



BURNSIDE

**Grand Bend Wind Farm Post-
Construction Monitoring Report
Year 3**

**Grand Bend Wind GP Inc.
as a general partner for and on behalf
of Grand Bend Wind Limited
Partnership**

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Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

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Table of Contents

1.0	Introduction	6
1.1	Project Location	7
2.0	Approvals and Permits	9
3.0	Summary of Year 1 (2017) Monitoring Results and Mitigation Applied in Year 2 (2018) and Year 3 (2019).....	10
4.0	Year 3 Post-Construction Monitoring Methodology	11
4.1	Mortality Thresholds.....	11
4.1.1	Bats	12
4.1.2	Birds	12
4.2	Effort and Timing for Bat and Bird Mortality Monitoring	12
4.3	Avian and Bat Mortality Searches	15
4.4	Raptor Mortality Searches	16
4.4.1	Raptor Mortality	16
4.4.2	Raptor Scoped Mortality and Cause and Effects Monitoring.....	17
4.5	Incidental Observations	17
4.6	Carcass (Scavenger) Removal Trials	17
4.7	Searcher Efficiency Trials	18
4.8	Proportion Area Searched	19
5.0	Post-Construction Monitoring Results.....	20
5.1	Carcass (Scavenger) Removal Trials	20
5.2	Searcher Efficiency Trials	23
5.3	Avian and Raptor Mortality Results.....	25
5.3.1	Species Composition.....	25
5.3.2	Mortalities by Date.....	28
5.3.3	Spatial Distribution	30
5.3.4	Raptor Scoped Mortality and Cause and Effects Monitoring.....	30
5.3.5	Corrected (Estimated) Bird Mortality Calculations.....	31
5.3.6	Consideration for Raptor Mortality Estimates	36
5.4	Bat Mortality Results	37
5.4.1	Species Composition.....	37
5.4.2	Mortalities by Date.....	40
5.4.3	Spatial Distribution	42
5.4.4	Corrected (Estimated) Bat Mortality Calculations.....	44
6.0	Summary of Avian and Bat Mortalities.....	48
7.0	Conclusions	53
8.0	References	56

Tables

Table 1: Visibility Classes	15
Table 2: Carcass (Scavenger) Removal Trial Results at the Project Site	21

Table 3: Searcher Efficiency Trial Results by Season	24
Table 4: Proportion of Total Area Searched at the Sub-Sample Turbines	33
Table 5: Actual Observed Mortalities of All Bird Species (Total) at the Sub-Sample Turbines	33
Table 6: Actual Observed Mortalities (Raptors Only) at the Sub-Sample Turbines	33
Table 7: Corrected (Estimated) Bird Mortality Rate for All Samples in a Given Month (Total).....	33
Table 8: Corrected (Estimated) Bird Mortality Rate for All Samples (Raptor)	34
Table 9: Corrected (Estimated) Bird Mortality Rate for All Samples (Raptor)	37
Table 10: Proportion of Total Area Searched at the Sub-Sample Turbines	46
Table 11: Actual Observed Bat Mortalities	46
Table 12: Corrected (Estimated) Bat Mortality Rate for All Samples in a Given Month	46

Figures

Figure 1: The Project Study Area	8
Figure 2: Location of Sub-Sample Mortality and Raptor Mitigation Monitoring Sites	14
Figure 3: Bird and Raptor Mortalities at the Project Site	27
Figure 4: Number of Bird Mortalities by Species and Season at the Project Site	29
Figure 5: Species Composition of Bat Mortalities by Percent at the Project Site	39
Figure 6: Number of Bat Mortalities by Species and Season at the Project Site	41
Figure 7: Number of Bat Mortalities by Species and Month at the Project Site.....	42
Figure 8: Spatial Distribution of Bat Mortalities by Species and Turbine at the Project Site	44
Figure 9: Total Number of Mortalities by Species at the Project Site	50
Figure 10: Total Recorded Number of Avian and Bat Mortalities at the Project Site.....	51
Figure 11: Proximity of Turbines to Surrounding Natural Heritage Features at the Project Site	52

Appendices

Appendix A Approvals and Permits
Appendix B Grand Bend Wind Farm: Raptor Behaviour Surveys North-South Environmental Inc.
Appendix C Turbine Habitat Maps
Appendix D Post-Construction Monitoring Raw Data
Appendix E Mortalities per Turbine (Map Book)
Appendix F Raptor Mortalities per Turbine (Map Book)

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1.0 Introduction

Grand Bend Wind GP Inc. as general partner for and on behalf of Grand Bend Limited Partnership, operates a 100 MW wind facility located north of Grand Bend, Ontario. Renewable Energy Approval (REA) (Number 5186-9HBJXR) was issued by the Ministry of the Environment (now the Ministry of the Environment, Conservation and Parks or MECP) on June 26, 2014 prepared under Ontario Regulation 359/09 of the *Environmental Protection Act*. The REA was amended on March 24, 2015 and again on July 17, 2017. None of these amendments concerned or affected the monitoring study which follows. The project is classified as a Class 4 Wind facility under the Regulation. The Grand Bend Wind Farm (the Project) is located in Huron County, spanning the lower-tier municipalities of Bluewater and Huron South. Portions of the transmission line also traverse the municipality of Huron East and municipality of West Perth in Perth County. The project location and study area are shown on Figure 1.

The basic project components include 40 turbines (Siemens SWT-3.0-113 direct drive wind turbine generators limited to produce 2.48 MW turbines each, with a total name plate capacity of 100 MW), turbine access roads, a 36 kV electrical collection system, substation, a parts and storage (office / maintenance) building, a new buried transmission line within municipal road right-of-ways along Sararas Road, Rodgerville Road, and Road 183 with connection to the provincial power grid at the 230 kV transmission line south of the Seaforth Transformer Station.

An Environmental Effects Monitoring Plan (EEMP) (January 2013) was submitted as part of the REA Application in February 2013. This document addressed the potential negative environmental effects that may result from engaging in the renewable energy project. Post-construction monitoring of potential effects on birds and bats is conducted in accordance with the following guidance documents (herein referred to as “the Guidelines”):

- *Birds and Bird Habitats: Guidelines for Wind Power Projects* (MNR, December 2011); and,
- *Bats and Bat Habitats: Guidelines for Wind Power Projects* (MNR, July 2011).

The EEMP set out a post-construction monitoring plan that included:

- A summary of all potential negative environmental effects which might be caused by the project.
- Performance objectives associated with mitigation measures designed to reduce negative effects (performance objectives are also described as mortality thresholds).
- A description of all mitigation strategies.
- A description of monitoring to be undertaken during project operation.

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

- Contingency measures that will be undertaken should monitoring reveal that mitigation measures do not meet performance objectives/mortality thresholds.

The Grand Bend Wind Farm became fully operational in July 2016. Post-construction environmental monitoring activities commenced on May 1, 2017.

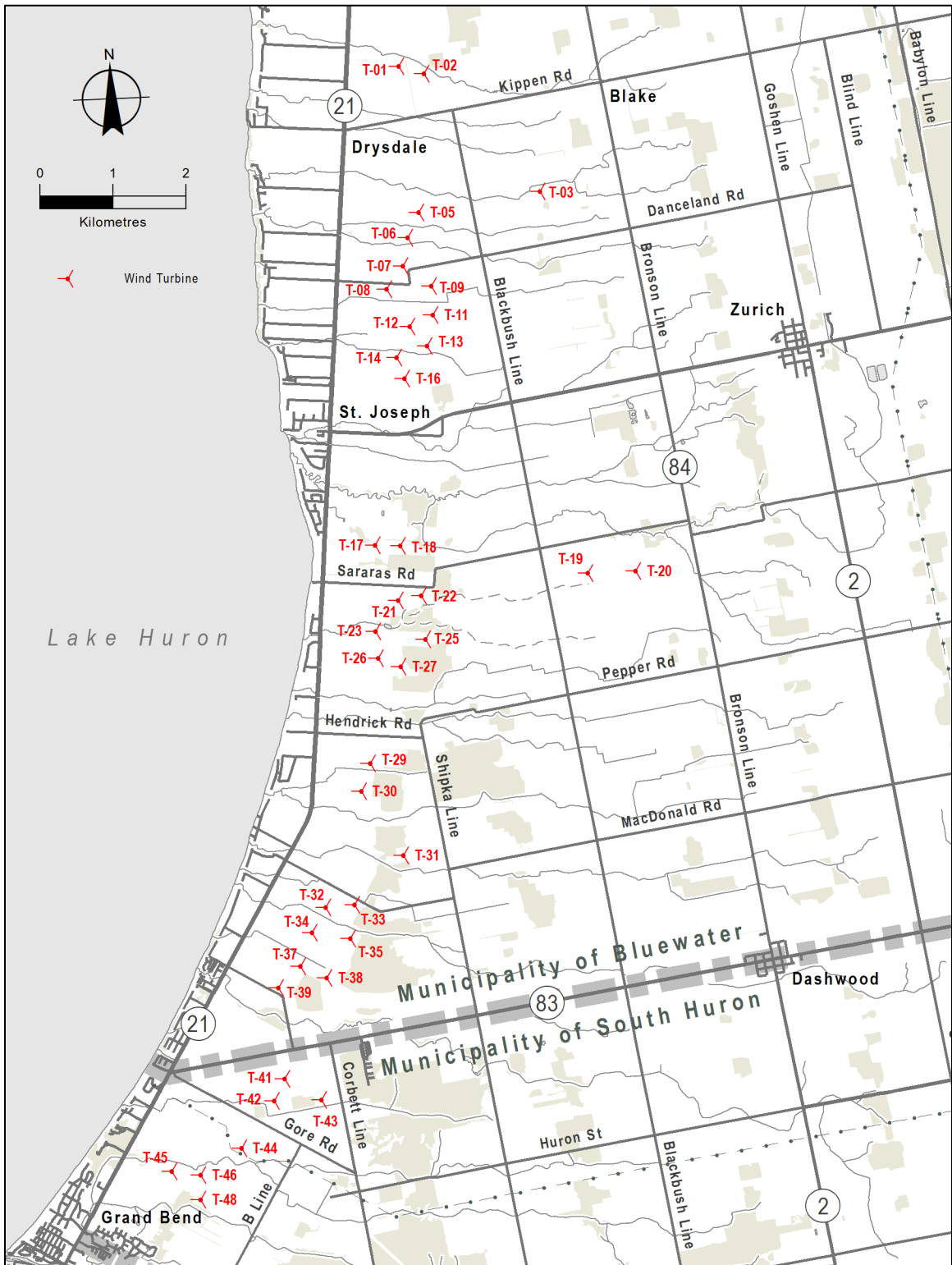
1.1 Project Location

The Project is located in Huron County, spanning the lower-tier municipalities of Bluewater and South Huron as well as a portion of Huron East and the municipality of West Perth in Perth County. The Project Study Area, shown in Figure 1 below is bounded by:

- The Bluewater Highway (Highway 21) to the west.
- Main Street East / Grand Bend Line to the south.
- Blackbush and Shipka Lines with a small section of the study area in the central section of the project extending to Bronson Line and to the east.
- Staffa Road to the north.

A transmission line route, not shown on Figure 1, runs along Sararas Road, Rodgerville Road, and Road 183 with connection to the provincial power grid at the 230 kV transmission line south of the Seaforth Transformer Station.

Figure 1: The Project Study Area



2.0 Approvals and Permits

A variety of approvals, permits and authorizations were required to conduct post-construction monitoring:

- MOE Renewable Energy Approval (REA) (June 26, 2014)
- Canadian Wildlife Service – Scientific Permit – Migratory Bird Regulations Permit #SC004 (this permit applies to any migratory non-SAR birds)
- MNRF Wildlife Scientific Collection (WSC) Permit #1092126
- MNRF Wildlife Animal Care Committee (WACC) Protocol #19-399
- *Endangered Species Act* (ESA) Registry Confirmation #M-102-8126759043

These approvals and permits allow for the handling, collection and storage of birds, bats and any Species at Risk (SAR) found during surveys.

In addition, a Notice of Activity for monitoring at the Grand Bend Wind Farm was submitted to MNRF as required under the ESA, Ontario Regulation 242/08.

A copy of these approvals and permits are found in Appendix A.

3.0 Summary of Year 1 (2017) Monitoring Results and Mitigation Applied in Year 2 (2018) and Year 3 (2019)

The following summarizes the findings of the Year 1 monitoring and mitigation applied in Year 2 and 3:

- The corrected total estimate for birds at the Project site (from May 1 to October 31, 2017) was 10.08 birds per turbine per year. This was **below** the provincial threshold of annual bird mortality of 14 birds per turbine per year. No additional mitigation was applied for bird mortalities in 2018 or 2019. Bird mortality monitoring continued as per the standard post-construction monitoring schedule set by the MNRF (2017-2019 inclusive).
- The corrected total estimate for all raptors at the Project site (from May 1 to November 30, 2017) was 0.89 raptors per turbine per year. This estimate was **above** the provincial threshold of annual raptor mortality of 0.2 raptors per turbine per year (all raptors). Given that there were no provincially tracked raptors found during the monitoring program (i.e., Bald Eagle, Golden Eagle, Rough-legged Hawk, Peregrine Falcon), raptor mortalities did not exceed the threshold of 0.1 raptors per turbine per year for provincially tracked raptors. Because the provincial raptor threshold was exceeded in 2017, scoped mortality monitoring at individual turbines (and unmonitored turbines in near proximity) was conducted in 2018 and 2019 to determine whether individual or groups of turbines had higher mortalities (see Section 4.4.2). In 2019, a raptor behavioral study was conducted by North-South Environmental as part of cause and effects monitoring (see Appendix B). No operational mitigation was applied for raptor mortalities in 2018 or 2019, however scoped raptor mortality surveys were conducted around specific wind turbines and are referred to in this report as “raptor mitigation” turbines to refer to those that could be used to inform possible mitigation plans in the future. See Section 4.2.
- The corrected total estimated mortality rate for bats at the Project site (from May 1 to October 31, 2017) was 27.85 bats per turbine per year. This estimate was **above** the annual bat mortality threshold of 10 bats per turbine per year, averaged across the Project site. As a result, operational mitigation was applied in 2018 and 2019, which meant changing the wind turbine cut-in speed to 5.5 m/s and feathering the wind turbine blades when wind speeds were below 5.5 m/s. The operational mitigation was implemented across the wind power project (i.e., at all turbines) from sunset to sunrise, from July 15 to September 30. Mitigation for bat mortalities is expected to remain in place for the duration of the wind farm project.

4.0 Year 3 Post-Construction Monitoring Methodology

Post-construction mortality surveys are required for all Class 3 and 4 wind power projects. This Post-Construction Monitoring Report is one component of the EEMP and has been prepared in accordance with MNRF's *Bats and Bat Habitats: Guidelines for Wind Power Projects* (July 2011) and MNRF's *Birds and Bird Habitats: Guidelines for Wind Power Projects* (December 2011).

Post-construction bat and bird mortality surveys estimate bird and bat mortality from wind turbines and may identify species and specific periods of high mortality. This knowledge can be used to evaluate the success of mitigation measures, establish protocols for operational mitigation, and inform adaptive management.

Bat and bird mortality surveys identify the number of bats or birds killed per turbine over a known period (expressed as bats per turbine per year **or** birds per turbine per year). This value represents an estimate of bat and bird mortality adjusted for carcass removal rates, searcher efficiency, and percent area searched (see Section 4.1 below).

For bats and birds, a monitoring year is from May 1 to October 31. This extends until November 30 specifically for raptor monitoring.

Year 3 post-construction monitoring in 2019 consisted of:

- Regular bat / bird mortality surveys around specific wind turbines.
- Scoped raptor mortality surveys around specific wind turbines as part of the raptor mitigation requirements.
- Cause and effects monitoring related to raptor mortalities (behaviour survey) was completed by North-South Environmental between May 1 and July 31 to assess how raptors fly through areas that are swept by blades, how they are using sites or habitats adjacent to the turbines, as well as recording any nesting evidence observed (see also Appendix B).
- Monitoring of bat / bird carcass removal rate by scavengers (or other means).
- Monitoring of bird / bat searcher efficiency (i.e., number of bat / bird fatalities present that are detected by searchers).

4.1 Mortality Thresholds

A threshold approach is used by the MNRF to identify and mitigate significant bat and bird mortality resulting from the operation of wind turbines.

4.1.1 Bats

Bat mortality is significant when a threshold of annual bat mortality (averaged across the site) exceeds 10 bats per turbine per year.

This threshold has been determined based on bat mortality reported at wind power projects in Ontario and compared with jurisdictions across North America.

4.1.2 Birds

Bird mortality is significant when annual bird mortality exceeds one or more of the following thresholds:

- 14 birds per year at individual turbines or turbine groups;
- 0.2 raptors per turbine per year (all raptors) across a wind power project; or,
- 0.1 raptors per turbine per year (provincially tracked raptors) across a wind power project.

Provincially tracked raptors are defined as raptors of provincial conservation concern by the MNRF Natural Heritage Information Centre (NHIC).

In addition, single significant mortality events have been reported at existing wind farms. Such an event has been defined by the MNRF as the results of any single monitoring survey in excess of:

- 10 or more birds at any one turbine; or,
- 33 or more birds (including raptors) at multiple turbines.

For birds, an additional 2 years of scoped mortality and cause and effect monitoring may be required at individual turbines (and unmonitored turbines in near proximity), following any given year where an annual post-construction mortality report identifies significant bird or raptor mortality.

For bird / bats, an additional 3 years of effectiveness monitoring may be required where mitigation is applied.

4.2 Effort and Timing for Bat and Bird Mortality Monitoring

The Project consists of 40 operating turbines. As per the Guidelines, for wind power projects >10 turbines, bat and bird mortality surveys should occur at a sub-sample of at least 30% of turbines (minimum 10 turbines) and should be selected to cover representative areas throughout the project location. A total of 12 turbines were selected to cover representative areas throughout the Project site (the “sub-sample”). The draft sub-sample identified in the EEMP was selected such that:

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

- The sub-sample of wind turbines that were monitored included a representative sample of all habitats present and covered the spatial distribution of the wind turbines. Wind turbines were selected through a scientifically defensible system (e.g., stratification).
- It included a range of turbines across the full spatial distribution of the project.
- The sub-sample turbines did not include ones where the majority of the search area would not be searchable due to vegetation cover or other impediments (i.e., Visibility Class 3-4 in accordance with MNR, 2011). Refer to Table 1.

The final 12 sub-sample turbines were modified slightly from the EEMP because none of the originally defined 12 Bat Maternity Colony habitats were found to be significant; therefore, the sub-sample was adjusted to ensure a representative sample of the Project site. The sub-sample consisted of the following 12 turbines used in Year 1, Year 2 and Year 3 (Figure 2 shows the location of the turbines):

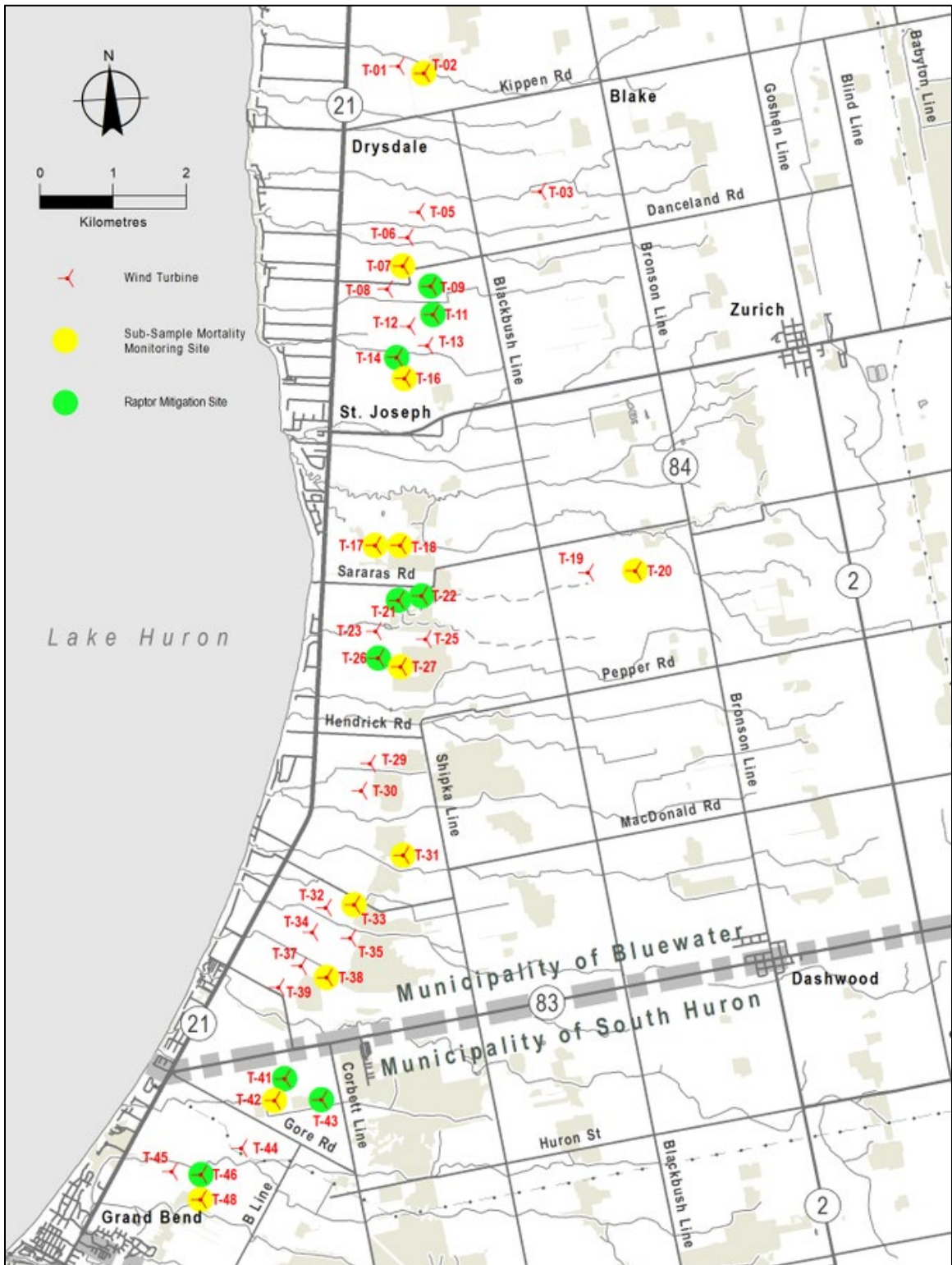
- T-02, T-07, T-16, T-17, T-18, T-20, T-27, T-31, T-33, T-38, T-42, and, T-48.

The Project became fully operational in July 2016; therefore, post-construction environmental monitoring activities for Year 1 commenced on May 1, 2017 and ended on November 30, 2017. Post-construction environmental monitoring for Year 2 commenced on May 1, 2018 and ended on November 30, 2018. Post-construction environmental monitoring for Year 3 commenced on May 1, 2019 and ended on November 27, 2019. These dates are referred to in this report as the “Monitoring Period”.

Data were collected following the Guidelines as well as the data standards and requirements of the Wind Energy Bird and Bat Monitoring Database. Survey data were collected using Fulcrum, a data collection platform for mobile devices. Data collected through Fulcrum automatically populates a database where they can be analyzed, reported and used to address knowledge gaps and create public data summaries. The data forms created in Fulcrum were based on the standardized templates available online through the Wind Energy Bird and Bat Monitoring Database found at http://www.bsc-eoc.org/birdmon/wind/wind_templates.jsp.

Post-construction monitoring was conducted by two searchers (herein referred to as searcher “SH” and searcher “SJ”).

Figure 2: Location of Sub-Sample Mortality and Raptor Mitigation Monitoring Sites



4.3 Avian and Bat Mortality Searches

Regular carcass searches for birds (excluding raptors) and bats were conducted twice weekly (3 and 4-day intervals) at the sub-sample of wind turbines between May 1 and October 31. When unsafe working conditions, such as a weather event (i.e., lightning, funnel clouds) caused a “stop work” event, the turbines were searched as soon as possible after the missed date (i.e., the next day).

Carcass searches consisted of the following:

- The time required searching each turbine varied depending on weather, soil conditions and vegetation cover as well as individual searchers and whether carcasses were recorded, but searchers typically spent between 15 minutes to 1 hour searching at each turbine. Time spent searching also depended on whether the turbine was searched by 1 or 2 searchers.
- Each surveyed turbine consisted of a 50 m search radius from the base of the turbine.
- Within this 50 m radius, the search area was examined using transects 5.0 m apart allowing for a visual search of 2.5 m on each side. The search area was circular (see Appendix C).
- The search area of each turbine was mapped into Visibility Classes according to Table 1.

Table 1: Visibility Classes

%Vegetation Cover	Vegetation Height	Visibility Class
≥90% bare ground	≤15cm tall	Class 1 (Easy)
≥25% bare ground	≤15cm tall	Class 2 (Moderate)
≤25% bare ground	≤25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥25% > 30cm tall	Class 4 (Very Difficult)

- Ground cover around the sub-sample turbines was maintained at a low level to facilitate more accurate bat and bird mortality surveys. The sub-sample turbines were maintained at either Visibility Class 1 or 2 for the duration of the Monitoring Program.
- All carcasses found were photographed and recorded / labeled with species (if known), sex (if known), date, time, location (UTM coordinate), carcass condition, searcher name, injuries, ground cover, and distance and direction to nearest turbine.
- Weather conditions including wind speed and precipitation were included as part of the data collection.
- The estimated number of days since death, and condition of each carcass collected were recorded in one of the following categories:
 - Fresh
 - Early decomposition

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

- Moderate decomposition
- Advanced decomposition
- Complete decomposition
- Scavenged
- Bird carcasses found during mortality monitoring were collected and stored in a freezer and used in carcass removal or searcher efficiency trials if they were in reasonable condition.
- Carcasses of the following species found during bat mortality searches were stored in a freezer and used in carcass removal or searcher efficiency trials, if they were in reasonable condition:
 - *Lasionycteris noctivagans* (Silver-haired Bat)
 - *Lasiurus cinereus* (Hoary Bat)
 - *Lasiurus borealis* (Eastern Red Bat)
- Because of white-nose syndrome contamination risks, the following species were not used in carcass removal or searcher efficiency trials:
 - *Myotis septentrionalis* (Northern Long-eared Bat)
 - *Myotis lucifugus* (Little Brown Bat)
 - *Myotis leibii* (Eastern Small-footed Bat)
 - *Perimyotis subflavus* (Tri-colored Bat)
 - *Eptesicus fuscus* (Big Brown Bat)

4.4 Raptor Mortality Searches

4.4.1 Raptor Mortality

In addition to carcass searches for birds and bats, raptor mortality surveys were conducted twice weekly in combination with the carcass searches at the 12 sub-sample turbines and the 9 raptor mitigation (scoped monitoring) turbines (see Section 4.4.2 below and Figure 2), and once per month at the remaining 19 turbines within the Project during the survey period from May 1 to October 31. For the month of November, once weekly raptor mortality surveys were conducted at the sub-sample turbines and the raptor mitigation turbines in addition to the monthly surveys of the remaining 19 turbines. The 19 turbines were as follows:

- T-01, T-03, T-05, T-06, T-08, T-12, T-13, T-19, T-23, T-25, T-29, T-30, T-32, T-34, T-35, T-37, T-39, T-44, and T-45.

The results of the targeted raptor mortality surveys were not added to the sub-sample survey mortality estimate calculations. The purpose of the raptor mortality surveys is to identify any individual or groups of turbines that may exceed the significant mortality threshold for raptors.

As per the Guidelines, searcher efficiency and carcass removal trials were not carried out during targeted raptor mortality surveys at the 28 turbines that were not part of the sub-sample.

4.4.2 Raptor Scoped Mortality and Cause and Effects Monitoring

As stated in Section 3.0, the provincial raptor threshold was exceeded in 2017, and as a result, scoped mortality and cause and effects monitoring at individual turbines (and unmonitored turbines in near proximity) was required for two subsequent years (2018-2019).

The following 9 turbines were changed from monthly monitoring to biweekly monitoring as part of Burnside's scoped monitoring schedule in 2018 and 2019:

- T-09, T-11, T-14, T-21, T-22, T-26, T-41, T-43, and T-46

The raptor cause and effects monitoring commenced in 2019 and was intended to take a closer, more focused approach to monitoring to determine a potential causal link and inform possible mitigation plans. The behavioural study started by North-South Environmental in 2019 is meant to provide results that could lead to conclusions regarding the cause and potential ongoing effects of the mortalities on raptor populations in the vicinity of the project. This information would then be used to assess potential causes of the mortality threshold being exceeded.

The results of this study is discussed in more detail in Section 5.3.4 and Appendix B.

4.5 Incidental Observations

Carcasses may be discovered incidental to formal searches. As per the MNRF Guidelines, these carcasses were processed (i.e., collected, recorded, etc.) and fatality data were included with the calculation of fatality rates. However, data for incidentally discovered carcasses that were found outside of the formal search area (i.e., 50 m) were reported separately and were not included with the calculation of fatality rates.

4.6 Carcass (Scavenger) Removal Trials

Carcass removal by scavengers is highly variable among sites (influenced by vegetation cover, terrain and season) and must be considered when estimating total bat and bird mortality. The rate of carcass scavenging was determined through carcass removal trials. In these trials, carcasses were placed around the wind turbines and monitored until they were removed by scavengers. The average carcass removal time is a factor in determining the estimated bat or bird mortality rate.

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

Carcass removal trials consisted of the following:

- Carcass removal trials were conducted once per season (Spring, Summer, Fall) during the same period as the mortality surveys (May 1 to October 31).
- According to the Guidelines, a minimum of 10 carcasses are to be used for each trial with no more than 5 trial carcasses placed at any one time. Burnside staff placed more than the minimum requirement by placing 15 carcasses at each Visibility Class present in the sub-sample per season in 2019 (Visibility Class 1 and 2).
- Carcasses were monitored every 3 to 4 days in conjunction with carcass searches.
- Carcass removal trials were conducted in a variety of weather conditions. Weather conditions were recorded.
- Carcasses were distributed across a range of different substrates / habitats and within Visibility Class 1 and 2 of turbines being searched.
- Carcass removal trials were conducted at turbines that were not part of the carcass search sub-sample.
- Carcasses were placed before dusk using gloves and boots to avoid imparting human smell that might bias trial results (e.g., attract scavengers, etc.).
- Trials continued until all carcasses were removed or were completely decomposed (generally two weeks).
- To avoid confusion with turbine related fatalities, trial carcasses were discretely marked with a unique identification, so they could be identified as trial carcasses.
- Frozen carcasses were used and were thawed prior to beginning carcass removal trials.
- Bat and bird carcasses were used for the trials. To the extent possible, bat carcasses were used for at least one third of the trials and bird carcasses were used for at least one third of the trial carcasses. At least one raptor was used during each trial period.

4.7 Searcher Efficiency Trials

Searcher efficiency is another important factor in creating an estimate of total bat and bird mortality. Searcher efficiency trials require a known number of discretely marked carcasses to be placed around a wind turbine. Searchers examined the wind turbine area, and the number of carcasses that they found was compared to the number of carcasses placed.

Searcher efficiency trials consisted of the following:

- Searcher efficiency trials were conducted once per season (spring, summer and fall) during the same period as the bat mortality surveys (May 1 to October 31).
- A 'tester' controlled the trials and returned to collect marked trial carcasses at the completion of the trials to determine the number of carcasses remaining and if any carcasses were scavenged or removed during the trial.

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

- Searcher efficiency trials were conducted for each individual searcher.
- The Guidelines and EEMP state that a total of 10 carcasses per searcher per season per all applicable Visibility Classes (i.e., 1 and 2) found in the search area of the sub-sample turbines (see Table 1) are to be used. Burnside staff placed out more than the minimum requirement by placing 15 carcasses per searcher at each Visibility Class present in the sub-sample per season in 2019 (Visibility Class 1 and 2). The average efficiency per searcher across all applicable Visibility Classes was used for calculations.
- Trial carcasses were spread out over the trial period (each season) and conducted with the mortality surveys. A maximum of 3 trial carcasses were placed at any one time to avoid bias and flooding the area with carcasses.
- Trial carcasses were placed for one search period only and then removed and recorded by the 'tester'.
- Trial carcasses were randomly placed within the search area and location recorded so that they could be retrieved if they were not found during the trial.
- Trial carcasses were discreetly marked with a unique identification so that they could be identified as a trial carcass by the tester.
- Frozen carcasses were used and thawed prior to beginning searcher efficiency trials.
- Bat and bird carcasses were used for the trials. To the extent possible, bat carcasses were used for at least one third of the trials and bird carcasses were used for at least one third of the trial carcasses.

4.8 Proportion Area Searched

Based on current Ontario post-construction data, most bat and bird mortalities appear to fall within 50 m of a wind turbine base (7,853.97 m²). This area therefore represents the maximum recommended search area. Since it was not always possible to search the entire 50 m radius (presence of thick or tall vegetation, active cultivation, etc.) the actual area searched during the mortality surveys was calculated at each turbine, using a GPS. A map of the actual search area for each turbine searched, and a description of areas deemed to be unsearchable (e.g., vegetation height, type, slope, etc.) is provided in Appendix C of this report.

Proportion area searched (P_s) was calculated as a total proportion for all turbines in a given season (Spring – May/June; Summer – July/August; Fall – September/October). P_s was determined as follows:

$$P_s = \frac{\sum \text{actual area searched}}{n\pi r^2}$$

Where,

r equals 50 m

n equals the number of turbines searched (12)

5.0 Post-Construction Monitoring Results

5.1 Carcass (Scavenger) Removal Trials

The proportion of carcasses not removed by scavengers over the search period varied slightly for each season, as indicated below.

Table 2 shows the number of carcasses remaining during carcass removal trials at the Project site. Details on the tester, date placed, species, distance and direction from turbine, dates checked, UTM, and whether the carcass was scavenged can be found in Appendix D.

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

Table 2: Carcass (Scavenger) Removal Trial Results at the Project Site

	No. of Carcasses Placed	No. Remaining	No. Remaining	No. Remaining	No. Remaining
Spring Trial (May/June)					
Turbine #	Visit 0	Visit 1	Visit 2	Visit 3	Visit 4
T-25	3	1	1	0	-
T-34	2	0	-	-	-
T-32	3	0	-	-	-
T-37	2	0	-	-	-
T-06	2	2	2	2	0
T-05	3	0	-	-	-
Total	15	3	3	2	0
Summer Trial (July/August)					
Turbine	Visit 0	Visit 1	Visit 2	Visit 3	Visit 4
T-01	3	2	2	0	-
T-45	2	0	-	-	-
T-12	2	1	0	-	-
T-32	3	1	0	-	-
T-35	3	1	1	0	-
T-19	2	2	2	0	-
Total	15	7	5	0	0
Fall Trial (September/October)					
Turbine	Visit 0	Visit 1	Visit 2	Visit 3	Visit 4
T-03	3	1	0		
T-06	2	1	1	1	1
T-08	3	2	0		
T-13	2	1	1	1	0
T-44	3	0	-	-	-
T-45	2	0	-	-	-
Total	15	5	2	2	1

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

The following formula was used to calculate the overall scavenger correction (S_c) factors based on the proportion of carcasses remaining after each search interval was pooled:

$$S_c = \frac{n_{visit1} + n_{visit2} + n_{visit3}}{n_{visit0} + n_{visit1} + n_{visit2}}$$

Where,

S_c is the proportion of carcasses not removed by scavengers over the search period

n_{visit0} is the total number of carcasses placed

$n_{visit1} - n_{visit3} \dots$ are the numbers of carcasses on visits 1 through 3

$$\begin{aligned} SC_{Spring} &= \frac{n_{visit1} + n_{visit2} + n_{visit3} + n_{visit4}}{n_{visit0} + n_{visit1} + n_{visit2} + n_{visit3} +} \\ &= \frac{(3 + 3 + 2 + 0)}{(15 + 3 + 3 + 2)} \\ &= \frac{8}{23} \end{aligned}$$

= 0.347

Based on the results of the scavenger removal trials in the Spring period, approximately 35% of carcasses remained after the average search frequency of approximately 3 to 4 days.

$$\begin{aligned} SC_{Summer} &= \frac{n_{visit1} + n_{visit2} + n_{visit3} + n_{visit4}}{n_{visit0} + n_{visit1} + n_{visit2} + n_{visit3} +} \\ &= \frac{(7 + 5 + 0 + 0)}{(15 + 7 + 5 + 0)} \\ &= \frac{12}{27} \end{aligned}$$

= 0.444

Based on the results of the scavenger removal trials in the Summer period, approximately 44% of carcasses remained after the average search frequency of approximately 3 to 4 days.

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

$$SC_{Fall} = \frac{n_{visit1} + n_{visit2} + n_{visit3} + n_{visit4}}{n_{visit0} + n_{visit1} + n_{visit2} + n_{visit3}}$$

$$= \frac{(5 + 2 + 2 + 1)}{(15 + 5 + 2 + 2)}$$

$$= \frac{10}{24}$$

= 0.417

Based on the results of the scavenger removal trials in the Fall period, approximately 42% of carcasses remained after the average search frequency of approximately 3 to 4 days.

Overall, scavenger removal trial results did not differ significantly between seasons. The scavenger removal trial results will be used to calculate the estimated bird and bat mortality rates at the Grand Bend Wind Farm.

5.2 Searcher Efficiency Trials

Searcher efficiency (S_e) was calculated for each searcher as follows:

$$S_e = \frac{\text{number of test carcasses found}}{\text{number of test carcasses placed} - \text{number of carcasses scavenged}}$$

The number of turbines that each individual searches will vary so it was necessary to calculate a weighted average that reflected the proportion of turbines each searcher searched. The weighted average or overall searcher efficiency was calculated as follows:

$$S_{e0} = S_{e1}(n_1/T) + S_{e2}(n_2/T) + S_{e3}(n_3/T) \dots$$

Where,

S_{e0} is the overall searcher efficiency
 S_{e1} and S_{e2} and $S_{e3} \dots$ are individual searcher efficiency ratings
 n_1 and n_2 and $n_3 \dots$ are number of turbines searched by each searcher
 T is the total number of turbines searched by all searchers

Vegetation at the sub-sample turbines remained at either Visibility Class 1 or Class 2 throughout the Monitoring Period; therefore, SE trials occurred seasonally. These periods have been denoted as SE_{spring} (May-June), SE_{summer} (July-August) and SE_{fall} (September-October).

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

The proportional area of turbines searched by each surveyor must be calculated so that respective searcher efficiencies can be weighted into a single composite value. As alluded by the equation for S_{e0} , this is accomplished by dividing the total number of turbines searched (n) by the total number of turbines ($T=12$), and was calculated as follows:

$$P_e = \frac{\sum n}{T}$$

Refer to Table 3 below.

Table 3: Searcher Efficiency Trial Results by Season

Season (2019)	Searcher	No. of Carcasses Placed	No. of Carcasses Scavenged	No. of Carcasses Found	No. of Carcasses Not Found	Searcher Efficiency ($SE_{individual}$)	Proportion of Turbines Searched Across the Project Site ($P_e = n/T$)
Spring	SH	30	5	21	4	0.840	0.490
	SJ	30	2	24	4	0.857	0.510
Summer	SH	30	4	15	11	0.577	0.538
	SJ	30	2	21	7	0.750	0.462
Fall	SH	30	1	19	10	0.655	0.510
	SJ	30	1	23	6	0.793	0.490

$$SE_{Spring} = \sum SE_{individual} * P_e$$

$$(0.840 * 0.490) + (0.857 * 0.510)$$

$$= \mathbf{0.849}$$

The overall weighted average for searcher efficiency revealed that 85% of all carcasses expected across the Project site were found by searchers in the Spring period.

$$SE_{Summer} = \sum SE_{individual} * P_e$$

$$= (0.577 * 0.538) + (0.750 * 0.462)$$

$$= \mathbf{0.657}$$

The overall weighted average for searcher efficiency revealed that 66% of all carcasses expected across the Project site were found by searchers in the Summer period.

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

$$\begin{aligned}
 SE_{Fall} &= \sum SE_{individual} * P_e \\
 &= (0.655 * 0.510) + (0.793 * 0.490) \\
 &= \mathbf{0.723}
 \end{aligned}$$

The overall weighted average for searcher efficiency revealed that 72% of all carcasses expected across the Project site were found by searchers in the Fall period.

5.3 Avian and Raptor Mortality Results

The following section discusses bird mortality findings by species, date, and spatial distribution and provides the corrected mortality estimates.

5.3.1 Species Composition

Bird mortalities were recorded during the Monitoring Period during every month from May 1 to November 30 at turbines monitored during bi-weekly and monthly raptor monitoring.

Of the 50 bird mortalities recorded at the Project site during the Monitoring Period, a total of 27 different species of birds were identifiable to species, including raptors and incidental observations; and 10 birds were recorded but not identifiable to species (e.g., due to advanced level of decomposition, missing body parts, etc.). Of the 50 bird mortalities, 33 were recorded at the sub-sample turbines. A total of 12 birds were recorded as incidental observations at the Project site, 8 of which were recorded at the sub-sample turbines. There were no raptors recorded as incidentals in 2019. A total of 8 raptors were recorded at the Project site, 4 of which were recorded at the sub-sample turbines and 4 of which were recorded at the remaining turbines during raptor mortality searches.

Golden-crowned Kinglet and Turkey Vulture were the most common recorded bird species that were identifiable to species, with a total of 4 carcasses each found across the entire Project site. Bobolink (*Dolichonyx oryzivorus*) was the second-most common recorded bird species that was identifiable to species, with a total of 3 carcasses found across the entire Project site.

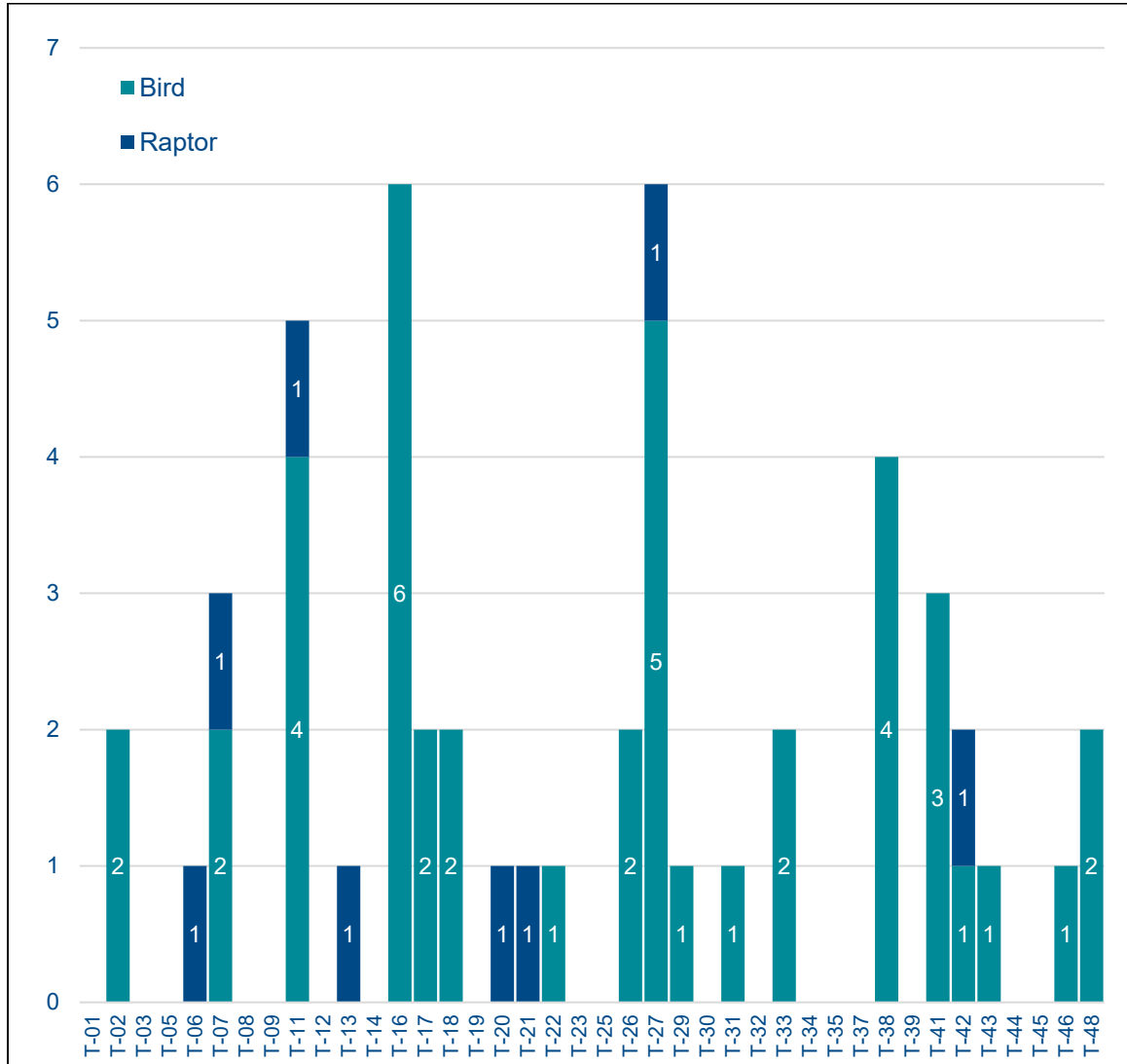
Of the 8 raptor mortalities recorded at the Project site, 4 different species were identified: Cooper's Hawk (*Accipiter cooperii*), Sharp-shinned Hawk (*Accipiter striatus*), Red-tailed Hawk (*Buteo jamaicensis*), and Turkey Vulture (*Cathartes aura*). Four raptors were recorded at the sub-sample turbines: 1 Red-tailed Hawk (T-07) and 3 Turkey Vulture (T-20, T-27, and T-42).

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

Two bird species at risk (SAR) listed as Threatened under the ESA was recorded at the Project site: Barn Swallow (*Hirundo rustica*) and Bobolink.

Figure 3 depicts bird and raptor mortalities at the Project site by turbine. The complete list of bird and raptor mortalities are found in Appendix D.

Figure 3: Bird and Raptor Mortalities at the Project Site



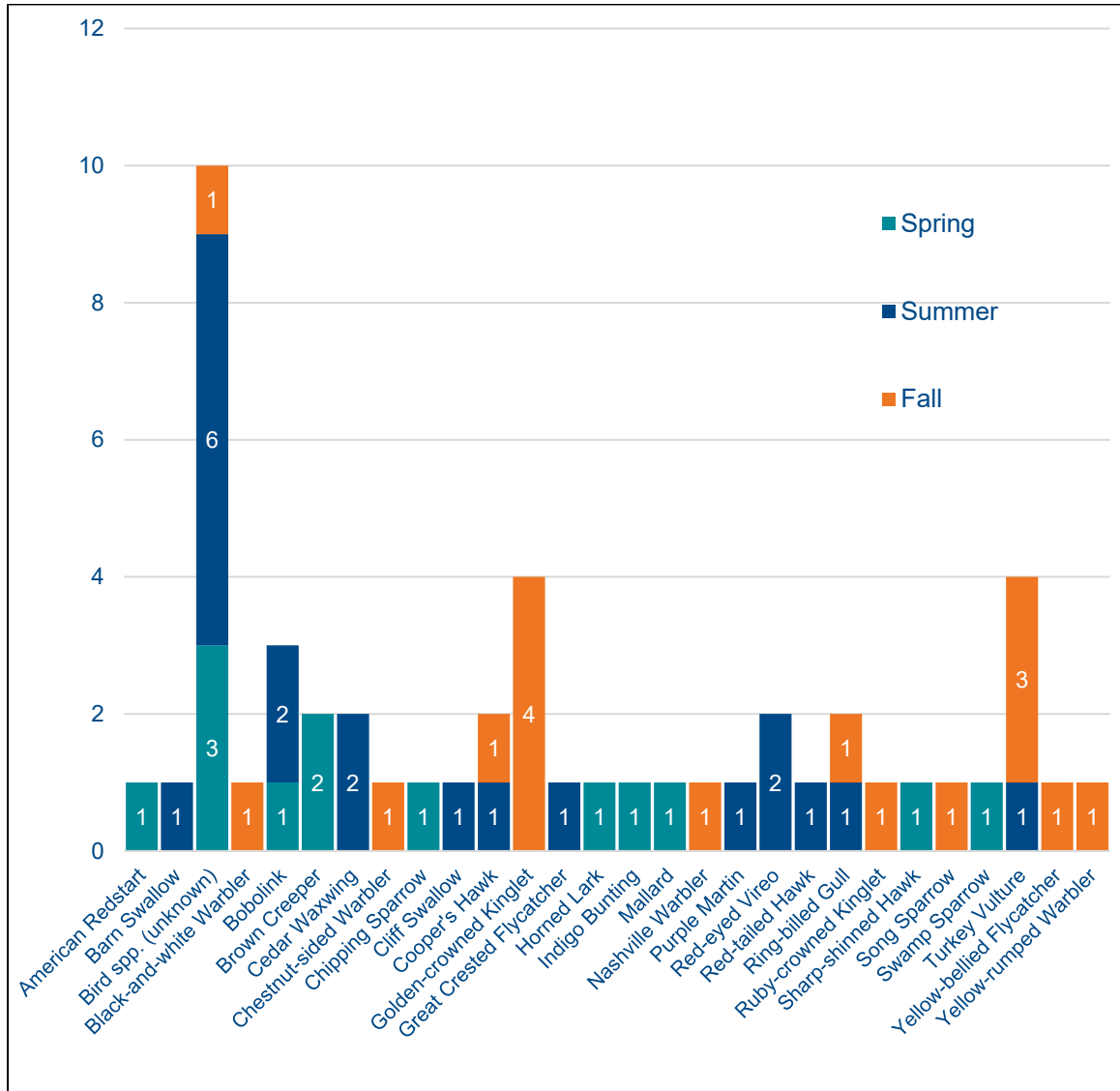
Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

5.3.2 Mortalities by Date

Out of a total of 50 bird mortalities recorded across the entire Project site, 18 were recorded in the Spring period (13 in May and 5 in June); 15 were recorded in the Summer period (6 in July and 9 in August); 15 were recorded in the Fall period (7 in September and 8 in October), and 2 were recorded in November. As shown on Figure 4 the highest mortalities occurred in the Spring period. May had the highest recorded mortalities out of any month of the monitoring period, which corresponds with the peak period for spring migration. Overall, the recorded number of mortalities for each of the Spring, Summer and Fall periods were comparable.

Of the 8 raptor mortalities recorded across the Project site, 2 were recorded in the Spring period (May/June), 3 were recorded in the Summer period (July/August), 2 were recorded in the Fall period (September/October), and 1 was recorded in November.

Figure 4: Number of Bird Mortalities by Species and Season at the Project Site



5.3.3 Spatial Distribution

Bird mortalities were recorded at 22 out of the 40 turbines, depicted on Figure 3, and were distributed across the Project site (see also Appendix E).

Of the 50 bird mortalities, 33 were recorded at the sub-sample turbines. Bird mortalities were recorded at all of the sub-sample turbines. T-16 and T-27 had the highest record of bird mortalities (6 each); T-11 had the second highest recorded mortalities (5); and T-38 had the third highest recorded mortalities (4).

Eight raptor mortalities were recorded at the following 8 turbines: T-06, T-07, T-11, T-13, T-20, T-21, T-27, and T-42. Two raptor carcasses were recorded at the 9 raptor mitigation (scoped monitoring) turbines (T-11 and T-22) and 4 at the sub-sample turbines within the formal search plot area.

5.3.4 Raptor Scoped Mortality and Cause and Effects Monitoring

As discussed in Section 4.4.2, as part of Burnside's scoped monitoring for raptors in 2018 and 2019, nine of the raptor mortality turbines were surveyed biweekly with the sub-sample turbines, instead of monthly. These included the following turbines:

- T-09, T-11, T-14, T-21, T-22, T-26, T-41, T-43, and T-46.

In 2017, 7 raptors were recorded at:

- T-09 (1), T-16 (1), T-22 (2), T-27 (1), T-43 (1), and T-48 (1).

In 2018, 7 raptors were recorded at:

- T-01 (1), T-25 (1), T-27 (1), T-30 (1), T-31 (1), T-42 (1), and T-45 (1).

In 2019, 8 raptors were recorded at:

- T-06 (1), T-07 (1), T-11 (1), T-13 (1), T-20 (1), T-21 (1), T-27 (1), and T-42 (1).

The only turbine that had a raptor mortality recorded in all 3 years (2017-2019) was T-27 (Turkey Vulture in 2017, Red-tailed Hawk in 2018, and Turkey Vulture in 2019). The raptor behaviour study conducted by North-South Environmental in 2019 as part of the cause and effects monitoring did not confirm any raptor nests in nearby woodlots. Their study determined that the main factors contributing to raptor mortalities appear to be a combination of:

1. Raptor abundance (i.e., those most often observed around the wind farm).
2. Raptor species and the differences in their flight patterns, foraging behaviours and habitat preferences.

3. Possible correlation to proximity of woodlots since the turbines with multiple mortalities have been adjacent to woodlots (although there are many single mortalities that have occurred at turbines that are not close to woodlots). In addition, the absolute number of mortalities was greater at turbines near woodlots than at turbines far from woodlots.

The results of this study are provided in Appendix B.

A map book depicting the distribution of raptor mortalities across the Project site between 2017-2019 is found in Appendix F.

5.3.5 Corrected (Estimated) Bird Mortality Calculations

Bird Species

Based on the calculations outlined below, the corrected total estimate for all bird species at the Project site for the 2019 Monitoring Period (from May 1 to October 31) is **7.864 birds per turbine per year**. This estimate is **below** the provincial threshold of annual bird mortality of 14 birds per turbine per year. Bird mortality thresholds have been established based on the range of bird mortality at wind power projects in Ontario and compared with jurisdictions across North America. The annual bird mortality threshold of 14 birds per turbine per year is below the 95th percentile of bird mortality rates in Ontario.

Raptor Species

The corrected total estimate for all raptors at the Project site for the 2019 Monitoring Period is **1.270 raptors per turbine per year** (based on Raptor Mortality surveys). This estimate is **above** the provincial threshold of annual raptor mortality of 0.2 raptors per turbine per year (all raptors). Given that there were no provincially tracked raptors found during the monitoring program, raptor mortalities did not exceed the threshold of 0.1 raptors per turbine per year for provincially tracked raptors.

Raptor mortalities at turbines that were not part of the sub-sample turbines are not to be added to the sample survey mortality estimate calculations. According to the Guidelines, the purpose of the raptor mortality surveys is to identify any individual or groups of turbines that may exceed the significant mortality threshold. A significant bird mortality event is defined to have occurred when bird mortality during a single mortality monitoring survey exceeds:

- 10 or more birds at any one turbine; or,
- 33 or more birds (including raptors) at multiple turbines.

There were no single mortality events recorded during the Monitoring Period for birds or raptors. The highest number of birds recorded at any one turbine during a single

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

mortality monitoring survey was 3, and the highest number of birds (including raptors) recorded at multiple turbines was 5.

The following 5 tables (Table 4, Table 5, Table 6, Table 7, and Table 8) summarize the values required for calculating the corrected total estimate for all bird species and for all raptors at the Project site in 2019.

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

Table 4: Proportion of Total Area Searched at the Sub-Sample Turbines

Month	Total Search Radius (m ²)	Total Searched Area (m ²)	Proportion of Area Searched (P _s)
Spring (May/June)	94,247.64	87,443.68	0.928
Summer (July/August)	94,247.64	83,966.70	0.890
Fall (September/October)	94,247.64	83,109.96	0.881

Table 5: Actual Observed Mortalities of All Bird Species (Total) at the Sub-Sample Turbines

Turbine	T2	T7	T16	T17	T18	T20	T27	T31	T33	T38	T42	T48	Total
Spring	0	1	0	1	1	0	2	0	0	0	0	1	6
Summer	1	1	4	0	0	0	2	1	0	1	0	0	10
Fall	0	0	0	0	1	1	0	0	2	3	2	0	9
Total	25												

Table 6: Actual Observed Mortalities (Raptors Only) at the Sub-Sample Turbines

Turbine	T2	T7	T16	T17	T18	T20	T27	T31	T33	T38	T42	T48	Total
Spring	0	0	0	0	0	0	0	0	0	0	0	0	0
Summer	0	1	0	0	0	0	1	0	0	0	0	0	2
Fall	0	0	0	0	0	1	0	0	0	0	1	0	2
Total	4												

Table 7: Corrected (Estimated) Bird Mortality Rate for All Samples in a Given Month (Total)

Turbine	T2	T7	T16	T17	T18	T20	T27	T31	T33	T38	T42	T48
Spring	0	0.305	0	0.305	0.305	0	0.610	0	0	0	0	0.305
Summer	0.321	0.321	1.284	0	0	0	0.642	0.321	0	0.321	0	0
Fall	0	0	0	0	0.314	0.314	0	0	0.627	0.941	0.627	0

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

Table 8: Corrected (Estimated) Bird Mortality Rate for All Samples (Raptor)

Turbine	T2	T7	T16	T17	T18	T20	T27	T31	T33	T38	T42	T48
Spring	0	0	0	0	0	0	0	0	0	0	0	0
Summer	0	0.321	0	0	0	0	0.321	0	0	0	0	0
Fall	0	0	0	0	0	0.314	0	0	0	0	0.314	0

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

The minimum estimated avian mortality (C) was calculated as follows:

$$C_{turbine} = \frac{c_{turbine}}{(SE_{season} * SC_{season} * P_{s-season})}$$

$$C_{month} = \frac{\sum C_{turbine}}{n_{turbine}}$$

$$C_{total} = \sum C_{month}$$

Where,

$C_{turbine}$	Corrected (estimated) monthly mortality rate for a specific turbine (# mortalities/month)
C_{month}	Corrected (estimated) monthly mortality rate for all turbines (# mortalities/month/turbine)
C_{total}	Corrected (Estimated) mortality rate per year (# mortalities/year/turbine)
SE_{season}	Calculated seasonal searcher efficiency
SC_{season}	Calculated seasonal scavenger rate
P_s	Proportion of total area searched at a turbine for a given season

Spring (May-June) – 6 observed mortalities:

$$C_{Spring (total)} = \frac{(6 \text{ mortalities})}{(0.849 * 0.347 * 0.928) * 12 \text{ turbines}} = 1.830 \frac{\text{mortalities}}{\text{turbine}}$$

$$C_{Spring (raptor)} = \frac{(0 \text{ mortalities})}{(0.849 * 0.347 * 0.928) * 12 \text{ turbines}} = 0.0 \frac{\text{raptor mortalities}}{\text{turbine}}$$

Summer (July-August) – 10 observed mortalities:

$$C_{Summer (total)} = \frac{(10 \text{ mortalities})}{(0.657 * 0.444 * 0.890) * 12 \text{ turbines}} = 3.210 \frac{\text{mortalities}}{\text{turbine}}$$

$$C_{Summer (raptor)} = \frac{(2 \text{ mortalities})}{(0.657 * 0.444 * 0.890) * 12 \text{ turbines}} = 0.642 \frac{\text{raptor mortalities}}{\text{turbine}}$$

Fall (September-October) – 9 observed mortalities:

$$C_{Fall (total)} = \frac{(9 \text{ mortalities})}{(0.723 * 0.417 * 0.881) * 12 \text{ turbines}} = 2.824 \frac{\text{mortalities}}{\text{turbine}}$$

$$C_{Fall (raptor)} = \frac{(2 \text{ mortalities})}{(0.723 * 0.417 * 0.881) * 12 \text{ turbines}} = 0.628 \frac{\text{raptor mortalities}}{\text{turbine}}$$

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

Total Avian Mortality Rates

Total Corrected Avian Mortality

$$C_{(Avian\ total)} = C_{(Avian\ Spring)} + C_{(Avian\ Summer)} + C_{(Avian\ Fall)}$$

$$C_{(Avian\ total)} = 1.830 + 3.210 + 2.824 = 7.864$$

$$C_{avian} = 7.864 \frac{\text{avian mortalities}}{\text{turbine} * \text{year}}$$

Total Corrected Raptor Mortality

$$C_{(Raptor\ total)} = C_{(Raptor\ Spring)} + C_{(Raptor\ Summer)} + C_{(Raptor\ Fall)}$$

$$C_{(Raptor\ total)} = 0 + 0.642 + 0.628 = 1.270$$

$$C_{raptor} = 1.270 \frac{\text{raptor mortalities}}{\text{turbine} * \text{year}}$$

5.3.6 Consideration for Raptor Mortality Estimates

It is noted that raptor mortality estimates are calculated using the composite values for Searcher Efficiency and Scavenger Rate as determined in Sections 5.2 and 5.3, respectively. The protocol requires that Searcher Efficiency be tested predominantly using small carcasses (bird, bat, rodent); it is anticipated that, as raptor carcasses are typically larger in size and far more easily visible by searchers, the searcher efficiency at locating raptor carcasses is significantly greater than the overall searcher efficiency.

Additionally, when calculating a composite Scavenger Rate using only raptor carcass results, the final Sc increases by approximately 30%.

$$SC_{total} = \frac{n_{visit1} + n_{visit2} + n_{visit3} + n_{visit4}}{n_{visit0} + n_{visit1} + n_{visit2} + n_{visit3}}$$

$$SC_{raptor} = \frac{(2 + 1 + 1 + 1)}{(4 + 2 + 1 + 1)} = \frac{5}{8} = 0.625$$

Table 9 below shows calculated values for anticipated raptor mortality assuming a raptor-specific rate of scavenge ($SC_{raptor} = 0.625$) and that searchers can be reasonably expected to find four out of every five raptor carcasses during surveys ($SE_{raptor} = 0.8$).

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

Table 9: Corrected (Estimated) Bird Mortality Rate for All Samples (Raptor)

Turbine	T2	T7	T16	T17	T18	T20	T27	T31	T33	T38	T42	T48
Spring	0	0	0	0	0	0	0	0	0	0	0	0
Summer	0	0.187	0	0	0	0	0.187	0	0	0	0	0
Fall	0	0	0	0	0	0.189	0	0	0	0	0.189	0

Modified Spring (July-August) – 0 observed mortalities:

No observed mortalities

Modified Summer (July-August) – 2 observed mortalities:

$$C_{Summer\ mod\ (raptor)} = \frac{(2\ mortalities)}{(0.800 * 0.625 * 0.890) * 12\ turbines} = 0.374 \frac{raptor\ mortalities}{turbine}$$

Modified Fall (September-October) – 2 observed mortalities:

$$C_{Fall\ mod\ (raptor)} = \frac{(2\ mortalities)}{(0.800 * 0.625 * 0.881) * 12\ turbines} = 0.378 \frac{raptor\ mortalities}{turbine}$$

Modified Total Raptor Mortality Rates

$$C_{(modified\ Raptor\ total)} = 0 + 0.374 + 0.378 = 0.752 \frac{raptor\ mortalities}{turbine * year}$$

It should be noted that in the above scenario, the rate of raptor mortalities ($C_{modified\ raptor\ total} = 0.752$) is still above the provincial threshold of $C_{raptor} = 0.2$. Regardless, it is felt that these assumptions regarding the calculation of raptor mortality are reasonable and valid moving forward.

5.4 Bat Mortality Results

5.4.1 Species Composition

The following section discusses bat mortality findings by species, date, and spatial distribution and provides the corrected mortality estimates.

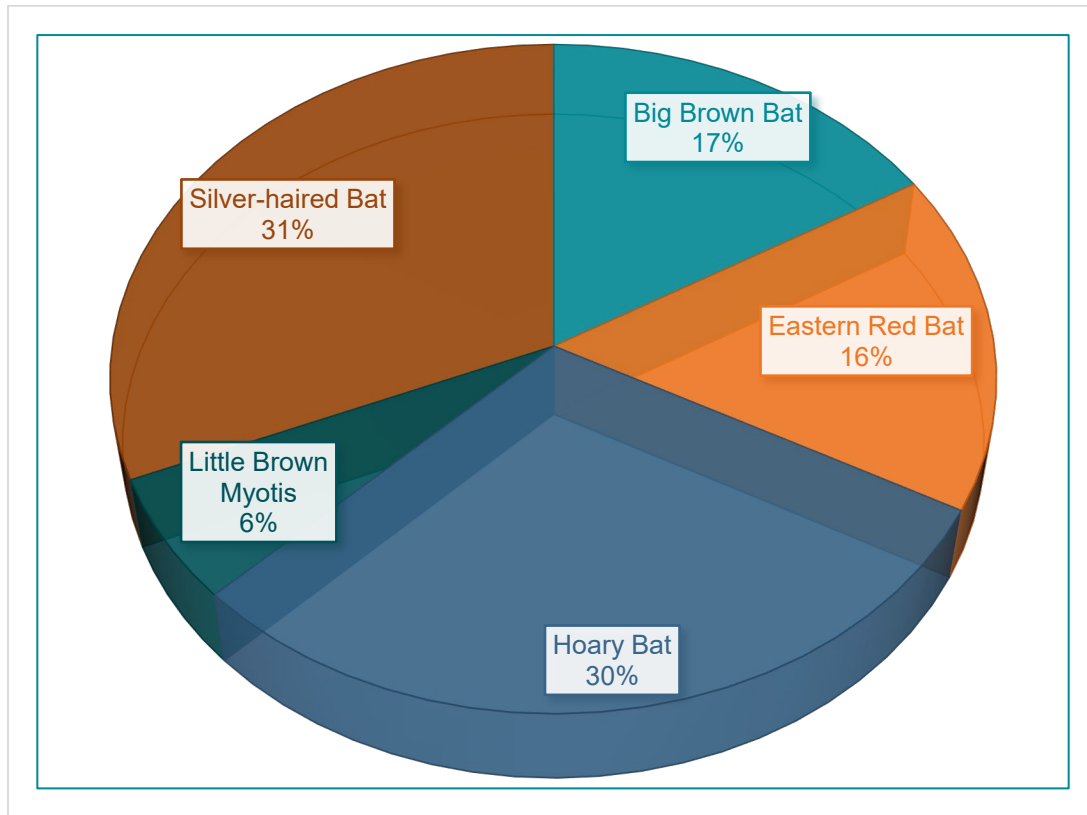
Bat mortalities were recorded during the Monitoring Period in every month except November at turbines monitored during bi-weekly and monthly raptor monitoring.

Of the 67 bat mortalities recorded at the Project site during the Monitoring Period, a total of 5 different species of bats were identified: Hoary Bat, Silver-haired Bat, Big Brown Bat, Little Brown Myotis and Eastern Red Bat. One SAR bat species listed as Endangered under the ESA was recorded at the Project site: Little Brown Myotis.

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

Silver-haired Bat represented the most common bat species recorded and represented 31% of all bat carcasses; Hoary Bat was the second-most common bat species and represented 30%. Eastern Red Bat and Big Brown Bat were the next-most common bat species and represented 16% and 17% respectively of all bat carcasses recorded each. Little Brown Myotis represented the least common bat species and represented 6% of all bat carcasses recorded. Refer to Figure 5 below.

A total of 6 bats were recorded as incidental observations at the Project site, found outside of the formal search plot area. All the incidental observations were recorded at the sub-sample turbines. As per the MNRF guidelines, these were incidentally discovered outside the formal search plot area, and therefore were reported separately and were not included in the calculation of fatality rates.

Figure 5: Species Composition of Bat Mortalities by Percent at the Project Site

It is important to note that it can be challenging to distinguish between some of the *Myotis* species and Big Brown Bat based on physical characteristics alone. In 2017, Burnside consulted with Dr. Brock Fenton on several occasions during the monitoring program to assist with bat identification. Dr. Fenton is a well-known bat expert from the Department of Biology at Western University in Windsor, Ontario. According to Dr. Fenton, if the forearm is over 39 mm then the bat is likely not Little Brown Bat and most likely Big Brown Bat. Additionally, the faces of these two species are distinctly different. Therefore, when the identification of a “brown” bat was in question, the forearm was measured and the tragus (if visible) was examined and photographed. The length of the forearm and features of the tragus were used to help distinguish between the two species.

Another key identification technique that is more definitive than forearm length or tragus is to compare the canine teeth. In bats in the genus *Myotis* in the upper jaw there is a gap between the canine (eye) teeth, and the next large tooth (a premolar). There are two small premolars in this space. In *Eptesicus* (e.g., Big Brown Bat) the canine is in contact with the next large tooth in the jaw (a premolar) (Martin, R.E., Pine, R.H. & A.F. DeBlase. 2001).

5.4.2 Mortalities by Date

As shown Figure 6 and Figure 7, the majority (61%) of bat mortalities occurred in the Summer period, which corresponds to the active period for Ontario bats when they are rearing and feeding young (Environment Canada, 2015). Out of a total of 67 bat mortalities recorded across the entire Project site, 41 were recorded in the Summer period. According to the Guidelines, the majority of bat mortalities from wind turbine operations occur during fall migration. Across North America, it is estimated that 90% of bat fatalities occur from mid-July through September (July 2011). In 2019, the highest number of bat mortalities recorded across the Project site at all turbines occurred in August (29 mortalities). In 2017 and 2018, the highest number of bat mortalities also occurred in August (50 and 26 mortalities, respectively). According to Grand Bend Wind GP, their scheduled shut down for maintenance / testing initiatives occurred between September 3-6, 2019. These dates correspond to the period of bat fall migration; therefore, the scheduled shut down in 2019 would have contributed to the lower bat fatality rates during the first week in September. In 2019, there were 9 bat mortalities recorded, compared to 14 in September 2018.

As stated in Section 3.0, the threshold for bat species was exceeded in 2017; therefore, operational mitigation for bat mortality was implemented in 2018. This consisted of changing the wind turbine cut-in speed to 5.5 m/s and feathering of the wind turbine blades when wind speeds are below 5.5 m/s. The operational mitigation was implemented across the wind power project (i.e., at all turbines) from sunset to sunrise, from July 15 to September 30. Mitigation is expected to continue for the duration of the project. The total number of bat mortalities across the Project site in 2019 was 67 compared to 116 in 2017; therefore, it is assumed that the two main factors that played an important role in the decrease in bat mortalities in 2019 was related to the operational mitigation and shut down in early September.

Figure 6: Number of Bat Mortalities by Species and Season at the Project Site

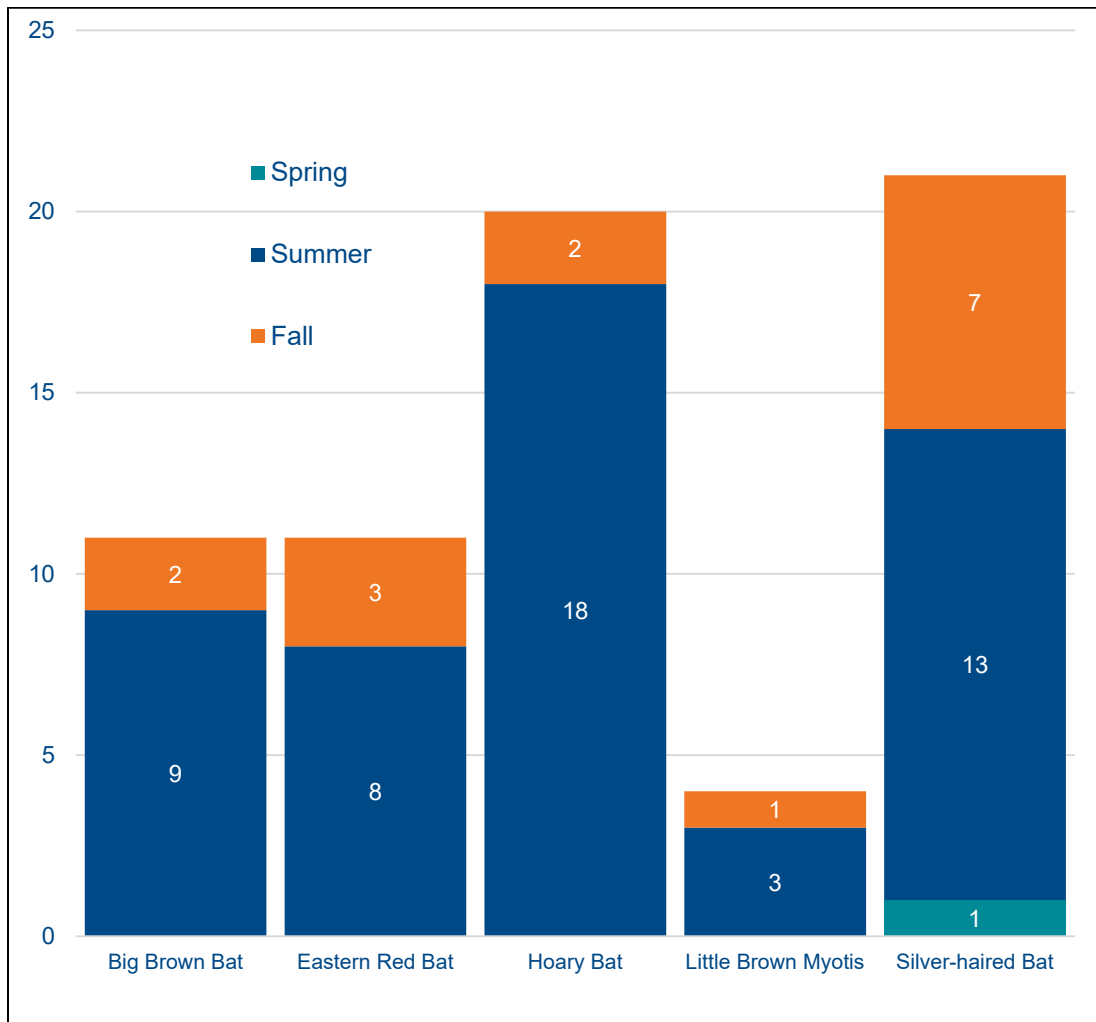
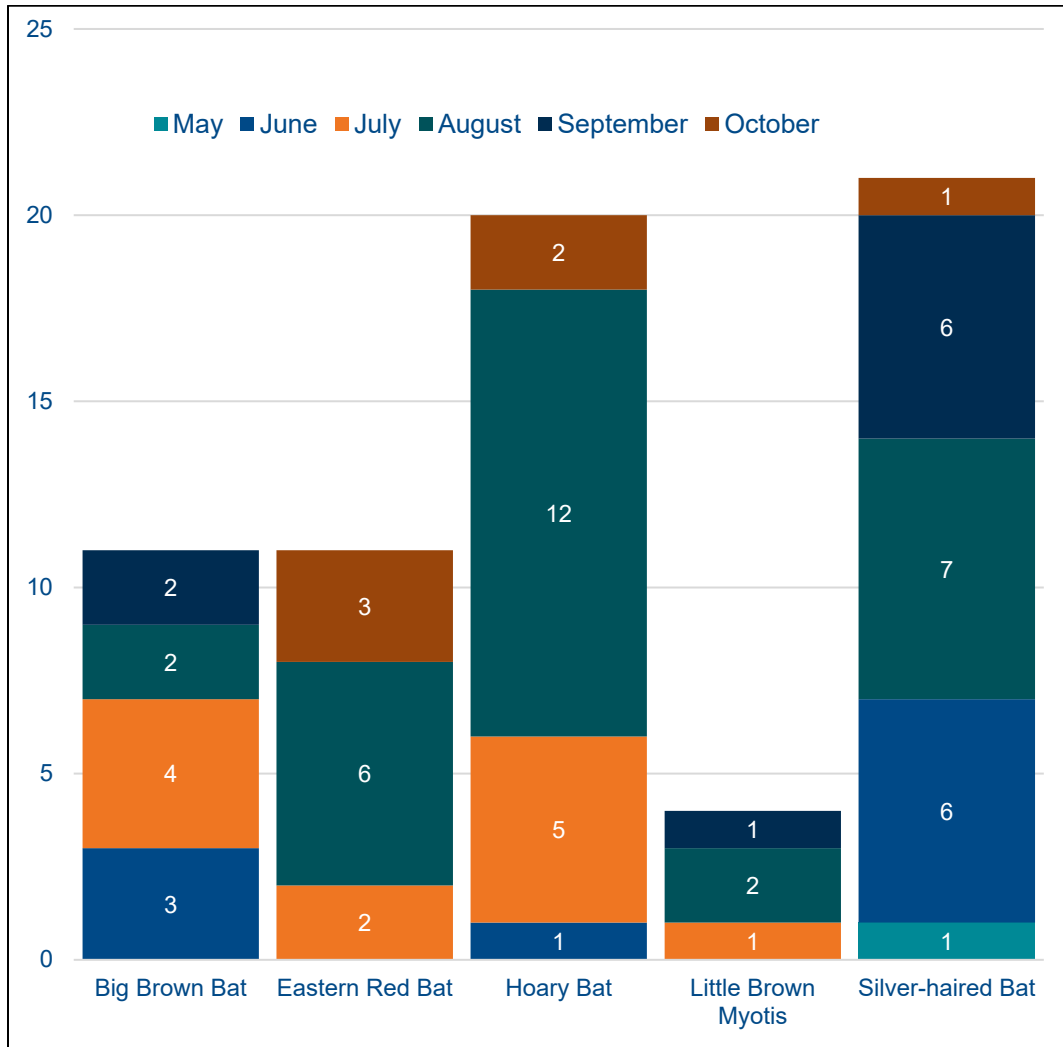


Figure 7: Number of Bat Mortalities by Species and Month at the Project Site



5.4.3 Spatial Distribution

Bat mortalities were recorded at 23 of the 40 turbines, depicted on Figure 8, and were distributed evenly across the Project site (see also Appendix E).

Of the 67 bat mortalities, 46 were recorded at the sub-sample turbines. Bat mortalities were recorded at all the sub-sample turbines.

T-31 had 9 recorded bat mortalities, with the highest occurrence of bat mortalities during the monitoring program. T-07, T-20 and T-42 ranked as the second-highest recorded number of bat mortalities with 6 bats each respectively. T-38 and T-48 each had 5 recorded bat mortalities, ranking them as equally having the third highest number of

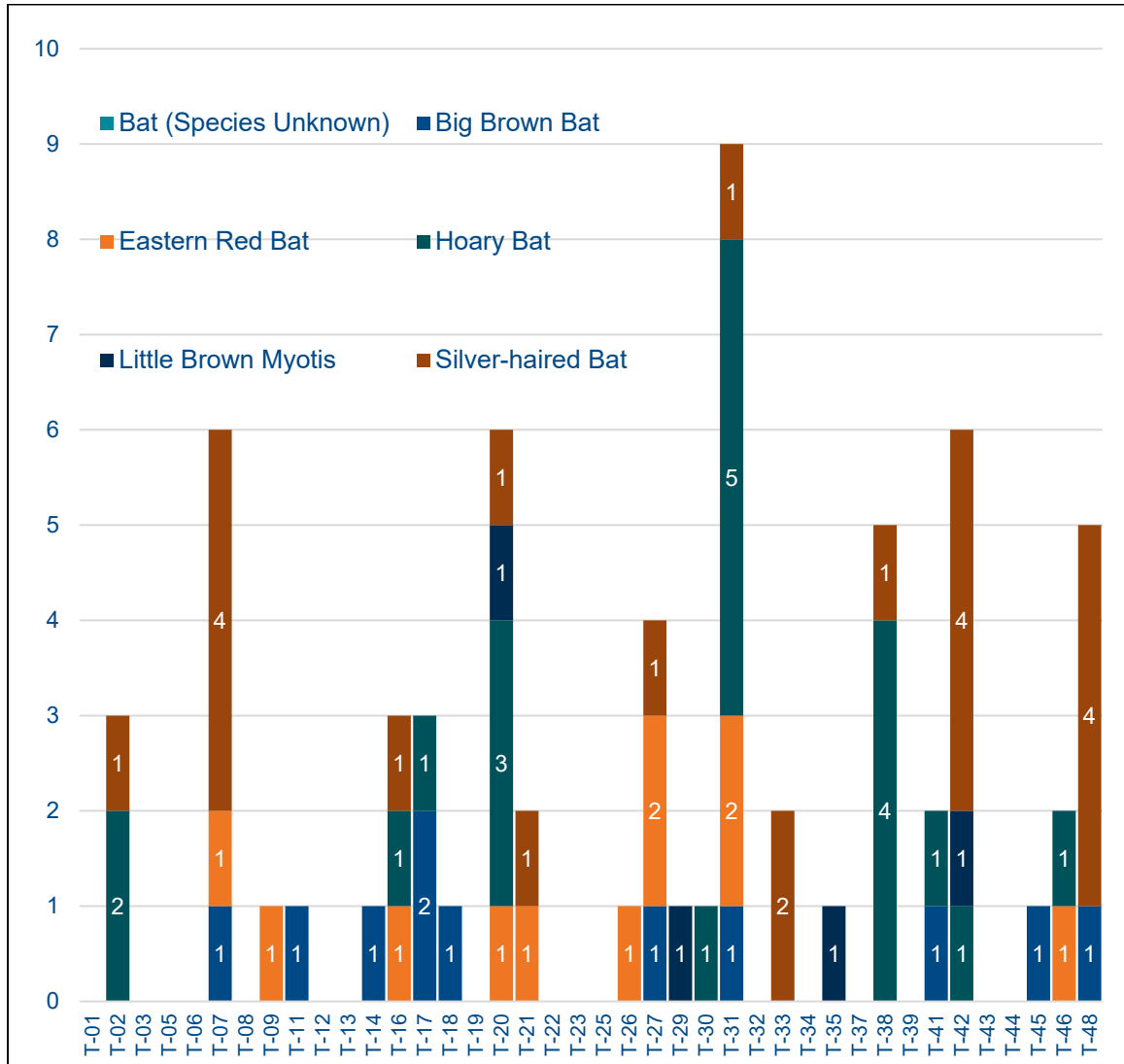
Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

bat mortalities during the monitoring program. In comparison, between 1 to 4 bat mortalities were recorded at the remaining 17 turbines.

Silver-haired Bat was found at 11 of the 23 turbines where bat mortalities were recorded. Hoary Bat was found at 10 of the 23 turbines. Big Brown Bat was found at 10 of the 23 turbines and Eastern Red Bat was found at 9 of the 23 turbines and. Records of these 4 species of bats, revealed an even distribution of these species across the Project site. The exception was for Little Brown Myotis, where one record each was recorded for this species at T-20, T-29, T-35, and T-42. Turbines where 6 or more bats were recorded had at least 3 different bat species found (T-07, T-20, T-31 and T-42).

It is expected that carcasses would be found in lower numbers at turbines not regularly monitored (e.g., scavengers, decomposition). Only 4 of the 67 bat mortalities were recorded at the monthly raptor mortality turbines (T-29, T-30, T-35, and T-45), with 1 mortality recorded at each. Bat mortalities were not recorded at any of the remaining monthly raptor turbines. Turbines monitored as part of the sub-sample and raptor mitigation naturally had higher numbers of bat mortalities recorded due to the survey frequency at these sites, with a range between 1 and 9 bats recorded. Figure 8 depicts the spatial distribution of bat mortalities by species and turbine.

Figure 8: Spatial Distribution of Bat Mortalities by Species and Turbine at the Project Site



5.4.4 Corrected (Estimated) Bat Mortality Calculations

Bat mortalities were recorded in every month of the monitoring program except November. Based on the calculations outlined below, the corrected total estimated mortality rate for bats at the Project site in 2019 (from May 1 to October 31) is **14.863 bats per turbine per year**. This estimate is **above** the annual bat mortality threshold of 10 bats per turbine per year, averaged across the Project site. This threshold has been determined based on bat mortality reported at wind power projects in Ontario and comparison with jurisdictions across North America.

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

In comparison, the total estimated mortality rate for bats at the Project site in 2017 was 27.85 bats per turbine per year.

The following 3 tables (Table 10, Table 11, and Table 12) summarize the values required for calculating the corrected total estimate for bats at the Project site in 2019.

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

Table 10: Proportion of Total Area Searched at the Sub-Sample Turbines

Month	Total Search Radius (m ²)	Total Searched Area (m ²)	Proportion of Area Searched (P _s)
Spring (May/June)	94,247.64	87,443.68	0.928
Summer (July/August)	94,247.64	83,966.70	0.890
Fall (September/October)	94,247.64	83,109.96	0.881

Table 11: Actual Observed Bat Mortalities

Turbine	T2	T7	T16	T17	T18	T20	T27	T31	T33	T38	T42	T48	Total
Spring	0	0	0	1	0	2	0	1	0	1	1	4	10
Summer	3	0	2	2	1	4	2	6	1	3	3	1	28
Fall	0	5	0	0	0	0	1	2	0	0	1	0	9
Total	47												

Table 12: Corrected (Estimated) Bat Mortality Rate for All Samples in a Given Month

Turbine	T2	T7	T16	T17	T18	T20	T27	T31	T33	T38	T42	T48
Spring	0	0	0	0.305	0	0.610	0	0.305	0	0.305	0.305	1.220
Summer	0.963	0	0.642	0.642	0.321	1.284	0.642	1.926	0.321	0.963	0.963	0.321
Fall	0	1.569	0	0	0	0	0.314	0.628	0	0	0.314	0

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

The minimum estimated bat mortality (C) was calculated as follows:

$$C_{turbine} = \frac{c_{turbine}}{(SE_{season} * SC_{season} * P_{s-season})}$$

$$C_{month} = \frac{\sum C_{turbine}}{n_{turbine}}$$

$$C_{total} = \sum C_{month}$$

Where,

$C_{turbine}$	Corrected (estimated) monthly mortality rate for a specific turbine (# mortalities/month)
C_{month}	Corrected (estimated) monthly mortality rate for all turbines (# mortalities/month/turbine)
C_{total}	Corrected (Estimated) mortality rate per year (# mortalities/year/turbine)
SE_{season}	Calculated seasonal searcher efficiency
SC_{season}	Calculated seasonal scavenger rate
P_s	Proportion of total area searched at a turbine for a given season

Spring (May-June) - 10 observed mortalities

$$C_{Spring (total)} = \frac{(10 \text{ mortalities})}{(0.849 * 0.347 * 0.928) * 12 \text{ turbines}} = 3.050 \frac{\text{mortalities}}{\text{turbine}}$$

Summer (July-August) – 28 observed mortalities

$$C_{Summer (total)} = \frac{(28 \text{ mortalities})}{(0.657 * 0.444 * 0.890) * 12 \text{ turbines}} = 8.988 \frac{\text{mortalities}}{\text{turbine}}$$

Fall (September-October) – 9 observed mortalities

$$C_{Fall (total)} = \frac{(9 \text{ mortalities})}{(0.723 * 0.417 * 0.881) * 12 \text{ turbines}} = 2.824 \frac{\text{mortalities}}{\text{turbine}}$$

Total Corrected Bat Mortality

$$C_{(Bat \text{ total})} = C_{(Bat \text{ Spring})} + C_{(Bat \text{ Summer})} + C_{(Bat \text{ Fall})}$$

$$C_{(Bat \text{ total})} = 3.050 + 8.988 + 2.824 = 14.863$$

$$C_{bat} = 14.863 \frac{\text{bat mortalities}}{\text{turbine} * \text{year}}$$

6.0 Summary of Avian and Bat Mortalities

A total of 117 mortalities were recorded across the Project site during the 2019 Monitoring Period (Refer to Figure 9), 50 of which were birds, and 67 of which were bats. In 2017, there were 163 mortalities and in 2018 there were 118. Of the 40 turbines at the Project site, 27 turbines had recorded mortalities in 2019 (refer to Figure 10). The remaining 13 turbines with no recorded mortalities were not part of the sub-sample, and therefore were only monitored once per month for raptors. It is expected that carcasses would be found in lower numbers at turbines not regularly monitored (e.g., scavengers, decomposition).

A total of 18 avian and bat mortalities were recorded across the Project site as incidental observations, 14 of which were recorded at the sub-sample turbines. These are defined as carcasses that were discovered incidental to formal searches and were found outside of the 50 m formal search area and were therefore reported separately and not included with the calculation of fatality rates (see Section 4.5). Incidental observations are listed in Appendix D.

Of the 27 turbines where bird and bat mortalities were recorded in 2019, the following two turbines had 10 or more bird and bat mortalities recorded:

- T-27: 10 mortalities
- T-31: 10 mortalities

These turbines were both part of the sub-sample monitoring. Turbines monitored as part of the sub-sample or biweekly raptor mitigation naturally had higher numbers of bird and bat mortalities recorded due to the frequency of the surveys at these sites. However, the fact that certain turbines in the sub-sample and/or biweekly raptor mitigation monitoring had higher mortality rates than others in the sub-sample may indicate that certain geographic locations where turbines are situated may contribute to higher or lower mortality rates, as discussed below.

Generally, turbines with the highest bird and bat mortalities (combined) correspond with turbines that also had high bat mortalities. The exception was at T-27 and T-16 where the rates were higher for bird mortalities. The overall trend appears to be that higher rates of mortalities occurred in the central and southern portion of the Project site (i.e., T17 to T42). This appears to correspond with proximity to woodland and treed (swamp) wetland habitats that, while still fragmented, are more contiguous and are larger in size when compared with the north end of the Project site. Wooded / wetland habitats in proximity to turbines located north of County Road 84 (i.e., T-1 to T16) are much sparser, fragmented without any linkages and smaller in size. Refer to Figure 11.

Two migratory bat species, Silver-haired Bat and Hoary Bat, were the most impacted species in 2019, followed by Eastern Red Bat and Big Brown Bat. Silver-haired Bat and

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

Hoary Bat represented 18% and 17% of the overall bird and bat mortalities across the Project site, respectively. Eastern Red Bat and Big Brown Bat each represented 9% of the overall bird and bat mortalities respectively. These four species of bats have been consistently the highest species recorded overall between 2017-2019, apart from Golden-crowned Kinglet. Out of 163 bird and bat mortalities in 2017, 71% were bats. Out of 118 bird and bat mortalities in 2018, 50% were bats. Out of the 117 bird and bat mortalities in 2019, 57% were bats. Therefore, it is assumed that the decline in bat mortalities in 2018 and 2019 can be attributed to the operational mitigation for bats that was implemented and the scheduled shut down that occurred in late July of 2018 and early September 2019.

Figure 9: Total Number of Mortalities by Species at the Project Site

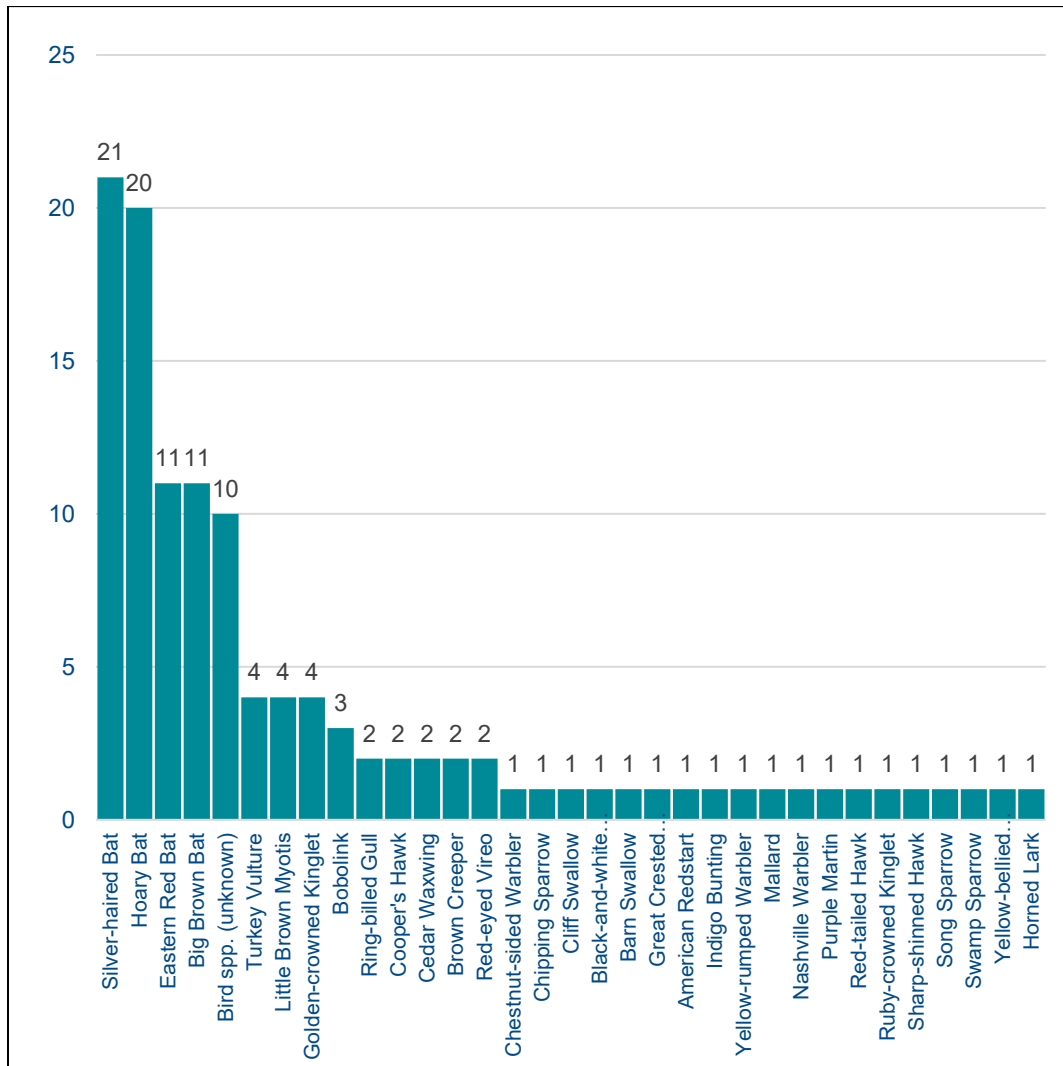


Figure 10: Total Recorded Number of Avian and Bat Mortalities at the Project Site

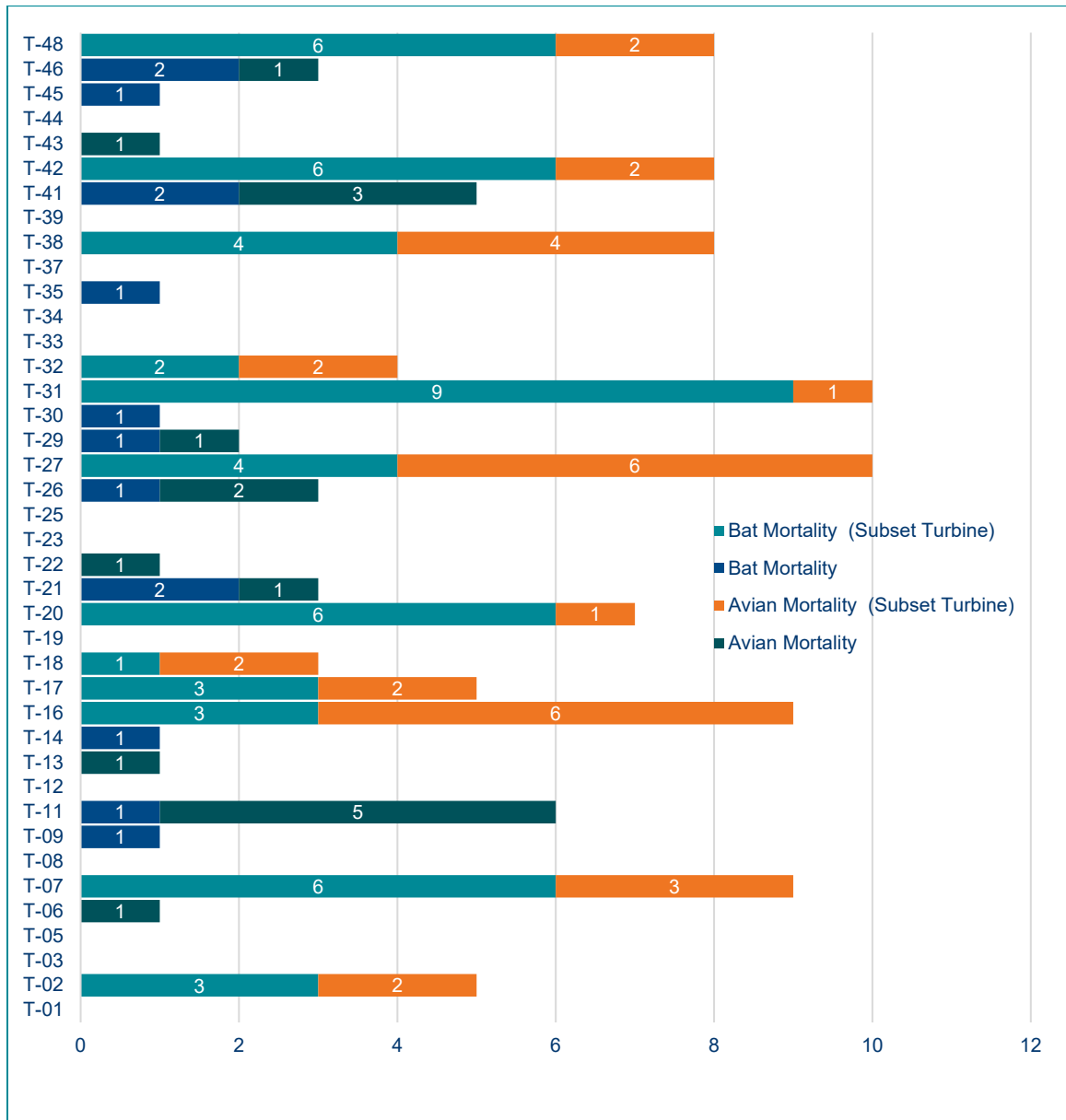
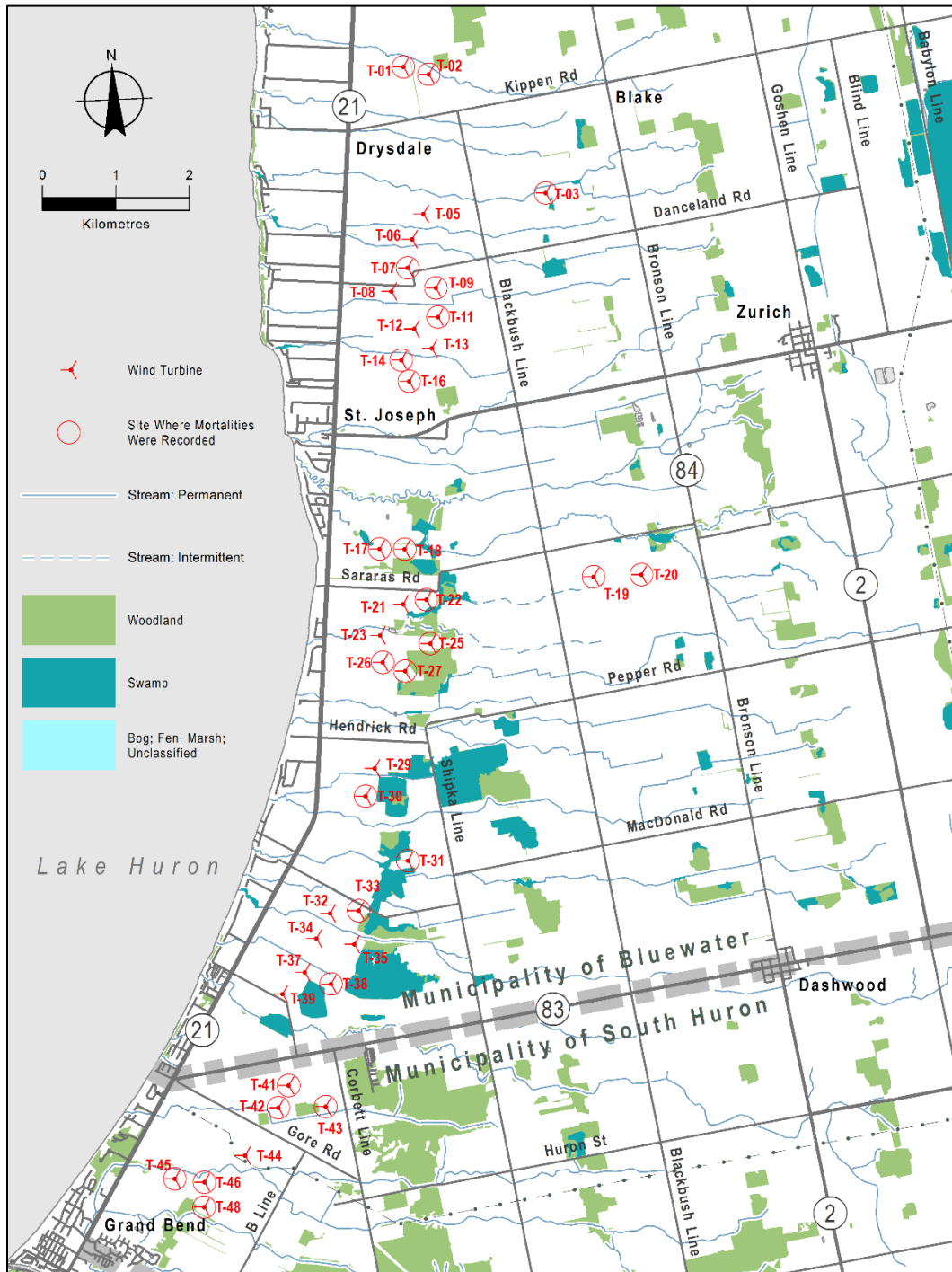


Figure 11: Proximity of Turbines to Surrounding Natural Heritage Features at the Project Site



7.0 Conclusions

The following summarizes the Year 3 post-construction monitoring results, mortality threshold exceedances, as well as any operational mitigation results and future requirements.

- A total of 50 bird species were recorded during the Monitoring Period across the entire Project site (from May 1 to November 30). Out of these, 33 (66%) were recorded at the sub-sample turbines.
- The corrected total estimate for birds at the Project site in 2019 (from May 1 to October 31) is **7.864 birds per turbine per year**. This estimate is **below** the provincial threshold of annual bird mortality of 14 birds per turbine per year.
- The corrected total estimate for all raptors at the Project site in 2019 (from May 1 to November 30) is **1.270 raptors per turbine per year**. This estimate is **above** the provincial threshold of annual raptor mortality of 0.2 raptors per turbine per year (all raptors). Given that there were no provincially tracked raptors found during the monitoring program (i.e., Bald Eagle, Golden Eagle, Rough-legged Hawk, Peregrine Falcon), raptor mortalities did not exceed the threshold of 0.1 raptors per turbine per year for provincially tracked raptors.
- There were no single mortality events recorded during the Monitoring Period for birds or raptors. The highest number of birds recorded at any one turbine during a single mortality monitoring survey was 3, and the highest number of birds (including raptors) recorded at multiple turbines was 5.
- As part of the MNRF post-construction mitigation requirements, the threshold exceedance in 2017 requires 2 years of scoped mortality monitoring and cause and effects monitoring (i.e., 2018 and 2019); therefore, monitoring in 2019 was a continuation of the scoped monitoring schedule detailed above, and also included the first behavioral monitoring surveys to assess the potential cause and effects of raptor mortalities.
- As per Condition L8 of the REA,

Following the completion of scoped monitoring, the Company shall implement operational mitigation and effectiveness monitoring at individual turbines as agreed to between the Company, the Director and the MNR, for the first three (3) years following the implementation of mitigation.”

- As per Condition L10 of the REA,

“If any of the bird mortality thresholds...are exceeded while monitoring is being implemented in accordance with Conditions L8...the Company shall contact the Director and the MNR and prepare and implement an

Grand Bend Wind Farm Post-Construction Monitoring Report
March 2020

appropriate response plan that shall include some or all of the following mitigation measures:

- *Increased reporting frequency to identify potential threshold exceedance;*
 - *Additional behavioural studies to determine factors affecting mortality rates;*
 - *Periodic shut-down of select turbines;*
 - *Blade feathering at specific times of year; or*
 - *An alternate plan agreed to between the Company, the Director and the MNR.”*
- Bat mortalities were recorded in every month of the monitoring program except November. In 2019, bat mortalities were highest in August. Based on the calculations outlined below, the corrected total estimated mortality rate for bats at the Project site in 2019 (from May 1 to October 31) is **14.863 bats per turbine per year**. This estimate is **above** the annual bat mortality threshold of 10 bats per turbine per year, averaged across the Project site.
 - Silver-haired Bat represented the most common bat species recorded and represented 31% of all bat carcasses; Hoary Bat was the second-most common bat species and represented 30%. Eastern Red Bat and Big Brown Bat were the second-most common bat species and represented 16% of all bat carcasses recorded each. Little Brown Myotis represented the least common bat species and represented 6% of all bat carcasses recorded.
 - As per Condition L6 of the REA,

“If the bat mortality threshold...is exceeded, the Company shall implement operational mitigation measures consistent with those described in the MNR publication entitled “Bats and Bat Habitats: Guidelines for Wind Power Projects” dated July 2011, or in an amended version of the publication. Such measures shall include some or all of the following:

 - *Increase cut-in speed to 5.5 m/s and/or feather wind turbine blades when wind speeds are below 5.5 m/s between sunset and sunrise, from July 15 to September 30 at all turbines; and*
 - *Implement an additional three (3) years of effectiveness monitoring.*
 - As per Condition L7 of the REA,

“If the bat mortality threshold...is exceeded after operational mitigation is implemented in accordance with L6, the Company shall prepare and implement a contingency plan, in consultation with the Director and the MNR, to address mitigation actions which shall include additional mitigation and scoped monitoring requirements.”

According to the Guidelines, a contingency plan addresses mitigation actions necessary in case of continued significant bat mortality after

mitigation has been implemented. A contingency plan allows additional mitigation measures to be implemented if ongoing adverse environmental effects are observed. Because cut-in speed mitigation was implemented, and the bat mortality threshold continues to be exceeded, Northland will work with MNRF to address contingency plan requirements at the Project site in 2020.

8.0 References

- Cadman, M.D. et al. 2007. Atlas of the Breeding Birds of Ontario, 2001-2005. Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature, Toronto, xxii + 706 pp.
- Environment Canada. 2015. Recovery Strategy for Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), and Tri-colored Bat (*Perimyotis subflavus*) in Canada [Proposed]. Species at Risk Recovery Strategy Series. Environment Canada, Ottawa. ix + 110 pp.
- Martin, R.E., Pine, R.H. & A.F. DeBlase. 2001. A Manual of Mammalogy With Keys to Families of the World. Dubuque, Iowa: W.C. Brown.
- Ministry of Natural Resources. July 2011. Bats and Bat Habitats, Guidelines for Wind Power Projects. Second Edition. Queen's Printer for Ontario.
- Ministry of Natural Resources. December 2011. Birds and Bird Habitats, Guidelines for Wind Power Projects. First Edition. Queen's Printer for Ontario.
- Ministry of Natural Resources. 2006. Wind Turbines and Bats: Bat Ecology Background Information and Literature Review of Impacts. Queen's Printer for Ontario.
- Ministry of Natural Resources and Forestry (MNR). March 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. Second Edition. Toronto: Queen's Printer for Ontario. 248 pp.
- Ministry of Municipal Affairs and Housing (MMAH). 2014. Provincial Policy Statement, 2014. Provincial Planning Policy Branch. Toronto: Queen's Printer for Ontario.
- Ministry of Natural Resources and Forestry (MNR). 2000. Significant Wildlife Habitat Technical Guide. Fish and Wildlife Branch, Wildlife Section. Science Development and Transfer Branch, Southcentral Science Section. 151p. + appendices.
- Neegan Burnside Limited. February 2013. Natural Heritage Environmental Effects Monitoring Plan. 24p.



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]



Appendix A

Approvals and Permits



CONFIRMATION OF REGISTRATION

Form Name: Notice of Activity and Other Notices under the Endangered Species Act, 2007

Date Registration Filed: 04/19/2016

Confirmation ID: M-102-8126759043

Version Number: 001

Update Date:

GRAND BEND WIND GP

30 St Clair AVE W12th Fl
Toronto, ON M4V3A1

Dear Sir/Madam,

You have registered under Ontario Regulation Reg. 242/08 of the *Endangered Species Act, 2007* and your Notice form has been received by the Ministry of Natural Resources for activities eligible under the following regulatory provision:

Wind Facilities - Operations

located at:

2 Parkside AVE
Zurich, ON N0M2T0

for the following species:

Barn Owl[Tyto alba]; Barn Swallow[Hirundo rustica]; Bobolink[Dolichonyx oryzivorus]; Eastern Meadowlark[Sturnella magna]; Eastern Whip-poor-will[Antrostomus vociferus]; Least Bittern[Ixobrychus exilis]; Yellow-breasted Chat[Icteria virens]; Little Brown Myotis (Little Brown Bat)[Myotis lucifugus]; Northern Myotis (Northern Long-eared Bat)[Myotis septentrionalis];

You are required to show this Confirmation of Registration upon the request of the Ministry. Please refer to Ontario Regulation 242/08 for requirements that apply to your activity.

Any questions related to this registration and/or the Natural Resources Registry should be directed to:

Registry and Approval Services Centre
Ministry of Natural Resources
300 Water Street
Peterborough, ON, K9J8M5
Toll-free: 1-855-613-4256
E-mail: mnr.rasc@ontario.ca

RENEWABLE ENERGY APPROVALNUMBER 5186-9HBJXR
Issue Date: June 26, 2014

Grand Bend Wind GP Inc. as general partner for and on
behalf of Grand Bend Wind Limited Partnership
30 St. Clair Avenue West, Unit 1700
Toronto, Ontario
M4V 3A1

Project: Grand Bend Wind Farm
Location: Generally bound by Lake Huron to west, Main Street/Grand
Bend Line to the south, Bronson Line to east, Staffa Road
to north, and a transmission line along Sararas Road,
Rodgerville Road, and Road 183.
Municipality of Bluewater, Municipality of South Huron,
Municipality of Huron East, Municipality of West Perth,
Huron County, and Perth County

*You have applied in accordance with Section 47.4 of the Environmental Protection Act for approval to
engage in a renewable energy project in respect of a Class 4 wind facility consisting of the following:*

- the construction, installation, operation, use and retiring of a Class 4 wind facility with a total name plate
capacity of 100 megawatts.

For the purpose of this renewable energy approval, the following definitions apply:

1. "Acoustic Assessment Report" means the report included in the Application and entitled "Grand Bend Wind
Farm - Environmental Noise Impact Assessment Report", dated April 15, 2014 and signed by Michael
Medal and Payam Ashtiani, Aercoustics Engineering Limited;
2. "Acoustic Audit - Emission" means an investigative procedure that is compliant with the CAN/CSA
Standard C61400-11-07 and consisting of measurements and/or acoustic modelling of noise emissions
produced by wind turbine generators, assessed to determine compliance with the manufacturer's noise
(acoustic) equipment specifications and emission data of the wind turbine generators, included in the
Acoustic Assessment Report;

3. "Acoustic Audit - Immission" means an investigative procedure consisting of measurements and/or acoustic modelling of all sources of noise emissions due to the operation of the Equipment, assessed to determine compliance with the Noise Performance Limits set out in this Approval;
4. "Acoustic Audit Report-Emission" means a report presenting the results of the Acoustic Audit - Emission;
5. "Acoustic Audit Report-Immission" means a report presenting the results of the Acoustic Audit - Immission;
6. "Acoustic Audit - Transformer Substation/Transformer and Reactor" means an investigative procedure that is compliant with the IEEE Standard C57.12.90 consisting of measurements and/or acoustic modelling of all noise sources comprising the transformer substation/transformer and reactor, assessed to determine compliance with the Sound Power Level specification of the transformer substation described in the Acoustic Assessment Report.
7. "Acoustic Audit Report - Transformer Substation/Transformer and Reactor" means a report presenting the results of the Acoustic Audit - Transformer Substation/Transformer and Reactor.
8. "Acoustical Consultant" means a person currently active in the field of environmental acoustics and noise/vibration control, who is knowledgeable about Ministry noise guidelines and procedures and has a combination of formal university education, training and experience necessary to assess noise emissions from wind facilities;
9. "Act" means the *Environmental Protection Act*, R.S.O 1990, c.E.19, as amended;
10. "Adverse Effect" has the same meaning as in the Act;
11. "Application" means the application for a Renewable Energy Approval dated February 5, 2013, and signed by John Brace, President and CEO, Grand Bend Wind GP Inc., and all supporting documentation submitted with the application, including amended documentation submitted up to the date this Approval is issued;
12. "Approval" means this Renewable Energy Approval issued in accordance with Section 47.4 of the Act, including any schedules to it;
13. "A-weighting" means the frequency weighting characteristic as specified in the International Electrotechnical Commission (IEC) Standard 61672, and intended to approximate the relative sensitivity of the normal human ear to different frequencies (pitches) of sound. It is denoted as "A";
14. "A-weighted Sound Pressure Level" means the Sound Pressure Level modified by application of an A-weighting network. It is measured in decibels, A-weighted, and denoted "dBA";
15. CAN/CSA Standard C61400-11-07, "Wind Turbine Generator Systems – Part 11: Acoustic Noise Measurement Techniques", dated October 2007;

16. "Class 1 Area" means an area with an acoustical environment typical of a major population centre, where the background sound level is dominated by the activities of people, usually road traffic, often referred to as "urban hum";
17. "Class 2 Area" means an area with an acoustical environment that has qualities representative of both Class 1 and Class 3 Areas:
 1. sound levels characteristic of Class 1 during daytime (07:00 to 19:00 or to 23:00 hours);
 2. low evening and night background sound level defined by natural environment and infrequent human activity starting as early as 19:00 hours (19:00 or 23:00 to 07:00 hours);
 3. no clearly audible sound from stationary sources other than from those under impact assessment.
18. "Class 3 Area" means a rural area with an acoustical environment that is dominated by natural sounds having little or no road traffic, such as the following:
 1. a small community with less than 1000 population;
 2. agricultural area;
 3. a rural recreational area such as a cottage or a resort area; or
 4. a wilderness area.
19. "Company" means Grand Bend Wind GP Inc., as general partner for and on behalf of Grand Bend Wind Limited Partnership, the partnership under the laws of Ontario, and includes its successors and assignees;
20. "Compliance Protocol for Wind Turbine Noise" means the Ministry document entitled, Compliance Protocol for Wind Turbine Noise, Guideline for Acoustic Assessment and Measurement, PIBS# 8540e;
21. "Decibel" means a dimensionless measure of Sound Level or Sound Pressure Level, denoted as dB;
22. "Director" means a person appointed in writing by the Minister of the Environment pursuant to section 5 of the Act as a Director for the purposes of section 47.5 of the Act;
23. "District Manager" means the District Manager of the appropriate local district office of the Ministry where the Facility is geographically located;
24. "Equipment" means the wind turbine generators and the substation with transformer and reactor, identified in this Approval and as further described in the Application, to the extent approved by this Approval;

25. "Equivalent Sound Level" is the value of the constant sound level which would result in exposure to the same total A-weighted energy as would the specified time-varying sound, if the constant sound level persisted over an equal time interval. It is denoted L_{eq} and is measured in dB A-weighting (dBA);
26. "Facility" means the renewable energy generation facility, including the Equipment, as described in this Approval and as further described in the Application, to the extent approved by this Approval;
27. "IEEE Standard C57.12.90" means the IEEE Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers, 2010.
28. "Independent Acoustical Consultant" means an Acoustical Consultant who is not representing the Company and was not involved in preparing the Acoustic Assessment Report. The Independent Acoustical Consultant shall not be retained by the Acoustical Consultant involved in the noise impact assessment;
29. "Ministry" means the ministry of the government of Ontario responsible for the Act and includes all officials, employees or other persons acting on its behalf;
30. "Noise Guidelines for Wind Farms" means the Ministry document entitled, "Noise Guidelines for Wind Farms - Interpretation for Applying MOE NPC Publications to Wind Power Generation Facilities", dated October 2008;
31. "Noise Receptor" has the same meaning as in O. Reg. 359/09;
32. "Publication NPC-233" means Ministry Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October 1995;
33. "O. Reg. 359/09" means Ontario Regulation 359/09 "Renewable Energy Approvals under Part V.0.1 of the Act" made under the Act;
34. "Point of Reception" has the same meaning as in the Noise Guidelines for Wind Farms and is subject to the same qualifications described in that document;
35. "Sound Level" means the A-weighted Sound Pressure Level;
36. "Sound Level Limit" is the limiting value described in terms of the one hour A-weighted Equivalent Sound Level L_{eq} ;
37. "Sound Power Level" means ten times the logarithm to the base of 10 of the ratio of the sound power (Watts) of a noise source to standard reference power of 10^{-12} Watts;
38. "Sound Pressure" means the instantaneous difference between the actual pressure and the average or barometric pressure at a given location. The unit of measurement is the micro pascal (μPa);

39. "Sound Pressure Level" means twenty times the logarithm to the base 10 of the ratio of the effective pressure (μPa) of a sound to the reference pressure of 20 μPa ;
40. "UTM" means Universal Transverse Mercator coordinate system.

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

A – GENERAL

- A1. The Company shall construct, install, use, operate, maintain and retire the Facility in accordance with the terms and conditions of this Approval and the Application and in accordance with the following schedules attached hereto:

Schedule A - Facility Description

Schedule B - Coordinates of the Equipment and Noise Specifications

- A2. Where there is a conflict between a provision of this Approval and any document submitted by the Company, the conditions in this Approval shall take precedence. Where there is a conflict between one or more of the documents submitted by the Company, the document bearing the most recent date shall take precedence.
- A3. The Company shall ensure a copy of this Approval is:
- (1) accessible, at all times, by Company staff operating the Facility and;
 - (2) submitted to the clerk of each local municipality and upper-tier municipality in which the Facility is situated.
- A4. If the Company has a publicly accessible website, the Company shall ensure that the Approval and the Application are posted on the Company's publicly accessible website within five (5) business days of receiving this Approval.
- A5. The Company shall, at least six (6) months prior to the anticipated retirement date of the entire Facility, or part of the Facility, review its Decommissioning Plan Report to ensure that it is still accurate. If the Company determines that the Facility cannot be decommissioned in accordance with the Decommissioning Plan Report, the Company shall provide the Director and District Manager a written description of plans for the decommissioning of the Facility.
- A6. The Facility shall be retired in accordance with the Decommissioning Plan Report and any directions provided by the Director or District Manager.

- A7. The Company shall provide the District Manager and the Director at least ten (10) days written notice of the following:
- (1) the commencement of any construction or installation activities at the project location; and
 - (2) the commencement of the operation of the Facility.
- A8. As described in Schedule A of the Approval the Company shall not construct or operate more than forty (40) out of the forty eight (48) wind turbine generators, one transformer substation (with transformer and reactor), one switchyard, and one parts and storage building, as specified in Schedules A and B of the Approval;

B – EXPIRY OF APPROVAL

- B1. Construction and installation of the Facility must be completed within three (3) years of the later of:
- (1) the date this Approval is issued; or
 - (2) if there is a hearing or other litigation in respect of the issuance of this Approval, the date that this hearing or litigation is disposed of, including all appeals.
- B2. This Approval ceases to apply in respect of any portion of the Facility not constructed or installed before the later of the dates identified in Condition B1.

C – NOISE PERFORMANCE LIMITS

- C1. The Company shall ensure that:
- (1) the Sound Levels from the Equipment, at the Points of Reception identified in the Acoustic Assessment Report, comply with the Sound Level Limits set in the Noise Guidelines for Wind Farms, as applicable, and specifically as stated in the table below:

Wind Speed (m/s) at 10 m height	4	5	6	7	8	9	10
Sound Level Limits, dBA	40.0	40.0	40.0	43.0	45.0	49.0	51.0

- (2) the Equipment is constructed and installed at either of the following locations:
 - a) at the locations identified in Schedule B of this Approval; or
 - b) at a location that does not vary by more than 10 metres from the locations identified in Schedule B of this Approval and provided that,
 - i) the Equipment will comply with Condition C1 (1); and
 - ii) all setback prohibitions established under O. Reg. 359/09 are complied with.

- (3) the Equipment complies with the noise specifications set out in Schedule B of this Approval.
- C2. Prior to construction and installation of the transformer substation the Company shall submit to the Director a written confirmation signed by an individual who has the authority to bind the Company that the subject transformer and the reactor sound power levels, determined fully in accordance with the IEEE Standard C57.12.90-2010, do not exceed the maximum sound power levels specified in the Schedule B of the Approval. The written confirmation also must include detailed electrical ratings (including MVA and kV) for the transformer and the reactor.
- C3. If the Company determines that some or all of the Equipment cannot be constructed in accordance with Condition C1 (2), prior to the construction and installation of the Equipment in question, the Company shall apply to the Director for an amendment to the terms and conditions of the Approval.
- C4. Within three (3) months of the completion of the construction of the Facility, the Company shall submit to the Director a written confirmation signed by an individual who has the authority to bind the Company that the UTM coordinates of the “as constructed” Equipment comply with the requirements of Condition C1 (2).

D – CONFIRMATION OF VACANT LOT NOISE RECEPTORS

- D1. The four hundred and fifty eight (458) vacant lots location identified in the Table entitled "Grand Bend Wind Farm - Noise Impact Summary Table - Vacant Lots" from the final revised "Grand Bend Wind Farm - Environmental Noise Impact Assessment Report for the ", as the Non-Participating Vacant Lots with ID numbers VL1-VL458 are specified as Noise Receptors for the purposes of subsection 54 (1.1) of O. Reg. 359/09 and subsection 35 (1.01) of O. Reg. 359/09.

E – ACOUSTIC AUDIT - IMMISSION

- E1. The Company shall carry out an Acoustic Audit - Immission of the Sound Levels produced by the operation of the Equipment in accordance with the following:
- (1) the acoustic audit measurements shall be undertaken in accordance with Part D of the Compliance Protocol for Wind Turbine Noise;
 - (2) the acoustic audit measurements shall be performed by an Independent Acoustical Consultant on two (2) separate occasions at five (5) different Points of Reception;
 - (3) the Points of Reception shall be selected using the following criteria, subject to the constraints imposed by the location of the Points of Reception with respect to the location of the Equipment:
 - a) the selected Point(s) of Reception should represent the location of the greatest predicted noise impacts, i.e., the highest predicted Sound Levels; and
 - b) the selected Point(s) of Reception should be located in the direction of prevailing winds from the Facility.

- E2. The Company shall submit to the District Manager and the Director an Acoustic Audit Report-Immission, prepared by an Independent Acoustical Consultant, at the following points in time:
- (1) no later than twelve (12) months after the commencement of the operation of the Facility for the first of the two (2) acoustic audit measurements at the five (5) Points of Reception; and
 - (2) no later than eighteen (18) months after the commencement of the operation of the Facility for the second of the two (2) acoustic audit measurements at the five (5) Points of Reception.
- E3. The Company shall carry out an Acoustic Audit - Transformer Substation/Transformer and Reactor and shall submit to the District Manager and the Director an Acoustic Audit Report – Transformer Substation/Transformer and Reactor prepared by an Independent Acoustical Consultant, in accordance with the IEEE Standard C57.12.90 and Ministry Publication NPC-233 and no later than six (6) months after the commencement of the operation of the Facility.
- E.4. In addition to the requirements described in Condition E.3, the Acoustic Audit - Transformer Substation/Transformer and Reactor must include a compliance summary of the measurement results and the transformer and reactor sound data contained in Attachment D of the Acoustic Assessment Report. The following items must be included in the compliance summary:
- (1) transformer sound power levels (overall level and frequency spectra in octave bands);
 - (2) reactor sound power levels (overall level and frequency spectra in octave bands); and
 - (3) statements that the transformer and the reactor sound power levels do not exceed the maximum sound power levels specified in the Schedule B of the Approval.

F – ACOUSTIC AUDIT- EMISSION

- F1. The Company shall carry out an Acoustic Audit - Emission of the acoustic emissions produced by the operation of the wind turbine generators in accordance with the following:
- (1) the acoustic emission measurements of the wind turbine generators shall be undertaken in accordance with the CAN/CSA Standard C61400-11-07;
 - (2) the acoustic emission measurements shall be performed by an Independent Acoustical Consultant; and
 - (3) the acoustic emission measurements shall be performed on two (2) wind turbine generators used in the Facility.
- F2. The Company shall submit to the District Manager and the Director an Acoustic Audit Report-Emission, prepared in accordance with Section 9 of the CAN/CSA Standard C61400-11-07 by an Independent Acoustical Consultant, no later than six (6) months after the commencement of the operation of the Facility.

- F3. In addition to the requirements described in Condition F2, the Acoustic Audit Report-Emission must include a summary of the measurement results corresponding to guarantee letter dated April 7, 2014 from the wind turbine generators manufacturer's (contained in the Attachment A of the Acoustic Assessment Report). The purpose of the summary is to show compliance with the guarantee letter. The following items must be included in the compliance summary:
- (1) sound power levels (overall levels and frequency spectra in octave bands for each wind speed) of the wind turbine generators;
 - (2) tonal audibility values (for each wind speed) of the wind turbine generators;
 - (3) statement that the wind turbine generators sound power levels, as per Condition F3(1), do not exceed the maximum sound power level specified in the Schedule B of the Approval; and
 - (4) statement that the wind turbine generators tonal audibility values, as per Condition F3(2), comply with the maximum tonal audibility value of 3.0 dB.

G – STORMWATER MANAGEMENT

- G1. The Company shall employ best management practices for stormwater management and sediment and erosion control during construction, installation, use, operation, maintenance and retiring of the Facility, as described in the Application.
- G2. Sedimentation and erosion control measures, including, but not limited to, straw bales, silt fence barriers, sand bags, turbidity curtains and/or rock check dams, shall be installed at the site of all construction activities during the construction phase, and remain until the site has been stabilized. The sedimentation and erosion control measures shall be sufficient to control the volumes of surface runoff. Continuous care shall be taken to properly maintain the sedimentation and erosion control devices.
- G3. During the construction and decommissioning phases, monitoring and recording of on-site conditions (including erosion and sediment control measures) shall occur, at minimum:
- (1) weekly during active construction periods;
 - (2) daily during extended rain or snowmelt periods.

H – WATER TAKING ACTIVITIES

- H1. The Company shall not take more than 50,000 litres of water on any day by any means during the construction, installation, use, operation, maintenance and retiring of the Facility.
- H2. Notwithstanding Condition H1, the Company is authorized to take, via diversion of flow, from the sources, for the duration, and at the rates and amounts of taking specified in the following table. Water taken upstream of each source at the culvert work site shall be returned directly downstream of the site with no impoundment of water.

Source	Crossing ID	Maximum Rate of Taking (m3/s)	Maximum number of days of taking	Maximum Volume of Taking (m3/day)
Hay B (North Crossing)	CR-031	0.025	10	21,600
Hay B (South Crossing)	CR-032	0.017	13	19,094
Saint Joseph Drain South	CR-041	0.036	12	37,325
Hay E	CR-023	0.003	10	2,592
Kading Drain	CR-018	0.083	20	143,424

- H3. For water taking for the purpose of watercourse diversion during the installation of the six new culverts, on each day water is taken, the Company shall record the date, the volume of water taken on that date and the rate at which it was taken. The daily volume of water taken shall be measured by a flow meter, or estimated based on the rate and duration of pumping. The Company shall keep all records required by this condition current and available at or near the site of the taking, and shall make these records available for review by the Ministry upon request.
- H4. The Company shall ensure that any water discharged to the natural environment does not result in scouring, erosion or physical alteration of stream channels or banks and that there is no flooding in the receiving area or water body, downstream water bodies, ditches or properties caused or worsened by this discharge.
- H5. The Company shall not discharge turbid water to any watercourse. Turbid water shall be defined as any discharge water or diverted water with a maximum increase of 5 NTUs above the receiving watercourse background levels.

I – ACCIDENTAL SPILLS

- I1. The Company shall ensure that all equipment used at the site is well maintained, clean and free of leaks. Maintenance on construction equipment such as refuelling, oil changes or lubrication shall only be permitted in designated areas located at a minimum 30 metres from any water feature, and all precautions shall be made to prevent oil, grease, antifreeze or other materials from entering the ground or surface water flow.
- I2. The Company shall ensure that adequate spill clean-up equipment and/or supplies are available at the site for fuel, oil and lubricant spills, and that all on-site operators are familiar with the use of such equipment and/or supplies.

J – SURFACE WATER

- J1. Directional drilling entry points and receiving pits shall be located at a minimum distance of 15 metres from the top of bank of any watercourses, unless the 15 metre setback would require construction activities to take place outside the Project Location, or outside the shoulder of public roads. In the event that the 15 metre setback can not be achieved within the Project Location or in the shoulder of public roads, the Company shall implement additional site-specific erosion and sediment control measures including contingency measures to avoid impacts to watercourses.
- J2. The Company shall undertake, as necessary, any other proposed mitigation measures for the water bodies described in the Water Assessment and Water Body Report, dated February 2013, prepared by Neegan Burnside Ltd.

K – SEWAGE WORKS OF THE TRANSFORMER SUBSTATION SPILL CONTAINMENT FACILITY

- K1. The Company shall design and construct a transformer substation oil spill containment facility which meets the following requirements:
- (1) the spill containment facility serving the transformer substation shall have a minimum volume equal to the volume of transformer oil and lubricants plus the volume equivalent to providing a minimum 24-hour duration, 50-year return storm capacity for the stormwater drainage area around the transformer under normal operating conditions. This containment area shall have:
 - (a) an impervious floor with walls usually of reinforced concrete or impervious plastic liners, sloped toward an outlet / oil control device, allowing for a freeboard of 0.25 metres terminating approximately 0.30 metres above grade to prevent external stormwater flows from entering the facility. The facility shall have a minimum of 300mm layer of crushed stoned (19mm to 38mm in diameter) within, all as needed in accordance to site specific conditions and final design parameters; or
 - (b) a permeable floor with impervious plastic walls and around the transformer pad; equipped with subsurface drainage with a minimum 50mm diameter drain installed on a sand layer sloped toward an outlet for sample collection purposes; designed with an oil absorbent material on floor and walls, and allowing for a freeboard of 0.25 metres terminating approximately 0.30 metres above grade to prevent external stormwater flows from entering the facility. The facility's berm shall be designed as needed in accordance to site specific conditions and the facility shall have a minimum 300mm layer of crushed stoned (19mm to 38mm in diameter) on top of the system, as needed in accordance to site specific conditions and final design parameters.
 - (2) the spill containment facility shall be equipped with an oil detection system; it also shall have a minimum of two (2) PVC pipes (or equivalent material) 50mm diameter to allow for visual inspection of water accumulation. One pipe has to be installed half way from the transformer pad to the vehicle access route;

- (3) the spill containment facility shall have appropriate sewage appurtenances as necessary, such as but not limited to: sump, oil/grit separator, pumpout manhole, level controllers, floating oil sensors, etc., that allows for batch discharges or direct discharges and for proper implementation of the monitoring program described under Condition K4; and
- (4) the Company shall have a qualified person on-site during construction to ensure that the system is installed in accordance with the approved design and specifications.

K2. The Company shall:

- (1) within six (6) months after the completion of the construction of the transformer substation spill containment facility, provide to the District Manager an engineering report and as-built design drawings of the sewage works for the spill containment facility and any stormwater management works required for it, signed and stamped by an independent Professional Engineer licensed in Ontario and competent in electrical and environmental engineering. The engineering report shall include the following:
 - (a) as-built drawings of the sewage works for the spill containment facility and any stormwater management works required for it;
 - (b) a written report signed by a qualified person confirming the following:
 - (i) on-site supervision during construction
 - (ii) in case of a permeable floor systems: type of oil absorbent material used (for mineral-based transformer oil or vegetable-based transformer oil, make and material's specifications)
 - (ii) use of stormwater best management practices applied to prevent external surface water runoff from entering the spill containment facility, and
 - (iv) confirm adequacy of the installation in accordance with specifications.
 - (c) confirmation of the adequacy of the operating procedures and the emergency procedures manuals as it pertains to the installed sewage works.
 - (d) procedures to provide emergency response to the site in the form of pumping and clean-up equipment within 24 hours after an emergency has been identified. Such response shall be provided even under adverse weather conditions to prevent further danger of material loss to the environment.
- (2) as a minimum, the Company shall check the oil detection systems on a monthly basis and create a written record of the inspections;
- (3) ensure that the effluent is essentially free of floating and settle-able solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen or foam on the receiving waters;

- (4) immediately identify and clean-up all losses of oil from the transformer;
- (5) upon identification of oil in the spill containment facility, take immediate action to prevent the further occurrence of such loss;
- (6) ensure that equipment and material for the containment, clean-up and disposal of oil and materials contaminated with oil are kept within easy access and in good repair for immediate use in the event of:
 - (a) loss of oil from the transformer,
 - (b) a spill within the meaning of Part X of the Act, or
 - (c) the identification of an abnormal amount of oil in the effluent.
- (7) in the event of finding water accumulation in the PVC pipes at the time of inspection, as per Condition K4, the Company shall: (a) for impervious floors, inspect the sewage appurtenances that allow drainage of the concrete pit; or (b) for permeable systems, replace the oil absorbent material to ensure integrity of the system performance and design objectives.
- (8) for permeable floor systems, the Company shall only use the type of oil specified in the design, i.e. mineral-based transformer oil or vegetable-based transformer oil. If a change is planned to modify the type of oil, the Company shall also change the type of the oil absorbent material and obtain approval from the Director to amend this Approval before any modification is implemented.

K3. The Company shall design, construct and operate the sewage works such that the concentration of the effluent parameter named in the table below does not exceed the maximum Concentration Objective shown for that parameter in the effluent, and shall comply with the following requirements:

Effluent Parameters	Maximum Concentration Objective
Oil and Grease	15mg/L

- (1) notify the District Manager as soon as reasonably possible of any exceedance of the maximum concentration objective set out in the table above;
- (2) take immediate action to identify the cause of the exceedance; and
- (3) take immediate action to prevent further exceedances.

K4. Upon commencement of the operation of the Facility, the Company shall establish and carry out the following monitoring program for the sewage works:

- (1) the Company shall collect and analyze the required set of samples at the sampling points listed in the table below in accordance with the measurement frequency and sample type specified for the effluent parameter, oil and grease, and create a written record of the monitoring:

Effluent Parameters	Measurement Frequency and Sample Points	Sample Type
Oil and Grease	Quarterly, i.e. four times over a year, relatively evenly spaced having a minimum two (2) of these samples taken within 48 hours after a 10mm rainfall event.	Grab

- (2) in the event of an exceedance of the maximum concentration objective set out in the table in Condition K3, the Company shall:
 - (a) increase the frequency of sampling to once per month, for each month that effluent discharge occurs, and
 - (b) provide the District Manager, on a monthly basis, with copies of the written record created for the monitoring until the District Manager provides written direction that monthly sampling and reporting is no longer required; and
- (3) if over a period of twenty-four (24) months of effluent monitoring under Condition K4, there are no exceedances of the maximum concentration set out in the table for Concentration Objective, the Company may reduce the measurement frequency of effluent monitoring to a frequency as the District Manager may specify in writing, provided that the new specified frequency is never less than annual.

K5. The Company shall comply with the following methods and protocols for any sampling, analysis and recording undertaken in accordance with Condition K4:

- (1) Ministry of the Environment publication "Protocol for the Sampling and Analysis of Industrial/ Municipal Wastewater", January 1999, as amended from time to time by more recently published editions, and
- (2) the publication "Standard Methods for the Examination of Water and Wastewater", 21st edition, 2005, as amended from time to time by more recently published editions.

L – NATURAL HERITAGE

General

- L1. The Company shall implement the Environmental Effects Monitoring Plan for the Grand Bend Wind Farm, titled Grand Bend Wind Farm Natural Heritage Environmental Effects Monitoring Plan, dated January 2013, and the commitments made in the Grand Bend Wind Farm Natural Heritage Assessment, dated January 2013 prepared by Neegan Burnside Ltd., and included in the application, and which the Company submitted to the Ministry of Natural Resources in order to comply with O. Reg. 359/09.

- L2. If the Company determines that it must deviate from the Environmental Effects Monitoring Plan or the Natural Heritage Assessment, described in Condition L1, the Company shall contact the Director and the Ministry of Natural Resources, prior to making any changes to the Environmental Effects Monitoring Plan or the Natural Heritage Assessment, and follow any directions provided.

Post Construction Monitoring - Significant Wildlife Habitat

- L3. The Company shall implement the post-construction monitoring described in the Environmental Effects Monitoring Plan described in Condition L1, including the following:
- (1) Disturbance Monitoring for Amphibian Breeding Habitat (ABH-001)
 - (2) Disturbance Monitoring for Turtle Nesting Area (TNA-002)

Post Construction Monitoring - Birds and Bats

- L4. The Company shall implement the post-construction bird and bat mortality monitoring described in the Environmental Effects Monitoring Plan, described in Condition L1, at a minimum of 12 of the 40 constructed turbines, selected in consultation with the Ministry of Natural Resources. Turbines 17, 18 and 42 must be included on the list of monitored turbines.

Thresholds and Mitigation

- L5. The Company shall contact the Director and the Ministry of Natural Resources if any of the following bird and bat mortality thresholds, as stated in the Environmental Effects Monitoring Plan for the Grand Bend Wind Farm described in Condition L1, exceeds:
- (1) 10 bats per turbine per year averaged across the Facility;
 - (2) 14 birds per turbine per year at individual turbines or turbine groups;
 - (3) 0.2 raptors per turbine per year (all raptors) across the Facility;
 - (4) 0.1 raptors per turbine per year (provincially tracked raptors) across the Facility;
 - (5) 10 or more birds at any one turbine during a single monitoring survey; or
 - (6) 33 or more birds (including raptors) at multiple turbines during a single monitoring survey.
- L6. If the bat mortality threshold described in Condition L5(1) is exceeded, the Company shall:
- (1) implement operational mitigation measures consistent with those described in the Ministry of Natural Resources publication entitled "*Bats and Bat Habitats: Guidelines for Wind Power Projects* " dated July 2011, or in an amended version of the publication. Such measures shall include some or all of the following:

- i. increase cut-in speed to 5.5 m/s and/or feather wind turbine blades when wind speeds are below 5.5 m/s between sunset and sunrise, from July 15 to September 30 at all turbines;
 - (2) implement an additional three (3) years of effectiveness monitoring.
- L7. If the bat mortality threshold described in Condition L5(1) is exceeded after operational mitigation is implemented in accordance with Condition L6, the Company shall prepare and implement a contingency plan, in consultation with the Director and the Ministry of Natural Resources, to address mitigation actions which shall include additional mitigation and scoped monitoring requirements.
- L8. If any of the bird mortality thresholds described in Conditions L5(2), L5(3), or L5(4) are exceeded for turbines located outside 120m of bird significant wildlife habitat, the Company shall conduct two (2) years of subsequent scoped mortality monitoring and cause and effects monitoring. Following the completion of scoped monitoring, the Company shall implement operational mitigation and effectiveness monitoring at individual turbines as agreed to between the Company, the Director and the Ministry of Natural Resources, for the first three (3) years following the implementation of mitigation.
- L9. If either of the bird mortality thresholds described in Conditions L5(5) or L5(6) are exceeded, the Company shall prepare and implement a contingency plan to address immediate mitigation actions which shall include:
- (1) periodic shut-down of select turbines; or
 - (2) blade feathering at specific times of year; or
 - (3) an alternate plan agreed to between the Company, the Director, and the Ministry of Natural Resources.
- L10. If any of the bird mortality thresholds described in Conditions L5(2), L5(3), or L5(4) are exceeded while monitoring is being implemented in accordance with Conditions L8, or if either of the bird mortality thresholds described in Conditions L5(5) or L5(6) are exceeded after mitigation is implemented in accordance with Condition L9, the Company shall contact the Director and the Ministry of Natural Resources and prepare and implement an appropriate response plan that shall include some or all of the following mitigation measures:
- (1) increased reporting frequency to identify potential threshold exceedance;
 - (2) additional behavioural studies to determine factors affecting mortality rates;
 - (3) periodic shut-down of select turbines;
 - (4) blade feathering at specific times of year; or

- (5) an alternate plan agreed to between the Company, the Director and the Ministry of Natural Resources.

Reporting and Review of Results

- L11. The Company shall report, in writing, the results of the post-construction disturbance monitoring described in Conditions L3, to the Director and the Ministry of Natural Resources for two (2) years on an annual basis and within three (3) months of the end of each calendar year in which the monitoring took place.
- L12. The Company shall report, in writing, bird and bat mortality levels to the Director and the Ministry of Natural Resources for three (3) years on an annual basis and within three (3) months of the conclusion of the November mortality monitoring, with the exception of the following:
- (1) if either of the bird mortality thresholds described in Conditions L5(5) or L5(6) are exceeded, the Company shall report the mortality event to the Director and the Ministry of Natural Resources within 48 hours of observation;
 - (2) for any and all mortality of species at risk (including a species listed on the Species at Risk in Ontario list as Extirpated, Endangered or Threatened under the provincial *Endangered Species Act*, 2007) that occurs, the Company shall report the mortality to the Ministry of Natural Resources within 24 hours of observation or the next business day;
 - (3) if the bat mortality threshold described in Condition L5(1) is exceeded, the Company shall report mortality levels to the Director and the Ministry of Natural Resources for the additional three (3) years of monitoring described in Condition L6, on an annual basis and within three (3) months of the conclusion of the October mortality monitoring for each year;
 - (4) if any of the bird mortality thresholds described in Conditions L5(2), L5(3), or L5(4) are exceeded for turbines located outside 120 m of bird significant wildlife habitat, the Company shall report mortality levels to the Director and the Ministry of Natural Resources for the additional two (2) years of cause and effects monitoring described in Condition L8, on an annual basis and within three (3) months of the conclusion of the November mortality monitoring for each year; and
 - (5) if the Company implements operational mitigation following cause and effects monitoring in accordance with Condition L8, the Company shall report mortality levels to the Director and the Ministry of Natural Resources for the three (3) years of subsequent effectiveness monitoring described in Condition L8, on an annual basis and within three (3) months of the conclusion of the November mortality monitoring for each year.

- L13. The Company shall publish the following documents on the Company's website;
- (1) any modifications to the Environmental Effects Monitoring Plan as described in Condition L2 within ten (10) days of submitting the final plan to the Director and the Ministry of Natural Resources;
 - (2) the results of the post-construction disturbance monitoring as described in Condition L11 within ten (10) days of submitting the final report(s) to the Director and the Ministry of Natural Resources; and
 - (3) annual bird and bat mortality monitoring as described in Condition L12 with the exception of subsection L12(2), within ten (10) days of submitting the final report(s) to the Director and the Ministry of Natural Resources.

M – ENVIRONMENT CANADA

- M1. Prior to operating (turbine blade movement that is feathered in accordance with the manufacturer's specifications is allowed) any of the wind turbines at the Facility, the Company shall, in collaboration with Environment Canada, develop and, enter into the following:
- (1) an Exceptional Weather Event Protocol that ensures that the Exeter Radar Station (Weather Radar) continues to provide accurate and reliable forecasts and weather warnings for high risk weather events;
 - (2) a Follow-up Plan; and
 - (3) an Adaptive Management Strategy.
- M2. Prior to operating (turbine blade movement that is feathered in accordance with the manufacturer's specifications is allowed) any of the wind turbines at the Facility, the Company shall enter into an Agreement Regarding the Implementation of the Follow-up Plan, the Adaptive Management Strategy and the Exceptional Weather Event Protocol (Agreement) with Environment Canada that will set out the details of the commitments and timelines required for the Exceptional Weather Event Protocol, Follow-up Plan, and Adaptive Management Strategy. The Agreement shall include specifics of the financial assurance to be provided by the Company to ensure the implementation of the agreement.
- M3. The day the first wind turbine is operating (turbine blade movement that is feathered in accordance with the manufacturer's specifications is allowed) at the Facility, the Company shall begin implementing its obligations under the Exceptional Weather Event Protocol and Follow-up Plan described in Condition M1.
- M4. As part of the Follow-Up Plan, the Company shall, in collaboration with Environment Canada:
- (1) develop the measureable objectives and decision making criteria for defining the success of the plan;

- (2) provide for the development, and subsequently the implementation, of the data interpolation mitigation measure agreed to by the Company and Environment Canada;
 - (3) verify the accuracy of the predicted adverse impacts to the Weather Radar resulting from the commercial operation of the Facility;
 - (4) assess the effectiveness of the data interpolation measure(s) to mitigate the predicted adverse impacts during the commercial operation of the Facility; and
 - (5) monitor the effectiveness of the Weather Radar in order to determine whether any additional mitigation measures are necessary.
- M5. During the implementation of the Follow-Up Plan, should it be determined based on the Follow-Up Plan that the data interpolation mitigation measure(s) do not adequately mitigate the adverse impacts of the Facility so that the Weather Radar can continue to provide accurate and reliable forecasts and weather warnings in accordance with Environment Canada's mandate, the Company shall, in collaboration with Environment Canada, implement the Adaptive Management Strategy, which shall include the following:
- (1) the design and implementation of additional mitigation measures that are reasonably necessary to mitigate any identified adverse impacts to the Weather Radar; and
 - (2) the monitoring and assessment of the effectiveness of these additional mitigation measures.

N – ABORIGINAL CONSULTATION

- N1. During the construction, installation, operation, use and retiring of the Facility, the Company shall:
- (1) create and maintain written records of any communications with Aboriginal communities; and
 - (2) make the written records available for review by the Ministry upon request.
- N2. The Company shall provide the following to interested Aboriginal communities:
- (1) updated project information, including the results of monitoring activities undertaken and copies of additional archaeological assessment reports that may be prepared; and
 - (2) updates on key steps in the construction, installation, operation, use and retirement phases of the Facility, including notice of the commencement of construction activities at the project location.
- N3. If an Aboriginal community requests a meeting to obtain information relating to the construction, installation, operation, use and retiring of the Facility, the Company shall make reasonable efforts to arrange and participate in such a meeting.

N4. If any archaeological resources of Aboriginal origin are found during the construction of the Facility, the Company shall:

- (1) notify any Aboriginal community considered likely to be interested or which has expressed an interest in such finds; and,
- (2) if a meeting is requested by an Aboriginal community to discuss the archaeological find(s), make reasonable efforts to arrange and participate in such a meeting.

O – ARCHAEOLOGICAL RESOURCES

O1. The Company shall implement all of the recommendations, if any, for further archaeological fieldwork and for the protection of archaeological sites found in the consultant archaeologist's report included in the Application, and which the Company submitted to the Ministry of Tourism, Culture and Sport in order to comply with O. Reg. 359/09.

O2. Should any previously undocumented archaeological resources be discovered, the Company shall:

- (1) cease all alteration of the area in which the resources were discovered immediately;
- (2) engage a consultant archaeologist to carry out the archaeological fieldwork necessary to further assess the area and to either protect and avoid or excavate any sites in the area in accordance with the *Ontario Heritage Act*, the regulations under that act and the Ministry of Tourism, Culture and Sport's *Standards and Guidelines for Consultant Archaeologists*; and
- (3) notify the Director as soon as reasonably possible.

P – COMMUNITY LIAISON COMMITTEE

P1. Within three (3) months of receiving this Approval, the Company shall make reasonable efforts to establish a Community Liaison Committee. The Community Liaison Committee shall be a forum to exchange ideas and share concerns with interested residents and members of the public. The Community Liaison Committee shall be established by:

- (1) publishing a notice in a newspaper with general circulation in each local municipality in which the project location is situated; and
- (2) posting a notice on the Company's publicly accessible website, if the Company has a website;

to notify members of the public about the proposal for a Community Liaison Committee and invite residents living within a one (1) kilometre radius of the Facility that may have an interest in the Facility to participate on the Community Liaison Committee.

- P2. The Company may invite other members of stakeholders to participate in the Community Liaison Committee, including, but not limited to, local municipalities, local conservation authorities, Aboriginal communities, federal or provincial agencies, and local community groups.
- P3. The Community Liaison Committee shall consist of at least one Company representative who shall attend all meetings.
- P4. The purpose of the Community Liaison Committee shall be to:
- (1) act as a liaison facilitating two way communications between the Company and members of the public with respect to issues relating to the construction, installation, use, operation, maintenance and retirement of the Facility;
 - (2) provide a forum for the Company to provide regular updates on, and to discuss issues or concerns relating to, the construction, installation, use, operation, maintenance and retirement of the Facility with members of the public; and
 - (3) ensure that any issues or concerns resulting from the construction, installation, use, operation, maintenance and retirement of the Facility are discussed and communicated to the Company.
- P5. The Community Liaison Committee shall be deemed to be established on the day the Director is provided with written notice from the Company that representative Community Liaison Committee members have been chosen and a date for a first Community Liaison Committee meeting has been set.
- P6. If a Community Liaison Committee has not been established within three (3) months of receiving this Approval, the Company shall provide a written explanation to the Director as to why this has not occurred.
- P7. The Company shall ensure that the Community Liaison Committee operates for a minimum period of two (2) years from the day it is established. During this two (2) year period, the Company shall ensure that the Community Liaison Committee meets a minimum of two (2) times per year. At the end of this two (2) year period, the Company shall contact the Director to discuss the continued operation of the Community Liaison Committee.
- P8. The Company shall ensure that all Community Liaison Committee meetings are open to the general public.
- P9. The Company shall provide administrative support for the Community Liaison Committee including, at a minimum:
- (1) providing a meeting space for Community Liaison Committee meetings;
 - (2) providing access to resources, such as a photocopier, stationery, and office supplies, so that the Community Liaison Committee can:

- a) prepare and distribute meeting notices;
- b) record and distribute minutes of each meeting; and
- c) prepare reports about the Community Liaison Committee's activities.

P10. The Company shall submit any reports of the Community Liaison Committee to the Director and post it on the Company's publicly accessible website, if the Company has a website.

Q – OPERATION AND MAINTENANCE

Q1. Prior to the commencement of the operation of the Facility, the Company shall prepare a written manual for use by Company staff outlining the operating procedures and a maintenance program for the Equipment that includes as a minimum the following:

- (1) routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the Equipment suppliers;
- (2) emergency procedures;
- (3) procedures for any record keeping activities relating to operation and maintenance of the Equipment; and
- (4) all appropriate measures to minimize noise emissions from the Equipment.

Q2. The Company shall;

- (1) update, as required, the manual described in Condition Q1; and
- (2) make the manual described in Condition Q1 available for review by the Ministry upon request.

Q3. The Company shall ensure that the Facility is operated and maintained in accordance with the Approval and the manual described in Condition Q1.

R – RECORD CREATION AND RETENTION

R1. The Company shall create written records consisting of the following:

- (1) an operations log summarizing the operation and maintenance activities of the Facility;
- (2) within the operations log, a summary of routine and Ministry inspections of the Facility; and
- (3) a record of any complaint alleging an Adverse Effect caused by the construction, installation, use, operation, maintenance or retirement of the Facility.

- R2. A record described under Condition R1 (3) shall include:
- (1) a description of the complaint that includes as a minimum the following:
 - a) the date and time the complaint was made;
 - b) the name, address and contact information of the person who submitted the complaint;
 - (2) a description of each incident to which the complaint relates that includes as a minimum the following:
 - a) the date and time of each incident;
 - b) the duration of each incident;
 - c) the wind speed and wind direction at the time of each incident;
 - d) the ID of the Equipment involved in each incident and its output at the time of each incident;
 - e) the location of the person who submitted the complaint at the time of each incident; and
 - (3) a description of the measures taken to address the cause of each incident to which the complaint relates and to prevent a similar occurrence in the future.

R3. The Company shall retain, for a minimum of five (5) years from the date of their creation, all records described in Condition R1, and make these records available for review by the Ministry upon request.

S – NOTIFICATION OF COMPLAINTS

- S1. The Company shall notify the District Manager of each complaint within two (2) business days of the receipt of the complaint.
- S2. The Company shall provide the District Manager with the written records created under Condition R2 within eight (8) business days of the receipt of the complaint.

T – CHANGE OF OWNERSHIP

- T1. The Company shall notify the Director in writing, and forward a copy of the notification to the District Manager, within thirty (30) days of the occurrence of any of the following changes:
- (1) the ownership of the Facility;
 - (2) the operator of the Facility;

- (3) the address of the Company;
- (4) the partners, where the Company is or at any time becomes a partnership and a copy of the most recent declaration filed under the *Business Names Act* , R.S.O. 1990, c.B.17, as amended, shall be included in the notification; and
- (5) the name of the corporation where the Company is or at any time becomes a corporation, other than a municipal corporation, and a copy of the most current information filed under the *Corporations Information Act* , R.S.O. 1990, c. C.39, as amended, shall be included in the notification.

U – TRAFFIC MANAGEMENT PLANNING

- U1. Within three (3) months of receiving this Approval, the Company shall prepare a Traffic Management Plan and provide it to the Municipality of Bluewater, Municipality of South Huron, Municipality of Huron East, Municipality of West Perth, Huron County, and Perth County.
- U2. Within three (3) months of having provided the Traffic Management Plan to the Municipality of Bluewater, Municipality of South Huron, Municipality of Huron East, Municipality of West Perth, Huron County, and Perth County, the Company shall make reasonable efforts to enter into a Road Users Agreement with the Municipality of Bluewater, Municipality of South Huron, Municipality of Huron East, Municipality of West Perth, Huron County, and Perth County.
- U3. If a Road Users Agreement has not been signed with the Municipality of Bluewater, Municipality of South Huron, Municipality of Huron East, Municipality of West Perth, Huron County, and Perth County within three (3) months of having provided the Traffic Management Plan to the Municipality of Bluewater, Municipality of South Huron, Municipality of Huron East, Municipality of West Perth, Huron County, and Perth County, the Company shall provide a written explanation to the Director as to why this has not occurred.

SCHEDULE A

Facility Description

The Facility shall consist of the construction, installation, operation, use and retiring of the following equipment:

- (a) a total of forty (40) out of forty eight (48) Siemens SWT-3.0-113 wind turbine generators each rated at 2.483 megawatts generating output capacity, as specified in the Acoustic Assessment Report;

with a total name plate capacity of up to approximately 100 megawatts, designated as source ID Nos. T-01 to T-48, each with a hub height of 99.5 metres above grade, and sited at the locations shown in Schedule B;

- (b) one (1) transformer substation including one (1) transformer and one (1) reactor and sited at the location shown in Schedule B;
- (c) one (1) switchyard as shown in Figure 2s of the Project Description Report, dated February 2013, prepared by Neegan Burnside Ltd.
- (d) one (1) parts and storage building as shown in Figure 2e of the Project Description Report, dated February 2013, prepared by Neegan Burnside Ltd.
- (e) associated ancillary equipment, systems and technologies including on-site access roads, underground cabling and underground transmission line,

all in accordance with the Application.

SCHEDULE B

Coordinates of the Equipment and Noise Specifications

Coordinates of the Equipment are listed below in UTM, Z17-NAD83 projection:

Table B1: Coordinates and Maximum Sound Power Levels of Wind Turbine Generators and Transformer Substation/Transformer and Reactor

Source ID	Sound Power Level (dBA)	Easting (m)	Northing (m)	Source description
T-01	101.5*	444036	4811878	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-02	101.5*	444376	4811760	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-03	101.5*	445882	4810067	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-04	101.5*	443802	4810148	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-05	101.5*	444206	4809869	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-06	101.5*	444035	4809533	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-07	101.5*	443954	4809148	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-08	101.5*	443718	4808841	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-09	101.5*	444323	4808855	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-10	101.5*	444002	4808745	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-11	101.5*	444330	4808461	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-12	101.5*	444001	4808315	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-13	101.5*	444228	4808041	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-14	101.5*	443802	4807902	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-15	101.5*	444500	4807773	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-16	101.5*	443896	4807611	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-17	101.5*	443377	4805355	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-18	101.5*	443717	4805337	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-19	101.5*	446261	4804829	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-20	101.5*	446913	4804825	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-21	101.5*	443654	4804592	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-22	101.5*	443974	4804635	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-23	101.5*	443320	4804184	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-24	101.5*	443623	4804057	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-25	101.5*	443997	4804036	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-26	101.5*	443339	4803814	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-27	101.5*	443638	4803681	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-28	101.5*	443409	4803439	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-29	101.5*	443154	4802383	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m

Table B1: Coordinates and Maximum Sound Power Levels of Wind Turbine Generators and Transformer Substation/Transformer and Reactor (continued)

Source ID	Sound Power Level (dBA)	Easting (m)	Northing (m)	Source description
T-30	101.5*	443011	4802014	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-31	101.5*	443540	4801110	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-32	101.5*	442448	4800448	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-33	101.5*	442838	4800465	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-34	101.5*	442243	4800119	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-35	101.5*	442757	4800013	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-36	101.5*	442447	4799830	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-37	101.5*	442062	4799669	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-38	101.5*	442409	4799492	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-39	101.5*	441744	4799389	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-40	101.5*	441527	4798742	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-41	101.5*	441764	4798145	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-42	101.5*	441607	4797851	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-43	101.5*	442249	4797830	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-44	101.5*	441123	4797225	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-45	101.5*	440154	4796958	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-46	101.5*	440550	4796892	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-47	101.5*	440850	4796687	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
T-48	101.5*	440529	4796554	Siemens model SWT-3.0-113 Rev. 0, 2.483 MW, hub height 99.5 m
R	100.2**	446784	4804831	Reactor
TS	96.1**	446772	4804794	Transformer

NOTE: * Wind turbine generators Sound Power Levels reported above are identified in the guarantee letter prepared by Siemens, dated April 7, 2014.
 ** The Sound Power Levels reported above for the Transformer and Reactor include the 5 Decibels (dB) adjustment for tonality as prescribed in Publication NPC-104.

Table B2: Maximum Sound Power Spectrums (dBA and dB Lin) for the transformer and the reactor

Transformer Substation	Octave Band Centre Frequency (Hz)								Overall
	63	125	250	500	1000	2000	4000	8000	
Lw (dBA) for the transformer	72.5	84.6	87.1	92.5	89.7	85.9	80.7	71.6	96.1
Lw (dB) for the transformer	98.7	100.7	95.7	95.7	89.7	84.7	79.7	72.7	105.5
Lw (dBA) for the reactor	70.0	81.0	96.0	98.0	65.0	60.0	55.0	50.0	100.2
Lw (dB) for the reactor	96.2	97.1	104.6	101.2	65.0	58.8	54.0	51.1	107.1

Note: The Transformer and Reactor Sound Power Level values above include the 5 decibel (dB) adjustment for tonality as prescribed in Publication NPC-104.

The reasons for the imposition of these terms and conditions are as follows:

1. Conditions A1, A2 and A8 are included to ensure that the Facility is constructed, installed, used, operated, maintained and retired in the manner in which it was described for review and upon which Approval was granted. These conditions are also included to emphasize the precedence of conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review.
2. Conditions A3 and A4 are included to require the Company to provide information to the public and the local municipality.
3. Conditions A5 and A6 are included to ensure that final retirement of the Facility is completed in an aesthetically pleasing manner, in accordance with Ministry standards, and to ensure long-term protection of the health and safety of the public and the environment.
4. Condition A7 is included to require the Company to inform the Ministry of the commencement of activities related to the construction, installation and operation of the Facility.
5. Condition B is intended to limit the time period of the Approval.
6. Conditions C1 and C2 are included to provide the minimum performance requirement considered necessary to prevent an Adverse Effect resulting from the operation of the Equipment and to ensure that the noise emissions from the Equipment will be in compliance with applicable limits set in the Noise Guidelines for Wind Farms.
7. Conditions C3, C4 and D are included to ensure that the Equipment is constructed, installed, used, operated, maintained and retired in a way that meets the regulatory setback prohibitions set out in O. Reg. 359/09.
8. Conditions E and F are included to require the Company to gather accurate information so that the environmental noise impact and subsequent compliance with the Act, O. Reg. 359/09, the Noise Guidelines for Wind Farms and this Approval can be verified.
9. Conditions G, H, I J, K, L and U are included to ensure that the Facility is constructed, installed, used, operated, maintained and retired in a way that does not result in an Adverse Effect or hazard to the natural environment or any persons.
10. Condition M is included to ensure that Environment Canada's Exeter Radar Station can continue to be used to provide accurate and reliable forecasts and weather warnings consistent with Environment Canada's mandate.
11. Condition O is included to protect archaeological resources that may be found at the project location.
12. Condition N is included to ensure continued communication between the Company and interested Aboriginal communities.

13. Condition P is included to ensure continued communication between the Company and the local residents.
14. Condition Q is included to emphasize that the Equipment must be maintained and operated according to a procedure that will result in compliance with the Act, O. Reg. 359/09 and this Approval.
15. Condition R is included to require the Company to keep records and provide information to the Ministry so that compliance with the Act, O. Reg. 359/09 and this Approval can be verified.
16. Condition S is included to ensure that any complaints regarding the construction, installation, use, operation, maintenance or retirement of the Facility are responded to in a timely and efficient manner.
17. Condition T is included to ensure that the Facility is operated under the corporate name which appears on the application form submitted for this Approval and to ensure that the Director is informed of any changes.

NOTICE REGARDING HEARINGS

In accordance with Section 139 of the Environmental Protection Act, within 15 days after the service of this notice, you may by further written notice served upon the Director, the Environmental Review Tribunal and the Environmental Commissioner, require a hearing by the Tribunal.

In accordance with Section 47 of the Environmental Bill of Rights, 1993, the Environmental Commissioner will place notice of your request for a hearing on the Environmental Registry.

Section 142 of the Environmental Protection Act provides that the notice requiring the hearing shall state:

1. The portions of the renewable energy approval or each term or condition in the renewable energy approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The signed and dated notice requiring the hearing should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The renewable energy approval number;
6. The date of the renewable energy approval;
7. The name of the Director;
8. The municipality or municipalities within which the project is to be engaged in;

This notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto, Ontario
M5G 1E5

AND

The Environmental Commissioner
1075 Bay Street, 6th Floor
Suite 605
Toronto, Ontario
M5S 2B1

AND

The Director
Section 47.5, *Environmental Protection Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca**

Under Section 142.1 of the Environmental Protection Act, residents of Ontario may require a hearing by the Environmental Review Tribunal within 15 days after the day on which notice of this decision is published in the Environmental Registry. By accessing the Environmental Registry at www.ebr.gov.on.ca, you can determine when this period ends.

Approval for the above noted renewable energy project is issued to you under Section 47.5 of the Environmental Protection Act subject to the terms and conditions outlined above.

DATED AT TORONTO this 26th day of June, 2014



Vic Schroter, P.Eng.
Director
Section 47.5, *Environmental Protection Act*

NC/
c: District Manager, MOE Owen Sound
Gordon Potts, Northland Power Inc.

Meredith Meeker

From: Fraser, Sarah (MNRF) <Sarah.Fraser@ontario.ca>
Sent: Tuesday, February 05, 2019 11:49 AM
To: Hannah Maciver
Subject: Renewal of protocol #399

February 5, 2019

Hannah, (R.J. Burnside & Associates Ltd.)

The OMNRF Wildlife Animal Care Committee has reviewed and approved the renewal of your protocol: "Grand Bend Wind Farm Post-Construction Monitoring."

Your protocol number for 2019 is #19-399

Protocol approvals are valid for one calendar year only and must be kept current. Should amendments to projects or procedures be deemed necessary, the researcher must contact the Wildlife Animal Care Committee and provide updated information for review.

A summary report will be required annually or upon completion of this project, stating number of animals handled, injuries, fatalities and any problems that may have occurred. This report is necessary for our files plus it will expedite the process if this protocol is to be renewed in the future.

Please note that if there are multiple unanticipated injuries or mortalities the project must be stopped. A report is to be submitted to the Wildlife Animal Care Committee with amendments to rectify the issue(s) prior to resumption.

Researchers who are not collaborating with an expert in animal pathology/physiology or who have limited expertise in this area should seek appropriate assistance in the event of an unexpected and unexplained mortality. Specimens should be submitted for necropsy to the nearest Canadian Wildlife Health Cooperative facility in the event of an unexpected mortality or mortality of a SAR. Make arrangements prior to commencing field work. Contact information for CWHC facilities can be found at <http://www.cwhc-rcsf.ca/>

Please ensure that you have also contacted the appropriate Ministry of Natural Resources and Forestry District Office(s) in your study area for the required permit(s) before this research begins. It is also your responsibility to provide them with a copy of this approval.

Good luck with your project,

Sarah

*Sarah Fraser, Chair
Wildlife Animal Care Committee
Ontario Ministry of Natural Resources and Forestry
Cell: 705-313-0090
sarah.fraser@ontario.ca*

Please Note: As part of providing accessible customer service, please let me know if you have any accommodation needs or require communication supports or alternate formats.

Meredith Meeker

From: Hannah Maciver
Sent: Tuesday, March 12, 2019 9:14 AM
To: 'Hagman, Jamie (MNRF)'
Cc: Lyle Parsons; 'Jim Mulvale'
Subject: RE: WSCA 1092126 Grand Bend Wind Farm Mortality Surveys
Attachments: WSCA_1092126_Executed_Signed.pdf

Hi Jamie,

Please find attached the authorization with my signature.

Thanks
Hannah

From: Hagman, Jamie (MNRF) <Jamie.Hagman@ontario.ca>
Sent: Thursday, February 28, 2019 3:42 PM
To: Hannah Maciver <Hannah.Maciver@rjburnside.com>
Subject: WSCA 1092126 Grand Bend Wind Farm Mortality Surveys

Hello,

Please see attached WSCA 1092126 (Local Reference No. GL2019-1037) for bird and bat mortality surveys at the Grand Bend Wind Farm.

Please sign and return the authorization and Schedule A by email to scp.guelph@ontario.ca.

If you have any questions, please feel free to contact myself or Kathy Richardson (kathy.richardson@ontario.ca).

Regards,

Jamie

Jamie Hagman
Acting/Integrated Resource Management Technical Specialist
Ministry of Natural Resources and Forestry
Guelph District
1 Stone Rd., Guelph ON
N1G 4Y2
Tel: 519-826-4910
Email: jamie.hagman@ontario.ca

Please Note: As part of providing accessible customer service, please let me know if you have any accommodation needs or require communication supports or alternate formats.

Ministry of Natural
Resources and Forestry

Ministère des ressources
naturelles et des forêts

Guelph District
1 Stone Road West
Guelph, Ontario
N1G 4Y2

Telephone: (519) 826-4955
Facsimile: (519) 826-4929



February 28, 2019

Hannah Maciver
R.J. Burnside & Associates Limited
1465 Pickering Parkway, Suite 200
Pickering, ON
L1V 7G7

Re: Wildlife Scientific Collectors Authorization #1092126

Dear Hannah Maciver,

Attached is the above Wildlife Scientific Collectors Authorization for works being done at the Grand Bend Wind Farm for post construction bird and bat mortality surveys. The expiry date is November 30, 2019.

This WSC Authorization has been issued in conjunction with approved Animal Care Protocol #18-399 and all conditions must be adhered to. Please ensure you and your assistants read all conditions and have this documentation with you when you are on site at all times.

Please return the signed WSC Authorization and Schedule A by email to scp.guelph@ontario.ca before commencement of any work.

Please note the conditions of authorization require a report to be submitted to scp.guelph@ontario.ca within 30 days of the termination date, but in no case later than January 31st of the following year.

If you have any questions or need to amend your authorization at any time please contact Kathy Richardson at 905 562-1177 or by email at kathy.richardson@ontario.ca.

Sincerely,

Jamie Hagman
Acting/Integrated Resource Management Technical Specialist
Ministry of Natural Resources
Guelph District
Telephone: (519) 826-4910
Email: jamie.hagman@ontario.ca

To meet with our staff please be sure to call ahead and make an appointment.
For general information visit: www.mnr.gov.on.ca or www.ontario.ca



Ministry of
Natural Resources
Ministère des
Richesses naturelles

Wildlife Scientific Collector's Authorization Autorisation pour faire la collecte scientifique d'animaux sauvages

Authorization No. N° d'autorisation	1092126
Local Reference No. N° de référence local	GL2019-1037
Issuer Account No. N° de compte du délivreur de permis.	10003157

This authorization is issued under Section 39 of the Fish and Wildlife Conservation Act, 1997 to:
Cette autorisation est délivrée en vertu de l'article 39 de la Loi sur la protection du poisson et de la faune de 1997 à:

Name of Authorization holder	Last Name / Nom de famille Ms. Maciver	First Name / Prénom Hannah	Middle Name / Second Prénom
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Nom du titulaire de l'autorisation	Name of Business/Organization/Affiliation (if applicable) Nom de l'entreprise/de l'organisme/de l'affiliation (le cas échéant) R.J. Burnside and Associates Limited
---------------------------------------	--

Mailing address of Authorization holder	Street Name & No./PO Box/RR#/Gen. Del./N° rue/C.P./R.R./poste restante 1465 Pickering Parkway, Suite 200	Province/State Province/État ON	Postal Code/Zip Code Code Postal/Zip L1V 7G7
Adresse postale du titulaire de l'autorisation	City/Town/Municipality / Ville/village/municipalité Pickering		

This authorization permits the above-named person to:
Cette autorisation permet à la personne nommée ci-haut de:

- Capture wildlife of the species and sex, in the numbers, and in the area set out below.
Capturer les espèces d'animaux sauvages selon le nombre et le sexe indiqués ci-dessous dans les lieux indiqués ci-dessous and/or / et/ou
- Keep game wildlife or specially protected wildlife in captivity for the purposes of education or science.
Garder des animaux sauvages spécialement protégés et du gibier sauvage en captivité à des fins éducatives et scientifiques
- Release the captured wildlife in the area of capture, if the captured wildlife is not to be removed from that area
Remettre en liberté les animaux sauvages capturés dans la zone de capture si les animaux captures ne doivent pas être enlevés de cette zone

OR / OU

- Capture and kill wildlife of the species and sex, in the numbers, and in the area set out below.
Capturer et tuer les espèces d'animaux sauvages selon le nombre et le sexe indiqués ci-dessous dans les lieux indiqués ci-dessous

Species / Espèces	Sex Sexe	Numbers Nombre	Location / Endroit
Bird species			Grand Bend Wind Farm
Bat species			Grand Bend Wind Farm

Yes/Oui

- Additional list attached / Liste additionnelle ci-jointe

Authorization Dates d'autorisation	Effective Date / Date d'entrée en vigueur (YYYY-MM-DD) 2019-05-01	Expiry Date / Date d'expiration (YYYY-MM-DD) 2019-11-30
--	--	--

Authorization conditions This authorization is subject to the conditions contained in Schedule A if included./Cette autorisation doit respecter les conditions de l'annexe A si celle-ci est jointe.

Conditions de l'autorisation	Yes/Oui <input checked="" type="checkbox"/>	No/Non <input type="checkbox"/>	Schedule A included. / Annexe A ci-jointe
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Authorized by (please print) Autorisé par (veuillez écrire en caractères d'imprimerie) Ian Thornton, Resource Operations Supervisor	Signature of Authorizer / Signature de la personne chargée d'autoriser 	Date of Issue/Date de délivrance (YYYY-MM-DD) 2019-02-28
--	--	---

Signature of Authorization holder / Signature du titulaire de l'autorisation Hannah Maciver	Date (YYYY-MM-DD) 2019-02-28
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Personal information contained on this form is collected under the authority of the Fish and Wildlife Conservation Act, 1997 and will be used for the purpose of licencing, identification, enforcement, resource management and customer service surveys. Please direct further inquiries to the District Manager of the MNR issuing district.

Les renseignements personnels dans ce formulaire sont recueillis conformément à la Loi sur la protection du poisson et de la faune, 1997, et ils seront utilisés aux fins de délivrance de permis, d'identification, d'application des règlements, de gestion des ressources et de sondage sur les services à la clientèle. Veuillez communiquer avec le chef du district du MRN qui délivrera le permis si vous avez des questions.

Wildlife Scientific Collector's Authorization
Autorisation pour faire la collecte scientifique d'animaux sauvages
Schedule A – Authorization conditions
Annexe A - Conditions de l'autorisation

#10921216

This authorization is subject to the conditions listed below.

1. **This authorization is valid only for the persons, species, numbers, areas and calendar year indicated.** A written report covering the operation of the preceding year must be submitted to scp.guelph@ontario.ca within 30 days of the termination date, but in no case later than January 31 next following the year of issue. The report shall contain a statement outlining the objectives of the operations, the methods used, the number and species of wildlife caught and their fate as well as a map indicating where the collections took place. An analysis is not required. The submission of a satisfactory report is a prerequisite to any subsequent renewals.

2. **Before carrying out any operation under the authorization in any area the authorized person shall inform the reporting Biologist,** Anne Marie Laurence of his or her intentions at least a week before commencing work and include information as to the type of operation, location, duration, and the name or names of personnel involved. The foregoing does not apply to the collection of road killed specimens of a type indicated on the authorization. Anne Marie can be reached 519-826-4132 or by email at Annemarie.laurence@ontario.ca.

3. **When possible, all wildlife captured under this authorization shall be released alive in the area of capture.** When further examination of the animal is necessary in the laboratory permission must be obtained as part of this authorization under section 40(2)(c) of the Fish and Wildlife Conservation Act. Where furbearing mammals are collected the authorized person must contact the issuing office and make arrangements to pay the royalty. Dead animals which are no longer required must be cremated or buried. The authorized person will inform the issuer of any burial site. Any animal suspected of being infected with a communicable disease shall be incinerated in a facility approved under the Environmental Protection Act for that purpose.

4. **A copy of the original authorization must be carried by the authorized person when working at the designated sites.** An assistant of the authorized person who is carrying out activities under this authorization during the absence of the authorized person shall carry a copy of the authorization on his or her person.

5. **All collection gear shall be clearly marked** with the authorized person's and the organization's name.

6. This authorization is not valid in Provincial Parks, park reserves, National Parks, Conservation Areas, Crown game preserves or sanctuaries established under the Migratory Birds Convention Act without written permission from the authorized person in charge of the area concerned.

7. **Capture gear to be used:** Latex-free gloves, clear plastic bags, large breathable totes

8. This authorization does not allow access to any property without permission of the landowner.

9. Sections 5 and 6 of the Fish and Wildlife Conservation Act 1997, and the provisions of the regulations relating to open seasons and bag limits do not apply to a person capturing or killing wildlife under this authorization.

10. Native and non-native reptiles and amphibians that are collected must be immediately released at the location of capture.

11. If a Species at Risk (SAR) is encountered, the survey must immediately stop until next steps have been discussed with MNR.

Cette autorisation doit se conformer aux conditions ci-dessous.

1. Cette autorisation n'est valide que pour les personnes, espèces, nombres, zones et année civile indiqués. Un rapport écrit portant sur les activités de l'année précédente doit être soumis au délivreur de l'autorisation dans les 30 jours suivant la date d'expiration et jamais plus tard que le 31 janvier qui suit la date de délivrance. Le rapport devra comprendre une déclaration décrivant les objectifs des activités, les méthodes utilisées, le nombre et les espèces d'animaux sauvages capturés et leur destination finale ainsi qu'une carte montrant l'emplacement des collectes. Une analyse n'est pas requise. La présentation d'un rapport satisfaisant est une condition préalable pour obtenir un renouvellement de l'autorisation.

2. Avant de réaliser toute activité visée par l'autorisation dans toute zone, la personne autorisée doit aviser le superviseur de la zone de ses intentions au moins une semaine avant de commencer ses activités et il doit fournir des renseignements sur le type d'activité, l'emplacement, la durée et le nom de toutes les personnes impliquées. Cette condition ne s'applique pas à la collecte de spécimens tués sur la route s'il s'agit d'une espèce mentionnée dans l'autorisation.

3. Lorsque cela est possible, tous les animaux sauvages capturés en vertu de cette autorisation doivent être remis en liberté dans la zone de capture. Lorsqu'un examen ultérieur d'un animal dans un laboratoire est nécessaire, il faut obtenir une permission à cet effet dans le cadre de cette autorisation, conformément à l'alinéa 40(2)(c) de la Loi sur la protection du poisson et de la faune. Lorsque des mammifères à fourrure sont récoltés, la personne autorisée doit communiquer avec le bureau qui délivre l'autorisation et prendre des dispositions pour payer les redevances afférentes. Les animaux morts qui ne sont plus utiles doivent être incinérés ou enterrés. La personne autorisée avisera le délivreur de l'autorisation de tout lieu d'enterrement. Tout animal qui pourrait avoir été infecté d'une maladie transmissible devra être incinéré dans une installation approuvée à cette fin, conformément à la Loi sur la protection de l'environnement.

4. Le titulaire de l'autorisation doit avoir en sa possession un exemplaire de l'autorisation originale lorsqu'il travaille dans les endroits désignés. Si un adjoint du titulaire de l'autorisation réalise des activités visées par l'autorisation en l'absence du titulaire de l'autorisation, il devra avoir un exemplaire de l'autorisation en sa possession.

5. Tout le matériel de collecte doit indiquer bien clairement le nom du titulaire de l'autorisation et de son organisme.

6. Cette autorisation n'est pas valide dans les parcs provinciaux, les réserves de parcs, les parcs nationaux, les zones de protection de la nature, les réserves de chasse de la Couronne et les réserves naturelles établies en vertu de la Loi sur la Convention concernant les oiseaux migrateurs sans la permission écrite de la personne autorisée qui est responsable de la zone en question.

7. Tout le matériel de collecte doit être inspecté régulièrement et les viviers doivent être inspectés au moins une fois par jour.

8. Cette autorisation ne permet pas au titulaire d'avoir accès à une propriété privée sans la permission du propriétaire foncier.

9. Les articles 5 et 6 de la Loi sur la protection du poisson et de la faune de 1997 et les dispositions des règlements se rapportant aux saisons de chasse et aux limites de prise ne s'appliquent pas à la personne qui capture ou tue des animaux sauvages en vertu de cette autorisation.

Signature of authorization holder / Signature du titulaire de l'autorisation

Hannah Maciver

Date

March 12, 2019

Wildlife Scientific Collector's Authorization
Autorisation pour faire la collecte scientifique d'animaux sauvages
Schedule A – Authorization conditions
Annexe A - Conditions de l'autorisat

#10921216

12. When SAR is involved, the SAR Handling Manual is to be used as a reference and all staff must be properly trained prior to any handling of the animals.

13. **Names of Assistants covered under this authorization are listed below: Sara Henry, 1-2 additional assistants TBD**
Any changes to these individuals must be submitted by email to Kathy Richardson at kathy.richardson@ontario.ca and a confirmation email returned confirming they have been added to this authorization prior to them conducting any work under this authorization.

14. Specimens must be released to suitable habitat immediately outside of the removal area/work zone.

15. Specimens must be released to suitable habitat immediately outside of the exclusion area/work zone.

16. This authorization is issued in conjunction with ACP #18-399.

17. The proponent will register the project under the exemption regulation for Wind Facilities (O.Reg. 242/08 s.23.3) for impacts to Species at Risk.

18. Injured wildlife found incidentally will be transported to a wildlife rehabilitation centre.

2

Signature of authorization holder / Signature du titulaire de l'autorisation

Hannah Maciver

Date

March 12, 2019



CANADIAN WILDLIFE SERVICE – PERMIT PERMIS – SERVICE CANADIEN DE LA FAUNE

		Permit to/for Permis de/pour SCIENTIFIC	Permit no. No de permis SC 00004 Amendment 1
Organization Organization R.J. Burnside & Associates Limited	Issued under section Délivré en vertu de l'article 4(1)	Of De MIGRATORY BIRD REGULATIONS	
Surname of holder Nom de famille du détenteur Maciver	Name of holder Prénom du détenteur Hannah		

Address Adresse 292 Speedvale Ave West Guelph, ON N1H 1C4	In accordance with section 19(1) of the Migratory Bird Regulations, this permit authorizes the permit holder to: <input type="checkbox"/> Kill a migratory bird <input checked="" type="checkbox"/> Take a migratory bird, its nest or eggs <input type="checkbox"/> Capture and band a migratory bird
--	---

Date of issue Date d'émission March 16, 2017	Date of expiry Date d'expiration November 30, 2019
---	---

Signature of holder Signature du détenteur 	For the minister Pour le ministre
---	--

Conditions – Conditions

<p>The permittee is authorized to:</p> <ul style="list-style-type: none"> - Collect dead migratory birds found at the Grand Bend Wind Farm, located in Grand Bend, ON for scientific purposes; - Possess migratory bird carcasses for predation and searcher efficiency trials; and - Donate migratory bird carcasses to an educational or governmental institution holding a valid permit to possess migratory birds. <ol style="list-style-type: none"> 1. This permit is only valid if it is signed by the permit holder. 2. All authorized activities must be conducted by permit holder and nominee(s). 3. This permit is non-transferable and is not valid if altered in any way. 4. This permit is only valid from the issue date to the expiry date (or if cancelled by the Minister, to date of cancellation) and for the activities indicated. 5. The permit holder and any nominees must comply with all other applicable Federal, Provincial/Territorial, and Municipal laws and regulations. 6. The permit holder is responsible for ensuring that all nominees comply with the permit terms and conditions and requirements. 7. Any changes to nominees must be reported to Environment Canada's regional Canadian Wildlife Service (CWS) office. 8. A copy of the signed permit must be carried at all times by the permit holder and/or nominee(s) while conducting the activity(ies). 9. The permit holder must keep a record during the currency of the permit and enter in the record the number of birds of each species or the number of nests or eggs of those birds taken or destroyed, as well as the information required to be submitted on the report. 10. The permit holder must, within 30 days of the expiry of the permit (unless otherwise specified on the permit) submit a report in the proper form. 11. Unless otherwise stated, this permit does not authorize the killing, taking, capturing and banding, or disturbing of species listed on Schedule 1 of the Species at Risk Act as threatened, endangered or extirpated. 12. Any bird bands, markers or devices attached to a bird must be reported to the Bird Banding Office (www.ec.gc.ca/bbo/). 13. Prior to any use of this permit the OMNRF is to be notified relative to procedures, times and localities of field research. 14. In instances where Species At Risk (SAR) are found, permittee must immediately report findings to Canadian Wildlife Service, 867 Lakeshore Road, Burlington, ON., L7S 1A1 or ec.faune.ontario-wildlife.ontario.ec@canada.ca. 15. Nominees authorized to act under the direction of the permittee are: Employees and/or contractors to R.J. Burnside & Associates Limited



BURNSIDE

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Appendix B

Grand Bend Wind Farm: Raptor Behaviour Surveys North-South Environmental Inc.



Grand Bend Wind Farm: Raptor Behaviour Surveys

Prepared for RJ Burnside & Associates

February 2020

North-South Environmental Inc.



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P.O. Box 518
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North-South Environmental Inc.

Pauline Catling: Raptor surveys, report input

Sarah Mainguy: Principle report author

Will Van Hemessen: Raptor surveys

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Lyle Parsons: Project Manager

Hannah Maciver: Project advisor

Table of Contents

1.0	Introduction.....	1
1.1	Study Context	1
1.2	Site Setting.....	1
1.3	Raptor Mortality.....	3
2.0	Methods.....	5
2.1	Site Stations.....	5
2.2	Site Visits.....	8
2.3	Survey Procedure.....	9
3.0	Results.....	10
3.1	Raptor Nest Searches	10
3.2	Numbers of Raptor Sightings in the Study Area	10
3.2.1	Height of Raptor Species in Relation to Turbines.....	12
3.2.2	Raptor Age	13
3.2.3	Proximity of Raptors to Individual Turbines	14
3.2.4	Weather Conditions and Sightings	14
3.3	Raptor Behaviour.....	15
3.3.1	Behavioural Observations	15
3.3.2	High-Risk Behaviours.....	17
3.4	Raptor Breeding and Foraging Habits.....	21
3.5	Landscape Factors.....	22
4.0	Discussion.....	28
5.0	Summary and Conclusions.....	30
6.0	References	34

List of Tables

Table 1	Mortalities noted at the Grand Bend Wind Farm, located in the vicinity of Grand Bend, Ontario	3
Table 2.	Summary of landscape setting around turbines of the Grand Bend Wind Farm	5
Table 3.	Dates, weather conditions and stations visited for each field survey	8

Table 4. Numbers of raptors noted within the study area, distance from the turbine where each species was noted, numbers of turbines with sightings, and individual turbines where the most sightings occurred.....	11
Table 5. Numbers of Turkey Vulture sightings at Turbines in the study area	11
Table 6. Estimated height of raptor species in relation to turbines.....	13
Table 7. Numbers of Adult and sub-adult raptors (including juveniles) noted within the study area	13
Table 8. Number of incidents of raptor behaviours observed in the study area	16
Table 9. High-risk behaviours observed in detail in the study area.....	19
Table 10. Nesting and foraging habitat of species noted in the study area (home range from various accounts in Birds of North America Online, 2019)	21
Table 11. Number of sightings (of all species) related to the proximity of woodlands.....	22
Table 12. Mortalities by species (2017-2019), turbine proximity to woodlands and numbers of sightings in 2019	26
Table 13. Numbers of mortalities (2017-2019) at turbines in relation to numbers of sightings in 2019 (all species combined and Turkey Vultures alone).....	27
Table 14. Numbers of sightings at turbines with and without mortality.....	27
Table 15. Summary of risk factors that may lead to collisions.....	33

List of Figures

Figure 1. Landscape context of the Grand Bend Wind Farm and stations from which observations were conducted	2
Figure 2. Locations of raptor mortalities in relation to turbines and landscape features within the landscape between 2017-2019.....	4
Figure 3. Number of Close Sightings (those within 120 m of a turbine) in relation to wind speed (measured by the Beaufort Scale) as the date progressed throughout the 26 visits in the study.....	15
Figure 4. Example of complex behaviour of raptors in the study area: Black lines indicate Turkey Vultures, blue lines indicate an American Kestrel, the red number indicates a perched Red-tailed Hawk and the purple line indicates a Northern Harrier	17
Figure 5. Numbers of raptor sightings and mortalities in relation to woodlands and watercourses.....	23
Figure 6. Distribution of “close” raptor sightings (sightings within 120 m of a turbine) in relation to landscape features and mortalities.....	24

List of Appendices

Appendix 1: Diagram of Turbine Layout.....	35
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1.0 Introduction

1.1 Study Context

R.J. Burnside & Associates Limited (“Burnside”) has been conducting post-construction mortality monitoring work at the Grand Bend Wind Farm (GBWF) since 2017. Grand Bend Wind GP Inc. as general partner for and on behalf of Grand Bend Limited Partnership (GBWLP), operates a 100 MW wind facility. Forty turbines comprise the wind farm (Siemens SWT-3.0-113 direct drive wind turbine generators limited to produce 2.48 MW turbines each, with a total name plate capacity of 100 MW), which is located in Huron County, spanning the lower-tier municipalities of Bluewater and Huron South, north of the Town of Grand Bend.

Burnside has continued to have a role in monitoring the wind farm, providing supervision of the post-construction monitoring work since it commenced. This involves management of the field staff who are conducting the bird and bat mortality monitoring and completing monitoring reports, as well as planning and reporting on searcher efficiency and scavenger trials required by the Ontario Ministry of Natural Resources and Forestry (MNR).

The wind farm exceeded the provincial threshold for raptor mortality in 2017. As a result, scoped mortality and cause and effect monitoring at individual turbines (and unmonitored turbines in near proximity) was required by MNR for two subsequent years (2018-2019). The proponent is required to determine the details of that monitoring plan, and the monitoring plan must be reviewed and approved by the Agencies.

North-South Environmental Inc. (NSE) was involved in pre-construction surveys, including surveys of vegetation, breeding birds, winter raptor habitat, migration stopover habitat for landbirds, and bat habitat. NSE was retained in 2019 to complete additional scoped behavioural monitoring surveys for raptors at turbine sites in order to help understand the cause and effects of mortalities at the site.

1.2 Site Setting

The Grand Bend Wind Farm setting is shown in Figure 1. All turbines are within 2-5 km of the Lake Huron shoreline: most are approximately 2 km from the shoreline and only three at 5 km from the shoreline: turbine numbers T-03, T-19 and T-20. The landscape is intensively farmed, with large fields ploughed in early spring and later showing growth of crops such as soy, corn, wheat and alfalfa. Woodlots mainly occur at the backs of farm properties, and are somewhat isolated by croplands. The northern part of the study area has the lowest proportion of natural cover. The southern portion of the study area contains a large, connected series of woodlots that extend south outside the study area.

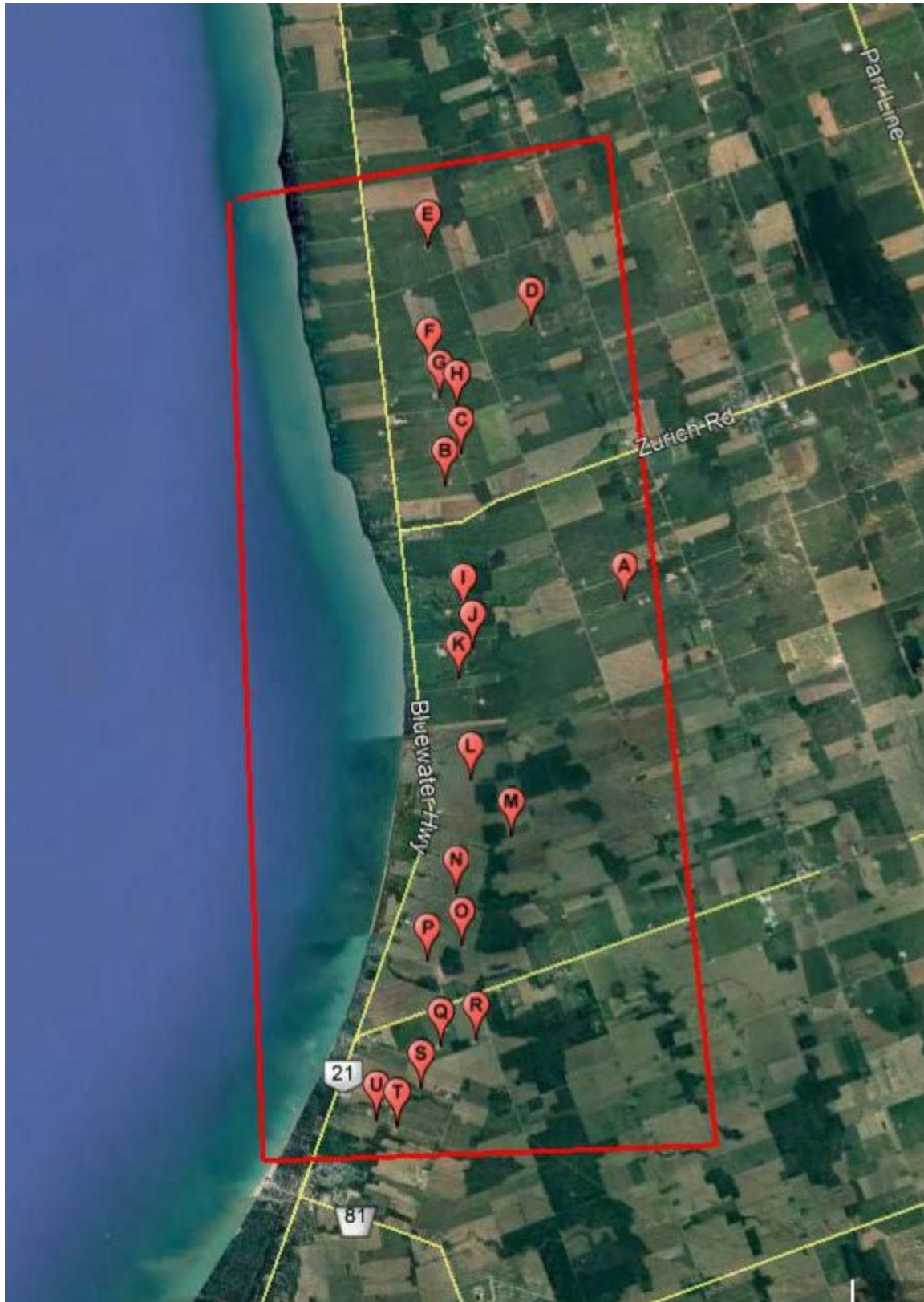


Figure 1. Landscape context of the Grand Bend Wind Farm and stations from which observations were conducted

1.3 Raptor Mortality

Twenty-two raptor mortalities have been recorded within the study area between 2017-2019 by Burnside (Maciver 2019, pers. comm.). Table 1 provides the breakdown of species and age (if known), as well as the turbine number in closest proximity to where they were noted. In total, 22 mortalities have been recorded: 7 in 2017, 7 in 2018, and 8 in 2019. Three turbines have had more than one raptor mortality: T-22 (1 Red-tailed Hawk and 1 Sharp-shinned Hawk), T-27 (1 Red-tailed Hawk and 2 Turkey Vultures), and T-42 (2 Turkey Vultures). Figure 2 shows locations of mortalities of all species within the study area.

Table 1 Mortalities noted at the Grand Bend Wind Farm, located in the vicinity of Grand Bend, Ontario

Species	Age	Turbine Number	Date
Cooper's Hawk	Adult	T-21	June 2019
Cooper's Hawk	Unknown	T-11	October 2019
Red-tailed Hawk	Adult	T-22	May 2017
Red-tailed Hawk	Unknown	T-43	May 2017
Red-tailed Hawk	Adult	T-25	May 2018
Red-tailed Hawk	Adult	T-30	July 2018
Red-tailed Hawk	Adult	T-27	November 2018
Red-tailed Hawk	Juvenile	T-07	August 2019
Sharp-shinned Hawk	Adult	T-13	May 2019
Sharp-shinned Hawk	Adult	T-22	November 2017
Turkey Vulture	Unknown	T-06	November 2019
Turkey Vulture	Juvenile	T-09	September 2017
Turkey Vulture	Juvenile	T-16	September 2017
Turkey Vulture	Juvenile	T-20	October 2019
Turkey Vulture	Juvenile	T-27	August 2019
Turkey Vulture	Adult	T-27	August 2017
Turkey Vulture	Adult	T-31	June 2018
Turkey Vulture	Adult	T-42	July 2018
Turkey Vulture	Juvenile	T-42	September 2019
Turkey Vulture	Unknown	T-45	May 2018
Turkey Vulture	Juvenile	T-48	July 2017
Unidentified Hawk	Unknown	T-01	May 2018

Mortalities were observed in some species more often than others. Turkey Vulture was the highest recorded raptor species (11 mortalities), totalling half of all the mortalities recorded. Red-tailed Hawk was the second highest recorded raptor species (6 mortalities). There were no patterns evident with regard to mortality in relation to location within the study area: mortalities were distributed fairly evenly throughout (Figure 2), though there

were no mortalities at two of the three turbines located the greatest distance from the lake shore (numbers T-03 and T-19), and there was more than one mortality at three of the turbines as described above.

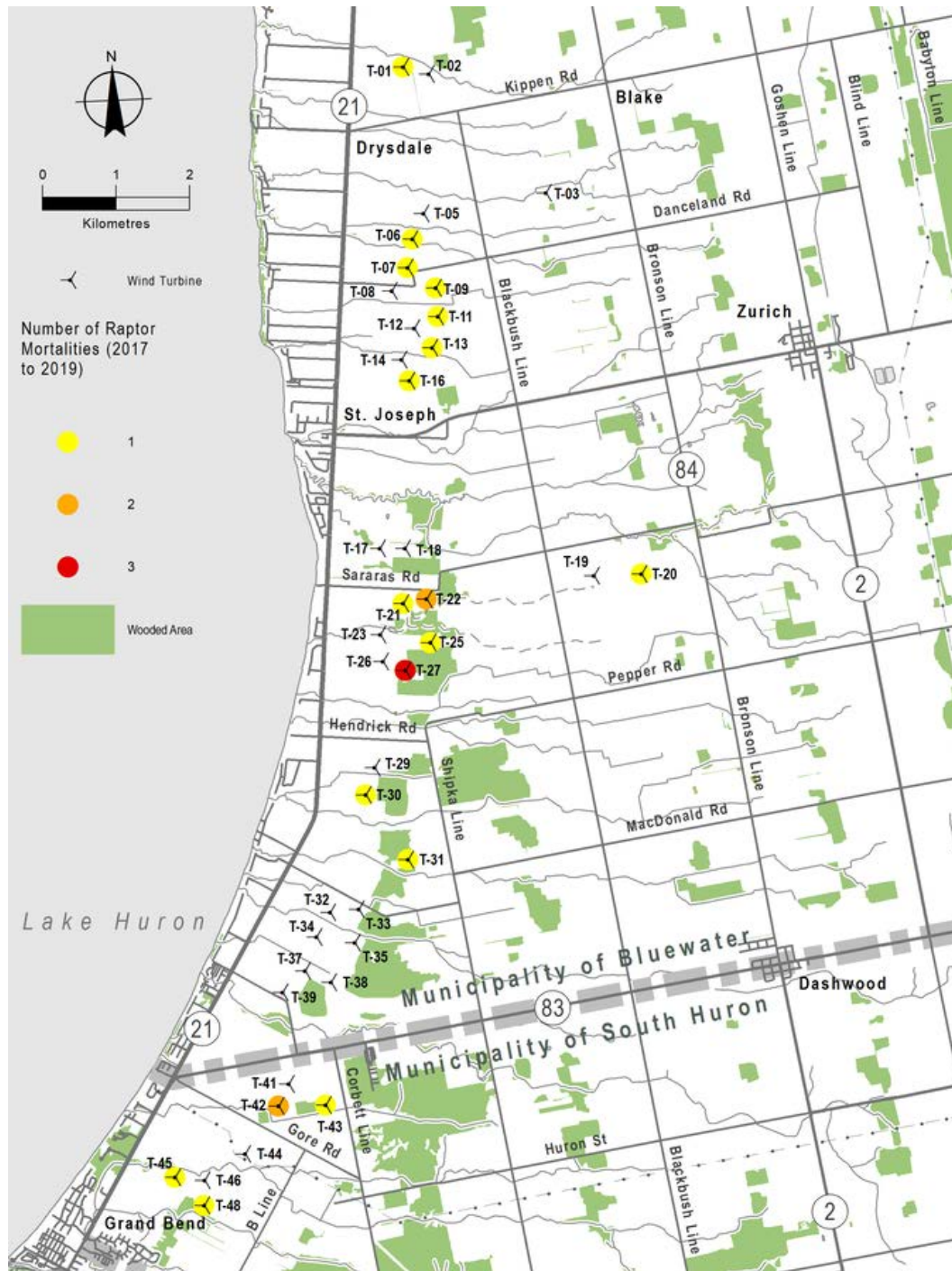


Figure 2. Locations of raptor mortalities in relation to turbines and landscape features within the landscape between 2017-2019.

2.0 Methods

Nesting and behavioral surveys were conducted between May 1 and July 31, 2019, during the active breeding window for raptors. Behavioural studies were intended primarily to determine how birds are using the area, especially to determine whether they are regularly flying through areas that will be swept by blades or are using sites or habitats adjacent to the turbines. This involved a field technician stationing themselves at various vantage points from which they spent time observing raptor location and behaviour using binoculars. Raptors observed within the study area while traveling between stations were also noted. Visits were conducted twice per week from May 1st to July 31st, in a variety of different weather conditions but for the most part avoiding rain given that precipitation typically reduces bird activity. The northern part of the study area was surveyed during the first visit each week, and the southern part was surveyed on the second visit, so each turbine was surveyed once per week. Details on survey protocols are provided in the following sections.

2.1 Site Stations

Twenty-one stations, selected because they provided a clear view of all turbines without trespassing on non-permitted properties, were surveyed on each visit (Figure 1). A brief summary of the terrain adjacent to each turbine is provided in Table 2, with a note of differences in habitat between turbines such as the presence of crops, woodland cover and other natural features.

Table 2. Summary of landscape setting around turbines of the Grand Bend Wind Farm

Station Identifier/ Turbine Number(s)	Landscape Description in Turbine Area			
	Crop	Approximate Woodland Proximity (m)	Approximate Size of Closest Woodland (ha)	Other Natural Features
E / T1	Soy, corn	419	2.9	Tributary within 100 m
E /T2	Soy, corn	176	2.9	Tributary within 100 m
D /T3	Corn, soy, wheat, hay	749	8	Hedgerow within 60 m, tributary within 128 m
F /T5	Soy, corn	1752	6.9	Tributary and hedgerow adjacent
F /T6	Soy, corn	1796	6.9	Tributary and hedgerow adjacent
G / T7	Soy, corn	1693	6.9	Hedgerow within 20 m

Station Identifier/ Turbine Number(s)	Landscape Description in Turbine Area			
	Crop	Approximate Woodland Proximity (m)	Approximate Size of Closest Woodland (ha)	Other Natural Features
G /T8	Soy, corn	1462	10.1	Hedgerow within 20 m
H /T9	Soy, corn	1354	10.1	Hedgerow within 210 m
C /T11	Wheat, corn	962	10.1	Tributary within 106 m
C /T12	Wheat, corn	871	10.1	Tributary within 106 m
C /T13	Wheat, corn	558	10.1	Tributary within 106 m
B /T14	Soy, corn	616	10.1	Hedgerow adjacent
B /T16	Soy, corn	379	10.1	Hedgerow adjacent
I /T17	Soy, corn	176	>13 (connected to other woodlands)	Hedgerow within 95 m
I /T18	Soy, corn	124	> 13 (connected to other woodlands)	Hedgerow within 95 m
A /T19	Soy, corn	676	15	Hedgerow adjacent
A /T-20	Soy, corn	334	15	Tributary adjacent to woodland
J /T21	Soy, corn	130	30	Tributary within 160 m, Hedgerow within 90 m
J /T22	Soy, corn	104	30	Tributary within 160 m, Hedgerow within 90 m
K /T23	Soy, corn	131	30	Tributary within 111 m
K /T25	Soy, corn	96	40	Tributary within 111 m
K /T26	Soy, corn	315	40	Tributary within 111 m
K /T27	Soy, corn	91	40	Tributary within 111 m
L /T29	Soy, corn, hay	118 m	109	Tributary within 48 m
L/ T30	Soy, corn, hay	152	109	Tributary within 48 m
M /T31	Corn, soy, wheat, hay	96	> 33 (connected to other)	

Station Identifier/ Turbine Number(s)	Landscape Description in Turbine Area			
	Crop	Approximate Woodland Proximity (m)	Approximate Size of Closest Woodland (ha)	Other Natural Features
			woodlands to south)	
N /T32	Corn, wheat	320 m	> 87 (connected to other woodlands to south)	Tributary within 102 m
N /T33	Corn, wheat	104	> 87 (connected to other woodlands to south)	Tributary within 102 m
O /T34	Corn, wheat, soy	414	> 87 (connected to other woodlands to south)	Hedgerow within 106 m
O /T35	Corn, wheat, soy	95	>87 (connected to other woodlands to south)	Hedgerow within 106 m
O /T37	Corn, wheat, soy	115, 680	15, >87	Hedgerow within 106 m
O/ T38	Corn, wheat, soy	96, 200	15, >87 (connected to other woodlands to south)	Hedgerow within 106 m
P /T39	Wheat, soy, corn	206, 279	15, 12	Small tributary within 150 m
Q /T41	Soy, corn	269, 775	5.4, > 196	Hedgerow within 182 m
Q /T42	Soy, corn	129, 948	5.4, >196	Hedgerow within 182 m
R /T43	Corn, soy	94, 442	5.4, >196 continuous with large woodland complex to south)	Hedgerow/ditch within 77 m
S /T44	Soy, alfalfa	451 m, 905	3 (woodland and tributary), >19	Hedgerow within 72 m
U /T45	Wheat	111 m	>19 (contiguous with woodlands to south)	Hedgerow adjacent, tributary within 228 m

Station Identifier/ Turbine Number(s)	Landscape Description in Turbine Area			
	Crop	Approximate Woodland Proximity (m)	Approximate Size of Closest Woodland (ha)	Other Natural Features
T /T46	Wheat	141 m	>19 (contiguous with woodlands to south)	Tributary within 190 m
T /T48	Wheat	91	>19 (contiguous with woodlands to south)	Tributary within 190 m

2.2 Site Visits

Surveys were conducted twice per week on days without precipitation, in a variety of wind and cloud conditions, to observe behaviour of raptors in different weather conditions. Surveys were not conducted in rainy weather given that precipitation typically reduces bird activity. Table 3 provides a summary of dates and weather conditions for each survey, as well as the turbines that were surveyed on each visit. Generally, half the turbines (split geographically from north to south) were surveyed on each visit, though some stations were surveyed on both visits if they were in the central part of the study area or when a searcher efficiency/ predation trial was taking place. Alterations to the schedule were made if raptors were seen near turbines outside the scheduled area.

Table 3. Dates, weather conditions and stations visited for each field survey

Date (2019)	Stations Surveyed	Weather Conditions		
		Wind (Beaufort Scale ¹)	Cloud Cover (%)	Temperature (°C)
1 May	Reconnaissance (all turbines visited)	6	100	10
6 May	A to P	3	50-100	9-16
10 May	K to U	4	100	11
14 May	A, J to U	4	5-70	11-15
17 May	A to K	2	40-100	11-14
22 May	A, J, R to U	4	10-60	12-14
25 May	A to L, P	2	100	14-16
28 May	A to K	3	10-80	13-18
31 May	L to U	1-2	60-70	13

¹ Beaufort Scale: **0: Less than 1 km/h:** calm, Smoke rises vertically; **1: 1-5km/h,** light air, direction of wind shown by smoke drift, but not wind vanes; **2: 6-11km/h,** light breeze, wind felt on face, leaves rustle. Ordinary vane moved by wind.**3: 12-19km/h,** gentle breeze, leaves and small twigs in constant motion, wind extends light flag; **4: 20-28km/h,** moderate breeze, raises dust and loose paper, small branches are moved.

Date (2019)	Stations Surveyed	Weather Conditions		
		Wind (Beaufort Scale ¹)	Cloud Cover (%)	Temperature (°C)
7 June	A to K	2	35-100	19
8 June	I to U	1-3	5-15	14-16
11 June	L to U	2	0-5	15-18
14 June	A to K	4	10-60	17-18
18 June	A to K	2-3	25	15-17
19 June	L to U	1-2	60-100	20-23
25 June	A to K	3-4	50-100	19-22
27 June	L to U	2	20-40	21-23
3 July	L to U	2-3	20-35	21-22
4 July	A to K	2	15-50	24-26
9 July	I, L to U	2	100	22
12 July	A to K	3-4	95-100	18-19
15 July	L to U	2-3	15-35	20-23
16 July	A to K	3	35-90	25-29
23 July	L to U	3-4	30-50	20
26 July	A to K	1-2	0-20	22-26
30 July	B, E, G, I to M, O	2	50-100	23-24

2.3 Survey Procedure

Site stations were positioned to maximize the area around each of the 40 turbines that could be scrutinized most efficiently during each visit. Surveys were generally conducted between 0900 and 1430. A minimum of five minutes was spent at each station. During all visits, woodland edges were examined with binoculars around each turbine to determine if nests were present, or if there were raptors nearby that exhibited behaviour consistent with nesting (display flights, food-carrying, etc.).

If a raptor was observed during the drive between stations, its behaviour was recorded to document the direction of flight and whether its behaviour was different from behaviour at the turbines.

Each time a raptor was observed, it was watched until it exited the area around the turbines. A maximum of half an hour was spent at each station regardless of whether there was a raptor in the area still. Time spent depended on the behavior of the raptor. For example, if a raptor was flying close to the turbine it was observed longer than if it was perched and not interacting in any way with the turbine. Observations of behaviour were recorded on a tablet, including:

- Location and direction of flight;
- flight behaviour: whether the raptor was circling, flying in a straight path, flying upwards or downwards, and whether it ultimately landed near the turbines;
- whether the raptor appeared to be hunting or flying between points; and

- proximity of raptor to the turbines.

Weather conditions at the time of the survey were recorded, including temperature (°C), cloud cover (%), and wind strength according to the Beaufort Scale (see footnote, Table 3).

3.0 Results

3.1 Raptor Nest Searches

No raptor nests were observed in the woodlots found within the study area from any of the survey stations, and no behaviour was recorded that was consistent with a nest near any of the turbines with the exception of two Northern Harriers that were observed later in the season that were suspected to be a female and a juvenile. The juvenile was able to fly well; so this observation was considered possible evidence of breeding even though it could not be confirmed that a pair was nesting in the study area.

3.2 Numbers of Raptor Sightings in the Study Area

Table 5 provides a summary of observations of each species in the study area, as well as the number of turbines at which they were seen. Individual turbine numbers where the most sightings of each species occurred are also shown in Table 4, except for Turkey Vulture sightings, which are analysed in Table 5.

Eight species were observed in the study area. Turkey Vultures were observed the most frequently, with over 600 sightings, and with at least one sighting near 34 of the 40 turbines. Northern Harrier, Red-tailed Hawk and American Kestrel were the second-most common raptors observed, though there were far fewer sightings of these species than Turkey Vultures (between 10 and 20). There were also occasional sightings of Bald Eagle, Broad-winged Hawk, Merlin and Cooper's Hawk.

There was some evidence that some species ventured closer to the turbines than others, though numbers of some species were so low that this analysis may have been confounded. Broad-winged Hawk, Cooper's Hawk and Merlin were noted so infrequently that even though they were not noted within 120 m of the turbines, it may have been only because there were so few. Bald Eagle was noted within 120 m of the turbines on 2 of the 4 sightings. Turkey Vulture, Northern Harrier and Red-tailed Hawk were all noted within 120 m of the turbines on 21% to 23% of the occasions they were sighted. However, American Kestrels were noted within 120 m of the turbines on one occasion of the 18 times they were seen, representing only 5% of the sightings.

Table 4. Numbers of raptors noted within the study area, distance from the turbine where each species was noted, numbers of turbines with sightings, and individual turbines where the most sightings occurred.

Species	Total Number of Sightings	Number of Sightings in Relation to Turbines			Number of Turbines where Sightings Occurred	Turbine Number(s) with Most Frequent Sightings (number of sightings shown in brackets)
		Number within 120 m	Number 121 to 500 m	Number >500 m		
Turkey Vulture	606	139	230	237	34	See table 5
Bald Eagle	4	2	1	1	3	T-21 (2)
American Kestrel	18	1	8	9	12	T-18 (3), T-29 (2), T-31 (2) T-32 (3)
Merlin	2			2	2	T-26 (1), T-41 (1)
Cooper's Hawk	2		2		2	T-35 (1), T-41 (1)
Red-tailed Hawk	15	3	12	0	13	T-18 (2) T-21 (3) T-31 (2)
Broad-winged Hawk	1		1		1	T-45 (1)
Northern Harrier	18	4	13	1	11	T-3 (5), T-5 (2), T-16 (2)
Total All Raptors	671	149	266	251	37	

Note: Shaded numbers indicate turbines where mortalities were noted. It should be noted that mortality records did not correspond with the species sighted at that turbine, with the exception of Turkey Vulture (see Table 5).

Table 5. Numbers of Turkey Vulture sightings at Turbines in the study area

Turbine Number	Number of Turkey Vulture Sightings
T-31*	71
T-29	48
T-43	34
T-30	33
T-18	32
T-22	29

Turbine Number	Number of Turkey Vulture Sightings
T-02, T-44	28
T-38	27
T-48*	25
T-20*	22
T-33	20
T-03, T-23, T-39	19
T-25	14
T-05, T-19	13
T-27*	11
T-21	10
T-35	9
T-41	8
T-13	7
T-09*	6
T-17	5
T-08, T-16*, T-42*, T-45*, T-46	4
T-11	3
T-01, T-06*, T-12	2
T-07, T-32	1
T-14, T-26, T-34, T-37	0

*Indicates turbines with Turkey Vulture mortalities (2017-2019)

3.2.1 Height of Raptor Species in Relation to Turbines

Estimated initial height of raptors (at first observation) in relation to the turbines was estimated as follows:

- 1- below blade sweep (1-43m)
- 2- within blade sweep height (44-156m)
- 3- above blade sweep height (157m or higher)
- 4- no flight height (on the ground or perched)

Table 6 indicates the turbines at which flights within the blade sweep were seen (category 2). In general, most species, except for Turkey Vulture, were seen most often perched or flying low to the ground or below the blade sweep. Turkey Vultures were seen most often within the height of the blade sweep (90% of sightings). Three of the four Bald Eagle sightings were within the height of the blade sweep. Flight height was not able to be estimated for 69 of the observations. This was primarily due to the raptors being at a great distance away.

Table 6. Estimated height of raptor species in relation to turbines

Species	Number of Sightings at Different heights				
	1 - Below Blade Sweep	2 - Within Blade Sweep	3 - Above Blade Sweep	4 - No Flight Height (on the Ground or Perched)	Unknown
Bald Eagle		3		1	
Turkey Vulture	137	365	53	55	4
American Kestrel	9			9	
Merlin				2	
Cooper's Hawk	1	1			
Broad-winged Hawk				1	
Red-tailed Hawk	13			2	
Northern Harrier	12	3		3	1

3.2.2 Raptor Age

Most species of birds observed were adults except for Turkey Vulture (Table 7). Turkey Vulture juvenile and sub-adult birds comprised 141 individuals, as assessed by the colour of the head (red on an adult, ashy red on a sub-adult and gray on a juvenile).

There was no evidence that sub-adult or juvenile Turkey Vultures (i.e. potentially less experienced flyers) were more likely to fly near the turbines than adults. Fifty-nine of the sightings of sub-adult Turkey Vultures were within 120 m of the turbines, while 31 adults were noted within 120 m. This difference likely reflects the difference in numbers of adults and juveniles.

Table 7. Numbers of Adult and sub-adult raptors (including juveniles) noted within the study area

Species	Number of Sightings	Number of Adults	Number of Sub-adults or Juveniles	Number of Unknown Age	Number of Each Gender
Bald Eagle	4	2	2		Unknown
Turkey Vulture	606	94	141 (33 juvenile)	371	Unknown
American Kestrel	18	16	2		12 male, 6 female
Merlin	2	1		1	Unknown
Cooper's Hawk	2	Unknown	Unknown	2	Unknown
Red-tailed Hawk	15	12	Unknown	3	Unknown

Species	Number of Sightings	Number of Adults	Number of Sub-adults or Juveniles	Number of Unknown Age	Number of Each Gender
Northern Harrier	18	6	2	10	14 female, 1 male, 3 unknown
Broad-winged Hawk	1	Unknown	Unknown	1	Unknown

3.2.3 Proximity of Raptors to Individual Turbines

As noted above, distance from the turbines was estimated for each sighting where possible. Table 5 provides a summary of the estimated distance of sightings of different species from turbines, as well as the number of sightings where it could not be determined. Generally, Turkey Vultures were the species observed in closest proximity to turbines, probably because of the large number in the study area.

This section discusses which species are found in proximity to turbines. An analysis of the reasons that raptors may be found in greater numbers at certain turbines is found in Section 3.5. Section 3.5 also maps and discusses the number of sightings of raptors in relation to landscape features such as woodlots and tributaries, in relation to where mortalities occurred.

3.2.4 Weather Conditions and Sightings

Figure 3 provides a graph of the number of “close” sightings (those within 120 m of the turbines), the date, and wind speed. Most close raptor sightings within 120 m of the turbines occurred in the middle and later part of the survey period (i.e., between 28th May and 30th July); in addition, the four dates where no close sightings occurred were in the earlier part of the season: May and early June. There was no evidence that raptors approached turbines closer in any particular wind conditions. There was also no evidence for a relationship between the number of close sightings and air temperature, wind direction or cloud cover.

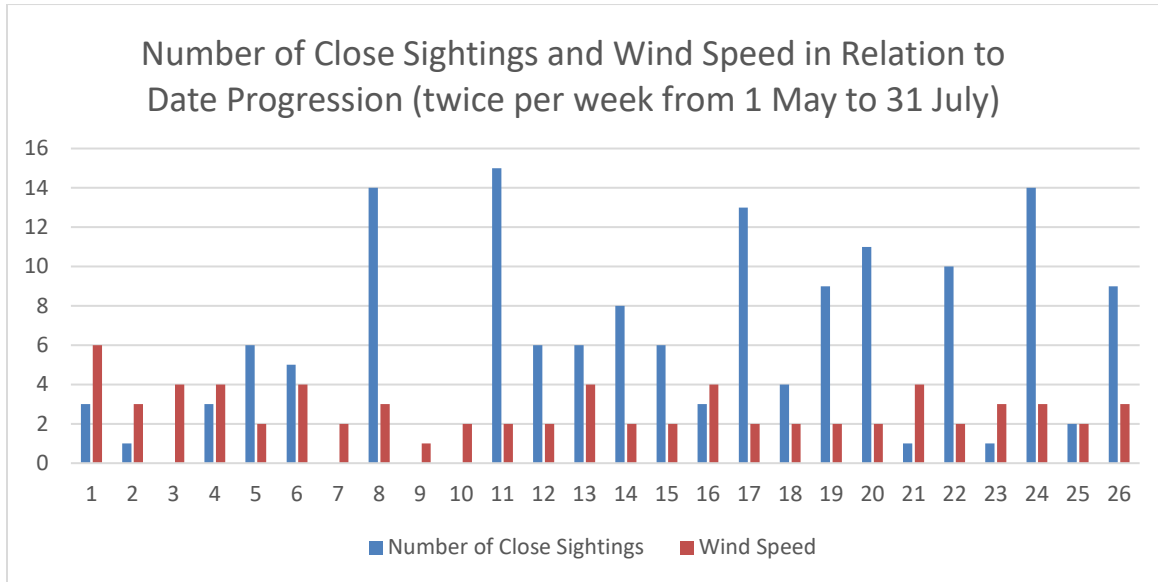


Figure 3. Number of Close Sightings (those within 120 m of a turbine) in relation to wind speed (measured by the Beaufort Scale) as the date progressed throughout the 26 visits in the study

3.3 Raptor Behaviour

Raptor behaviour within the study area was highly variable (as could be expected according to their foraging strategies): raptors were noted soaring, gliding, circling, flapping and perching in the study area. In most cases, raptors observed flying near the ground appeared to be foraging; they were focused on the ground and frequently dipped lower and higher as they searched for food over the study area.

3.3.1 Behavioural Observations

Behaviour of species differed as follows:

- Bald Eagles were noted rarely, and were generally perching or soaring close to the lake;
- Northern Harriers were usually observed foraging in a straight line or zig-zag pattern across fields while close to the ground;
- Cooper’s Hawks and Merlins were seen very infrequently as they flew fast and directly in pursuit of birds; and did not remain in the area for long enough to be easily spotted or to have their behaviour observed;
- Red-tailed Hawks and Turkey Vultures exhibited a variety of circling and soaring behaviour;
- American Kestrels tended to be observed perching or flapping/hovering as they typically do while hunting.

Table 8 summarizes the behaviour noted for all species in the study area. Most behaviours were complex and tended to occur in combination: for example, raptors were frequently

observed flapping, circling and soaring within the same observation session, as illustrated in Figure 4 (mapped near T-23, T-24, T-25 and T-27 on a variety of dates).

Table 8. Number of incidents of raptor behaviours observed in the study area

Species	Perching	Soaring	Circling	Hunting	Flapping	Gliding
American Kestrel	12	1		2	11	1
Bald Eagle	1	2	1		3	1
Cooper's Hawk		1	1	1	1	1
Northern Harrier	4	4	2	6	12	12
Red-tailed Hawk	9	8	8		8	3
Turkey Vulture	100	483	498	12		22
Broad-winged Hawk	1					
Merlin	2				1	
Unknown Raptor	1	3	3		2	
Unknown Falcon					1	
Total	130	502	513	31	39	40

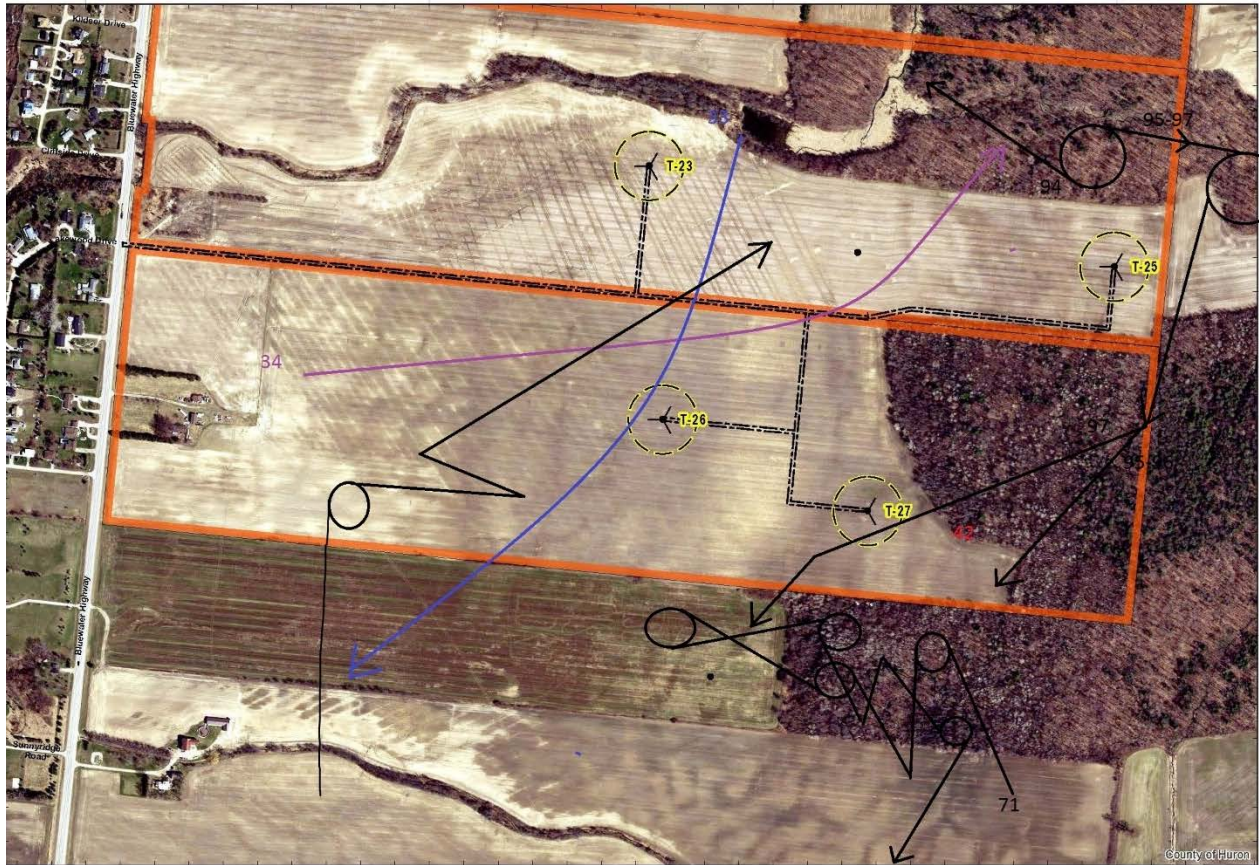


Figure 4. Example of complex behaviour of raptors in the study area: Black lines indicate Turkey Vultures, blue lines indicate an American Kestrel, the red number indicates a perched Red-tailed Hawk and the purple line indicates a Northern Harrier.

3.3.2 High-Risk Behaviours

Twenty incidents of high-risk behaviour were observed in detail, as summarized in Table 10. The last column of Table 9 shows the notes taken during the observation and conveys the high level of concern the observer felt while watching the incident. High-risk behaviours involved only Turkey Vultures (of a variety of ages), and generally involved birds flying closely past or through the turbine blades. Turkey Vultures exhibited behaviour that was noticeably careless around turbines (e.g. see observation at Turbine 2); they frequently foraged over the ground within the height of the blade sweep, ventured close to the turbines, and were observed flying upwards suddenly near turbines while they were foraging. Their heads were usually positioned downwards, a behaviour that may have led to their noticing the turbine only as they got close to it.

Incidents of high-risk behaviours were observed three times at T-44, twice at T-02 (the second incident involved two birds) and twice at T-22. High-risk behaviours were noted for four birds at T-27, but all behaviours were related to the same incident. All other incidents occurred at different turbines. High-risk behaviours were not confined to any time of year; they were observed throughout the course of the study, with 6 incidents noted in May, 2 in June, and 9 in July (one incident in July involved four birds).

Table 9. High-risk behaviours observed in detail in the study area

Closest Turbine	Bird Observation Number	Date	Species Code	Age (A/SA/J/ U)	Gender (M/F/U)	Distance from TB Base (m)	Flight Direction	Initial Flight Height at Turbine (1-4) - please note when height change is observed	Behaviour Codes / Behavioural Response SO / FL / CI / GL / PE / HU. AV / NO / HR ²	Notes
2	B4	2019-05-01	TUVU	U-unknown	U- unknown	30	E	1	so, hr	
2	B151	2019-05-28	TUVU	A-adult	U- unknown	60	NW	1	ci, so, av, hr	initially circling low then circled higher and went towards T-2. changed direction in what looked like avoidance then circled back to original location before flying NW
2	B152	2019-05-28	TUVU	A-adult	U- unknown	60	NW	1	ci, so, av, hr	initially circling low then circled higher and went towards T-2. changed direction in what looked like avoidance then circled back to original location before flying NW
5	B634	2019-07-26	TUVU	U-unknown	U- unknown	20	NW	2-3-1	ci, so, av, hr	flew in from west. Soared and circled over field then circled around T-5 a few times high risk but went to height 3 when going directly over turbine before heading NW to woodlot where in flew low to height 1
6	B636	2019-07-26	TUVU	J-juvenile	U- unknown	60	W	3	ci, so, no, hr, pe	flew in from west then circled over Blackbush Rd. then circled field then went between T-6 and T-7 then back close behind 6 and crossed between T-5 and T-6 with lots of circling. Turbines all off or slow, no reaction, perched in willow tree
22	B378	2019-06-18	TUVU	U-unknown	U- unknown	60	N	2	hr, av, so, ci	flying along woodlot then went towards turbine, near miss before turning direction in avoidance
22	B498	2019-07-04	TUVU	J-juvenile	U- unknown	2	NW	2	so, ci, no, hr	flew to T-22 with near miss that made it turn around (avoidance) but it went to T-21 nr then joined other TUVU circling near T-17. In short, the bird almost got hit then flew very close to two other turbines. Silly bird.
27	B503	2019-07-04	TUVU	U-unknown	U- unknown	10	SE	2	so, ci, no, hr	503-506 came in and a moving kettle, they were really all over the place, no reaction to turbines, which were off, but would be high risk if they had been on, they circled and flew right over turbines multiple times. They did get low near T-27 and were fighting. possible reaction to the dead vireo? [i.e. vireo left on ground for scavenger trials]
27	B504	2019-07-04	TUVU	U-unknown	U- unknown	10	SE	2	so, ci, no, hr	503-506 came in and a moving kettle, they were really all over the place, no reaction to turbines, which were off, but would be high risk if they had been on, they circled and flew right over turbines multiple times. They did get low near T-27 and were fighting. possible reaction to the dead vireo? [i.e. vireo left on ground for scavenger trials]

² Behavioural codes:
so-soaring; fl-flapping; ci-circling; gl-gliding; pe-perching; hu-hunting; av-avoidance; no-no response; hr- high risk

Closest Turbine	Bird Observation Number	Date	Species Code	Age (A/SA/J/ U)	Gender (M/F/U)	Distance from TB Base (m)	Flight Direction	Initial Flight Height at Turbine (1-4) - please note when height change is observed	Behaviour Codes / Behavioural Response SO / FL / CI / GL / PE / HU. AV / NO / HR ²	Notes
27	B505	2019-07-04	TUVU	J-juvenile	U- unknown	0	SE	2	so, ci, no, hr	B503-506 came in and a moving kettle, they were really all over the place, no reaction to turbines, which were off, but would be high risk if they had been on, they circled and flew right over turbines multiple times. They did get low near T-27 and were fighting. possible reaction to the dead vireo? [i.e. vireo left on ground for scavenger trials]
27	B506	2019-07-04	TUVU	J-juvenile	U- unknown	10	SE	2	so, ci, no, hr	B503-506 came in and a moving kettle, they were really all over the place, no reaction to turbines, which were off, but would be high risk if they had been on, they circled and flew right over turbines multiple times. They did get low near T-27 and were fighting. possible reaction to the dead vireo? [i.e. vireo left on ground for scavenger trials]
29	B13	2019-05-01	TUVU	U-unknown	U- unknown	45	E	2 but then 1 when soaring across the field and under the turbine	so, ci, hr	started far then got within 50m
31	B570	2019-07-15	TUVU	U-unknown	U- unknown	50	W	2	ci, so, no, hr	Circled and soared between T-29 and T-27 with 569-577. moving kettle going west to field N of T-31. one individual was circling near T-31 and went between blades. High risk
35	B614	2019-07-23	TUVU	U-unknown	U- unknown	30		2	so, ci, hr, no	flying over woodlot circled at height 2 then went out over field to T-35 and back to circle over woodlot. Seen after at station to N still circling and soaring over woodlot
44	B64	2019-05-14	TUVU	U-unknown	U- unknown	20	SW	2	so, fl, hr, no	same individual as B62?
44	B596	2019-07-15	TUVU	SA-subadult	U- unknown	20	SE	2-3	so, no, hr	crossed between blades of T-44 no reaction then went high to height 3 and continued SE, circling and soaring over fields
44	B610	2019-07-23	TUVU	SA-subadult	U- unknown	20	SE	2	so, ci, no, hr	flew up from SE near T-46 then circled over woodlot and when other two TUVU went SE it went N (high risk); near miss with T-44. swerved a bit last minute after a blade swing. Then cut N to join B611
46	B57	2019-05-14	TUVU	J-juvenile	U- unknown	20	N	2	ci, so, hr	in kettle southeast of T-48 then flew north and near miss with T-46; dropped down after the blade nearly hit
46	B611	2019-07-23	TUVU	A-adult	U- unknown	20	SE	2	so, ci, no, hr	flew up from S near T-46 then circled over woodlot and went back to T-46; near miss with no reaction, then N to woodlot and around T-44 before heading SE
48	B459	2019-06-27	TUVU	U-unknown	U- unknown	100	E	2	ci, so, hr?	Circling near T-48

3.4 Raptor Breeding and Foraging Habits

While raptors were not confirmed breeding within the study area, it is possible that nests were present deep within woodlots or fields and were not visible from the stations. Foraging habitat was abundant within the study area for all species. Table 10 summarizes preferences for nest sites and foraging habitat of raptors, which likely attract them to the study area. All raptors have highly variable, but often very large, home ranges (depending on prey density), so it is also probable that many raptors that were seen in the study area were breeding outside the study area.

Table 10. Nesting and foraging habitat of species noted in the study area (home range from various accounts in Birds of North America Online, 2019)

Species	Nesting Habitat	Foraging Habitat	Home Range
Bald Eagle	Super-canopy trees adjacent to large bodies of water or rivers	Shallow lakes	700 ha to 2200 ha for breeding individuals, can be > 5 million ha for non-breeders
Turkey Vulture	Dark recesses in a variety of sites: mainly rock outcrops, occasional forest	Fields	>40,000 ha
American Kestrel	Fields, woodland edges	Fields	34 to 460 ha
Merlin	Woodlands	Open to semi-open areas	600 to 2300 ha
Cooper's Hawk	Woodlands	Woodlands, woodland edges, fields	400-1800 ha
Sharp-shinned Hawk	Woodlands	Woodlands, fields, shorelines	90-270 ha
Broad-winged Hawk	Woodlands (rarely breeds in the area)	Woodlands, fields	unknown
Red-tailed Hawk	Woodlands, trees in open and shrubby areas	Fields, woodland edges	44-206 ha
Northern Harrier	Open fields	Open fields	170-15,000 ha

3.5 Landscape Factors

Turbines within 400 m of larger woodlands (defined as woodlands over 10 ha) were associated with more raptor sightings than turbines more than 400 m away from the nearest woodland (Table 11 and Figure 5). This difference was significant (<0.01) when tested with a Student's T-test. There was some evidence that there were fewer sightings associated with turbines within 400 m of a small woodland (defined as those between 2.5 and 10 ha) but the sample size was small (there were only three woodlots < 10 ha that were within 400 m of turbines) and the difference was not significant (Table 11). For this analysis, woodlots were included only if they were more than 2.5 ha and were not linear features along a tributary.

Table 11. Number of sightings (of all species) related to the proximity of woodlands

Category of Turbine	Number of Sightings	Number of Turbines (N)	Average Number of Sightings per Turbine
Turbines within 300 m of >10 ha woodlot	415	18	23.1
Turbines within 400 m of a >10 ha woodlot	485	23	21.1
Turbines within 400 m of <10 ha woodlot	46	3	11.5
Turbines > 400 m of a woodlot > 10 ha	116	14	8.9

There was no evidence that close sightings of raptors (sightings within 120 m of a turbine) were related to the presence of woodlands (Figure 6). However, the observer noted that she felt that very close sightings, within 50 m, were noted more often at turbines close to woodlands (these were not recorded separately from those within 120 m). There was no evidence of greater mortality at turbines where greater numbers of close sightings were seen (Figure 6). The highest number of raptor mortalities between 2017-2019 have occurred at T-27, which is in close proximity to woodlands on three sides. Several high-risk behaviours were also seen at this turbine, all involving the same kettle of four birds. However, as noted above, the number of sightings at this turbine was 12, which was not unusually high.

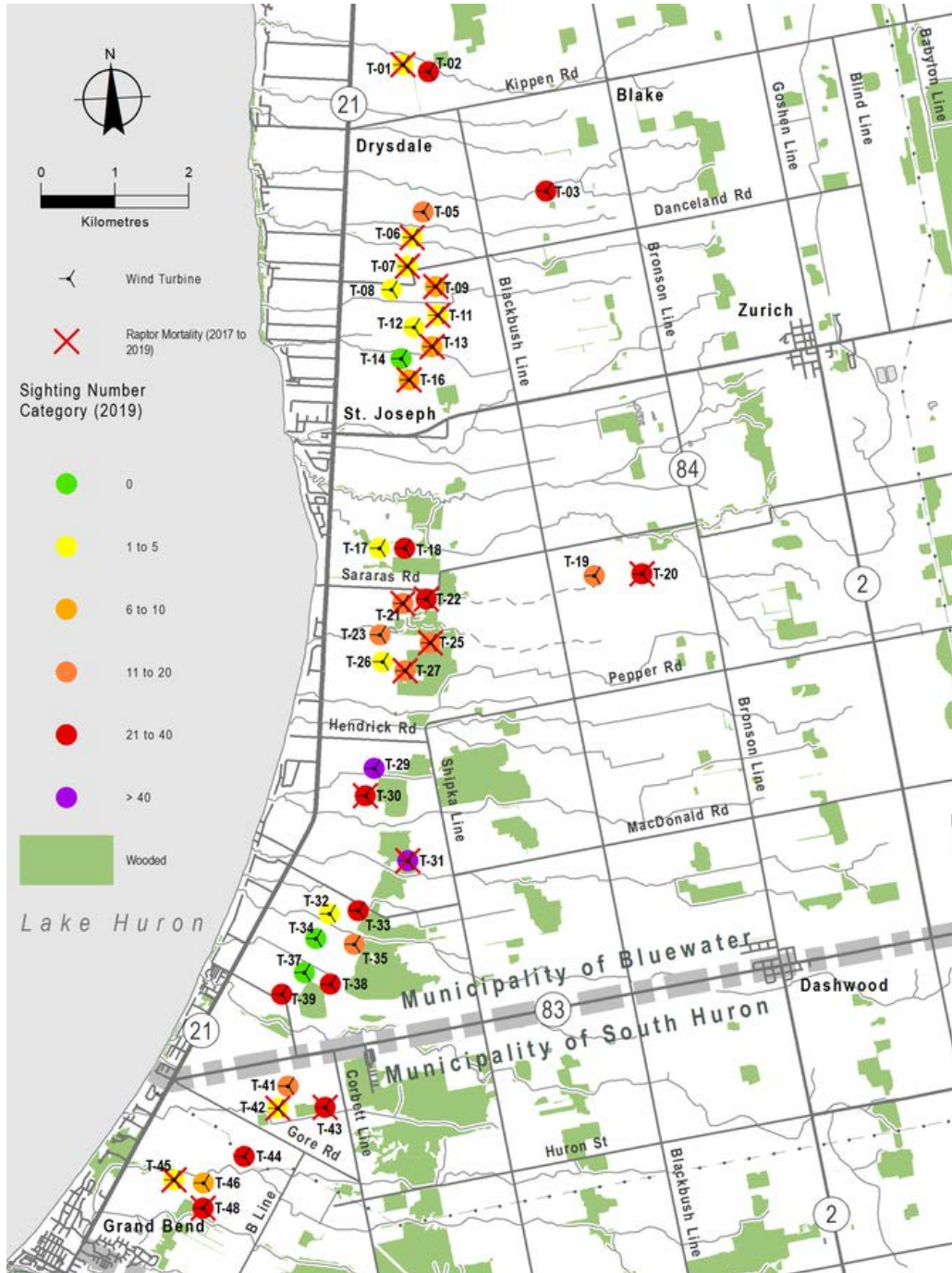


Figure 5. Numbers of raptor sightings and mortalities in relation to woodlands and watercourses

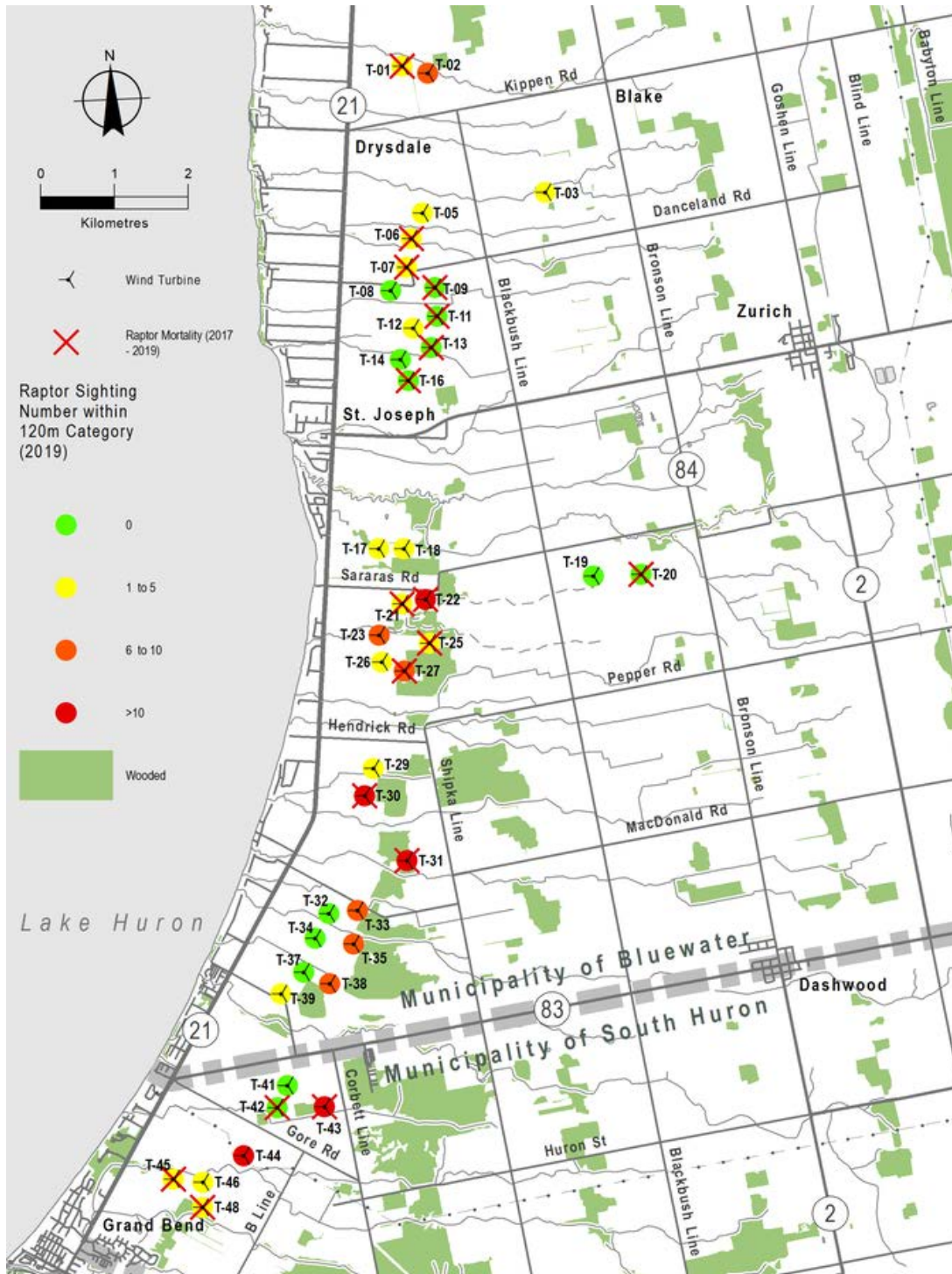


Figure 6. Distribution of “close” raptor sightings (sightings within 120 m of a turbine) in relation to landscape features and mortalities

The relationship between proximity of raptors to woodland edges and sightings of raptors may be important to risk of mortality. Since raptors that venture near turbines are likely at greater risk of collision than raptors that stay away from turbines, this may be an

indication that turbines that are within approximately 400 m of woodlands could be associated with a greater risk of collisions. There was a small amount of evidence that proximity to a woodland increased the risk of collisions. More than half of high-risk incidents took place at turbines less than 400 m from a woodlot. There is some evidence of this from the pattern of mortalities as well. There were no mortalities at turbines where no raptors were sighted, and the highest numbers of mortalities were associated with turbines at which there were 29 sightings (T-22, with 2 mortalities), 5 sightings (T-42, with 2 mortalities) and 12 sightings (T-27, with 3 mortalities). 16 mortalities were found at turbines within 400 m of a woodlot, while only 6 were found at turbines more than 400 m from a woodlot.

However, the relationship between numbers of sightings and numbers of mortalities was not consistent. There was no clear evidence that mortalities were consistently associated more with turbines at which there were higher numbers of sightings than lower numbers.

Table 12 shows the mortalities for each species recorded from 2017-2019, the distance from the nearest woodland, and the number of sightings and close sightings recorded in 2019. The turbines at which there was more than one mortality (turbines T-22, T-27 and T-42) are all closer than 300 m to a woodland edge. For turbines where mortalities were found, there were significantly more sightings of raptors at turbines that were within 400 m of a woodlot ($p < 0.01$). However, in considering all mortalities there is no consistent correlation between occurrence of mortalities, numbers of sightings or close sightings and proximity to a woodland, probably because of the small sample size. There is no clear trend showing that mortalities are more likely to occur near turbines with a higher number of sightings, or more likely to occur at turbines near a woodland.

Tables 13 and 14 provide further analyses of the relationship between sightings recorded in 2019, mortalities recorded from 2017-2019 and proximity of turbines to a woodland, and provide further evidence that there is no consistent relationship between the number of sightings, mortality and the proximity of woodlands.

Table 12. Mortalities by species (2017-2019), turbine proximity to woodlands and numbers of sightings in 2019

Turbine Number	Species	Age	Number of Sightings	Number of Close Sightings	Woodland Proximity (m)
T-01	Unidentified Hawk	Unknown	3	2	419
T-06	Turkey Vulture	Unknown	3	1	1796
T-07	Red-tailed Hawk	Juvenile	2	1	1693
T-09	Turkey Vulture	Juvenile	7	0	1354
T-11	Cooper's Hawk	Unknown	3	0	962
T-13	Sharp-shinned Hawk	Adult	8	0	558
T-16	Turkey Vulture	Juvenile	6	0	379
T-20	Turkey Vulture	Juvenile	23	0	334
T-21	Cooper's Hawk	Adult	17	2	130
T-22	Red-tailed Hawk	Adult	29	11	104
T-22	Sharp-shinned Hawk	Adult	29	11	104
T-25	Red-tailed Hawk	Adult	14	3	96
T-27	Red-tailed Hawk	Adult	12	7	91
T-27	Turkey Vulture	Juvenile	12	7	91
T-27	Turkey Vulture	Adult	12	7	91
T-30	Red-tailed Hawk	Adult	34	11	152
T-31	Turkey Vulture	Adult	77	16	96
T-42	Turkey Vulture	Adult	5	0	129
T-42	Turkey Vulture	Juvenile	5	0	129
T-43	Red-tailed Hawk	Unknown	34	15	94
T-45	Turkey Vulture	Unknown	5	1	111
T-48	Turkey Vulture	Juvenile	26	4	91

As shown in Table 13, many mortalities were associated with turbines at which there were low numbers of sightings as well as at turbines with high numbers of sightings.

Table 13. Numbers of mortalities (2017-2019) at turbines in relation to numbers of sightings in 2019 (all species combined and Turkey Vultures alone)

Category of Numbers of Sightings	Number of Turbines in Each Category without Mortalities		Number of Turbines in Each Category with Mortalities	
	All Species	Turkey Vultures	All Species	Turkey Vultures
0	3	4	0	0
1 to 5	5	6	6	7
6 to 10	1	2	3	3
11 to 20	5	6	3	2
21-40	7	5	5	5
>40	1	1	1	1

Table 14 shows that turbines near woodlots with mortalities did not have significantly more raptor sightings than those without mortalities. Pairwise Student's T tests showed that there was no significant difference between numbers of sightings at turbines within 400 m of woodlots where mortality occurred and did not occur, or between numbers of sightings over 400 m from woodlots where mortality did and did not occur (significance of all tests > 0.08). The only significant difference found was that at turbines with mortalities, there were more sightings at woodlots < 400 m from woodlots than at turbines > 400 m from woodlots, reflecting the general rule that numbers of raptor sightings were greater at turbines near woodlots.

Table 14. Numbers of sightings at turbines with and without mortality

	Sightings at turbines with no mortality, within 400 m of a woodlot	Sightings at turbines with mortality, within 400 m of a woodlot	Number of sightings at turbines with no mortality, > 400 m from a woodlot	Number of sightings at turbines with mortality, > 400 m from a woodlot
Total Number of raptor sightings	208	277	90	26
Number of Turbines (N)	14	12	8	6
Mean	17.8	23.5	11.2	4.3
Standard Deviation	14.8	19.9	11.5	2.5

The only species for which there was some evidence of greater mortality at turbines closer to woodland edges was Red-tailed Hawk, though this was not statistically significant because of the small sample size. Red-tailed Hawk mortality was associated in 5 of 6 cases with turbines within 150 m of woodland edges. The only Red-tailed Hawk killed at a turbine more than 400 m from a woodland was a juvenile killed at Turbine T-07, which is 1693 m from the nearest woodland. However, Red-tailed Hawk mortalities were not confined to turbines where this species was sighted (only one mortality took place at a turbine where this species was sighted). In addition, two other Accipiter species' mortalities noted (Sharp-shinned Hawk and Cooper's Hawk) were species that are dependent on forests for nesting and foraging; two of the four Accipiter mortalities were noted at turbines within 400 m of a woodland edge. The eight Turkey Vulture mortalities were noted at a variety of turbine numbers, five of which were within 400 m of a woodland edge.

4.0 Discussion

The largest numbers of raptor observations within the study area were Turkey Vultures. Turkey Vultures flew close to the turbines more often than other raptors, were the only raptors seen exhibiting risky behaviour near the turbines, and they flew within the height of the turbine blades more often than they flew at other heights (and more often than other raptors flew at those heights). It is likely that the large number of Turkey Vultures in the study area and this combination of behaviours caused the large number of Turkey Vulture mortalities. Like other raptors, Turkey Vultures were more often seen at turbines within 400 m of woodland edges. However, the number of Turkey Vulture mortalities was not clearly associated with numbers of sightings.

Red-tailed Hawk mortality was disproportionately higher for the number of sightings than any other raptor. Their observed behaviour did not seem to indicate high risk. Though they were among the largest number of raptor species (after Turkey Vultures) seen in the study area, they were generally seen perched or on the ground, were not often observed approaching the turbines closely, did not generally fly within the height of the blades, and did not show high-risk behaviour. However, they were always seen at turbines within 500 m (and usually 400 m) of a woodland edge.

One possible explanation for the large number of Red-tailed Hawk mortalities is that forest species are notably more likely to be killed at turbines than other species (Table 1). Red-tailed Hawks mainly nest in forests, and Red-tailed Hawks have been noted in other studies to exhibit distracted behaviour near turbines (Hoover and Morrison 2005). Turbines close to woodlands are more often associated with mortality of Red-tailed Hawks than other turbines in the present study as well as in other studies so the distracted behaviour may be related to woodland edges, possibly as they are in search of prey. Red-tailed Hawks may approach turbines more closely at times of the day or in weather when they were not observed during this study.

Northern Harriers and American Kestrels appear to be at low risk of collision at the Grand Bend Wind Farm (there were no reported mortalities of these species). This is likely because Northern Harriers nest and forage on the ground. Over 50% of American Kestrels in this study were seen at a long distance from the turbines (> 400 m), and their hunting behaviour would usually keep them below turbine heights. It is noteworthy that where Northern Harriers and American Kestrels were noted near turbines, the turbines were within 400 m of forest edges as was the pattern for other raptors, though there were no mortalities of these species. This is not always the case at other wind farms. In a California study at the Altamont Pass Wind Farm (APWRA) (Smallwood et al. 2009), American Kestrel was noted foraging within the rotor zone of the turbines 25% of the time it was seen, in contrast to the findings in the GBWF study. American Kestrels experience high mortality rates at the APWRA (Smallwood et al. 2009).

The reason for the mortality of Red-tailed Hawk and Turkey Vulture is likely related to behaviour. Smallwood et al. (2009), in a study in California, observed substantial increases in time spent foraging (i.e., hovering, kiting, and diving) of Red-tailed Hawk (40%), while within the rotor zone of operating turbines, and suggested that it was in response to winds which were stronger while turbines operated. Raptor species that do not exhibit risky behaviour have been noted in other studies to be less likely to be killed by turbines. For example, in Smallwood's (2009) study, similar to the findings in the GBWF study area, Northern Harriers spent 29% more of their flight time traveling (i.e., from low contour flights to straight fly-through) while moving through the rotor zone, no matter whether turbines were on or not (Smallwood et al. 2009).

There have been studies that have examined raptor behaviour at wind turbines to determine whether some species have behaviours that make them more susceptible to collisions. For example, behavioural studies at the APWRA, which kills thousands of birds per year including hundreds of raptors, concluded that Red-tailed Hawk was among the most often observed species in the APWRA and the most often performing what they judged to be more dangerous behaviors (Smallwood et al. 2009). In Smallwood et al.'s (2009) study, flights by raptors within 50 m of turbine blades were performed most often by Red-tailed Hawk (31.1% of birds seen), Turkey Vulture (12.2%), American Kestrel (6.8%), Golden Eagle (5.2%) and Northern Harrier (1.9%). This differed from the findings at the GBWF, where American Kestrel and Northern Harrier were rarely observed flying close to turbines. It points out that close flights by these species may occur though they were not seen in this study. However, Smallwood et al. (2009) observed that Northern Harriers were more cautious than other species around wind turbines.

Smallwood et al. (2009) hypothesized that birds lose track of wind turbines while focused on diving for prey items, fly-catching, and hovering. It is possible that prey may occur more frequently within 400 m of woodland edges, and that wind patterns are different near woodland edges, so that different flight and foraging strategies used in these circumstances affect the susceptibility of raptors at turbines near woodland edges. Smallwood also noted that another suite of behaviors that corresponded with higher fatality rates was interactions with other birds while in the rotor zone. These authors noted that interaction

behaviours are distracting, and likely led to collisions. Turkey Vultures were particularly often noted interacting with each other in the present study, and this may result in their high susceptibility to mortality at the GBWF.

Watson et al. (2018a) observed that visitation was greater than expected at turbines <0.8km from nests, so the proximity of turbines to nests may be important though it could not be determined in this study. Nests for most species are mainly within woodlands, so this may explain the fact that raptor sightings occurred more frequently at turbines near woodland edges. Northern Harrier nest in grasslands, and so could have occurred near turbines close to hayfields, but they are less susceptible to being hit because of their low hunting behaviour and their cautious approach to turbines.

Hawks fly differently in strong winds than in weak winds. In a study by Hoover and Morrison (2006), they noted that raptors, especially Red-tailed Hawks, exhibited kiting activity (which is considered a risky behaviour by Smallwood et al. 2009) almost exclusively in strong winds and on windward slopes. In these situations, deflection tip-drafts are created by the deflection of wind tip over a hillside (Hoover and Morrison 2006). Studies have shown raptor use of tip-drafts for lift to be positively correlated with increasing wind velocities, especially for red-tailed hawks. Some slope lift has been measured at woodland edges, and this could be an added reason that soaring raptors such as Turkey Vultures and Red-tailed Hawks tend to be seen near woodlands. However, the lift generated by a woodland edge is more complex, and contains more turbulence, than the lift generated by a slope (Dellwik et al. 2014).

Raptor mortality, and particularly mortality of Red-tailed Hawks, is not noted at all wind farms; it appears to be more common at APWRA than at other wind farms (Hoover and Morrison 2005). These authors suggested that the high topographic relief was a factor in Red-tailed Hawk mortality, as slope-lift wind patterns were generated by the surrounding hills, which, coupled with winds facing hillsides, were used by hawks to gain lift and save energy while hunting prey. Though the mortality of Red-tailed Hawks was disproportionately high in the present study it was likely not related to slope lift generated by the topography as the area is quite flat. However, Turkey Vultures were seen apparently using wind patterns near the wind turbines to gain height. In this landscape where there was a dearth of features to cause slope-lift, it is possible that soaring raptors such as Turkey Vultures and Red-tailed Hawks particularly sought out wind turbines as a source of lift that saved energy for flight. Red-tailed Hawks are primarily perch hunters (Hoover and Morrison 2005), so they likely perch at woodland edges and fly out after prey, resulting in interactions with turbines while they are distracted.

5.0 Summary and Conclusions

In the absence of any woodlots with confirmed nesting, the main factors contributing to mortality appear to be a combination of:

1. Raptor abundance (i.e., those most often observed around the wind farm),
2. Raptor species and the differences in their flight patterns, foraging behaviours and habitat preferences.
3. Possible correlation to proximity of woodlots since the turbines with multiple mortalities have been adjacent to woodlots (although there are many single mortalities that have occurred at turbines that are not close to woodlots). In addition, the absolute number of mortalities was greater at turbines near woodlots than at turbines far from woodlots.

The highest numbers of sightings of birds in the area, and the largest number of mortalities, were of Turkey Vultures. High-risk behaviours involved only Turkey Vultures (of a variety of ages), and generally involved birds flying closely past or through the turbine blades. Red-tailed Hawks and Turkey Vultures exhibited a variety of circling and soaring behaviours that put them nearer to turbine blades than, for example, Northern Harrier, which tended to forage low over the ground, and for which mortalities were not noted. Turbines within 400 m of larger woodlands (woodlands over 10 ha) were associated with more raptor sightings than turbines more than 400 m away from the nearest woodland: this may influence mortality of raptors that forage in woodlands, such as Sharp-shinned Hawk and Cooper's Hawk.

Risk factors that may have led to larger numbers of mortalities in some species than others are summarized in Table 15. Raptor mortality is only partly related to abundance (DeLucas et al. 2008), so the number of sightings of raptors is likely not the only determinant of likelihood of mortality at a wind turbine.

The fact that collisions rarely occur at the same turbine on more than one occasion indicates that a complex set of factors influences raptors' behaviour near turbines and their likelihood of collisions. Though mortality appears to be greater at some turbines that are within 400 m of woodlands, and raptors are more often sighted within 400 m of woodlands, mortality also occurs at turbines at a much greater distance from woodlands and is not always related to the number of sightings.

Many factors have been suggested as the cause of raptor mortality at wind turbines (Dance, 2011, Marques et al. 2014, Watson et al. 2018b). Many of these factors are likely interactive, including weather, wind patterns, behaviour, inter- and intra-species interactions etc. There may be many other risk factors that were not evident in this study. It has been reported in studies of bird collisions related to tall towers that the largest mortality events occur in unusual weather conditions where fog and rain cause birds to become disoriented, so it is possible that weather events may increase the likelihood of mortality at some turbines. It is likely that there is some element of randomness in factors that cause mortality, so that turbine placement and operation cannot always mitigate against the risky behaviour of species such as Turkey Vulture.

The greatest number of raptor mortalities between 2017-2019 were Turkey Vulture and Red-tailed Hawk. For future operational mitigation and effectiveness monitoring that may

be required at the GBWF, turbines that may warrant special consideration are summarized below with the intent to try and reduce the mortality rates of these two species as a first step, recognizing that findings to date indicate that raptor mortalities appear to be based on the complex set of factors and that no specific turbine or set of turbines appear to be the cause of all raptor mortalities. Based on observational and mortality data collected to date, T-22, T-27, T-31, T-42 may have more than one factor that contributes to Turkey Vulture and Red-tailed Hawk mortalities more than other turbines at the wind farm. Factors that were considered included turbines with more than one raptor mortality, turbines with a Turkey Vulture or Red-tailed Hawk mortality, turbines that had the highest overall mortalities for both birds and bats, and turbines in proximity to woodlots:

- T-22, T-27 and T-42 have recorded more than one raptor mortality between 2017-2019 and all three of these turbines have had either a Turkey Vulture or Red-tailed Hawk mortality (or both);
- T-22 is located within 104 m of the nearest woodlot;
- T-22 had one Red-tailed Hawk mortality;
- T-27 had multiple Turkey Vulture mortalities;
- T-27 had one Red-tailed Hawk mortality;
- T-27 is located within 91 m of the nearest woodland and is bounded by woodlands on three sides;
- T-27 ranked as the 6th highest turbines for all mortalities (birds/bats) between 2017-2019;
- T-31 ranked as the highest turbine for all mortalities (birds/bats) between 2017-2019;
- T-31 had the highest number of Turkey Vulture sightings, which also had one Turkey Vulture mortality;
- T-31 is located within 96 m of the nearest woodlot;
- T-42 ranked as the 2nd highest turbine for all mortalities (birds/bats) between 2017-2019;
- T-42 is located within 129 m of the nearest woodlot;
- T-42 had two Turkey Vulture mortalities.

Table 15. Summary of risk factors that may lead to collisions

Species	Behaviours			Nesting Habitat/ Home Range	Foraging Habitat	Abundance in the Study Area	Number of Mortalities
	Close Proximity	Flight within Turbine Sweep Height	Risky Behaviour Noted				
Bald Eagle	Y	Y	N	N	N	N	None
Turkey Vulture	Y	Y	Y	Y	Y	Y	11
American Kestrel	N	N	N	Y	Y	Y	None
Merlin	N	N	N	Y	Y	N	None
Cooper's Hawk	N	Y	N	Y	Y	N	2
Sharp-shinned Hawk	?	?	N	Y	Y	N	2
Broad-winged Hawk	N	N	N	Y	Y	N	None
Red-tailed Hawk	Y	N	N	Y	Y	Y	6
Northern Harrier	Y	N	N	Y	Y	Y	None

6.0 References

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Hoover, S. and M.L. Morrison. 2005. Behaviour of Red-tailed Hawks in a wind turbine development. *Journal of Wildlife Management*; Jan 2005; 69, 1; ProQuest pg. 150.

de Lucas, M., G. F. E. Janss, D. P. Whitfield and Miguel Ferrer. 2008. Collision fatality of raptors in wind farms does not depend on raptor abundance. *Journal of Applied Ecology* , 45, 1695–1703.

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Marques, A. T., H. Batalha, S. Rodrigues, H. Costa, M. J. Ramos Pereira, C. Fonseca, M. Mascarenhas and J. Bernardino. 2014. Understanding bird collisions at wind farms: An updated review on the causes and possible mitigation strategies. *Biological Conservation* 179: 40-52

Smallwood, K.S., L. Rugge and M.L. Morrison. 2009. Influence of Behavior on Bird Mortality in Wind Energy Developments. *J. Wildl. Manage.* 73(7):1082–1098.

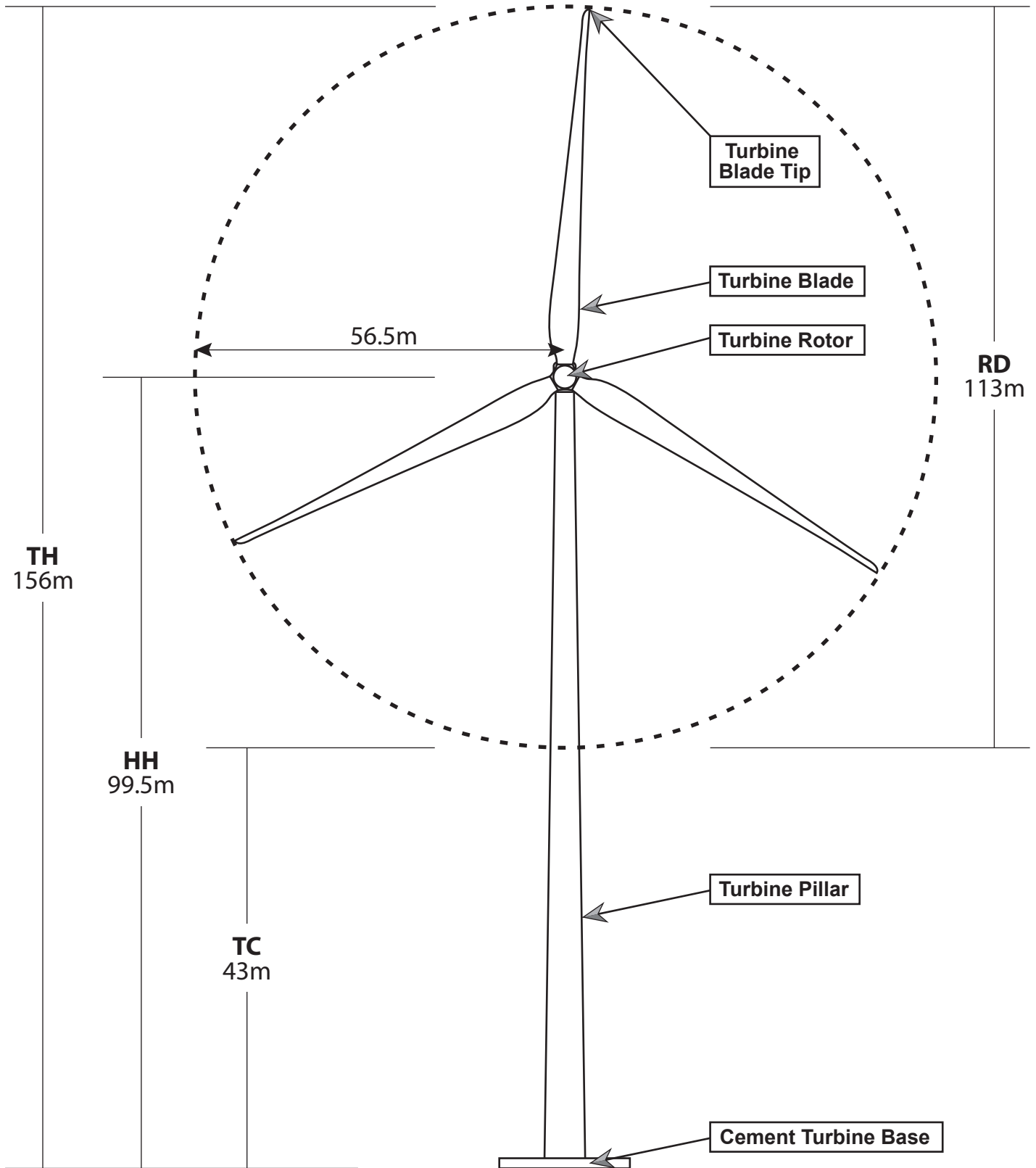
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Appendix 1: Diagram of Turbine Layout

Appendix 1. Diagram of Turbine Layout

Siemens SWT-3.0-113 Wind Turbine Diagram



HH: Hub Height **RD:** Rotor Diameter **TC:** Tip Clearance **TH:** Tip Height Swept Area – 10,000 m²



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix C

Turbine Habitat Maps

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

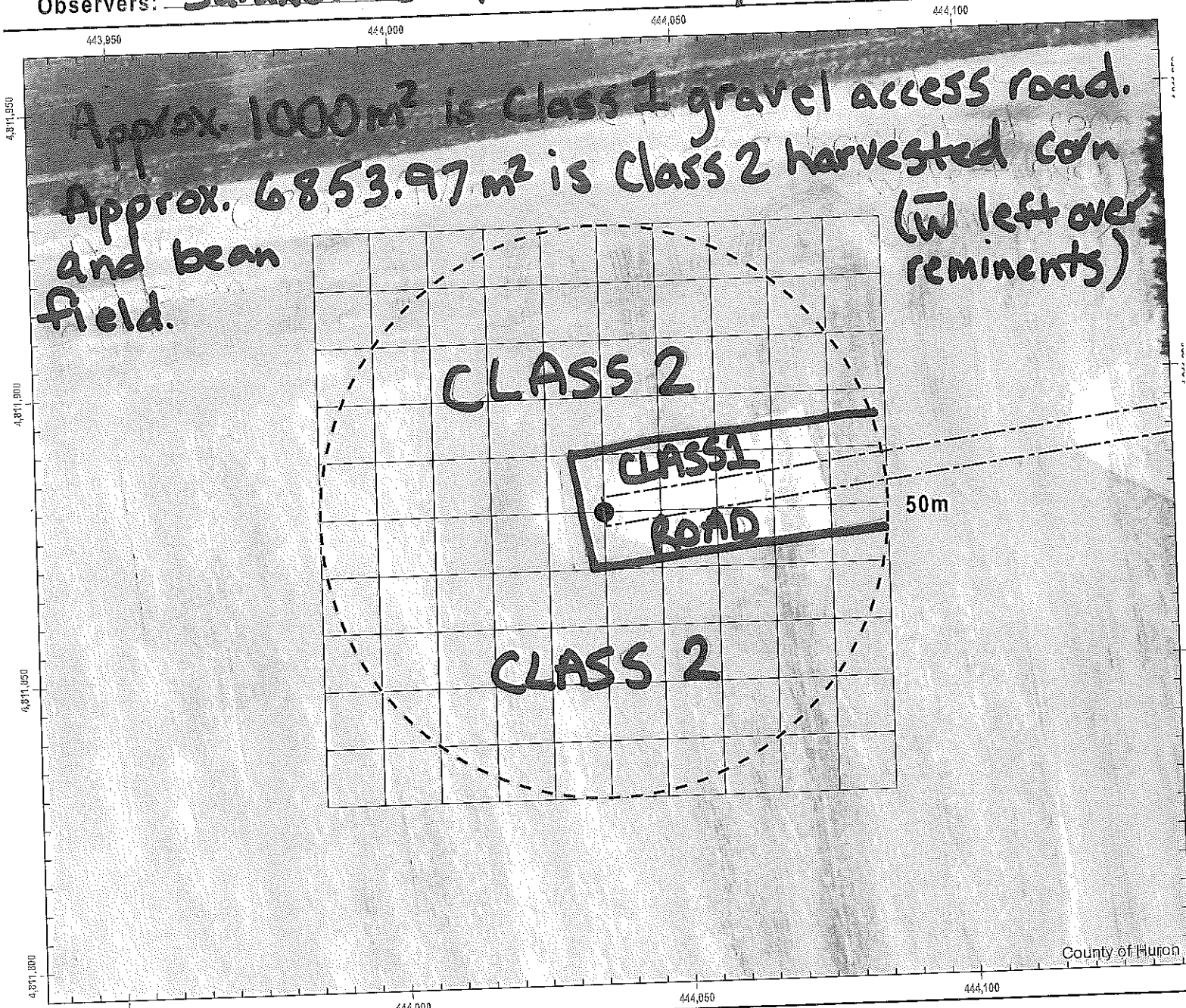
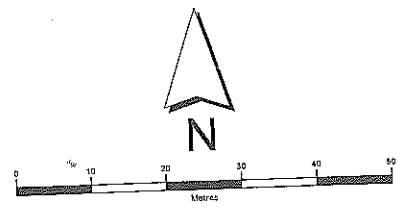
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-01

Survey Date: May 1 2019

Actual Searched Area (m²): 7853.97m²
(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson, Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

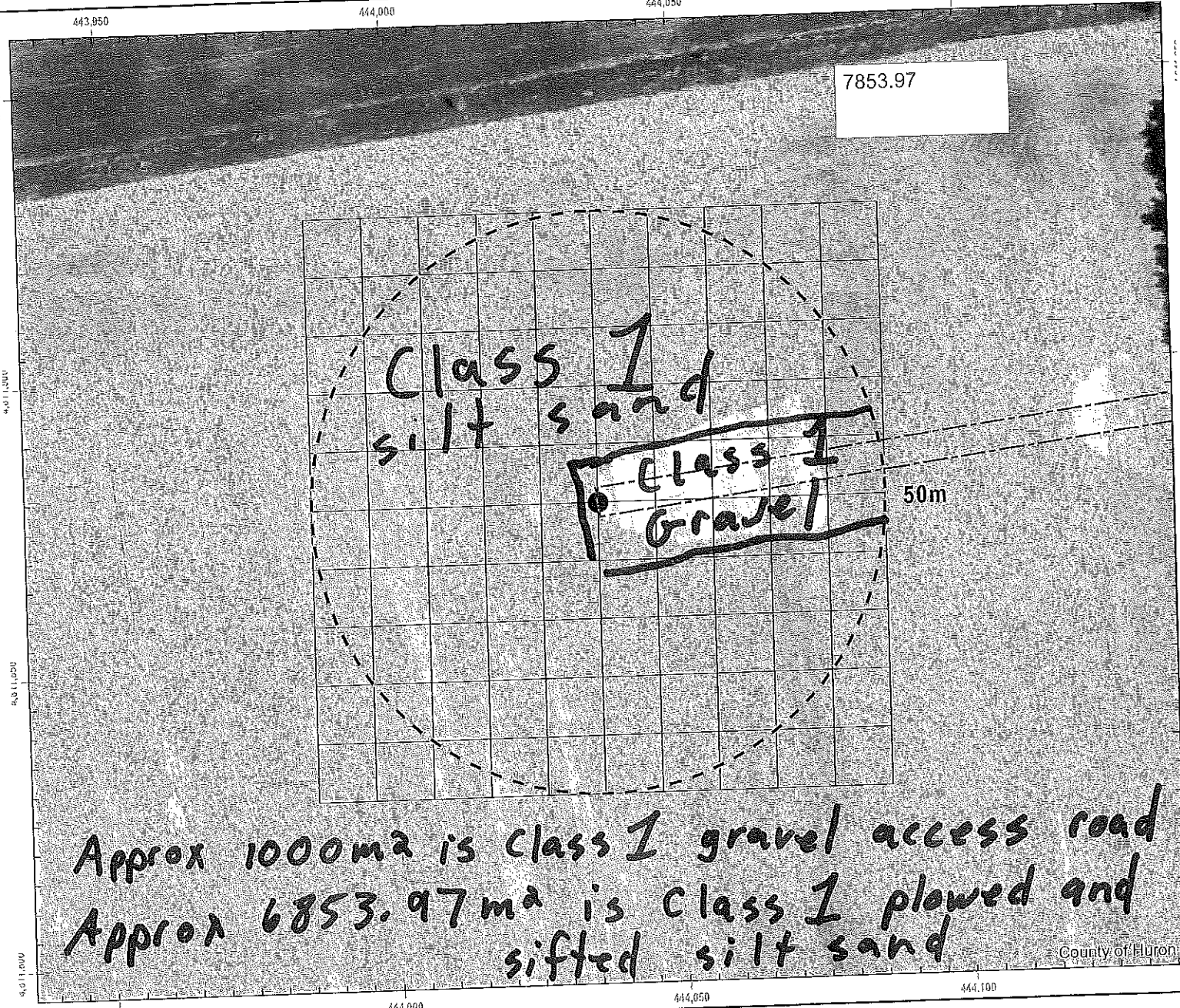
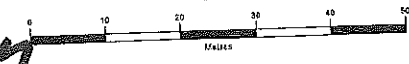
Site Number: T-01

Survey Date: June 6/19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



Approx 1000m² is Class 1 gravel access road
 Approx 6853.97m² is Class 1 plowed and sifted silt sand

County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
≤ 25% bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

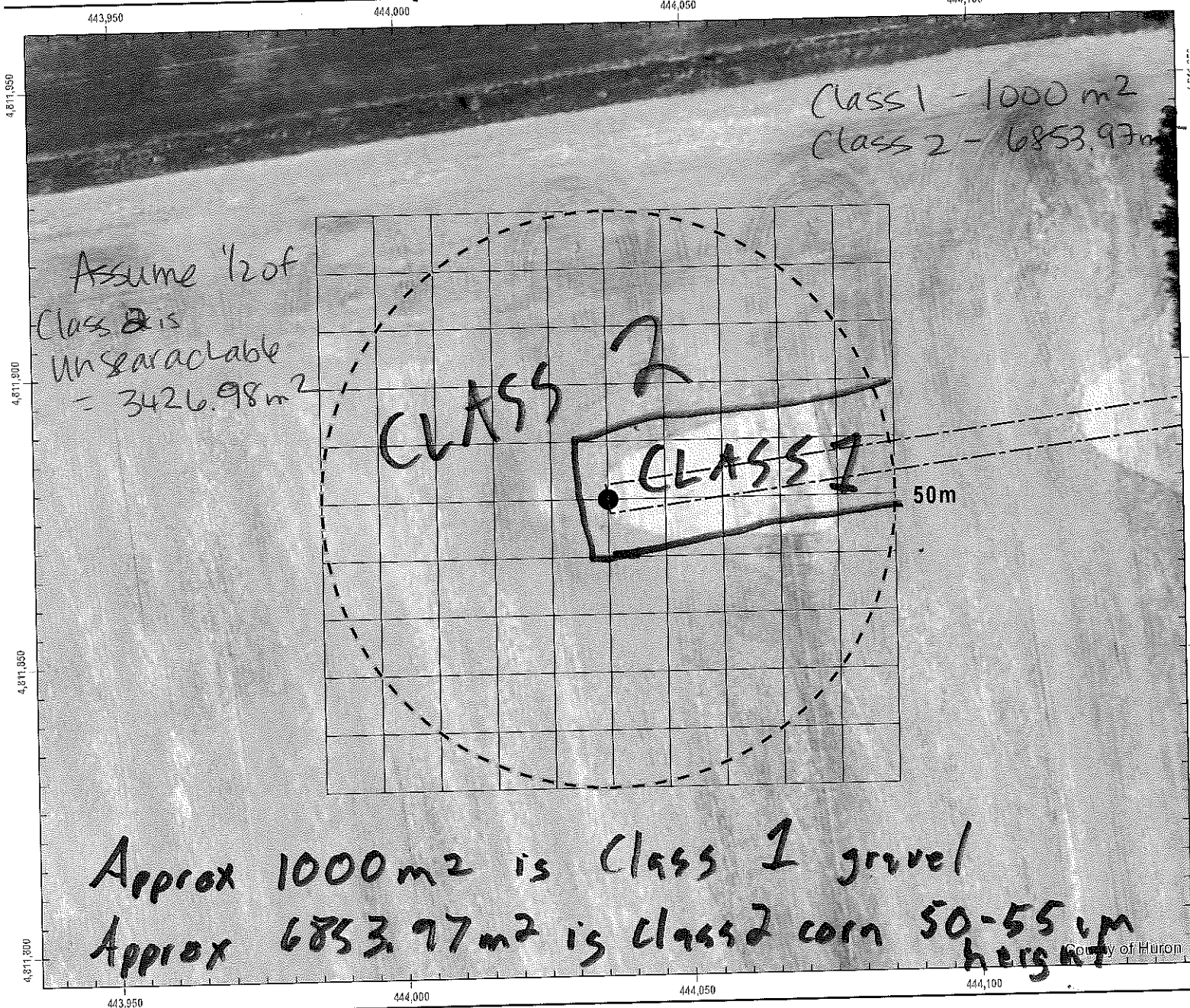
Site Number: T-01

Survey Date: July 3/19

Actual Searched Area (m²): 4426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sam Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

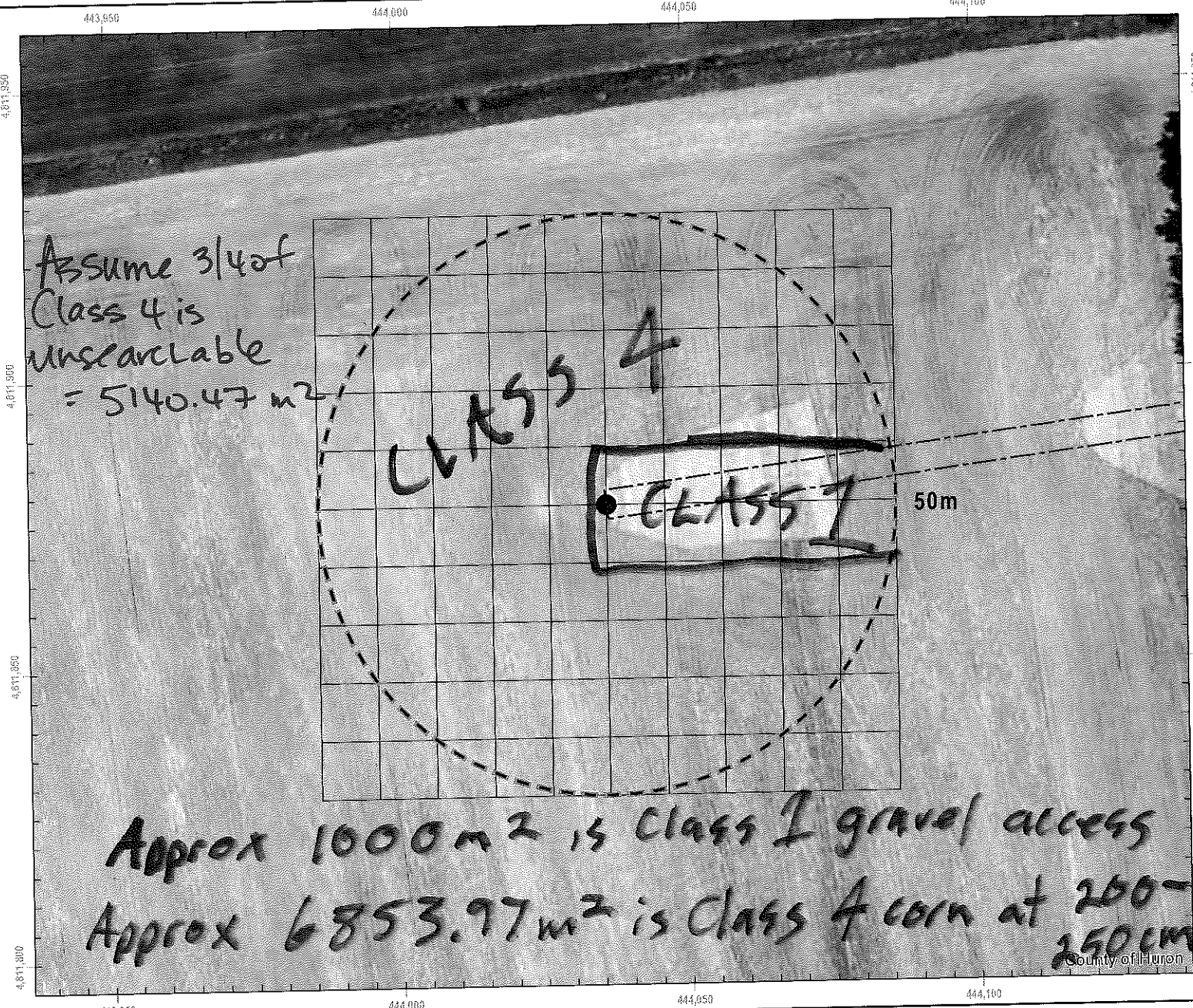
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-01

Survey Date: Aug 2 / 19

Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97 m²)

Observers: Gary Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
	> 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

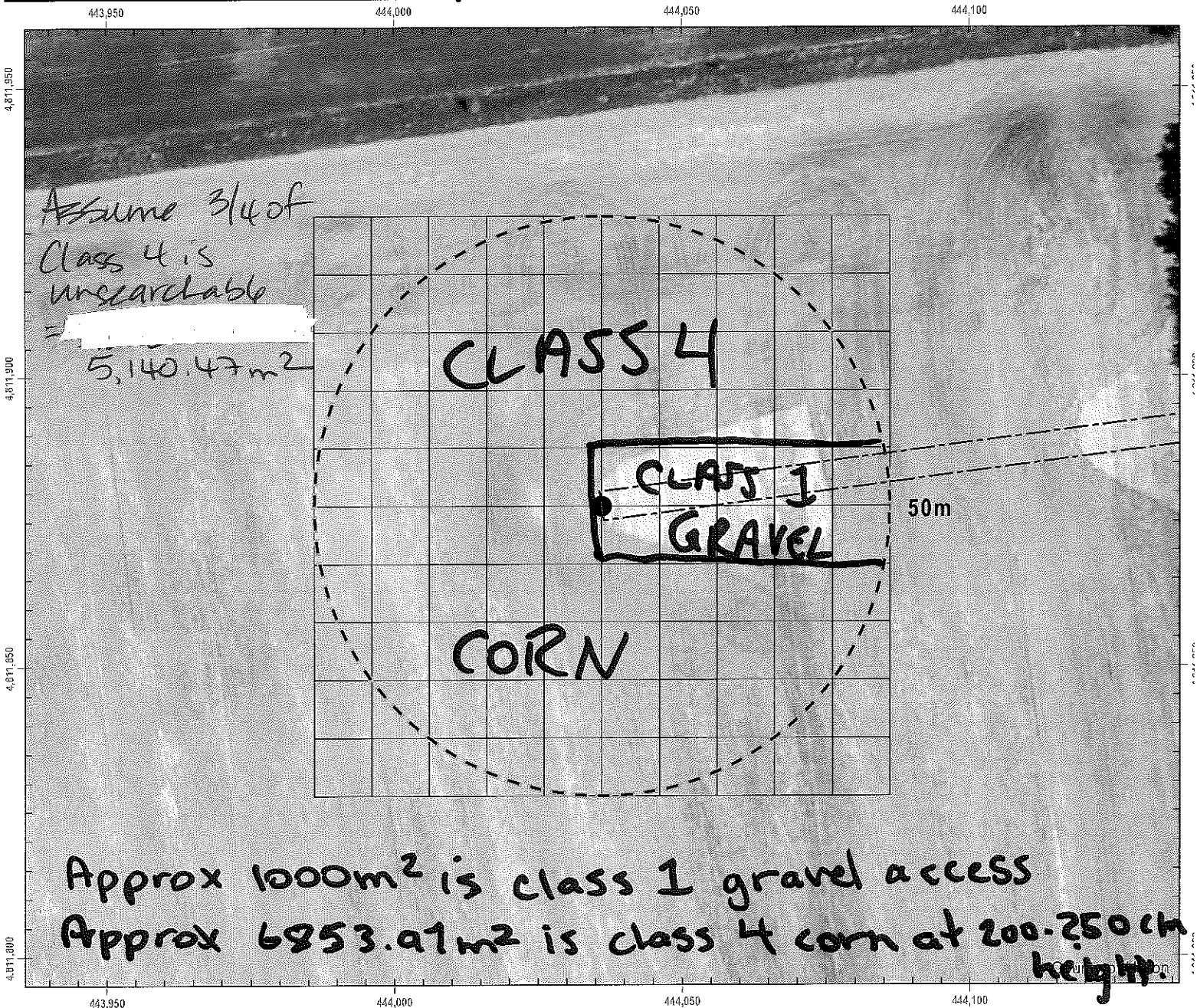
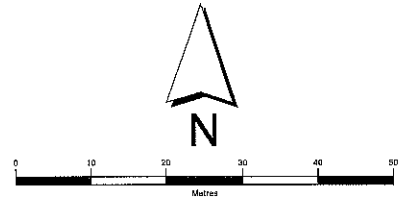
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-01

Survey Date: Sept. 4/19

Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

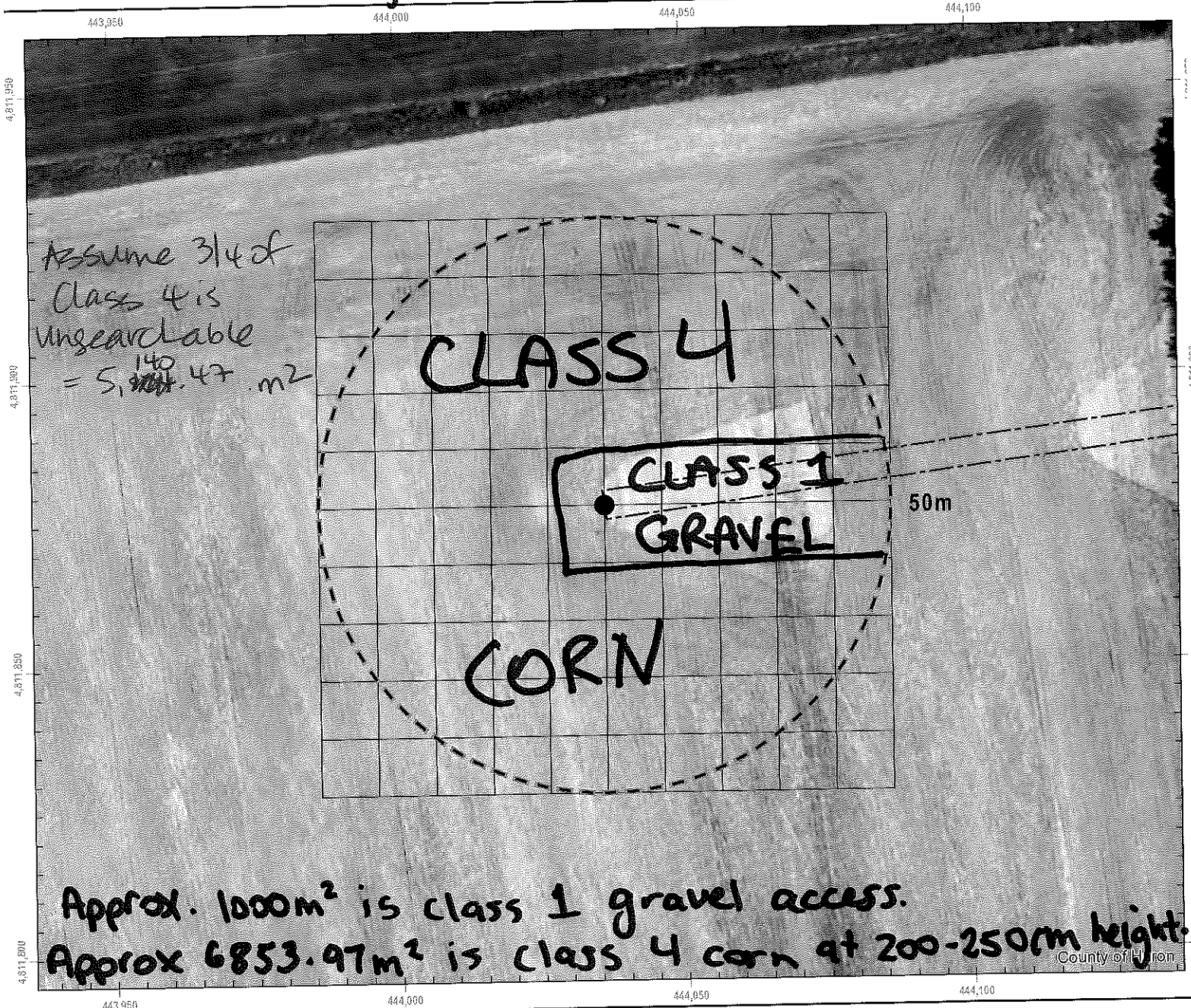
Site Number: T-01

Survey Date: Oct/5/19

Actual Searched Area (m²): 2,713.50 m²

(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
≤ 25% bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

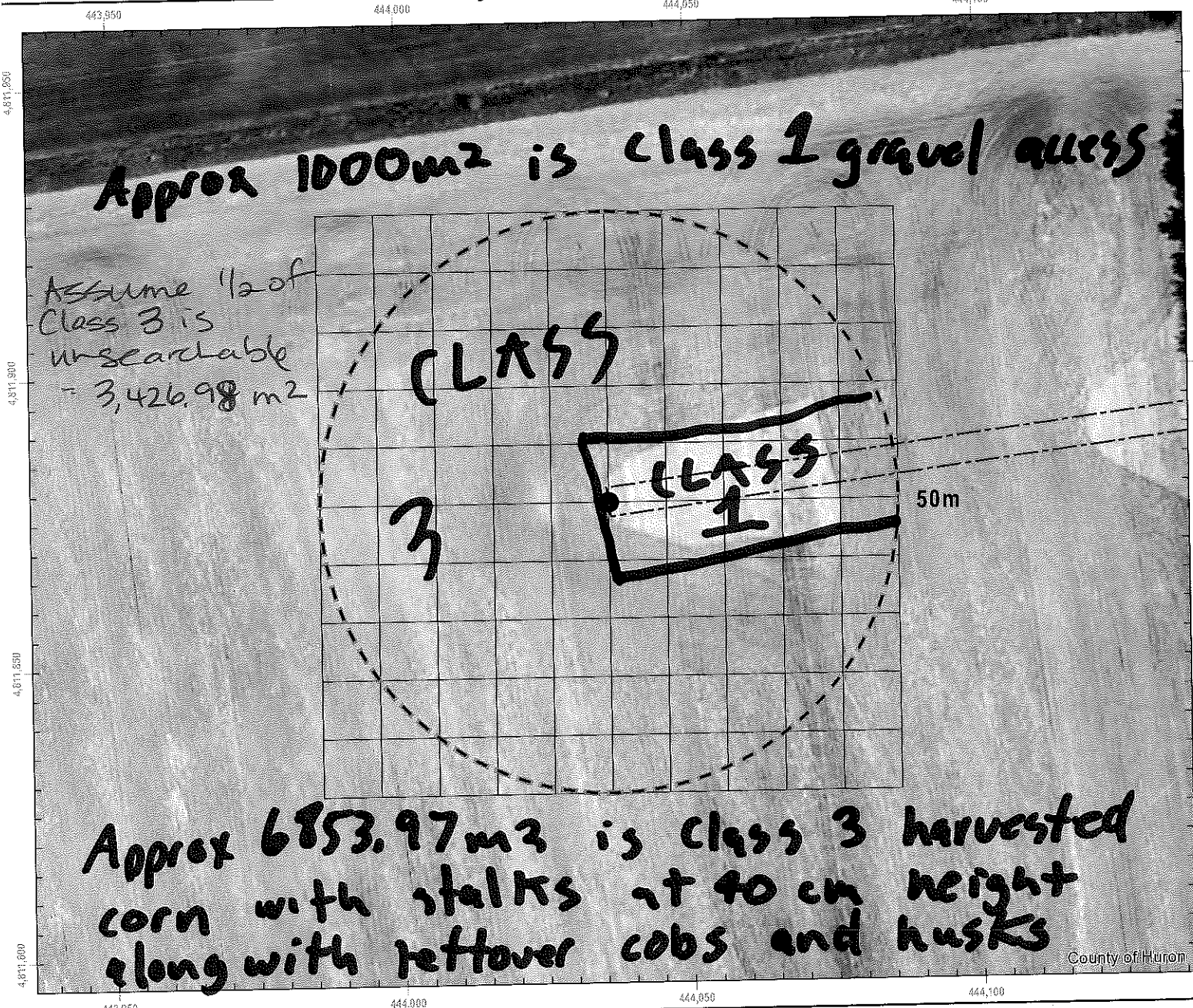
Site Number: T-01

Survey Date: Nov 6/19

Actual Searched Area (m²): 4,426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
≤ 25% bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

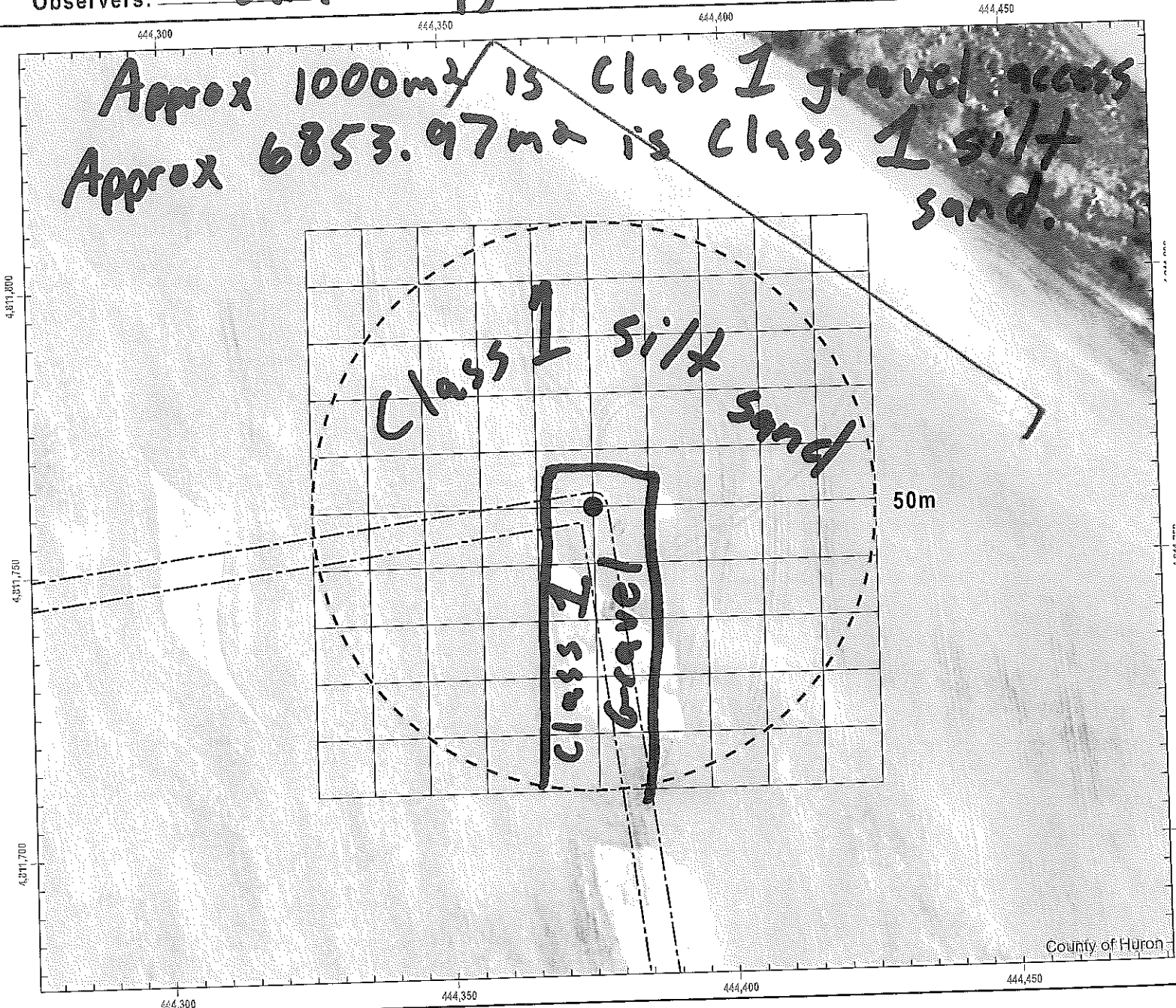
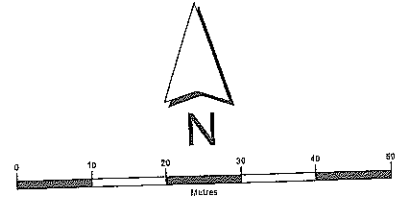
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-02

Survey Date: May 2 / 19

Actual Searched Area (m²): 6853.97m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



County of Huron

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

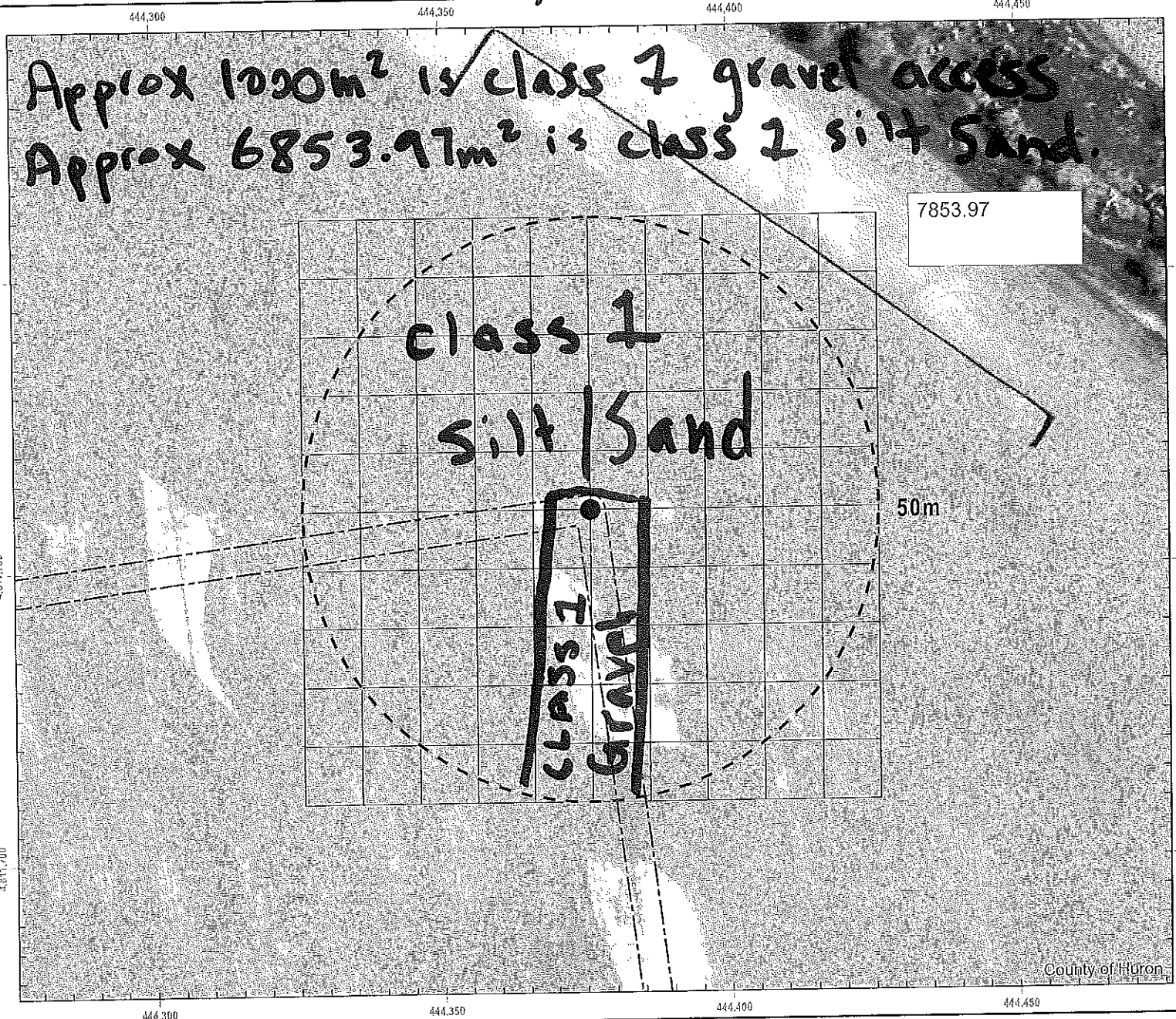
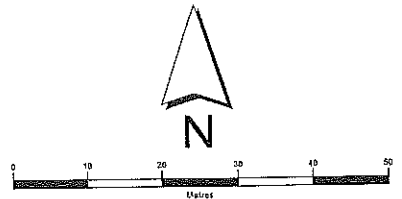
Site Number: T-02

Survey Date: June 17/19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson, Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
≤ 25% bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

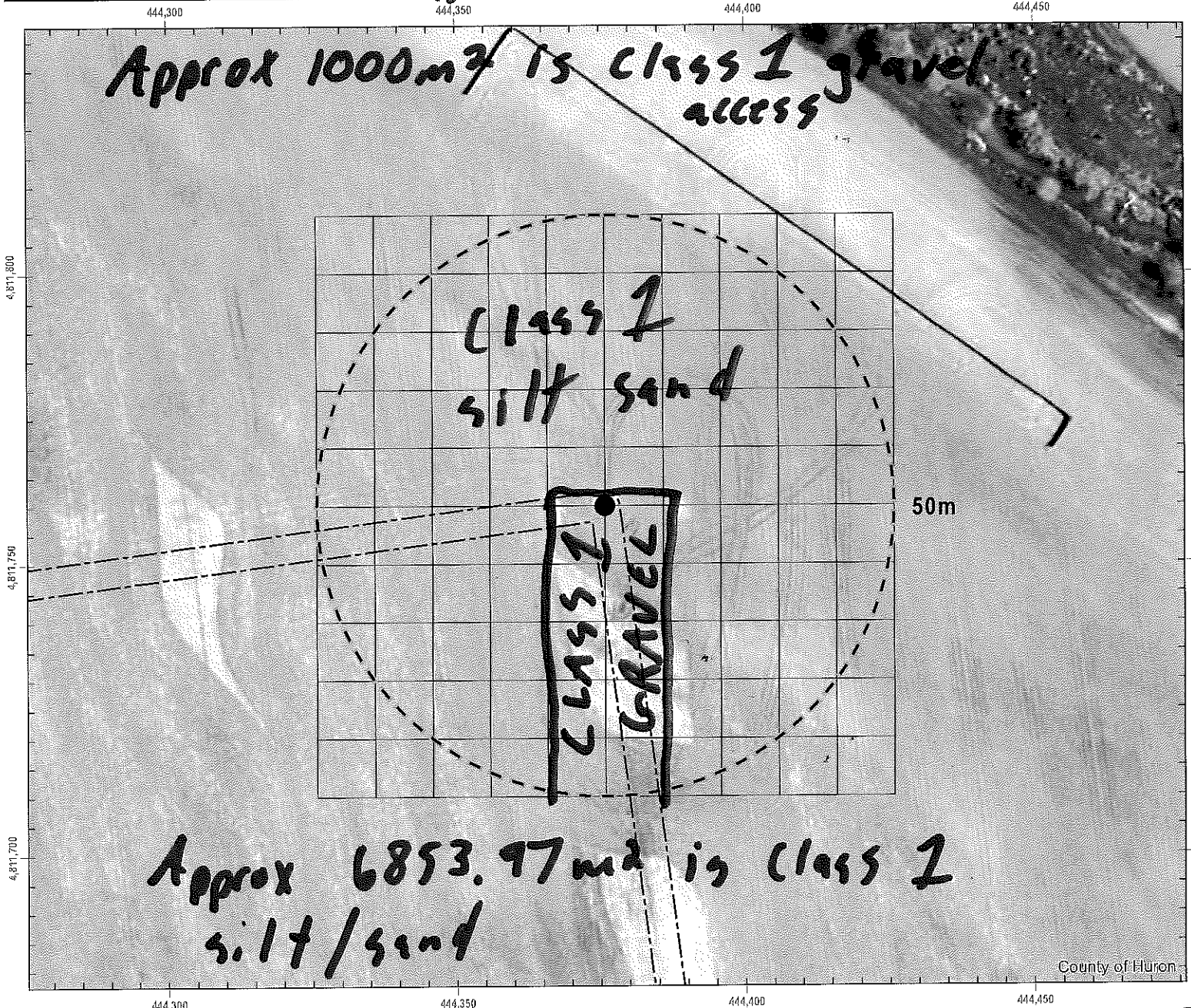
Site Number: T-02

Survey Date: July 25/19

Actual Searched Area (m²): 7853.97 m²

(subtract from total search area - 7853.97 m²)

Observers: Sara Heary, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

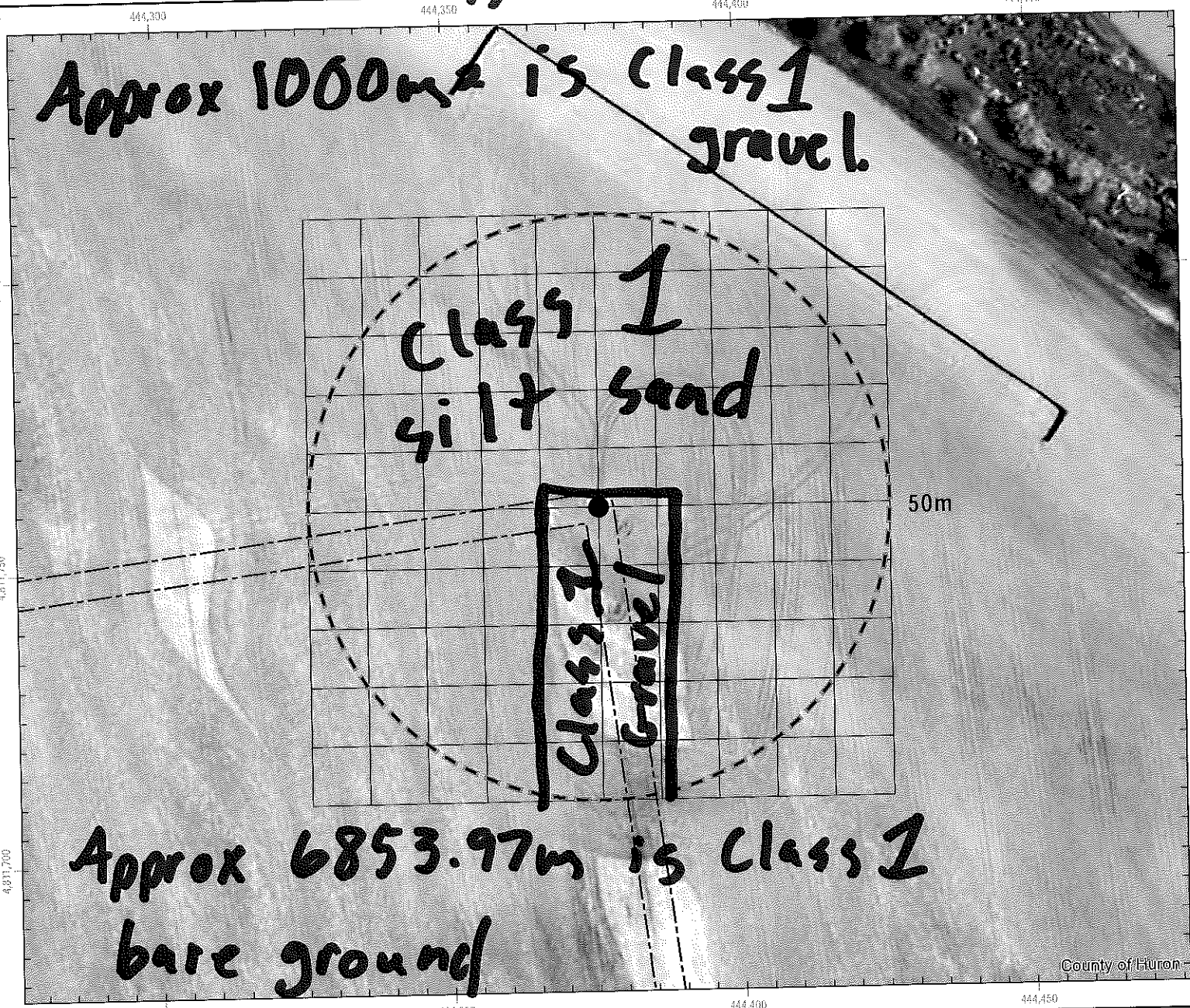
Site Number: T-02

Survey Date: Aug 19/19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

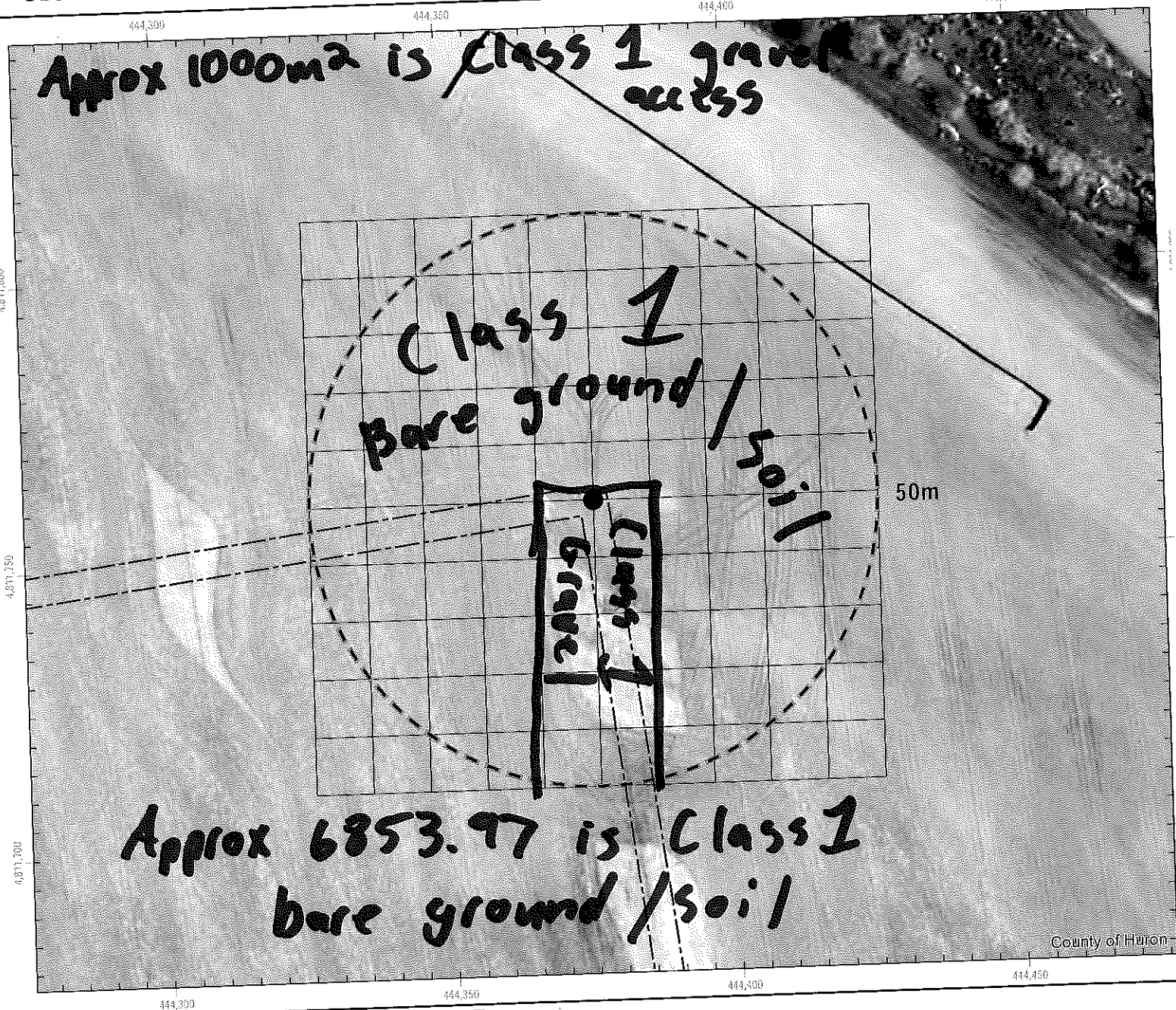
Site Number: T-02

Survey Date: Sept 16 / 19

Actual Searched Area (m²): 7853.97 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

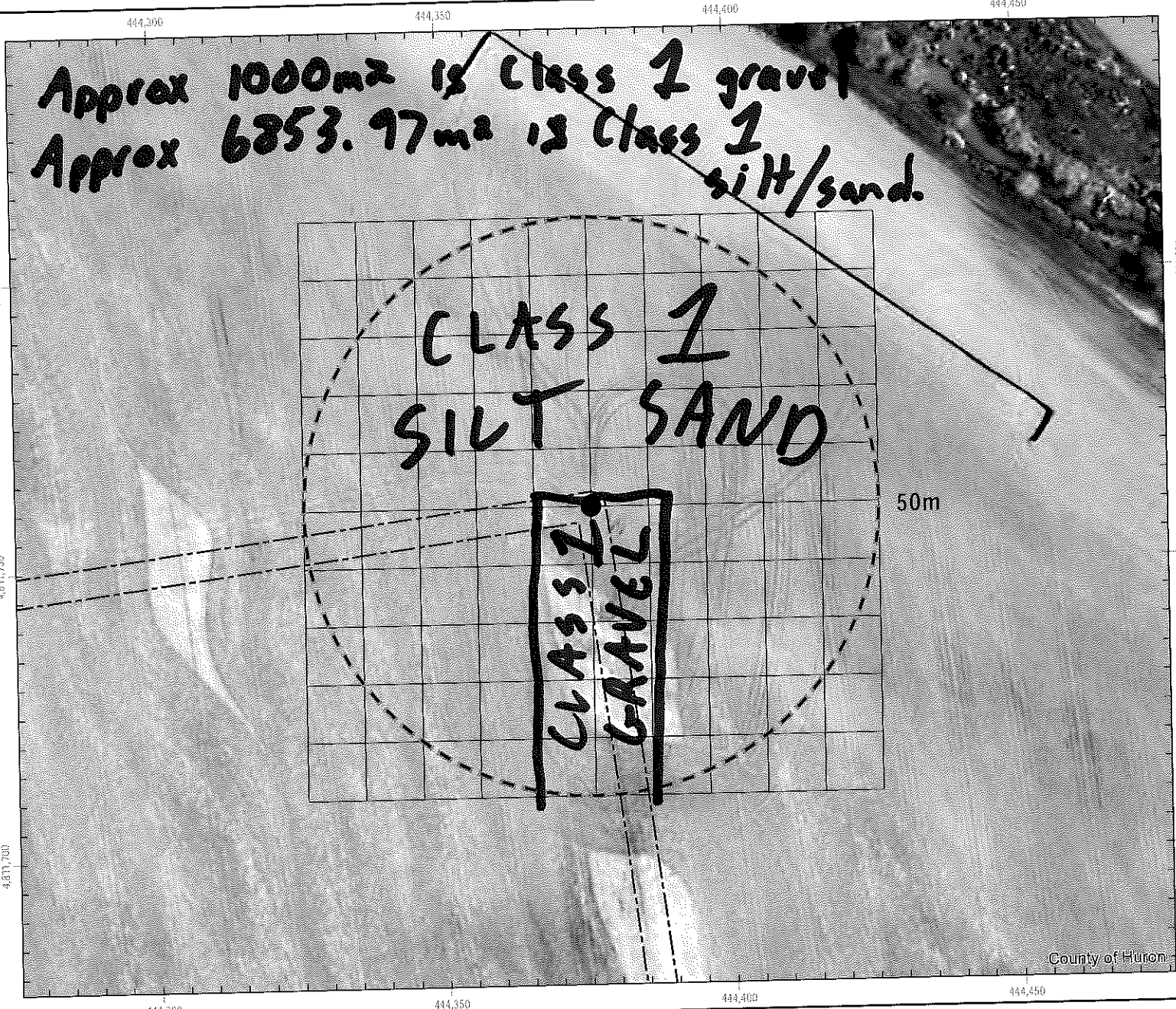
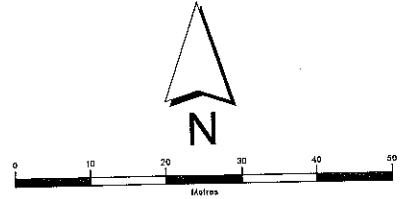


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-02
 Survey Date: Oct 24/19
 Actual Searched Area (m²): 7853.97m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
		Class 4 (Very Difficult)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

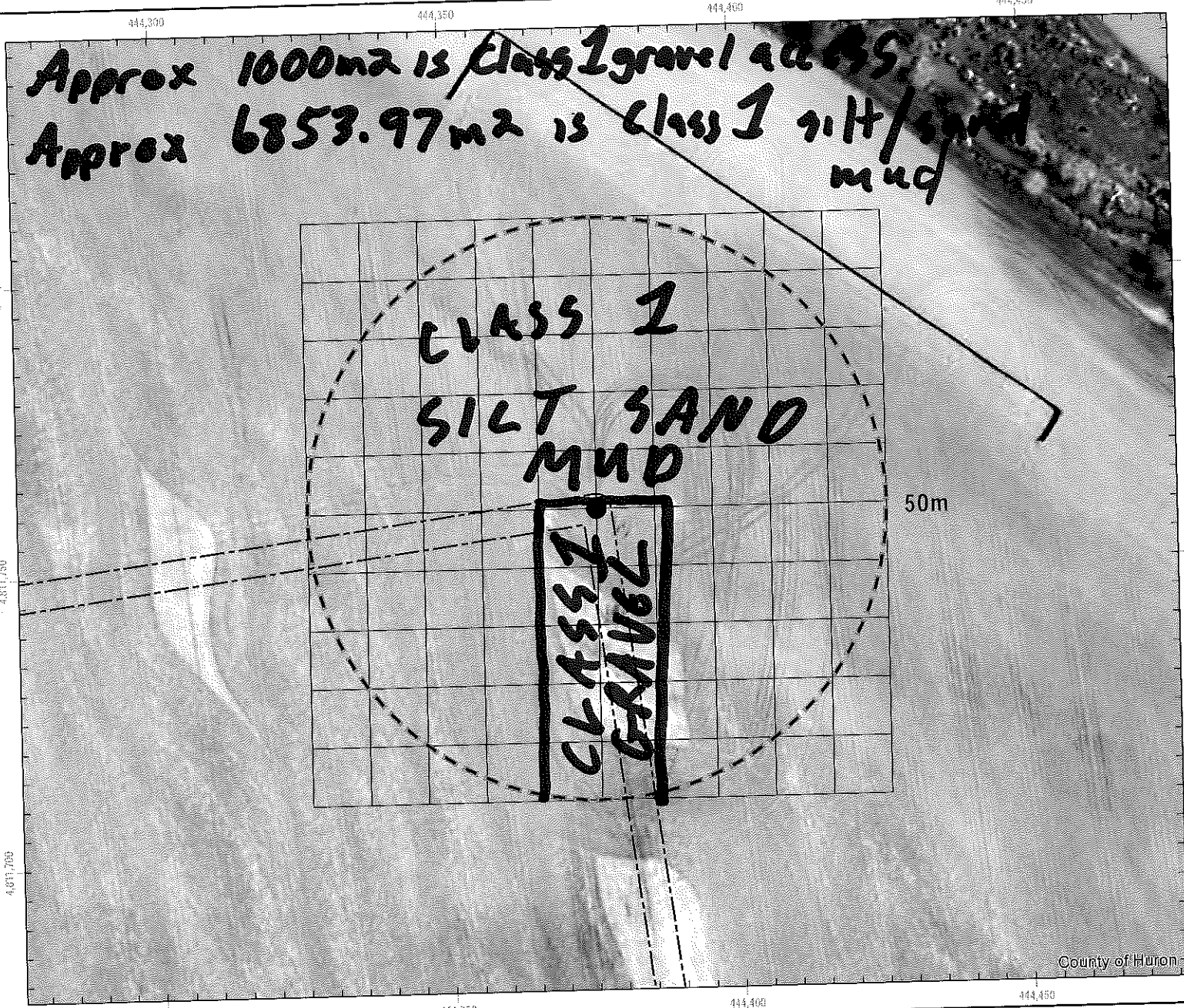
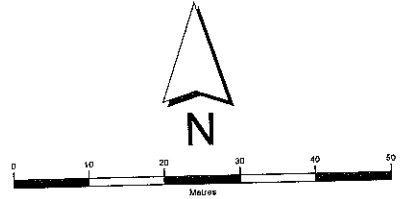
Site Number: T-02

Survey Date: Nov 18/19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sara Heary



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)



RESOURCES: 10M BY 10M SQUARE GRIDS

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

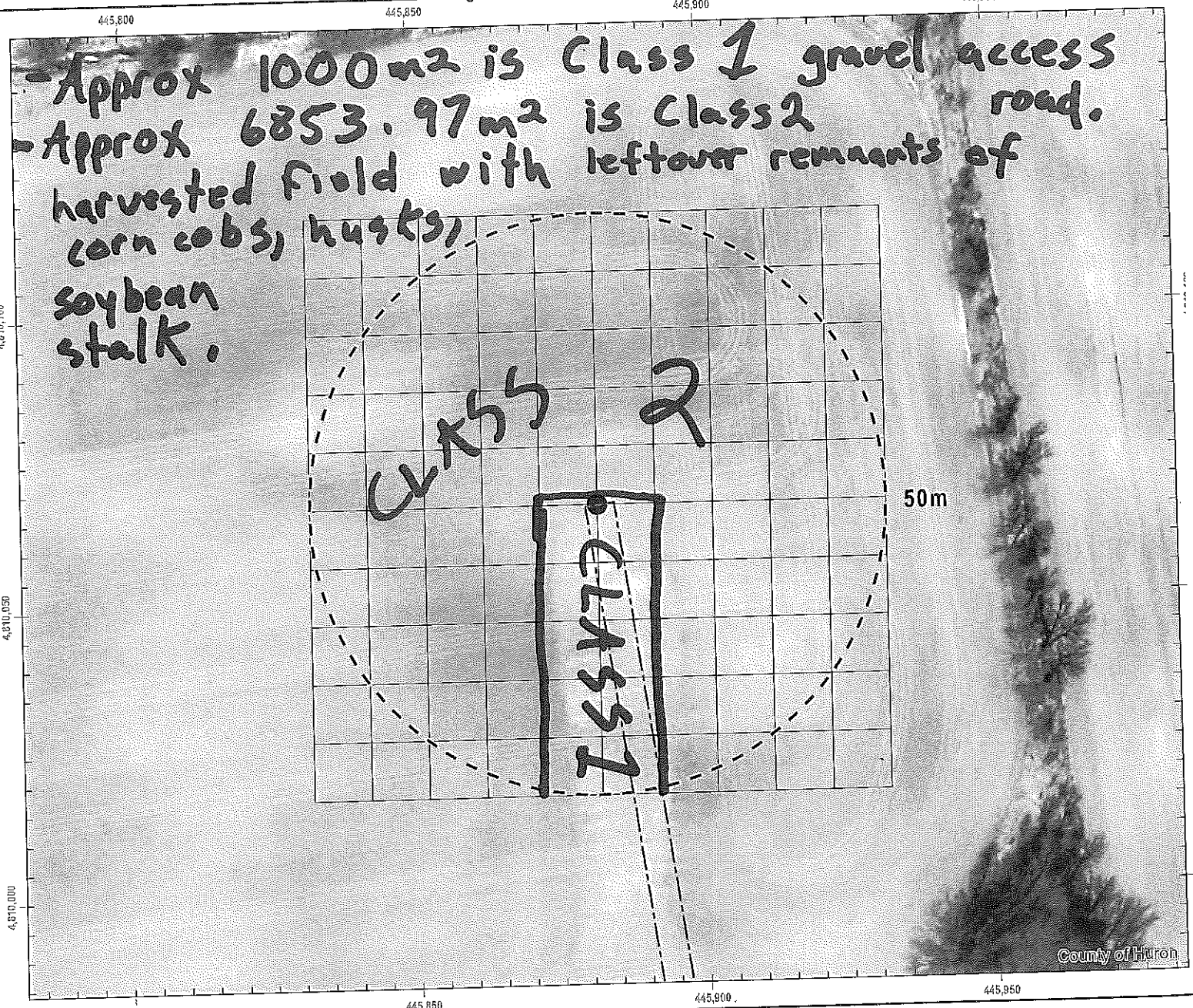
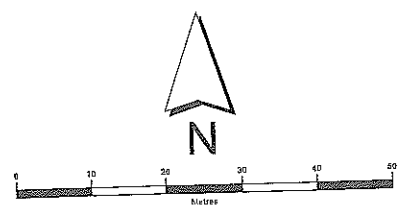
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-03

Survey Date: May 1 / 19

Actual Searched Area (m²): 7853.97m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

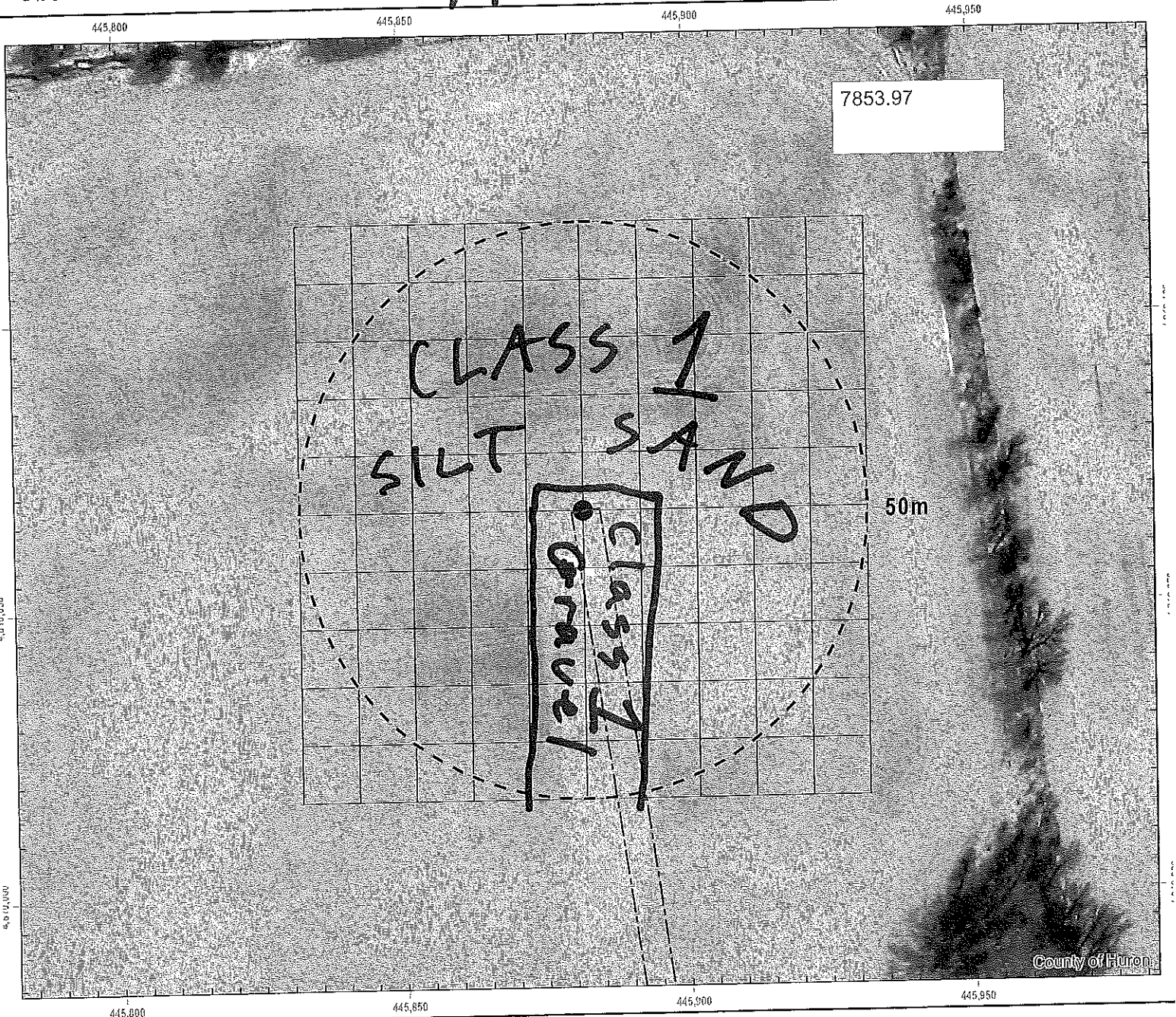
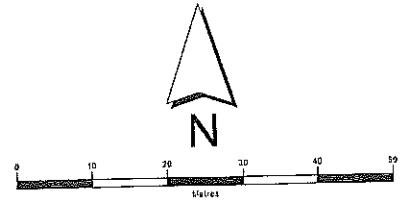
Site Number: T-03

Survey Date: June 6 / 19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

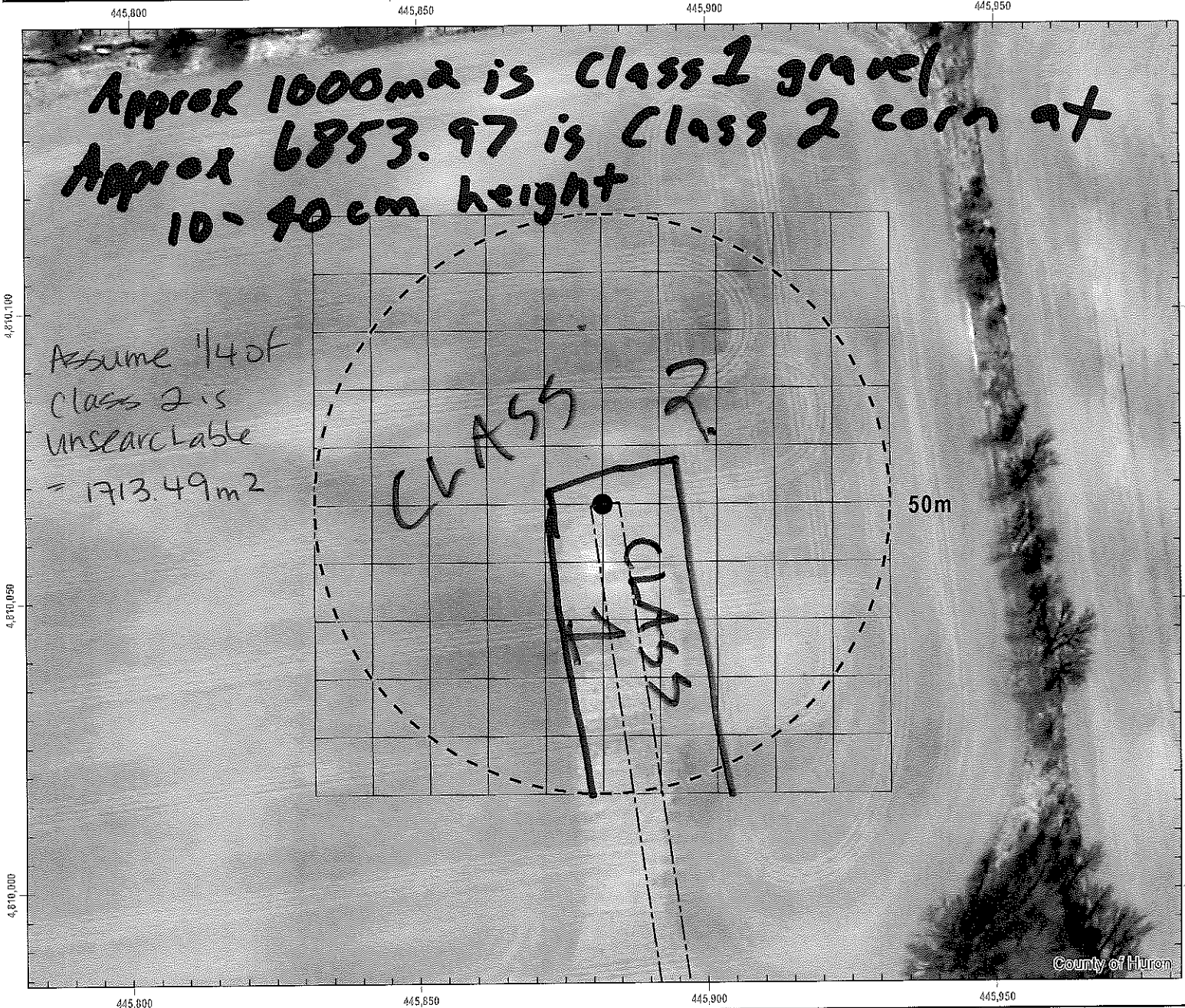
Site Number: T-03

Survey Date: July 3 / 19

Actual Searched Area (m²): 6140.48 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

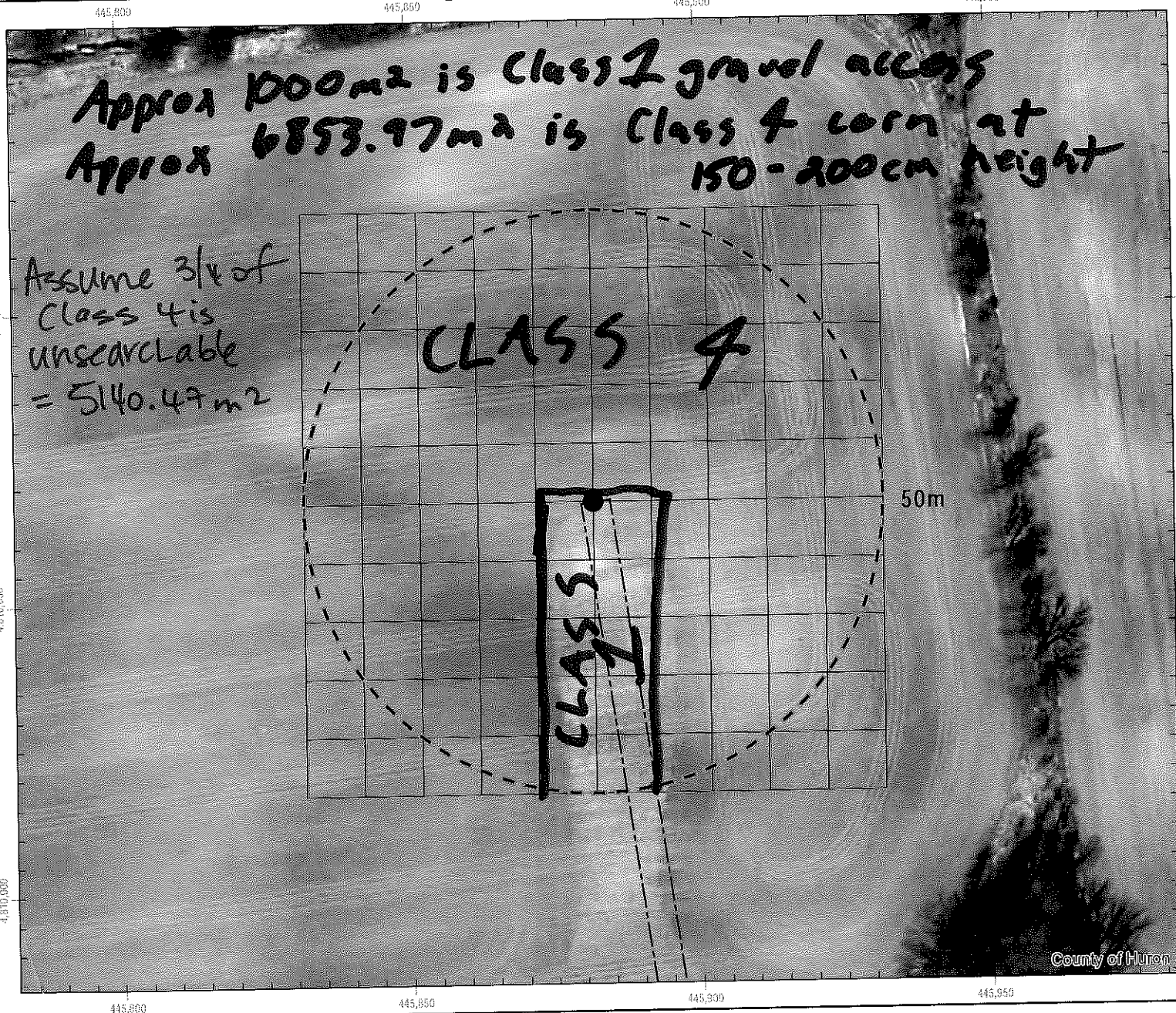
Site Number: T-03

Survey Date: Aug 7 / 19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

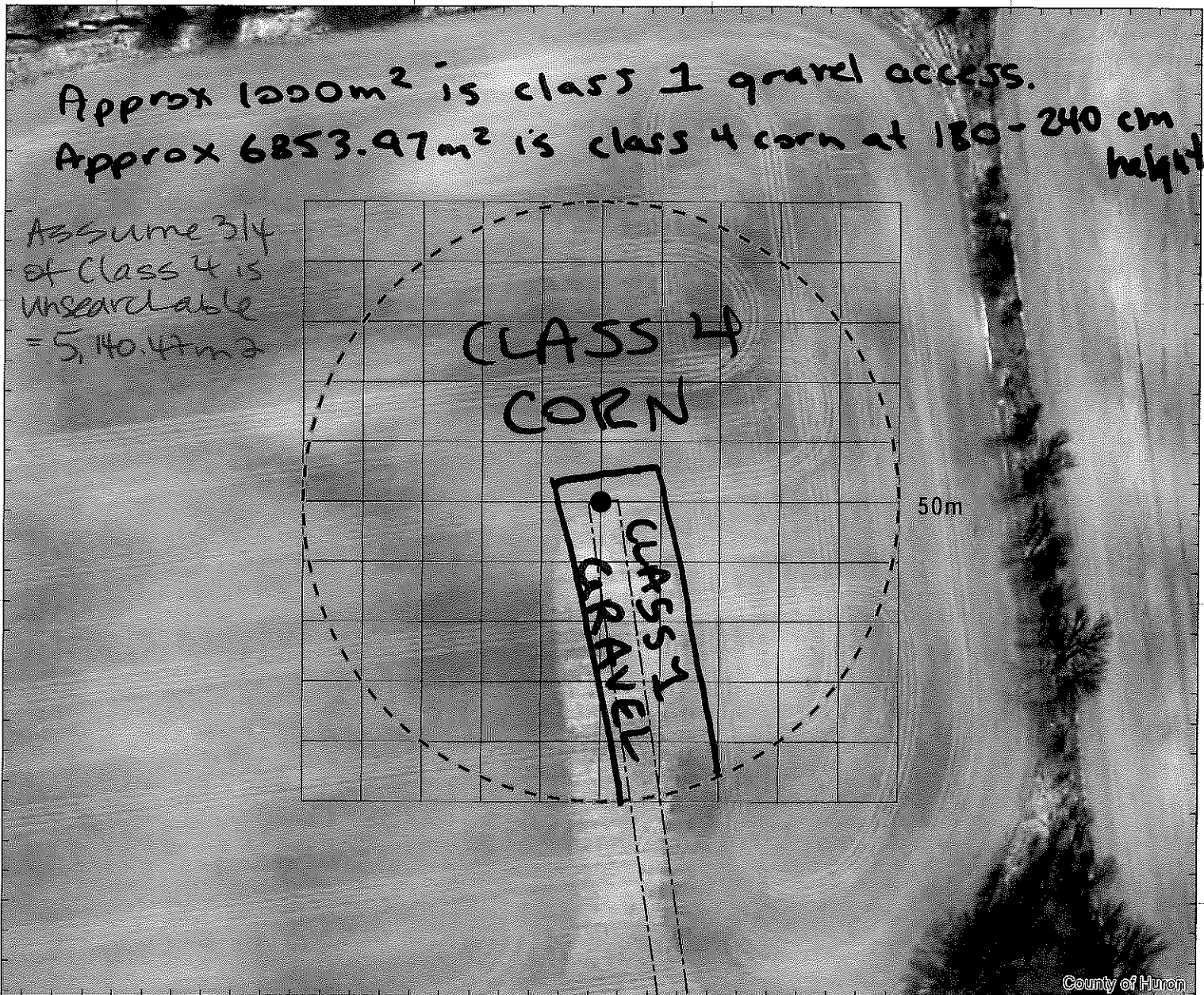
Site Number: T-03

Survey Date: Sept. 4/19

Actual Searched Area (m²): 2,713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

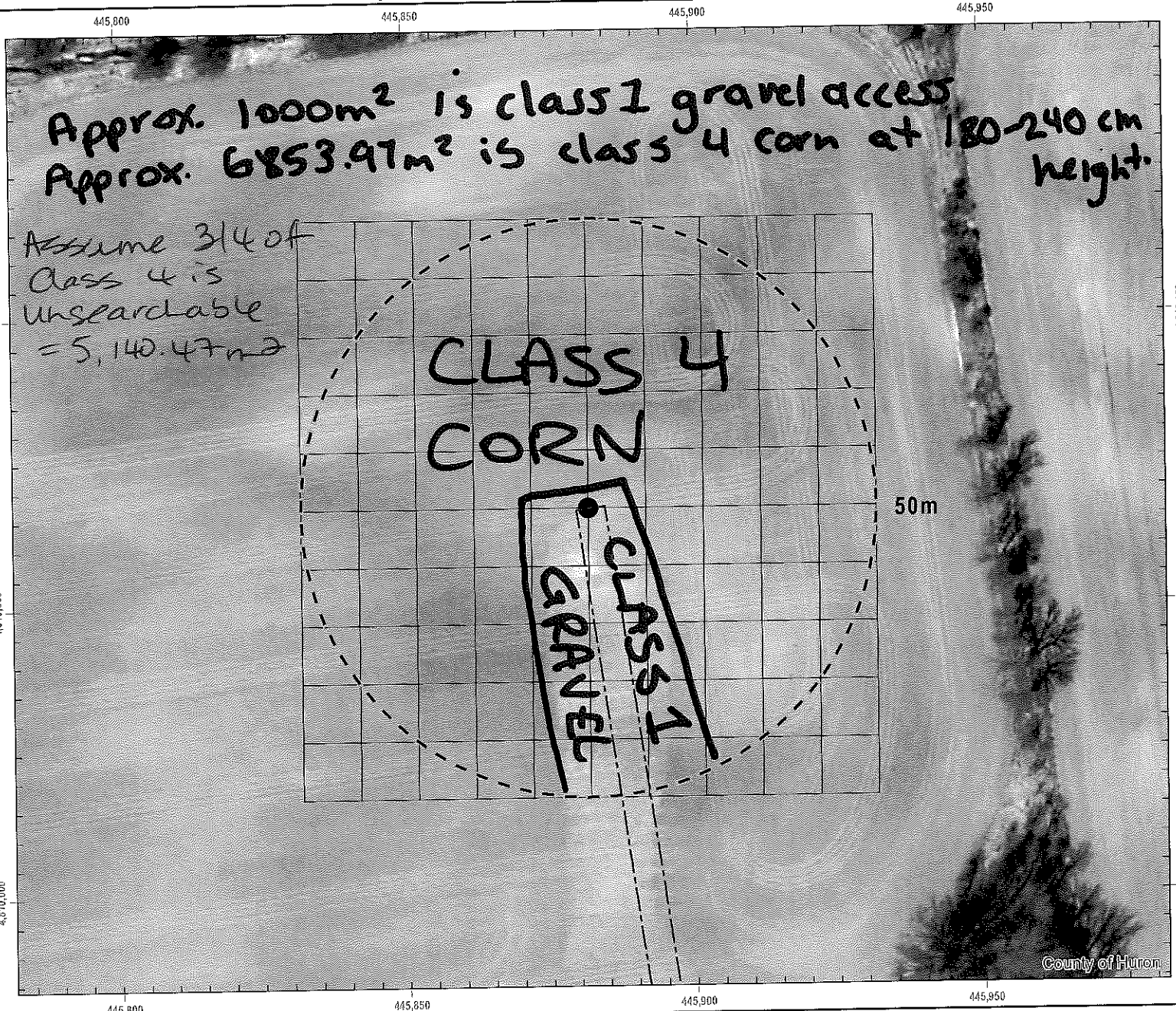
Site Number: T-03

Survey Date: Oct 5/19

Actual Searched Area (m²): 2,713.50 m²

(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
> 25% > 30cm tall		Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

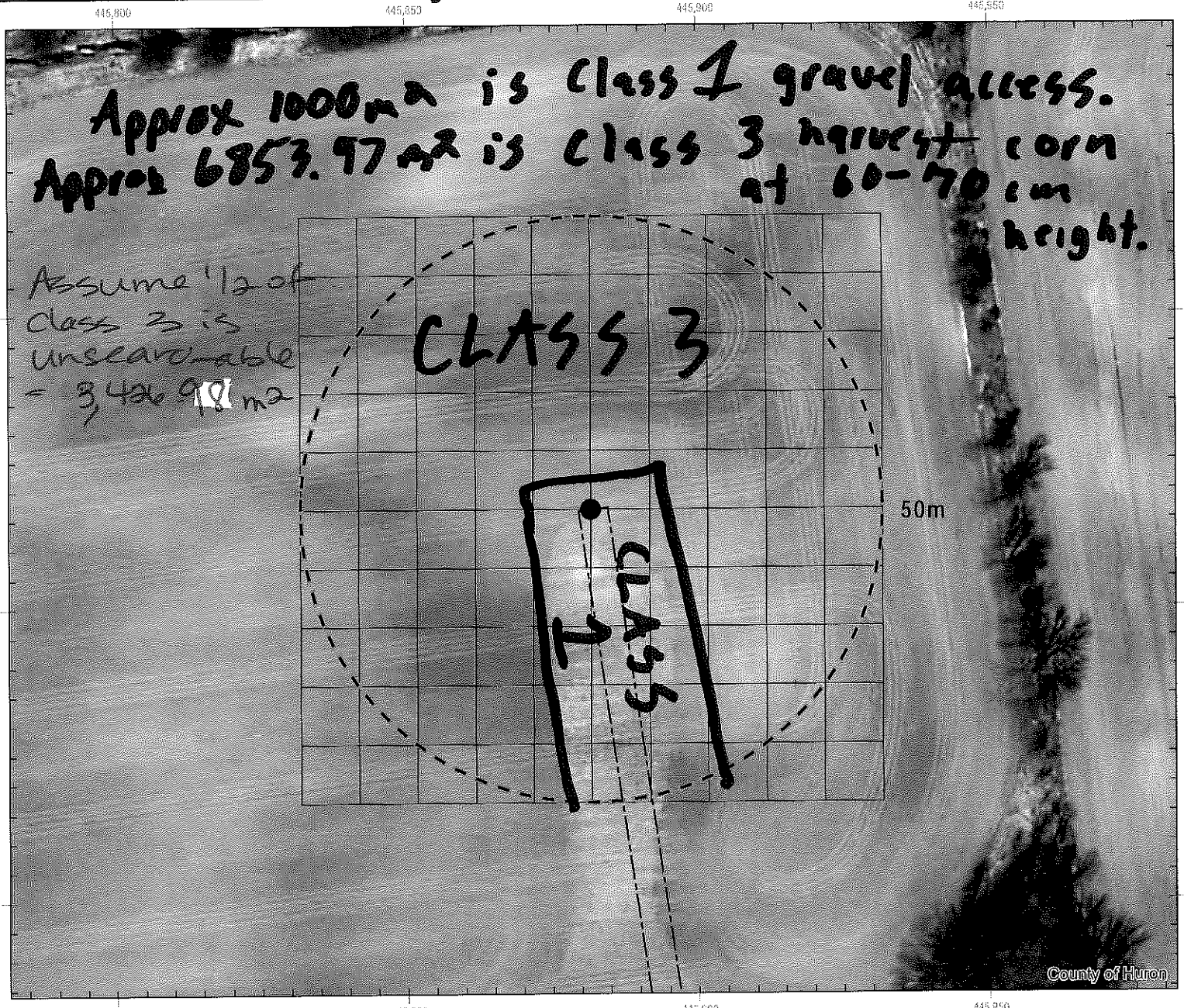
Site Number: T-03

Survey Date: Nov 6 /19

Actual Searched Area (m²): 4426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)

County of Huron



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

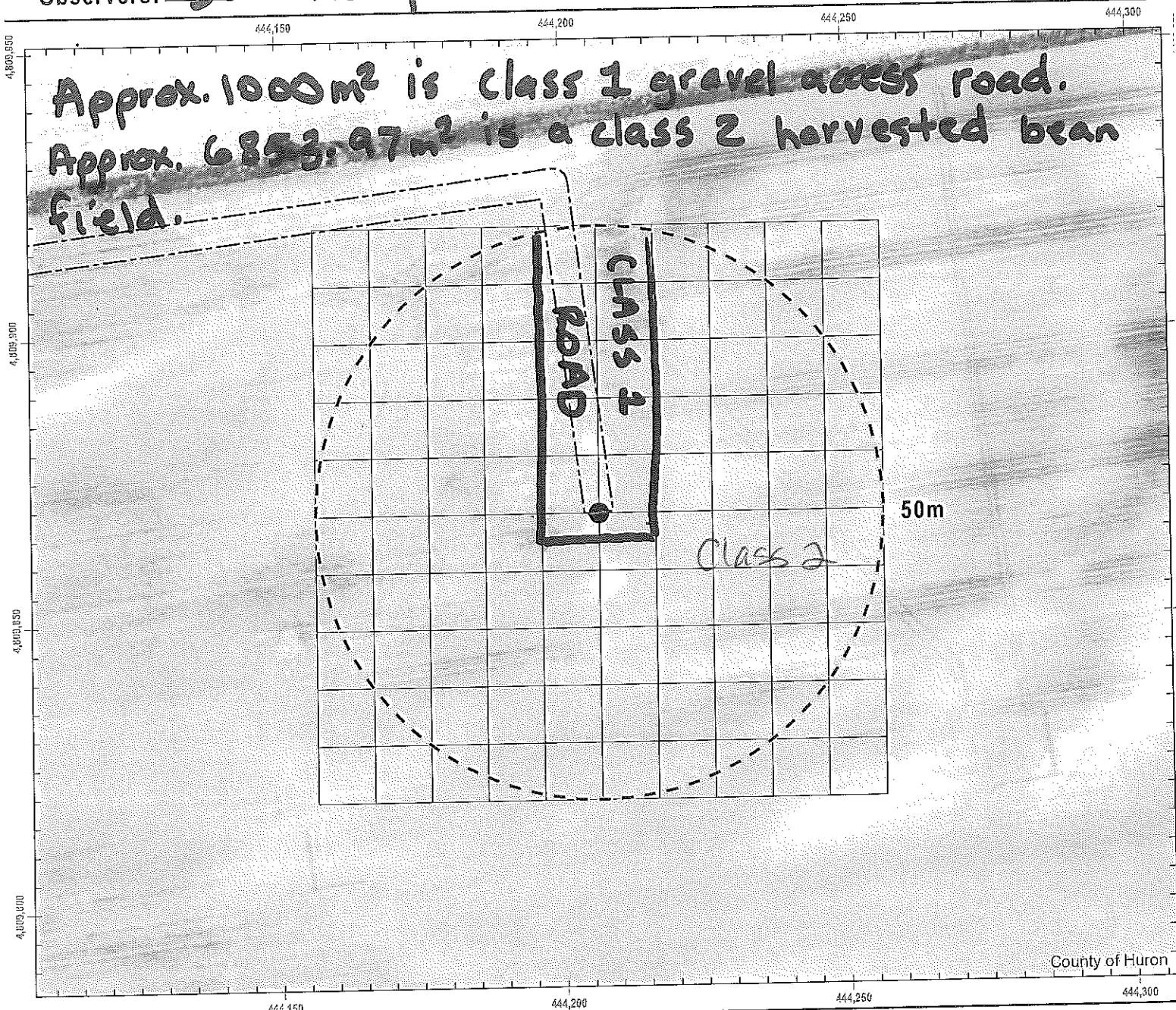
Site Number: T-05

Survey Date: May 1 2019

Actual Searched Area (m²): 7853.97 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	< 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

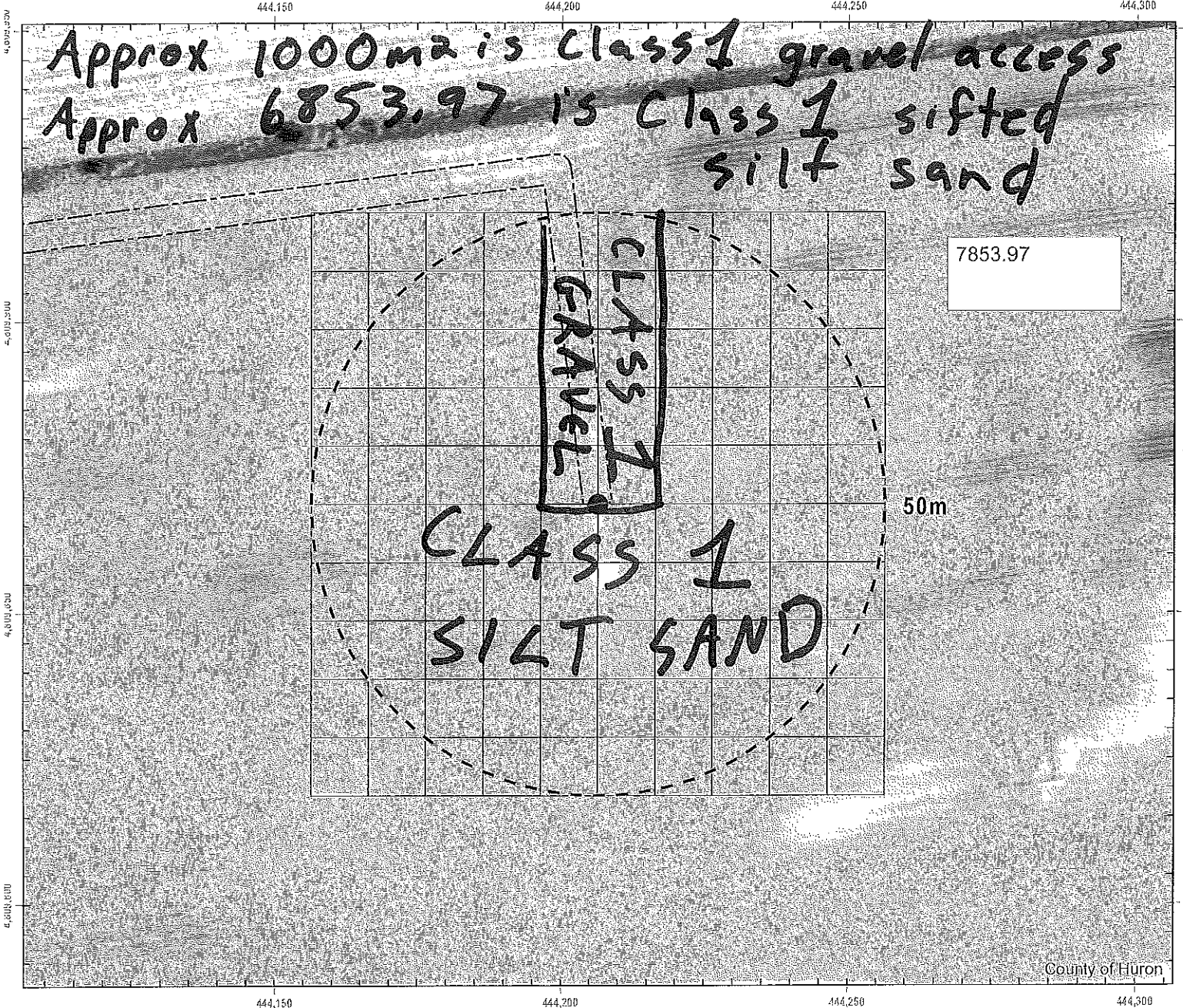
Site Number: T-05

Survey Date: June 5 / 19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

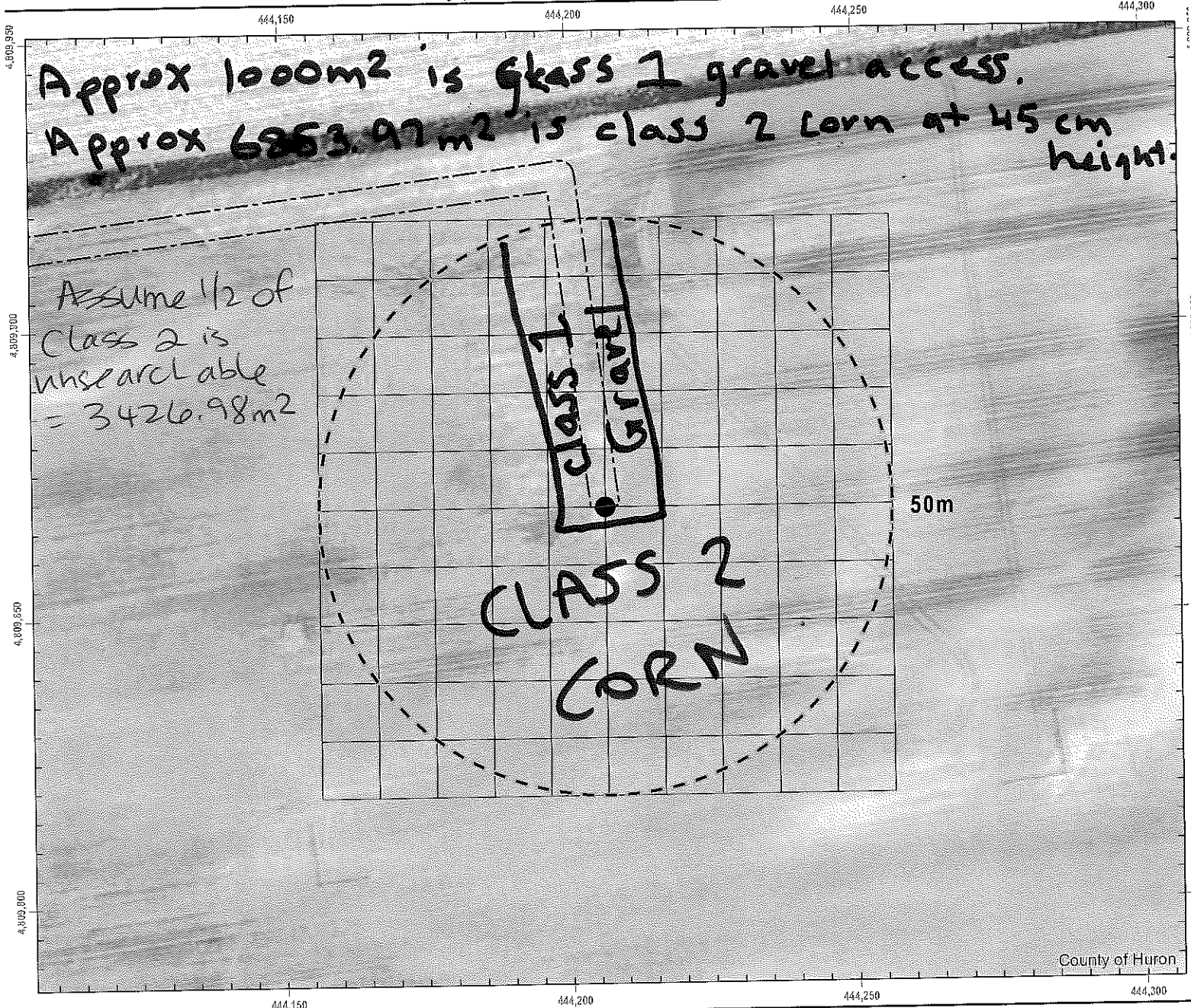
Site Number: T-05

Survey Date: July 3/19

Actual Searched Area (m²): 4426.99m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
	> 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

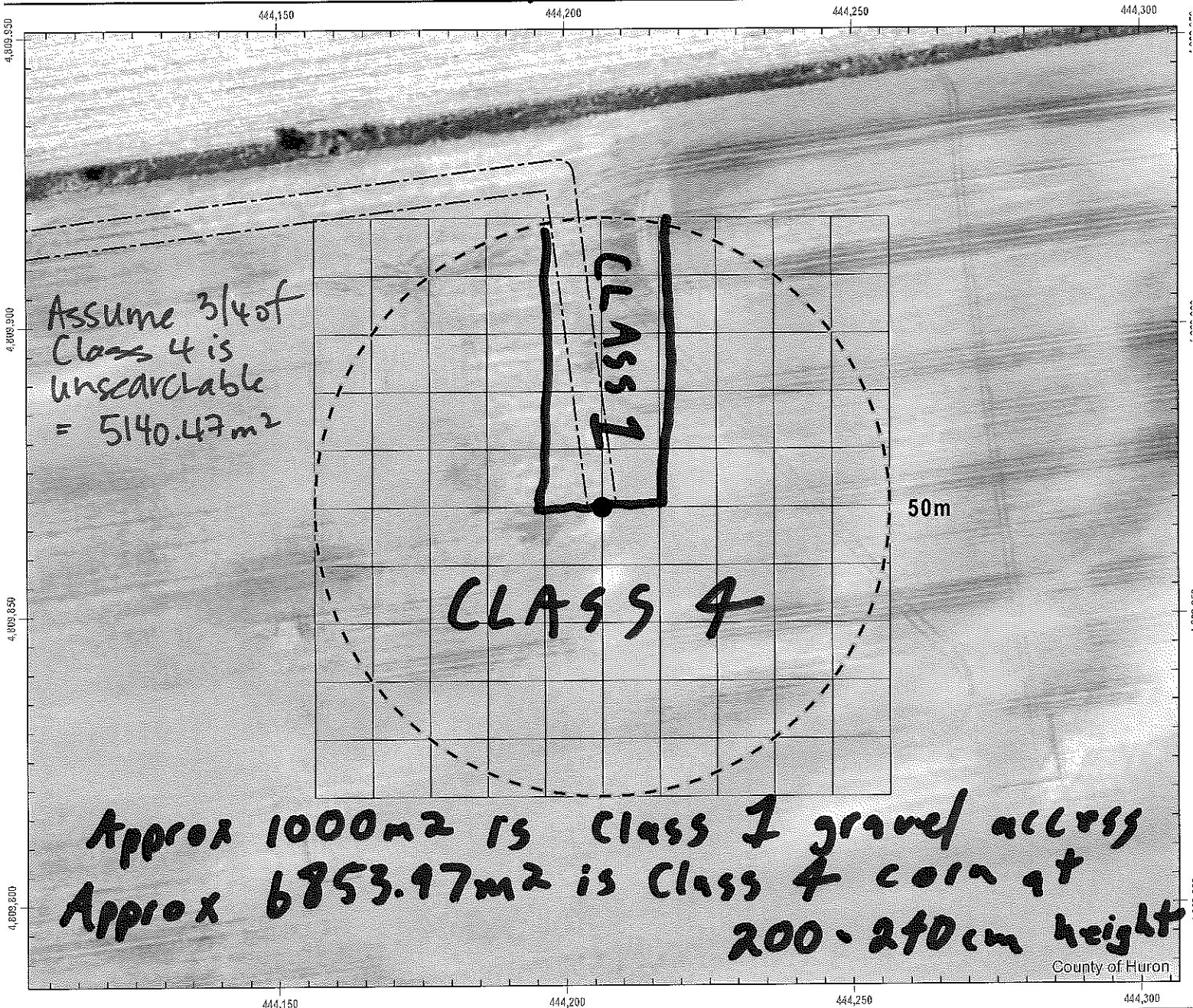
Site Number: T-05

Survey Date: Aug 7/19

Actual Searched Area (m²): 2913.50 m²

(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

254 SQUARE METERS DISPLAYED AS 10M BY 10M SQUARE GRIDS

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

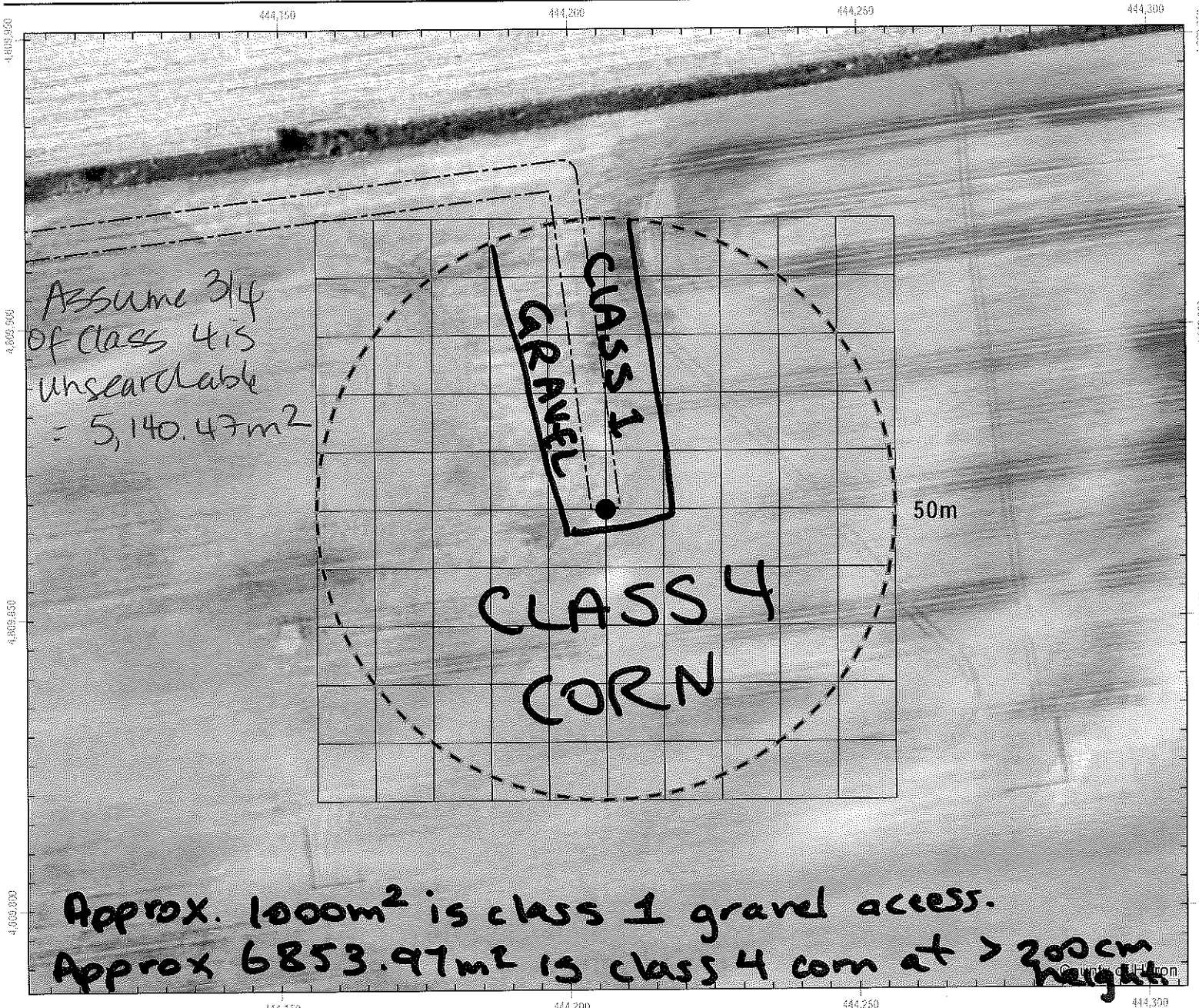
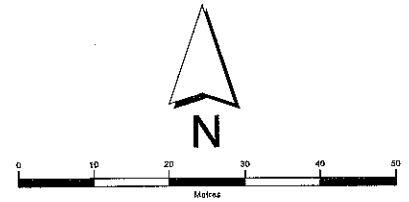
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-05

Survey Date: Sept. 4/19

Actual Searched Area (m²): 2,713.50m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
> 25% bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

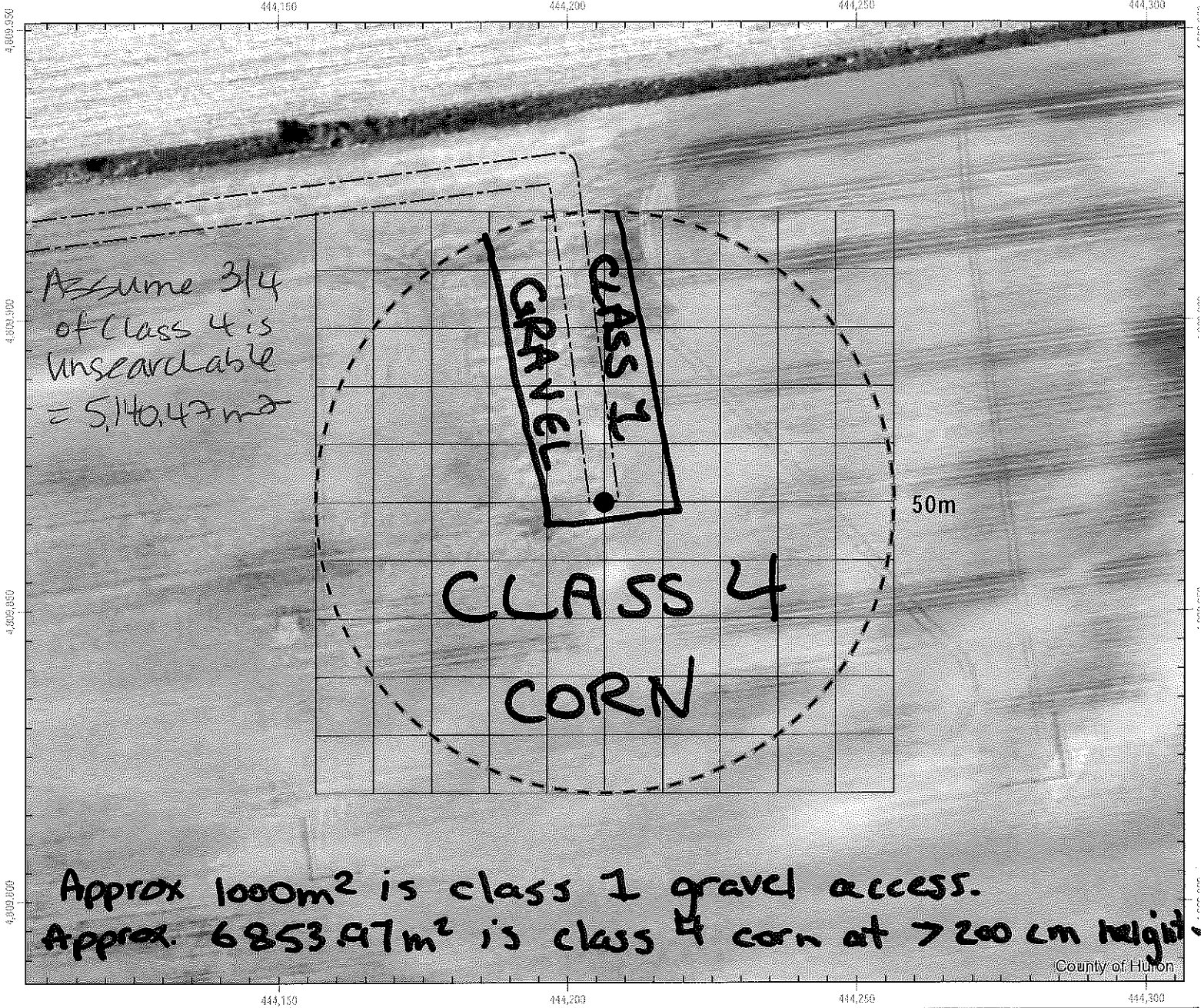
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-05

Survey Date: Oct 5/19

Actual Searched Area (m²): 2,713.50 m²
(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

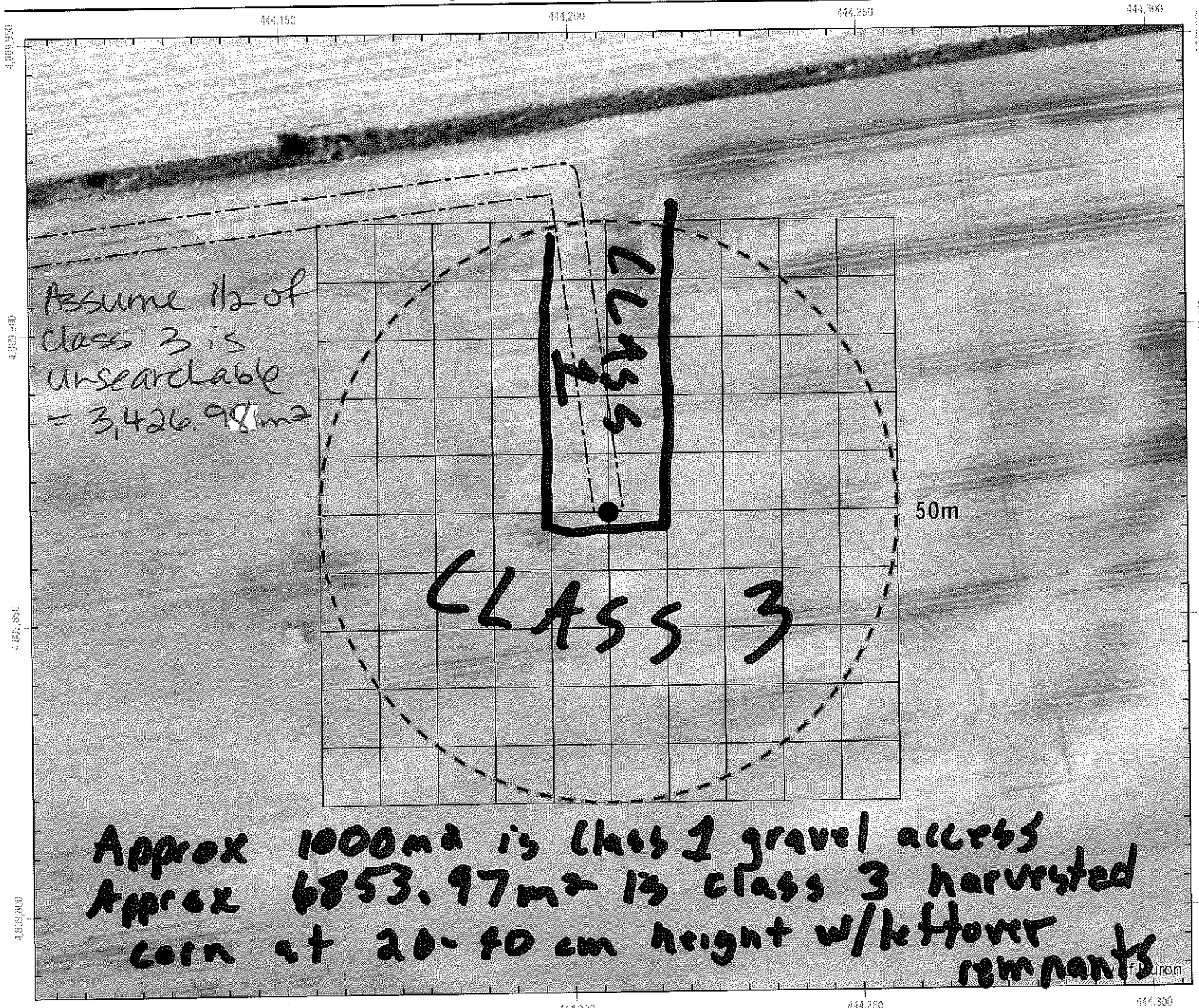
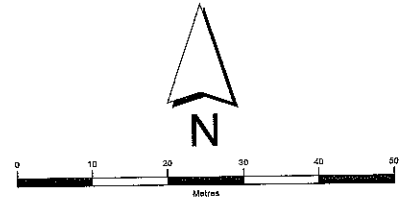
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-05

Survey Date: Nov 6 / 19

Actual Searched Area (m²): 4,426.99 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

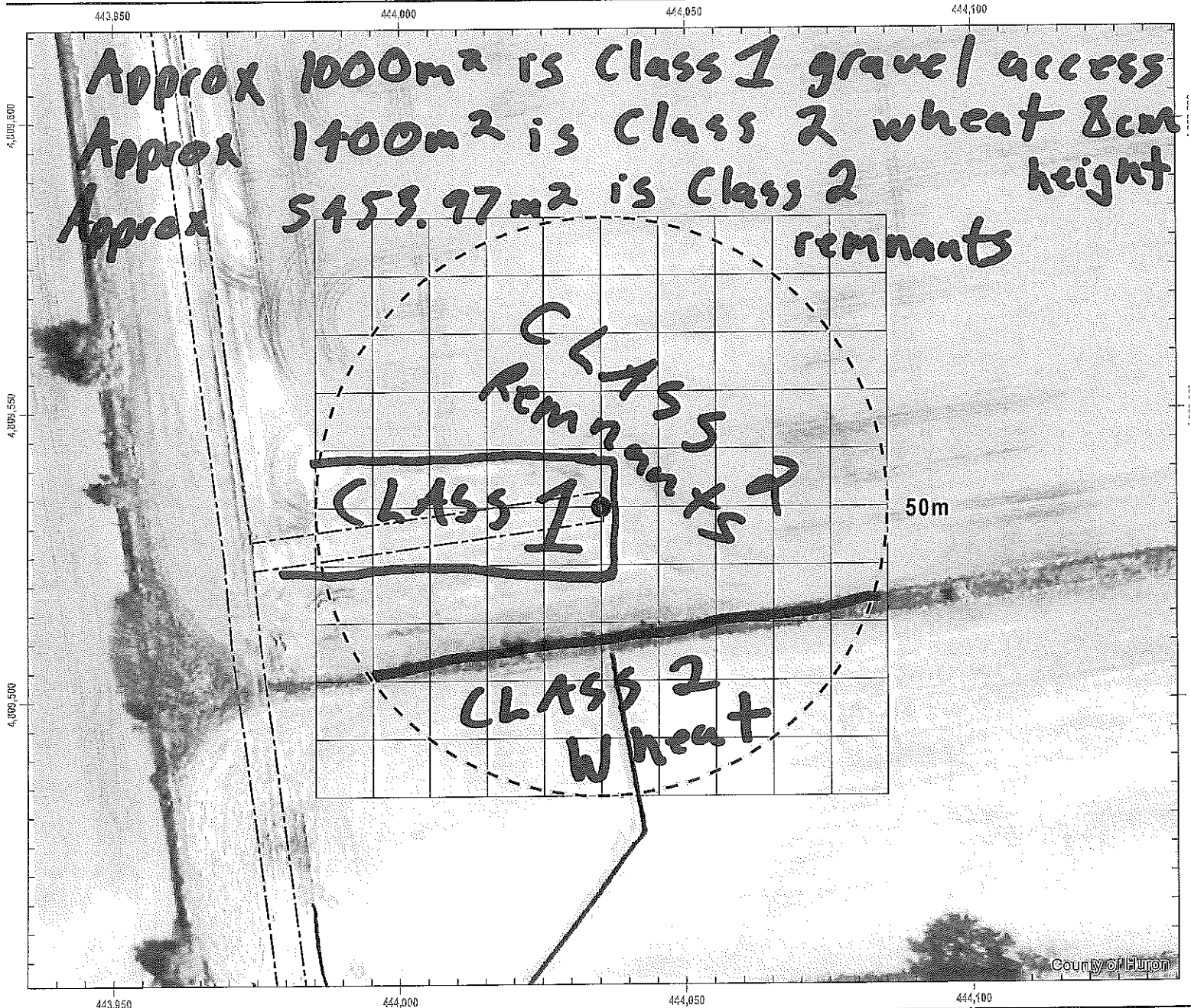
Site Number: T-06

Survey Date: May 1, 2019

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-06

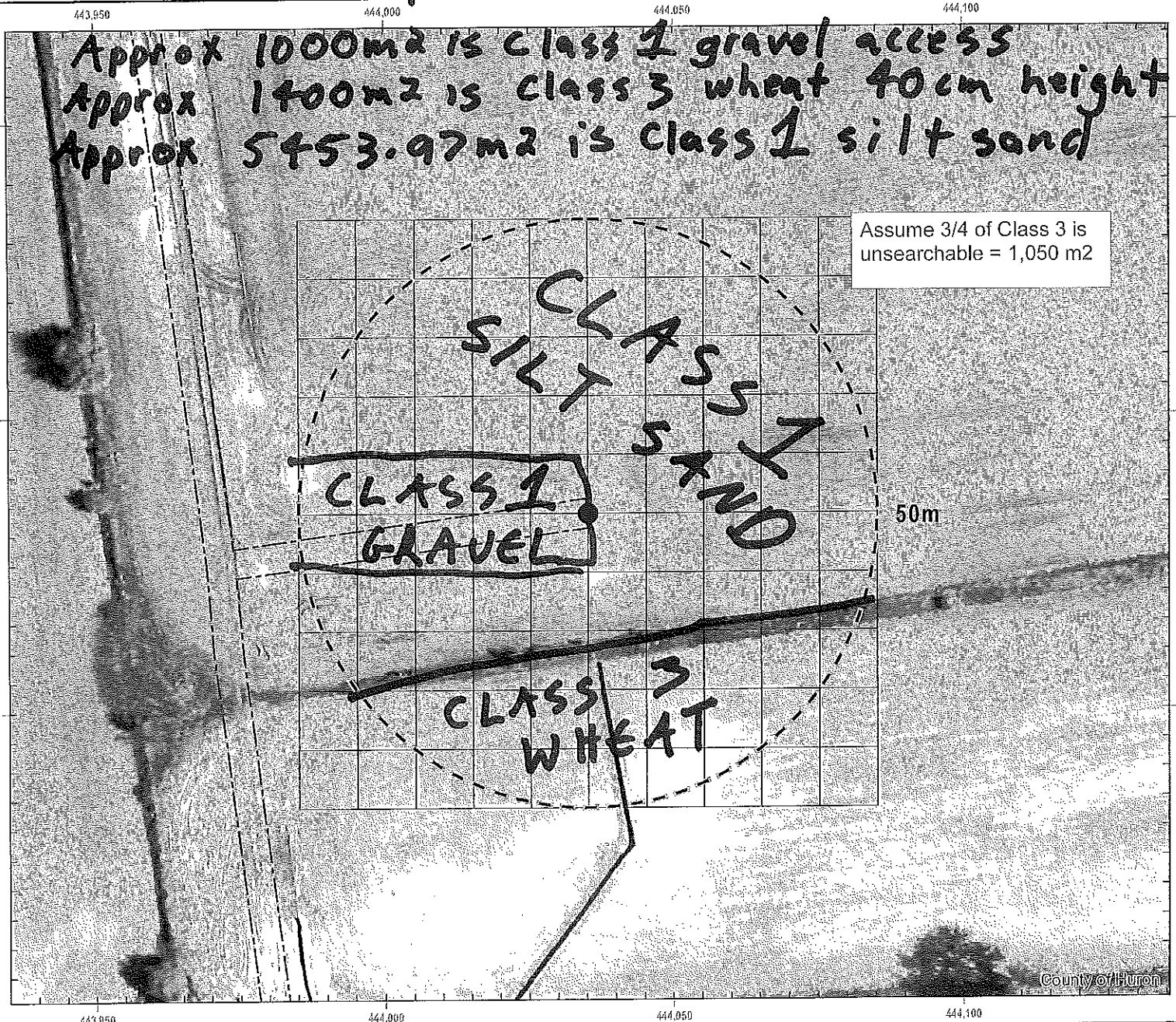
Survey Date: June 5 / 19

Actual Searched Area (m²):

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

6803.97 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

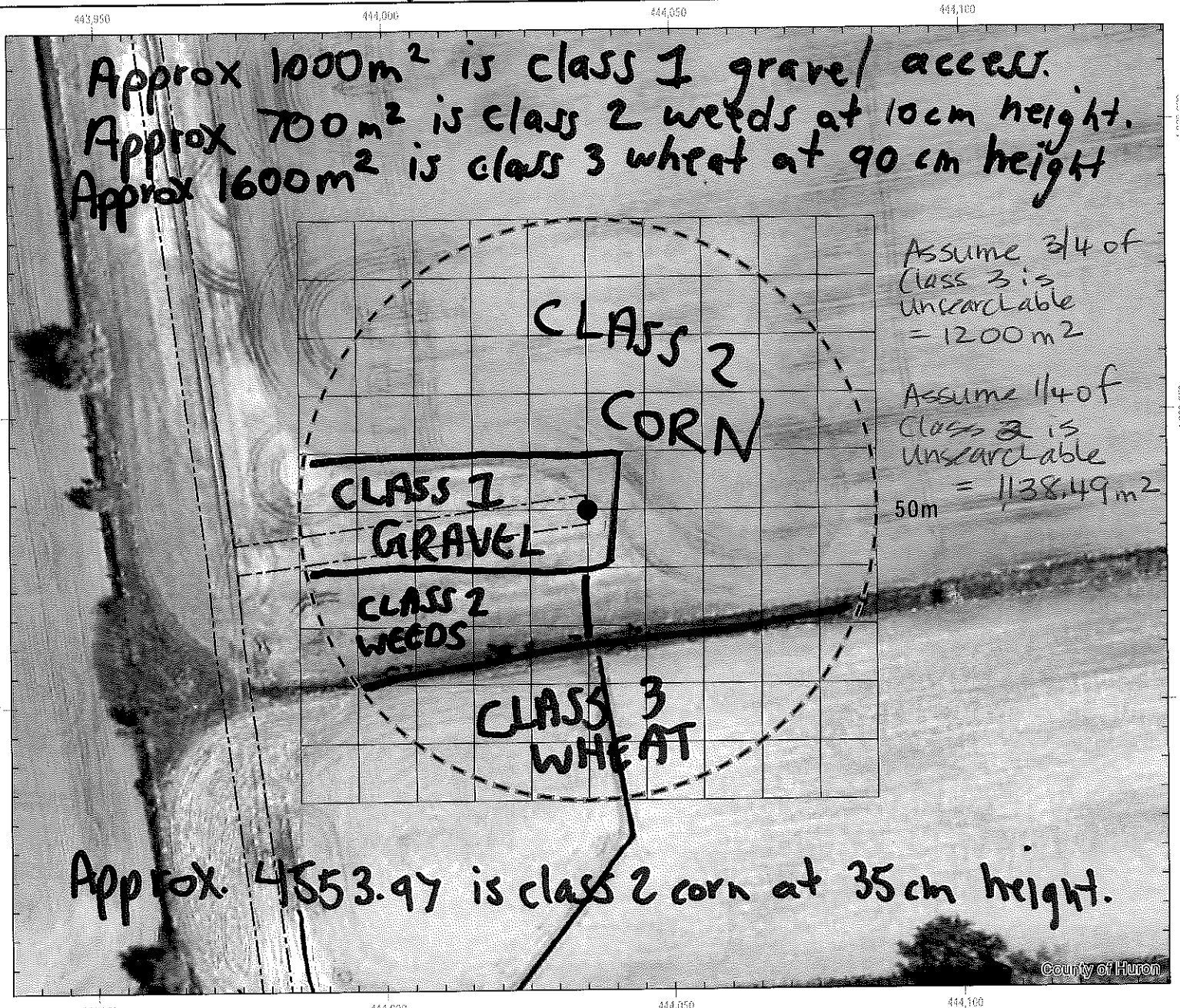
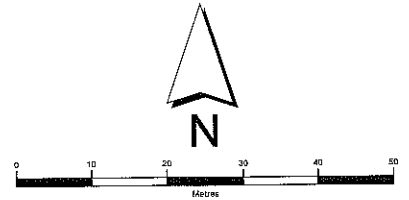
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-06

Survey Date: July 3/19

Actual Searched Area (m²): 5515.48 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
	> 25% > 30cm tall	Class 4 (or Default)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

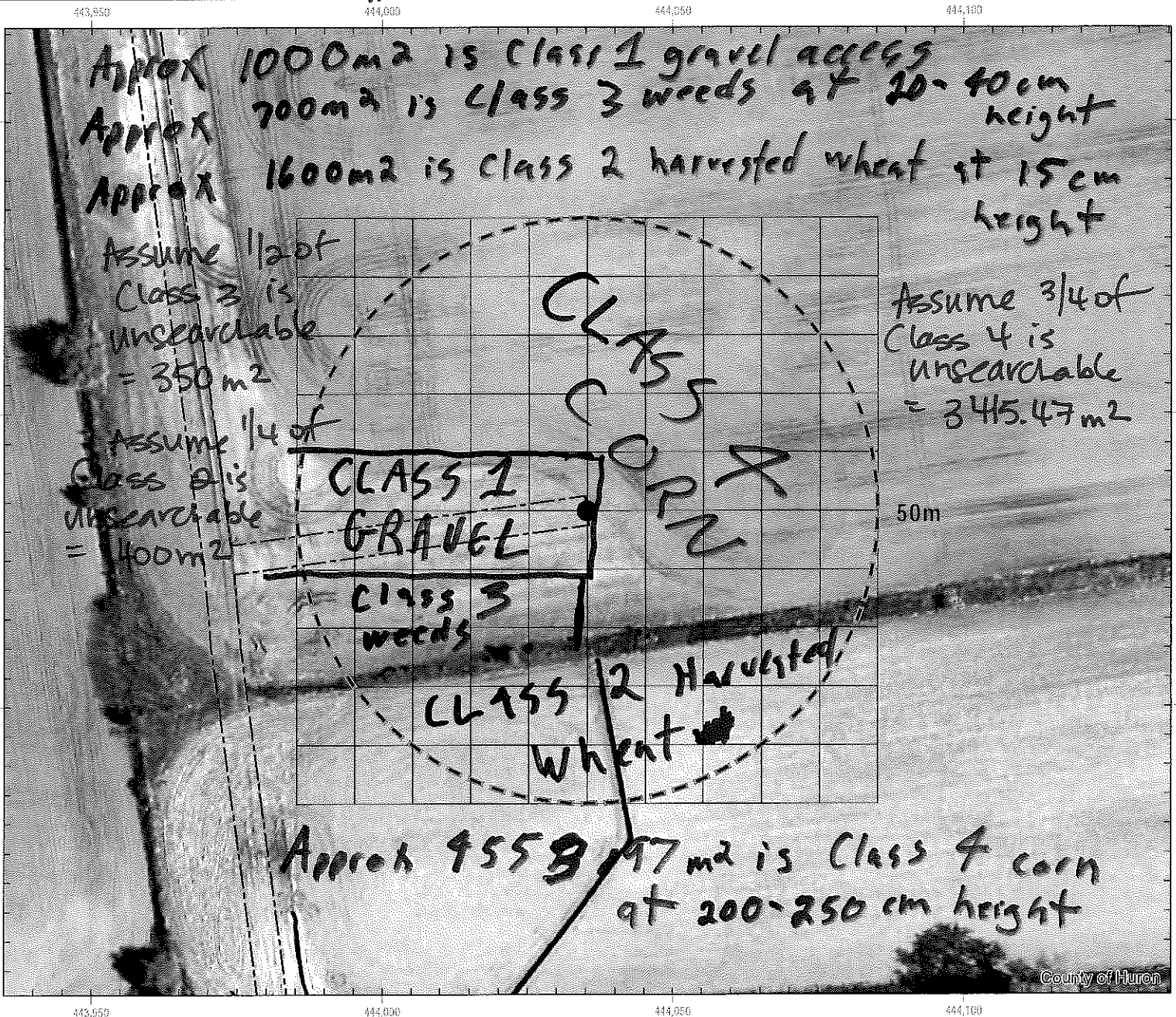
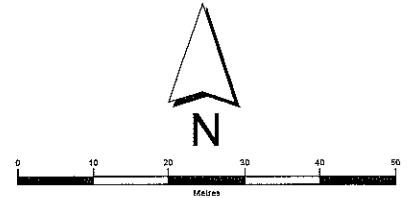
Site Number: T-06

Survey Date: Aug 7/19

Actual Searched Area (m²): 3088.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
little or no bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-06

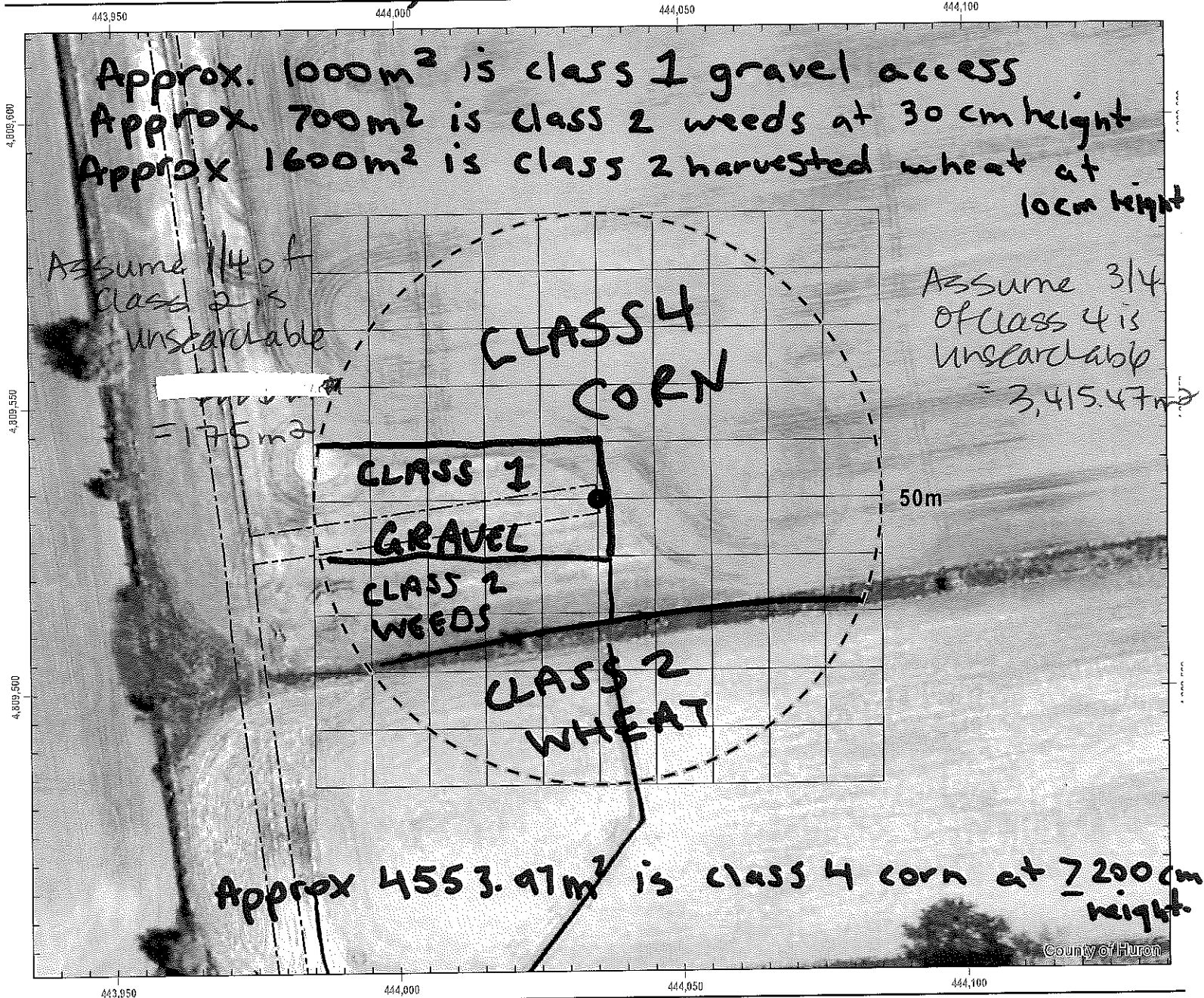
Survey Date: Sept. 4/19

Actual Searched Area (m²): _____

4,263.50m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

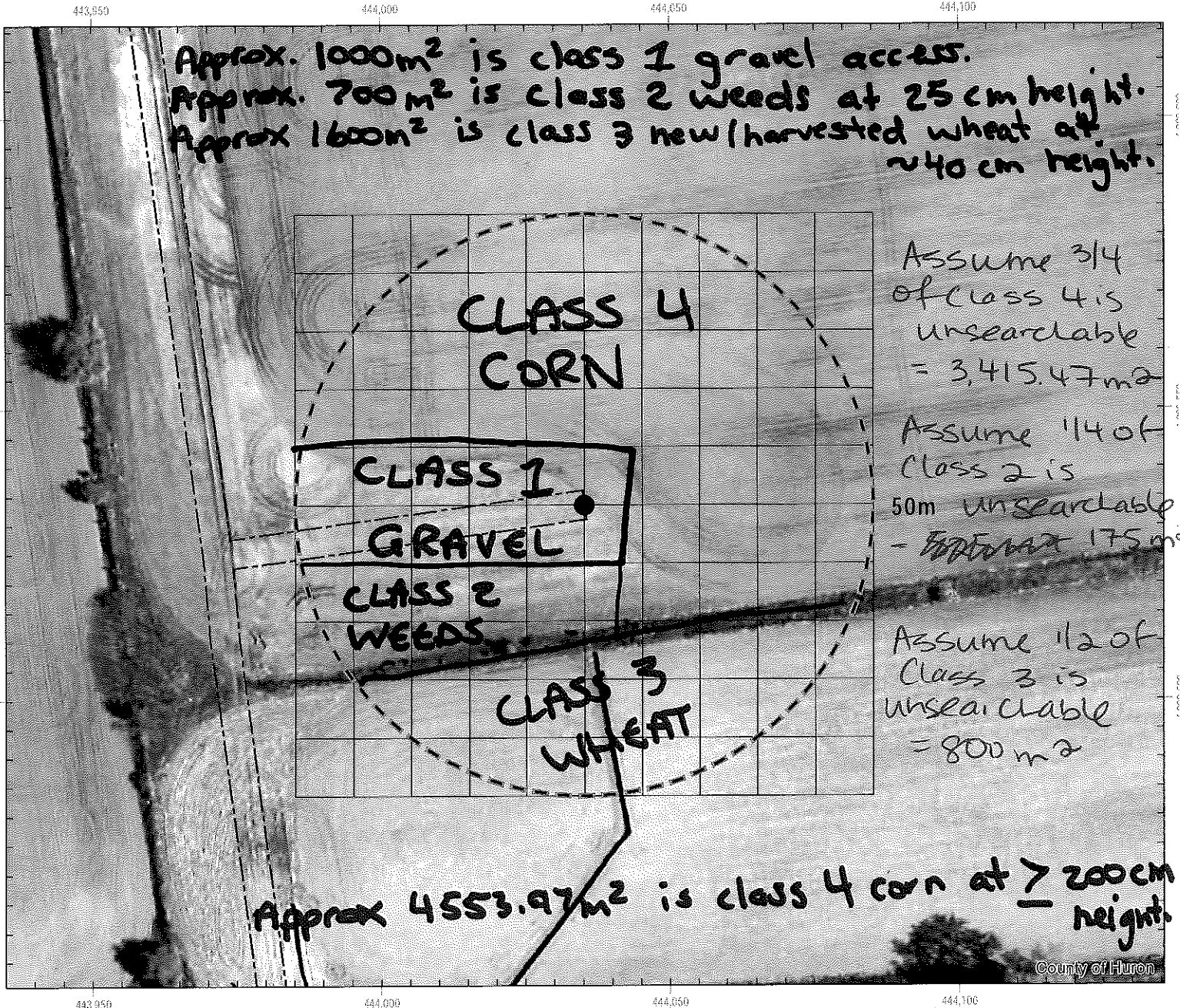
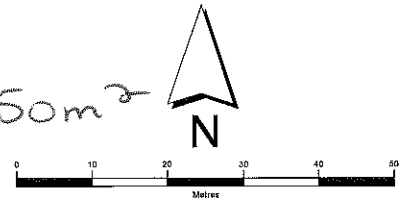
Site Number: T-06

Survey Date: Oct/5/19

Actual Searched Area (m²): 3,463.50m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DIVIDED AS 10M BY 10M SQUARE GRIDS

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

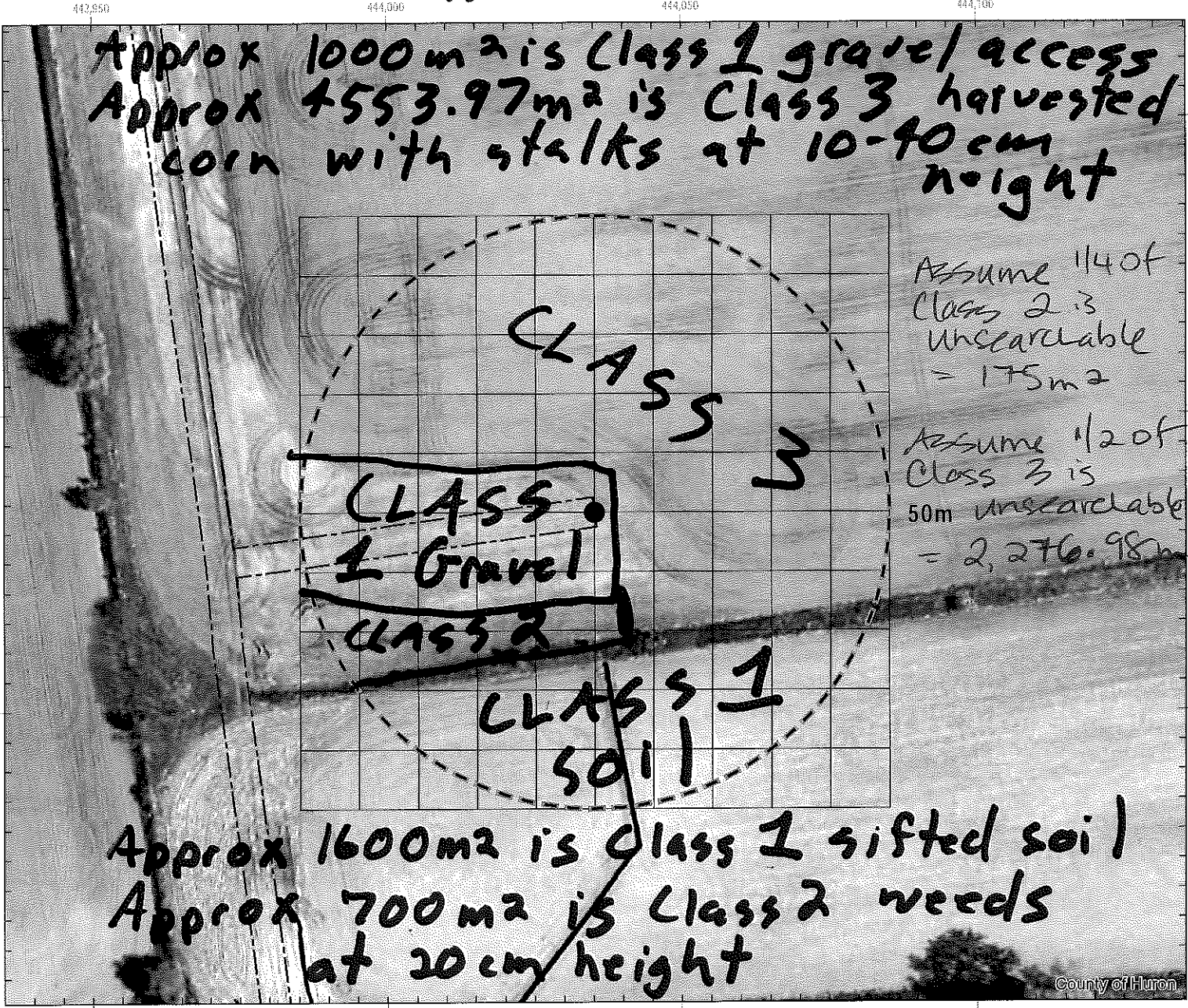
Site Number: T-06

Survey Date: Nov 6/19

Actual Searched Area (m²): 5,401.99 m²

(subtract from total search area 7853.97m²)

Observers: Sara Henry, Sarah Jackson



Assume 1/4 of Class 2 is unsearchable = 175m²

Assume 1/2 of Class 3 is 50m unsearchable = 2,276.98m²

County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

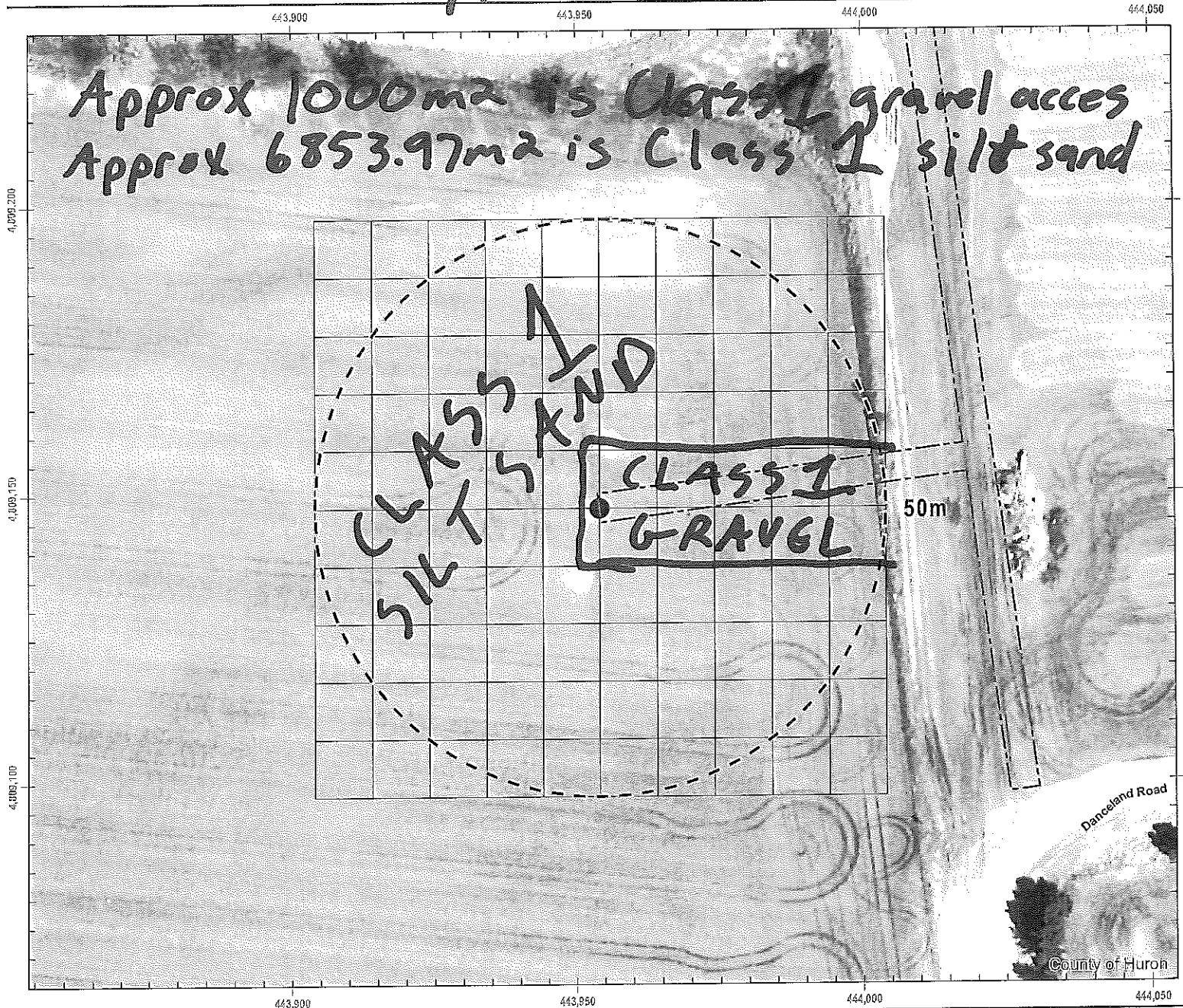
Site Number: T-07

Survey Date: May 3 / 19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

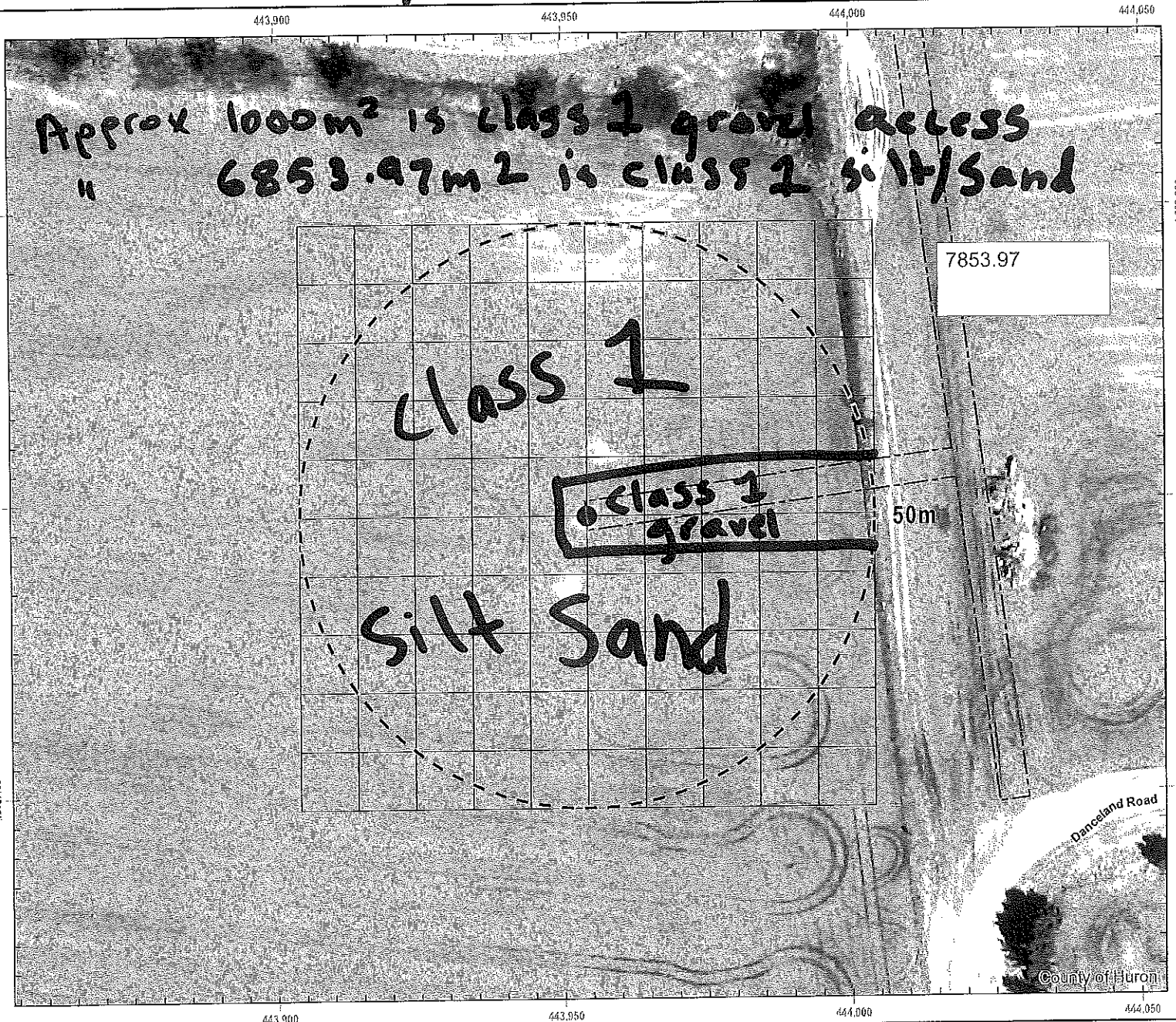
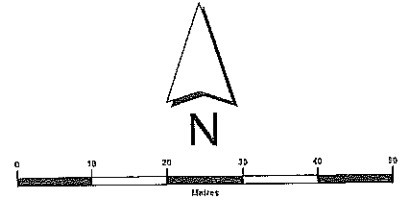
Site Number: T-07

Survey Date: June 18/19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
≤ 25% bare ground	> 30cm tall	Class 4 (Very Difficult)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

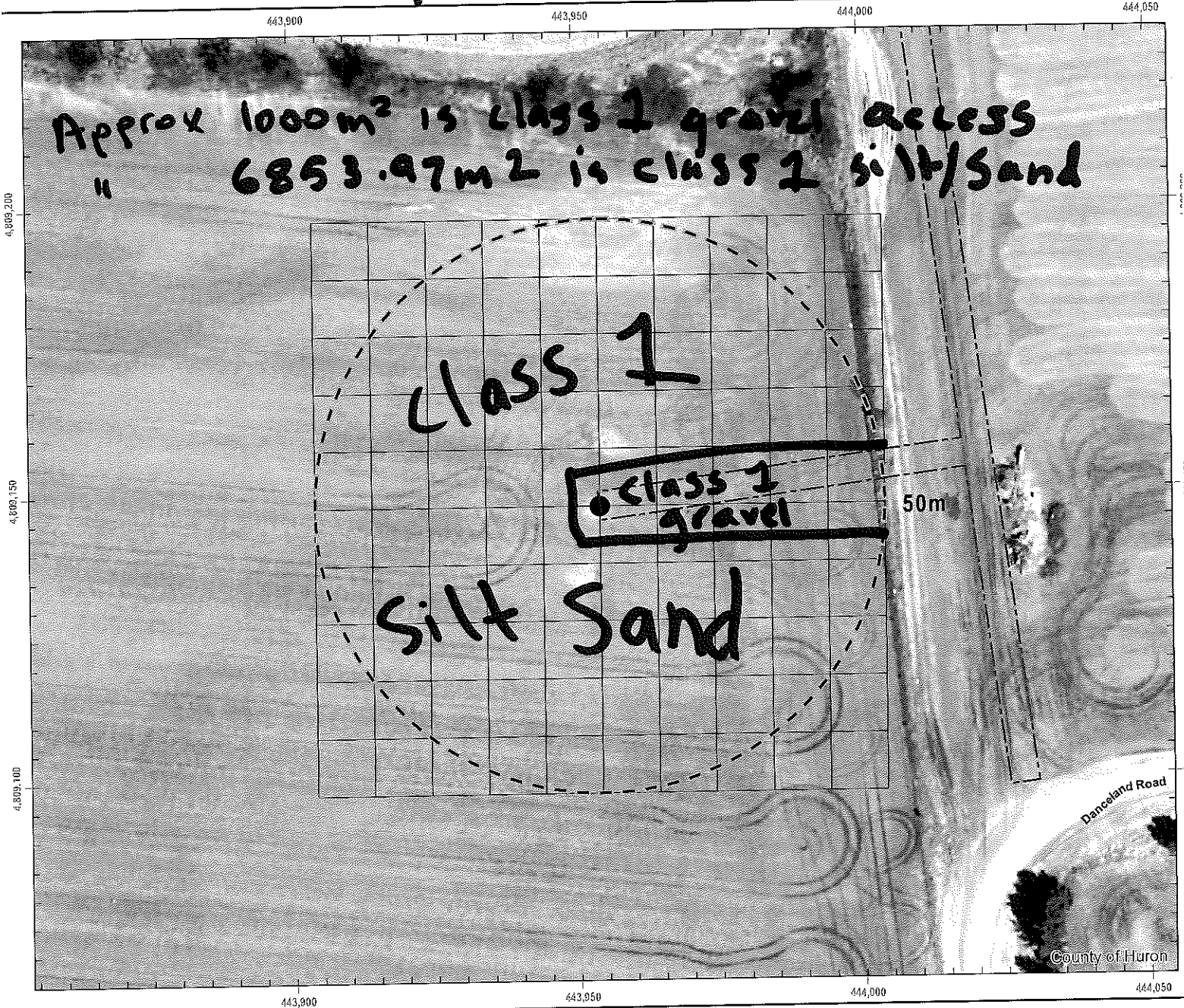
Site Number: T-07

Survey Date: June 18/19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
≤ 25% bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

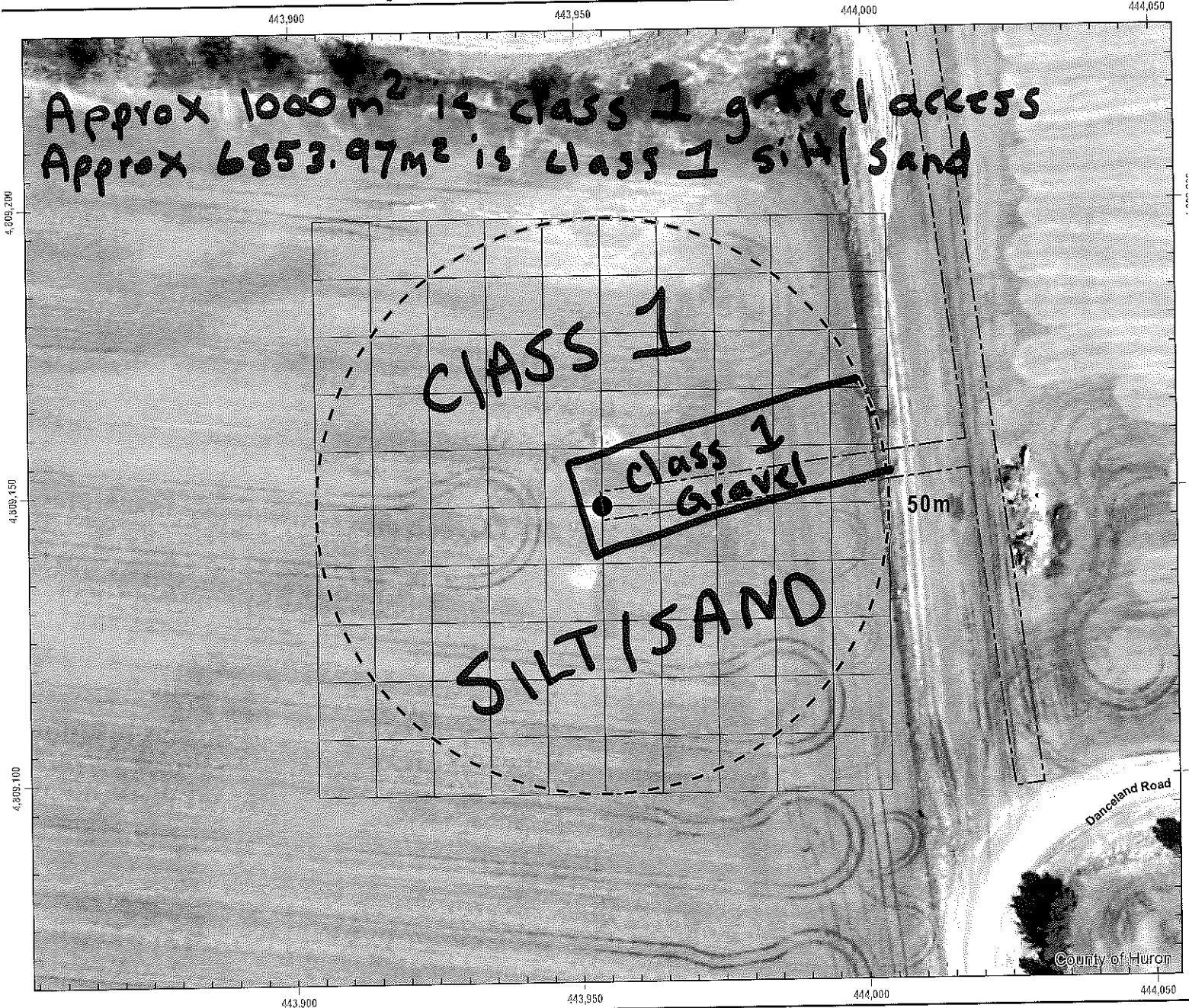
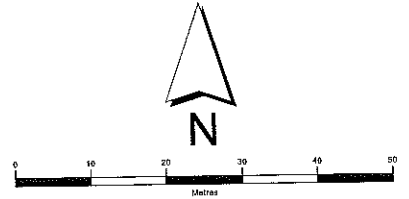
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-07

Survey Date: July 23/19

Actual Searched Area (m²): 7853.97m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
≤ 25% bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

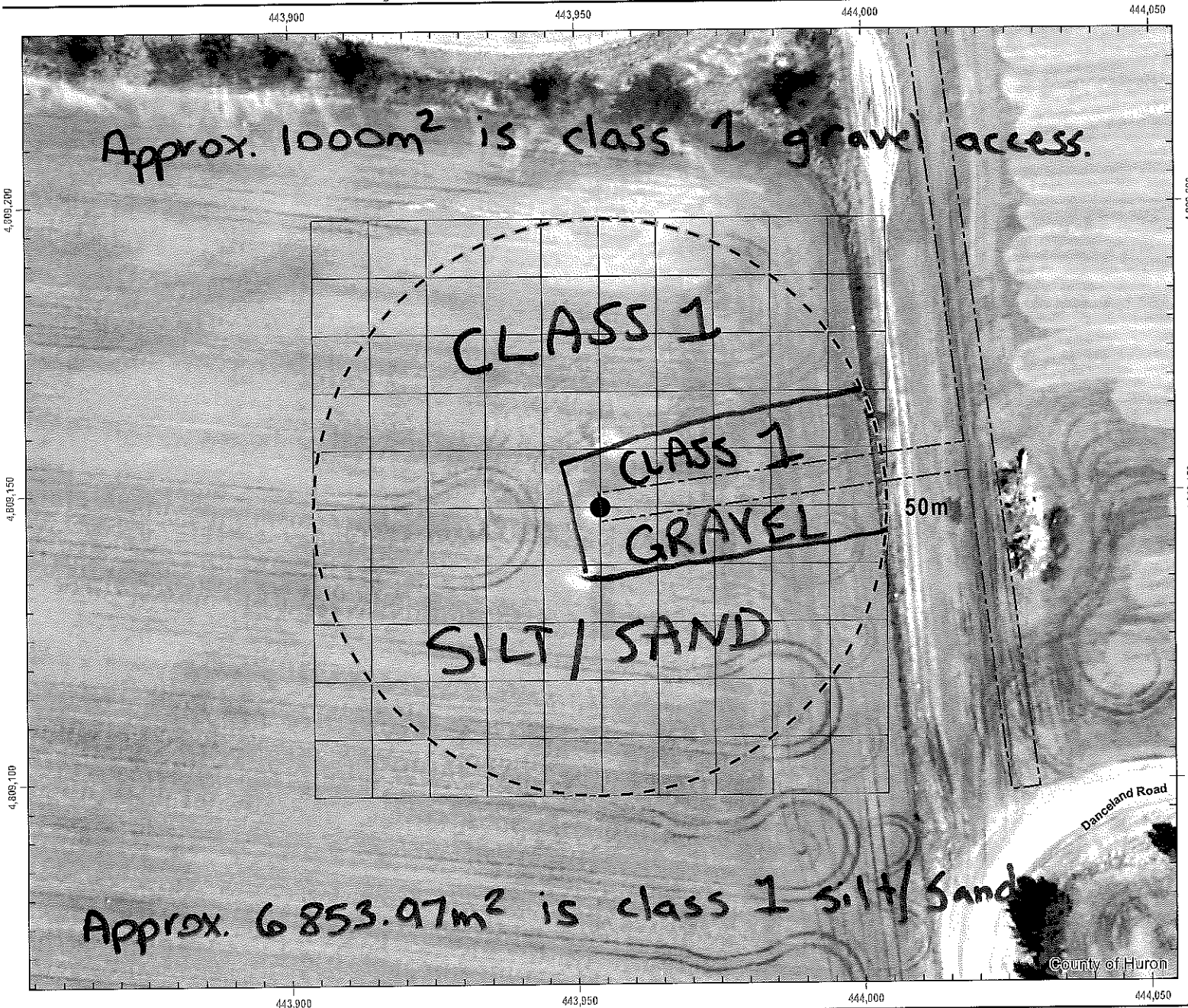
Site Number: T-07

Survey Date: Aug 2/19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
> 25% bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

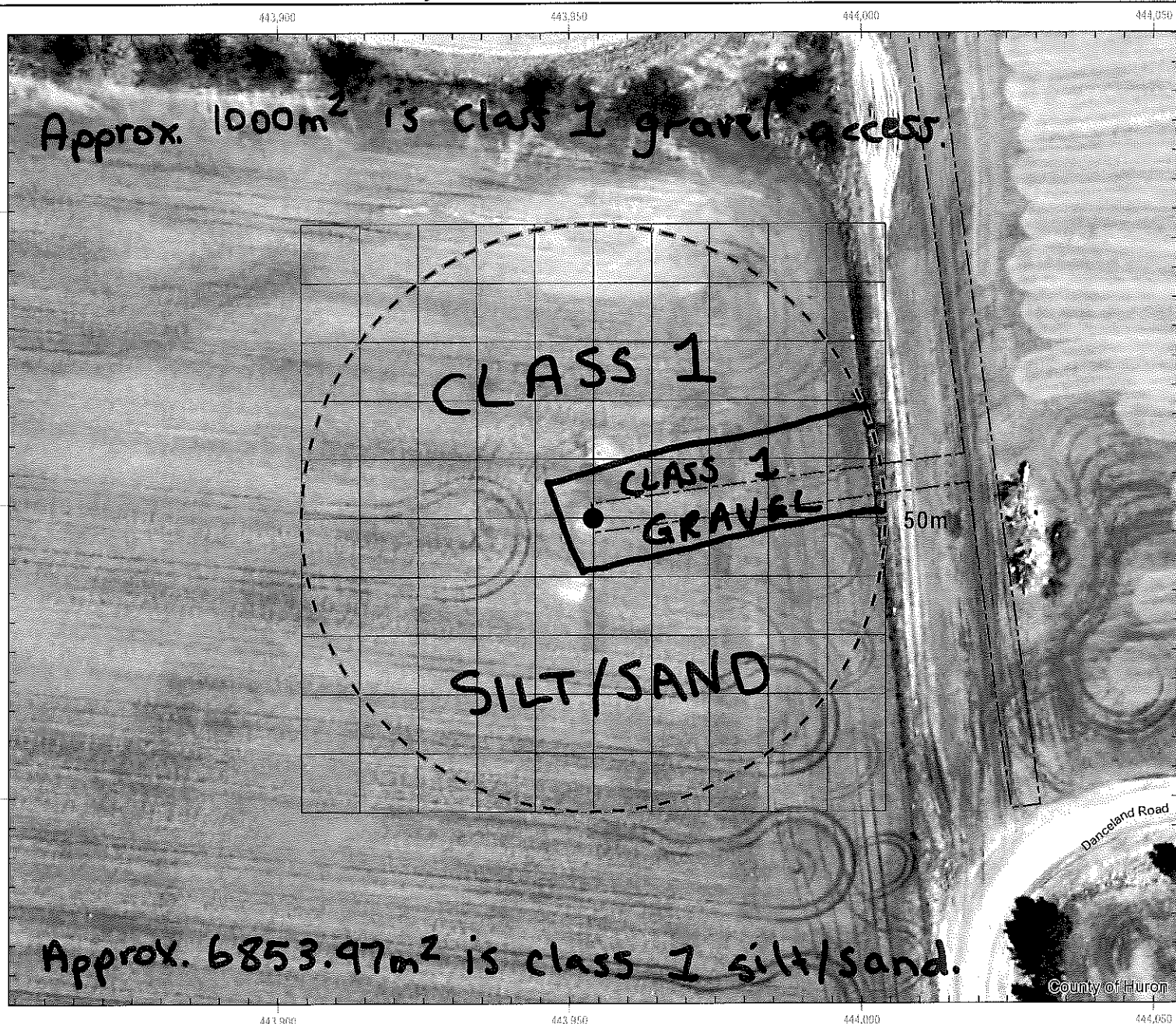
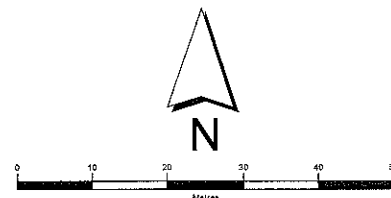
Site Number: T-07

Survey Date: Sept 17/19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
≤ 25% > 30cm tall	≤ 25% > 30cm tall	Class 4 (Very Difficult)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

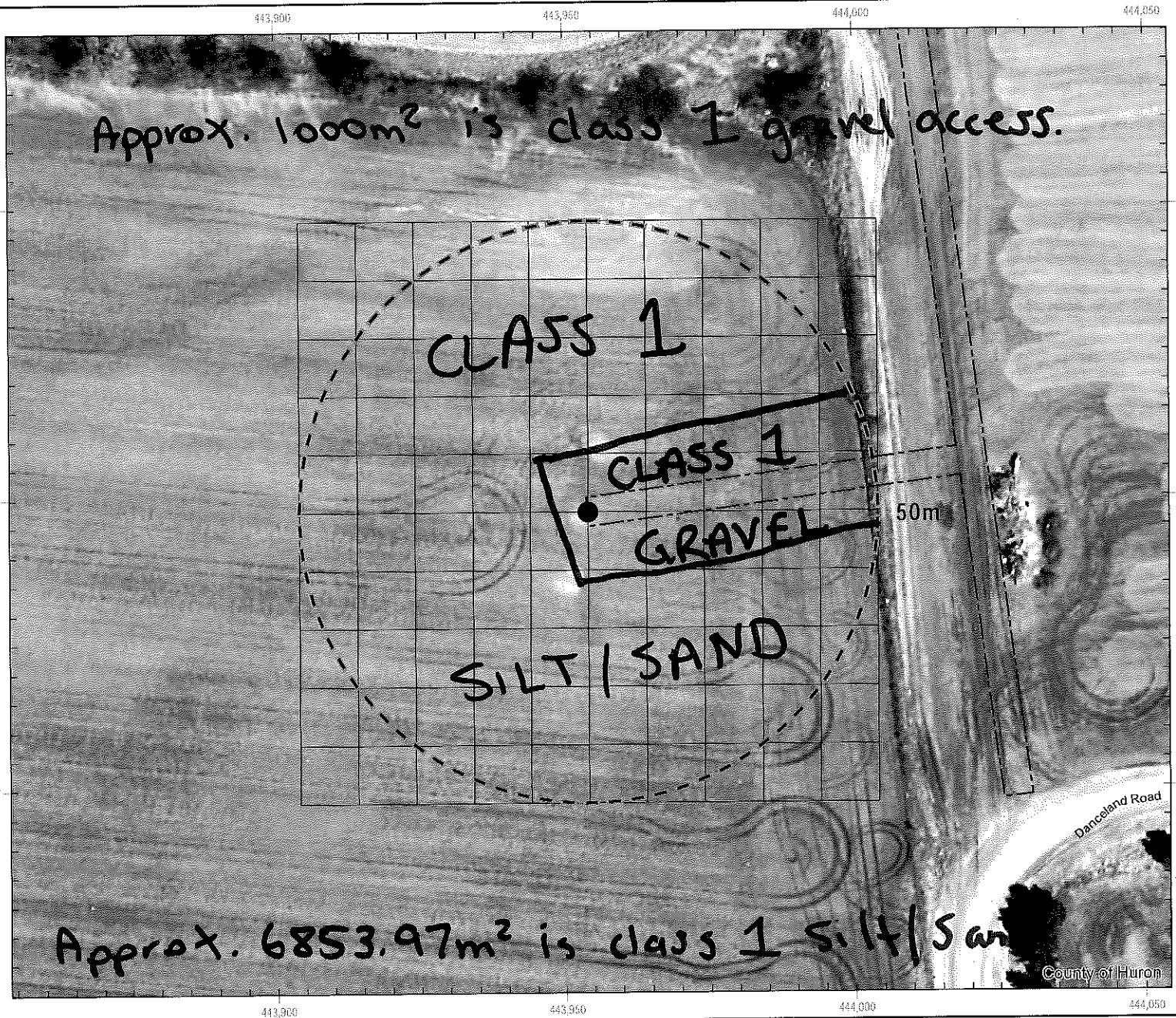
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: I-07

Survey Date: Oct. 22/19

Actual Searched Area (m²): 7853.97 m²
(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson, Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

25-100M AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

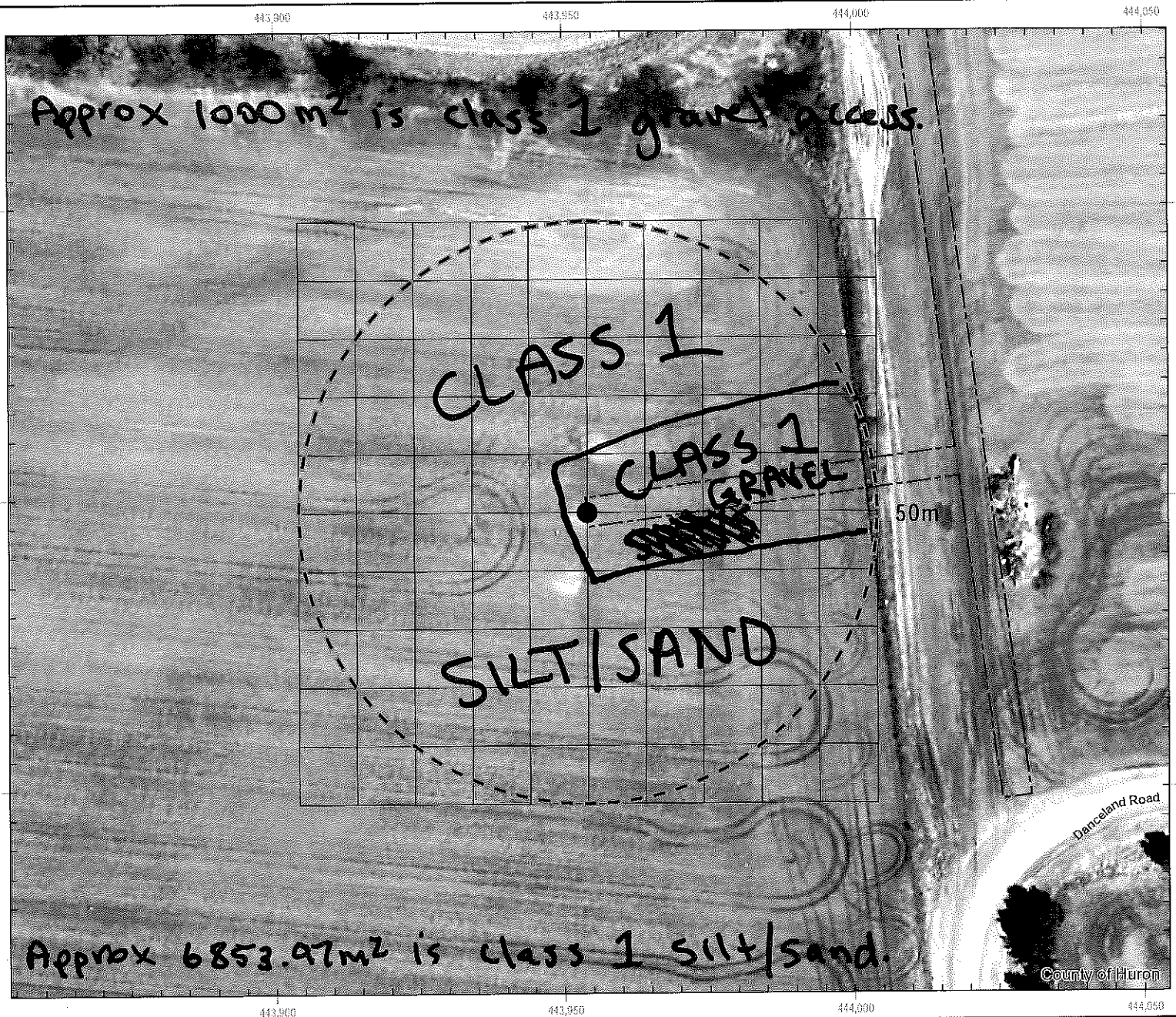
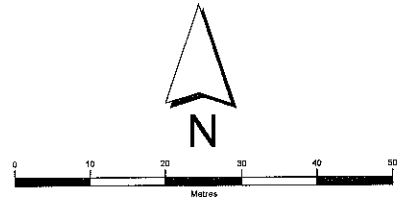
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-07

Survey Date: NOV 20 / 19

Actual Searched Area (m²): 7853.97 m²
(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson



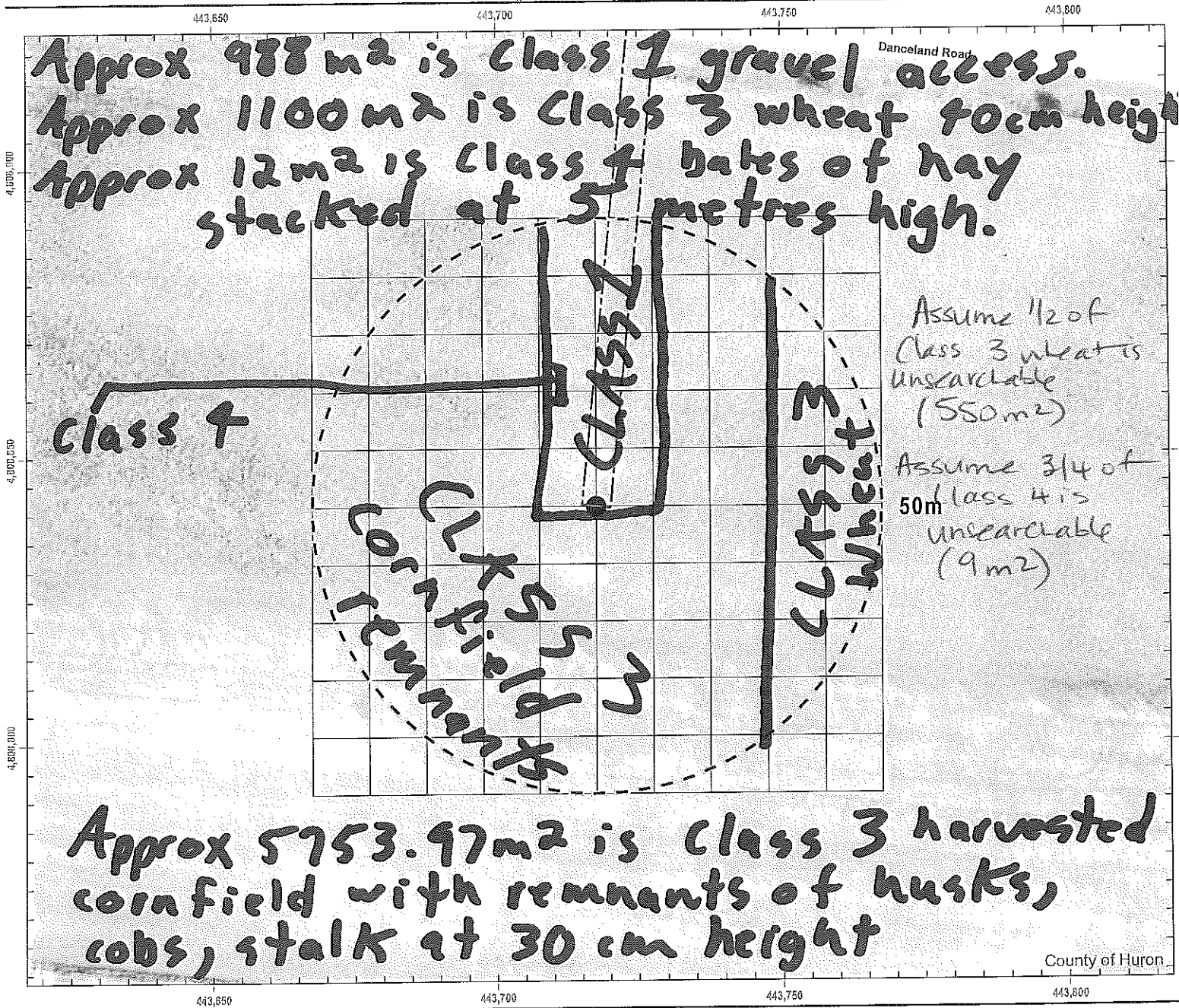
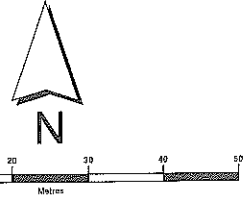
% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-08
 Survey Date: May 1 / 19
 Actual Searched Area (m²): 7294.97 m²
(subtract from total search area - 7853.97 m²)
 Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



BURNSIDE

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

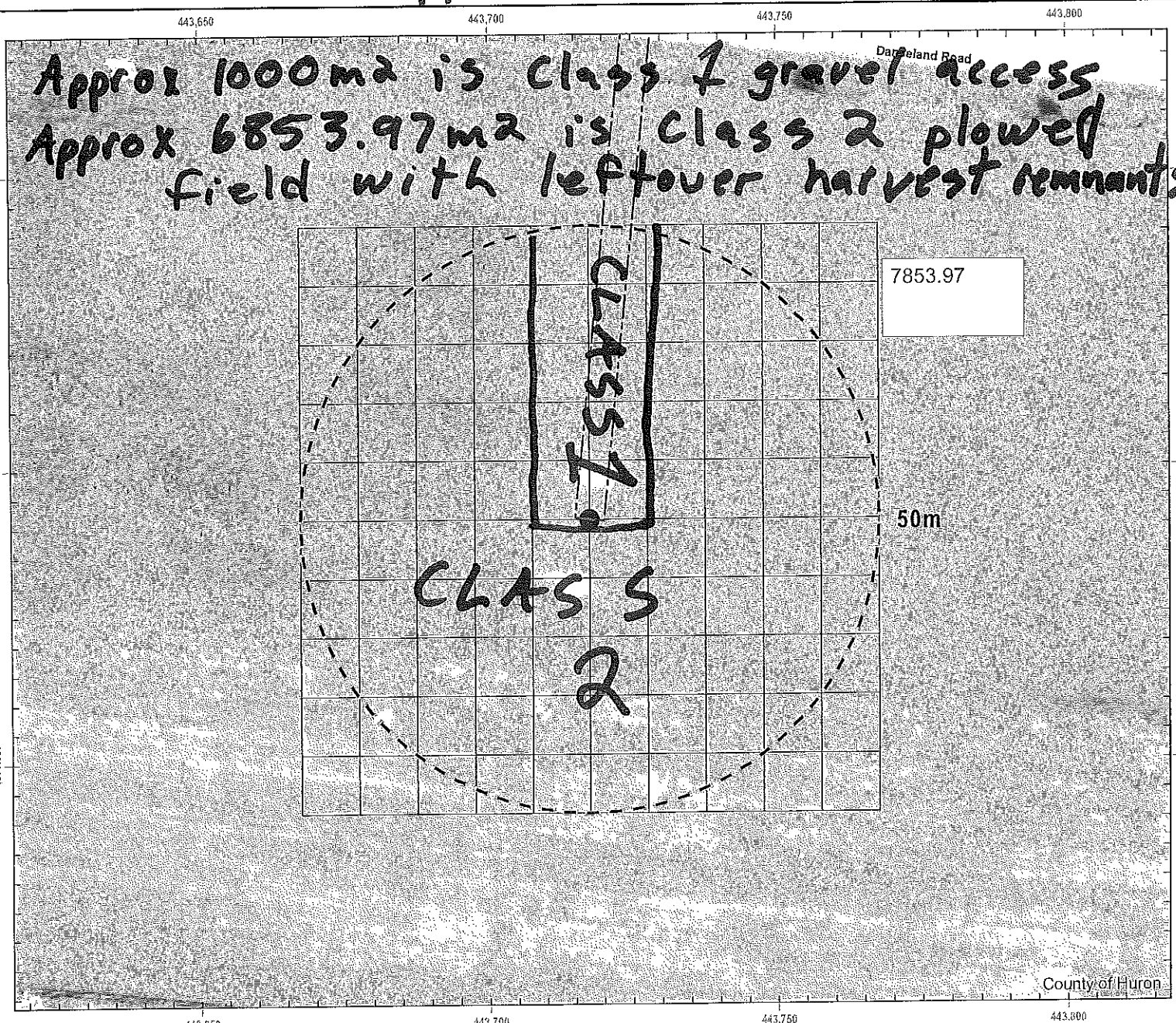
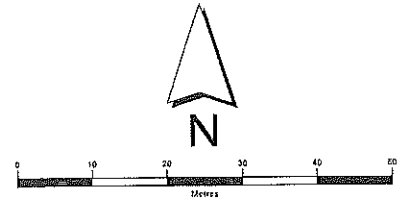
Site Number: T-08

Survey Date: June 5 / 19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sam Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
	≤ 25% > 30cm tall	Class 4 (Very Difficult)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

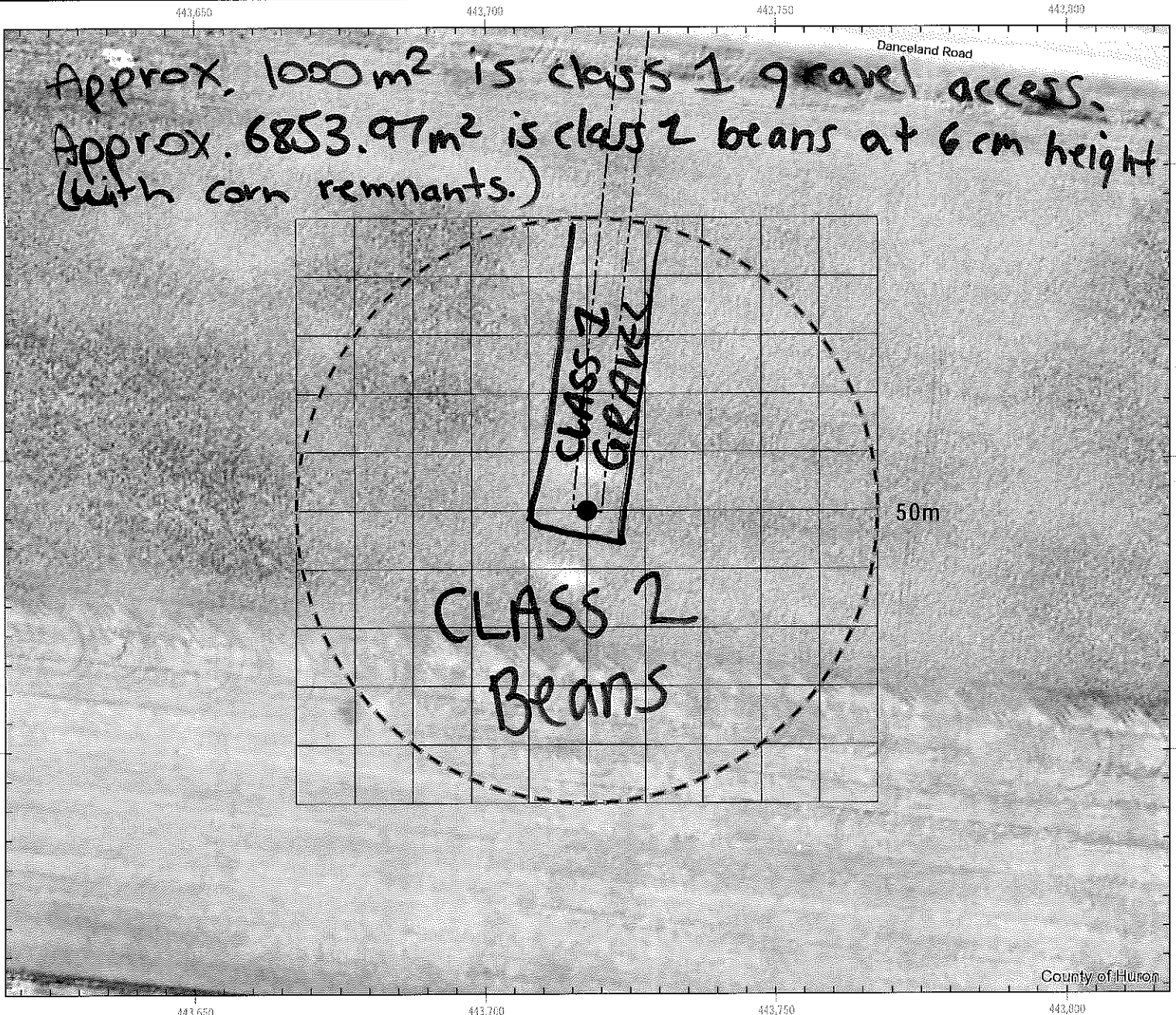
Site Number: T-08

Survey Date: July 3/19

Actual Searched Area (m²): 7853.97 m²

(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

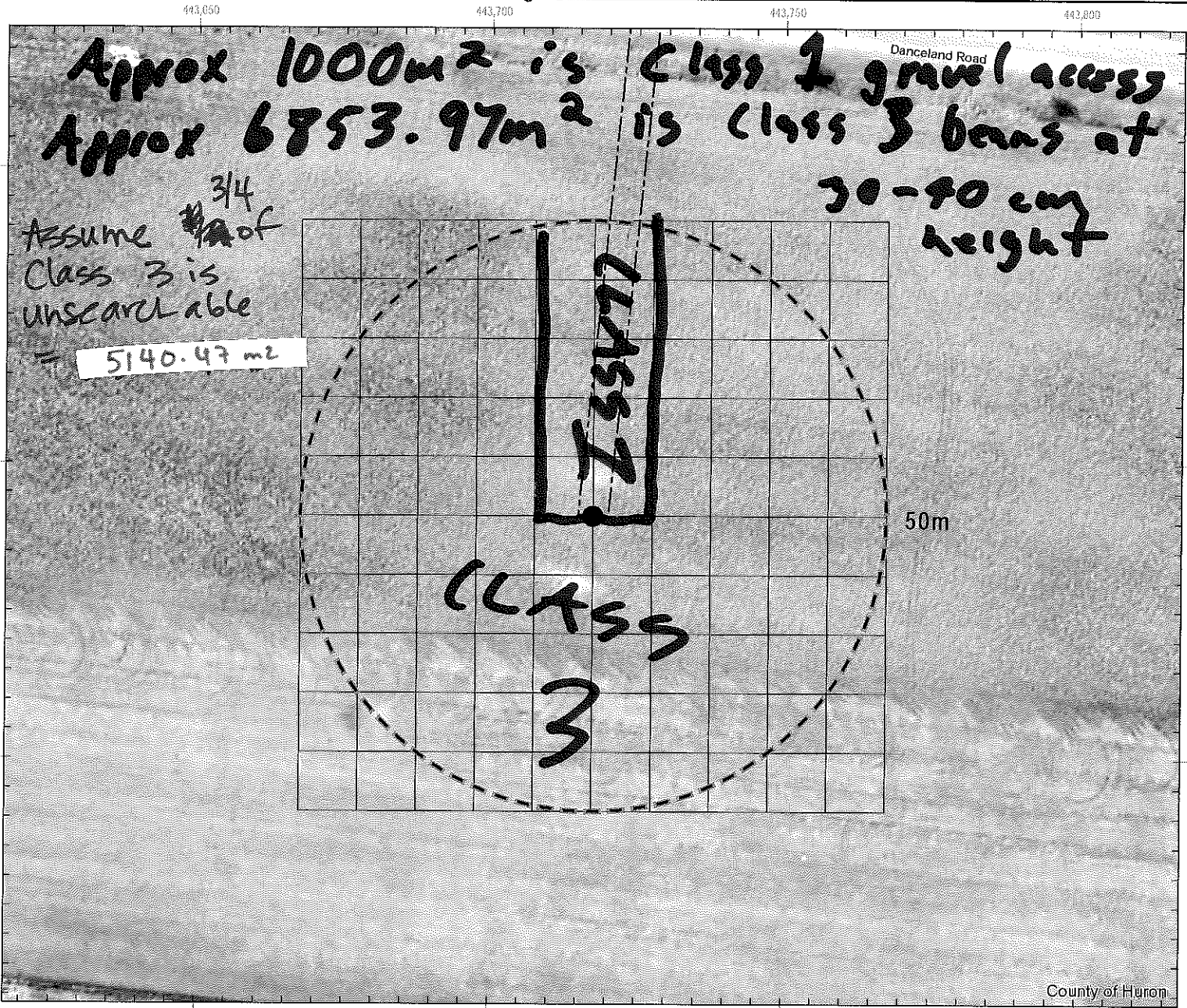
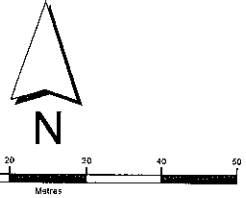
Site Number: T-08

Survey Date: Aug 7/19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

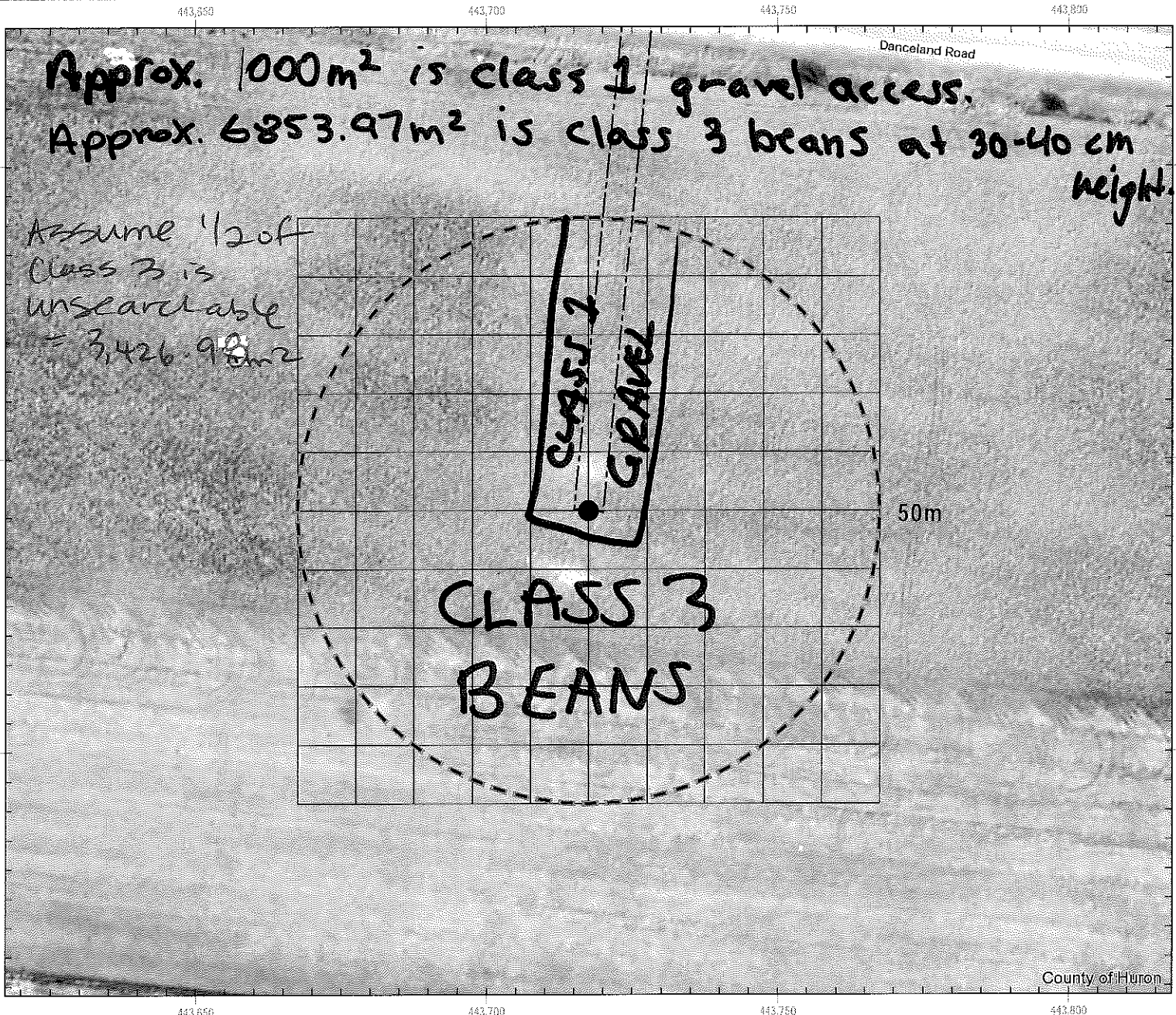
Site Number: T-08

Survey Date: Sept 4/19

Actual Searched Area (m²): 4,426.99m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

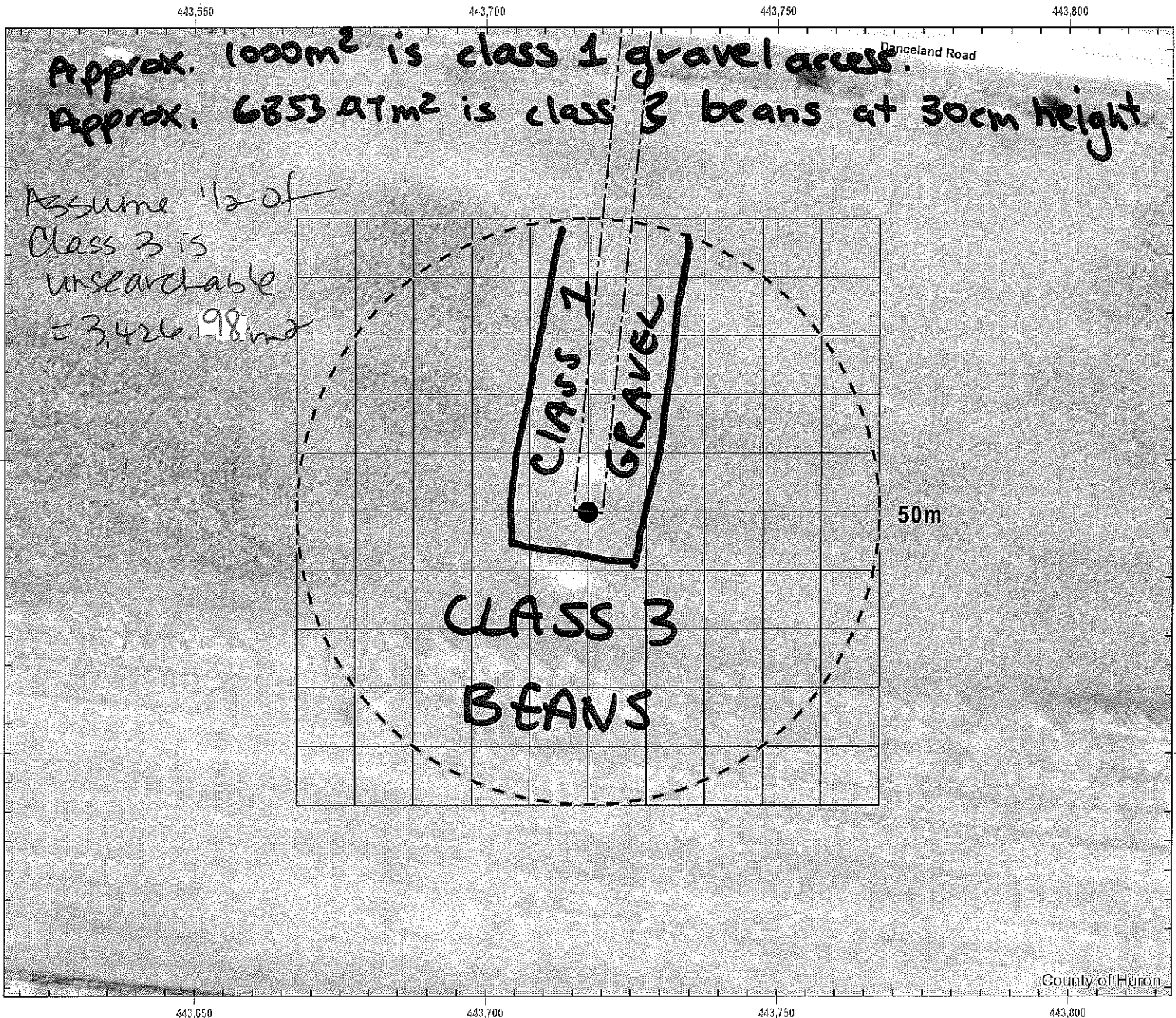
Site Number: T-08

Survey Date: Oct/5/19

Actual Searched Area (m²): 4,426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

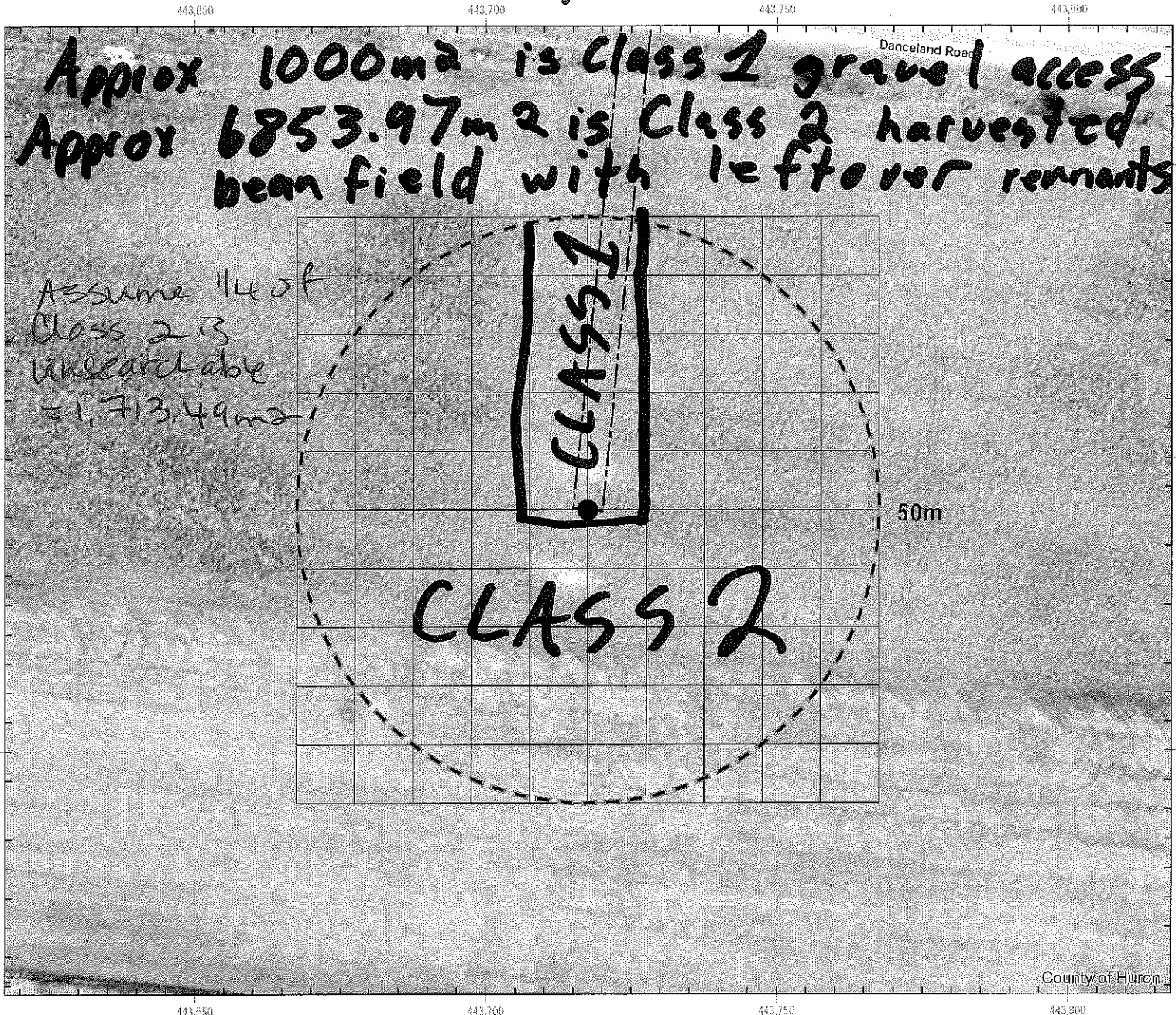
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-08

Survey Date: Nov 6 / 19

Actual Searched Area (m²): 6,140.48m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

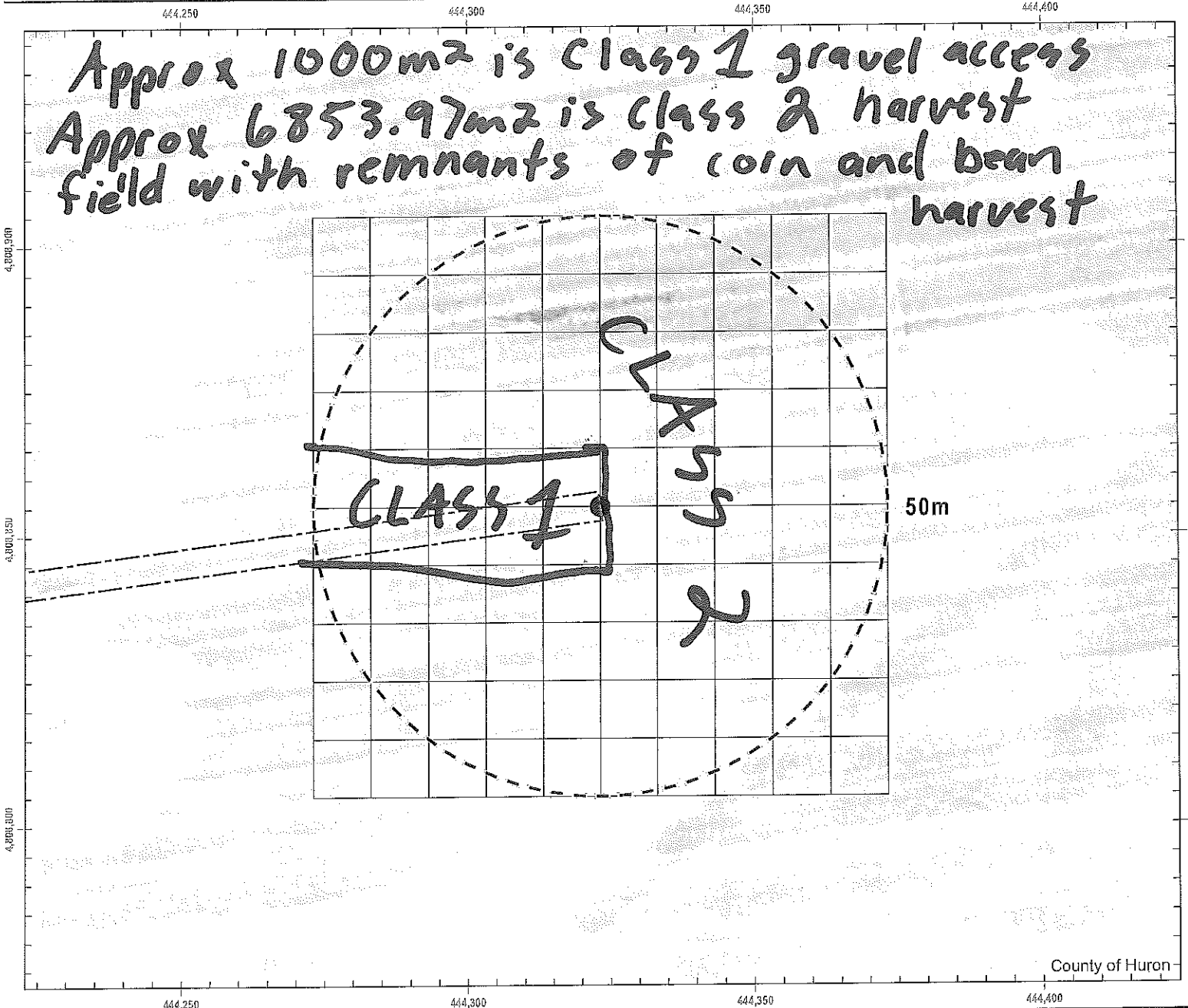
Site Number: T-09

Survey Date: May 3/19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

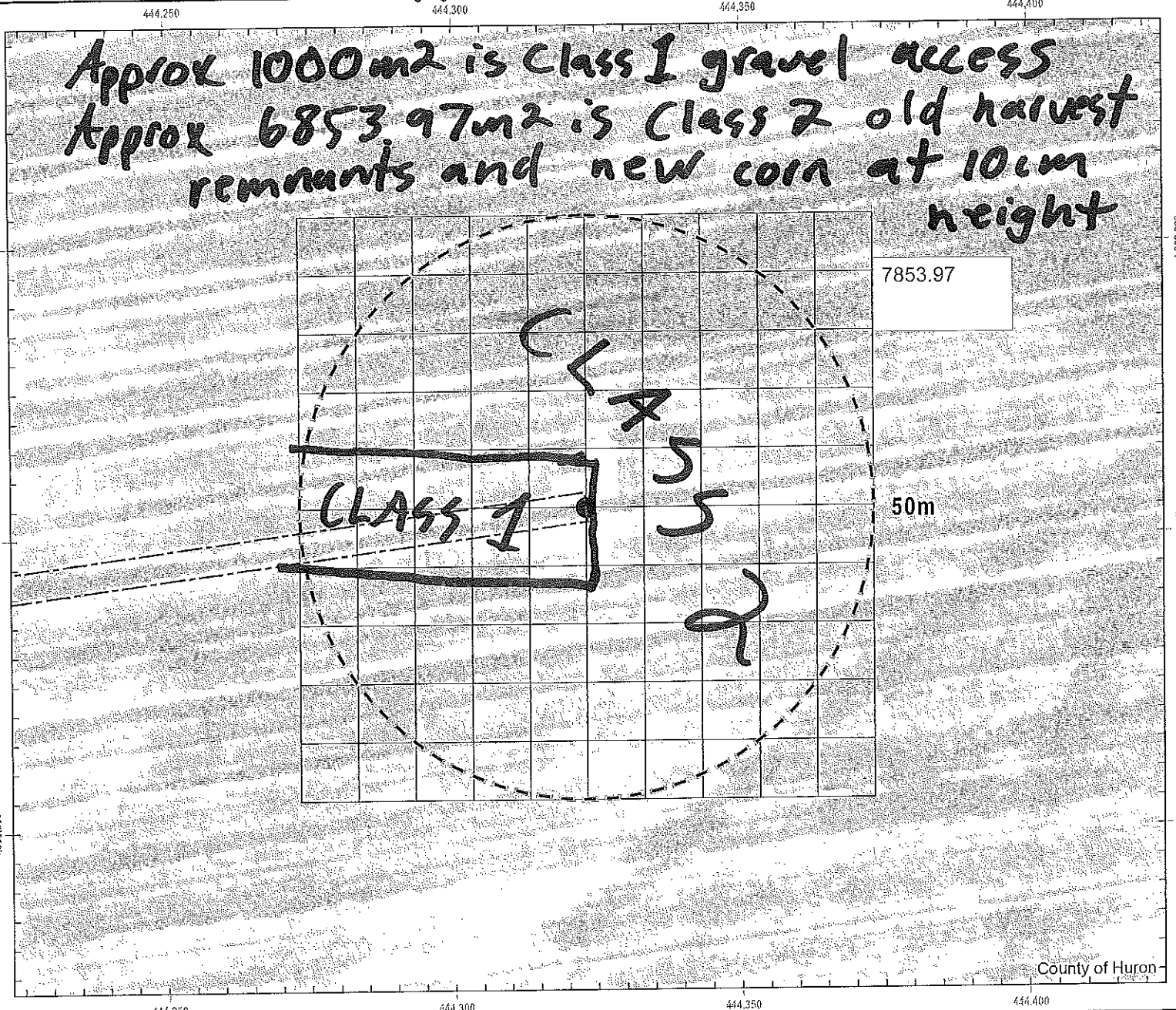
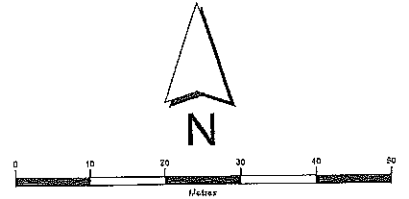
Site Number: T-09

Survey Date: June 17/19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
	> 25% > 30cm tall	Class 4 (Very Difficult)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

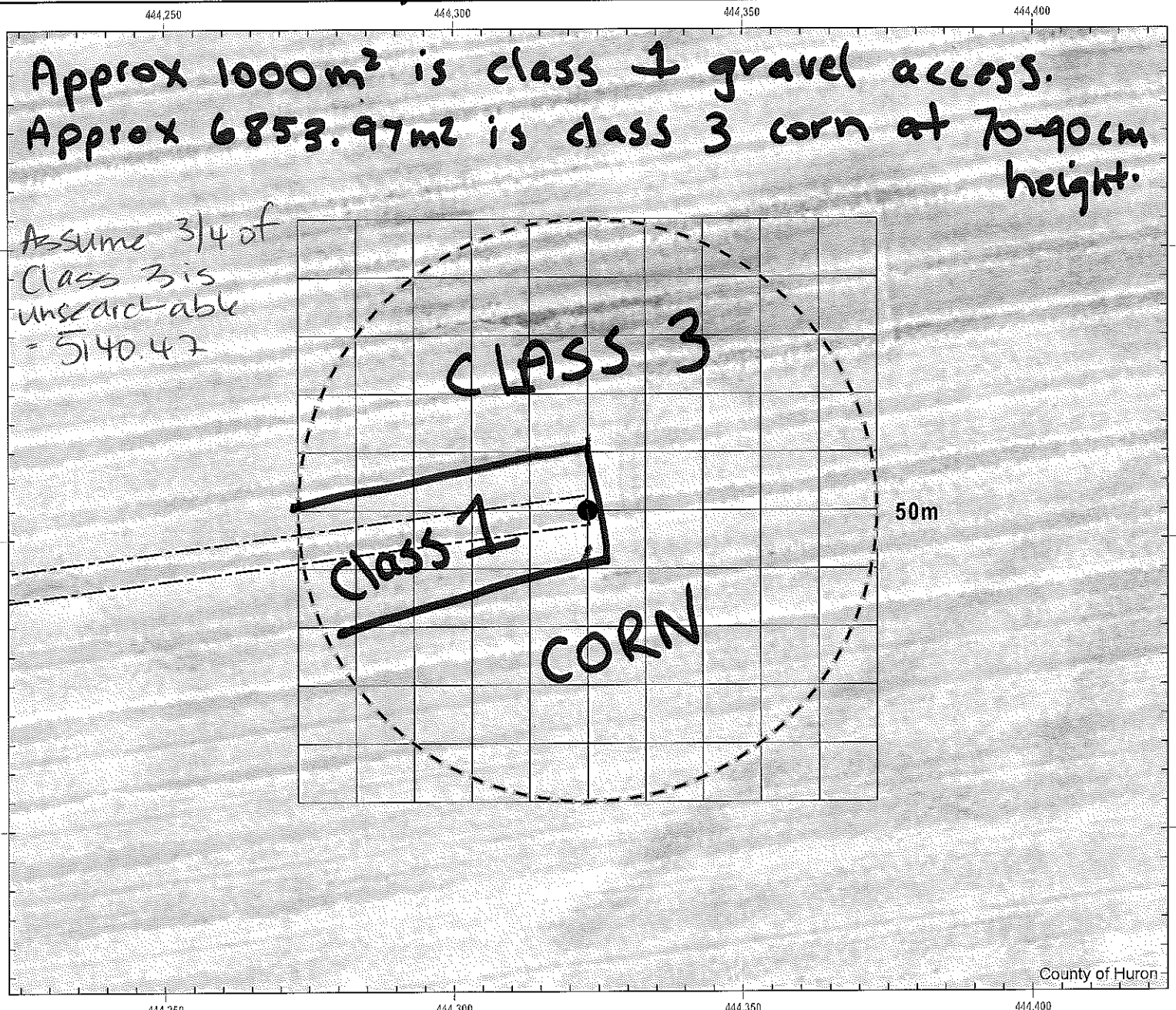
Site Number: T-09

Survey Date: July 9/19

Actual Searched Area (m²): 2713.50m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

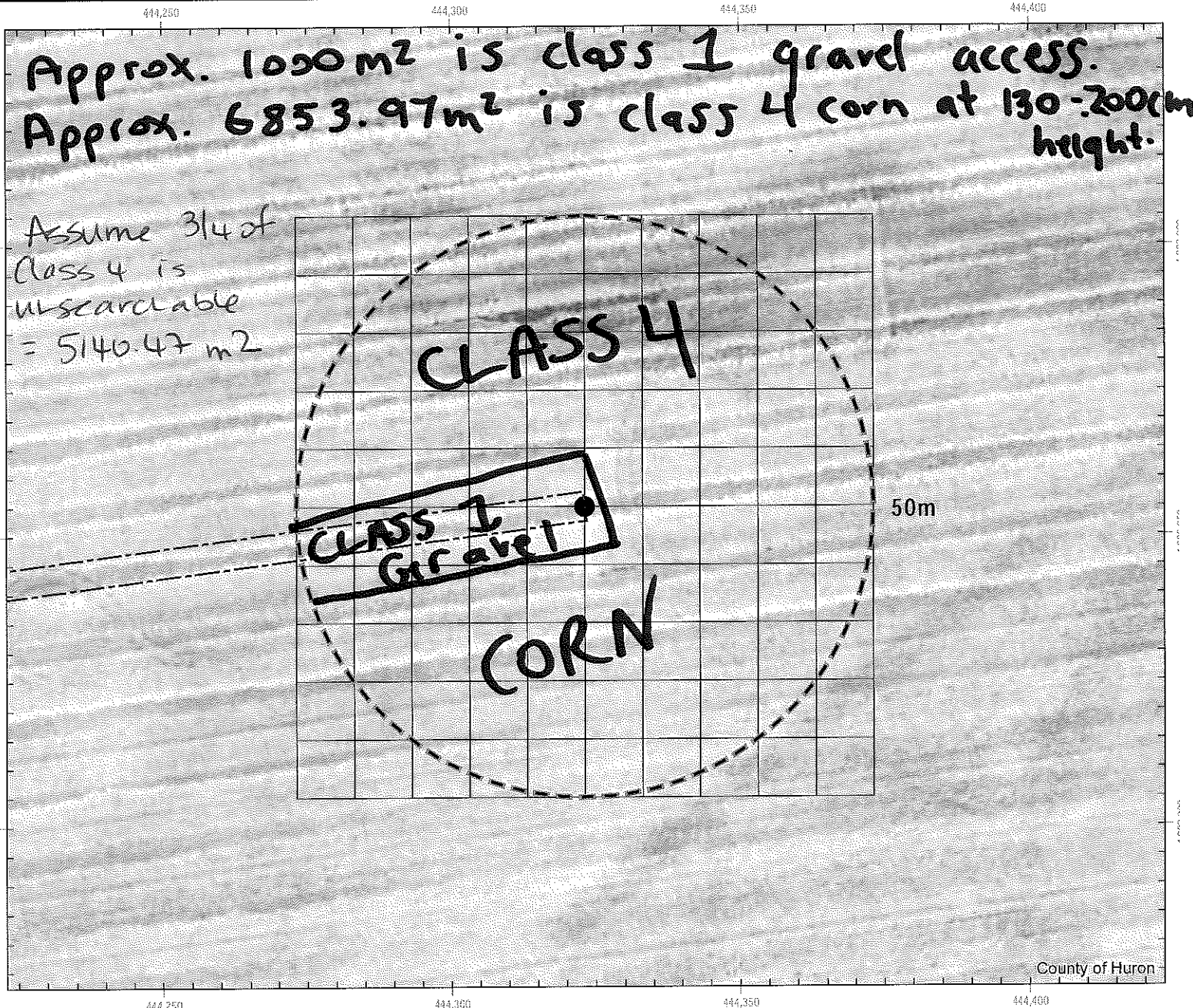
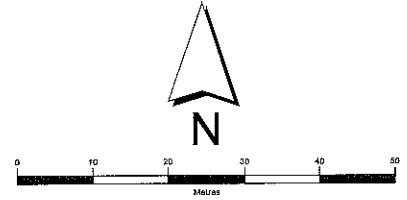
Site Number: T-09

Survey Date: July 23/19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
little or no bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

25100X AREA 10 BIRD AND BAT 40 10M BY 10M SQUARE GRID

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

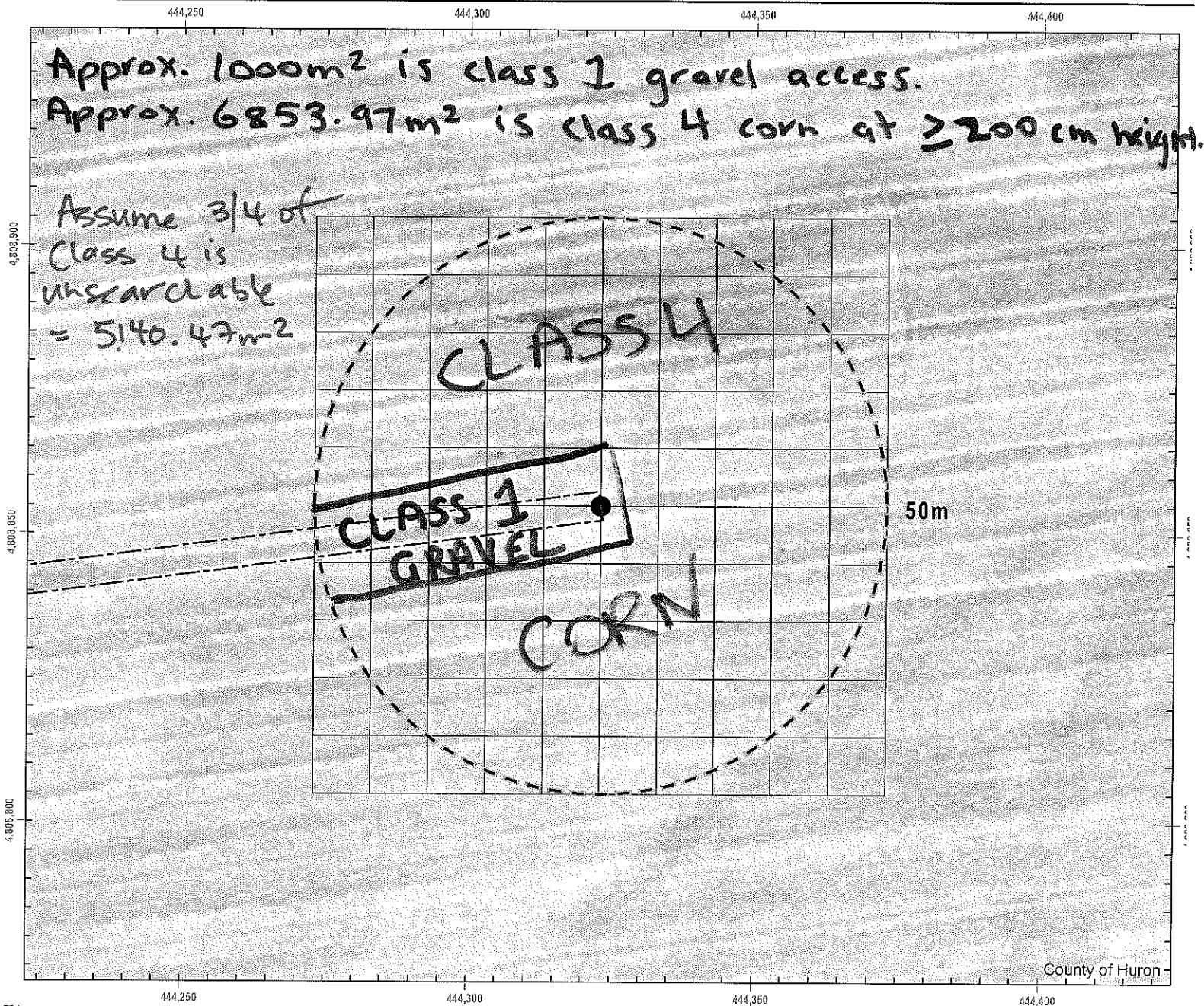
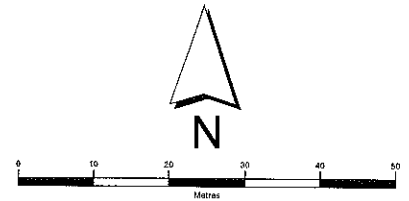
Site Number: T-09

Survey Date: Aug 16/19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

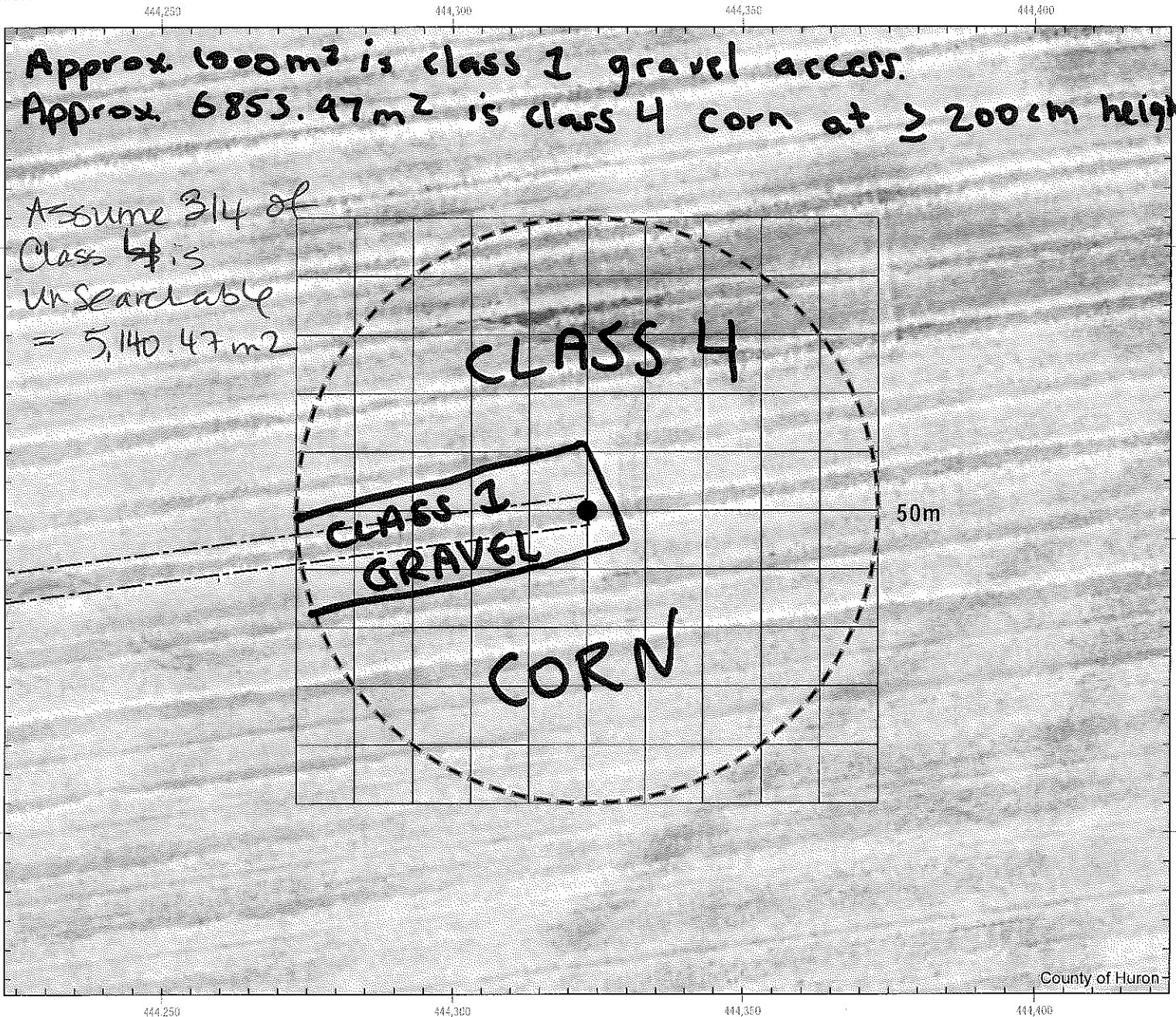
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-09

Survey Date: Sept 17/19

Actual Searched Area (m²): 2,713.50 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

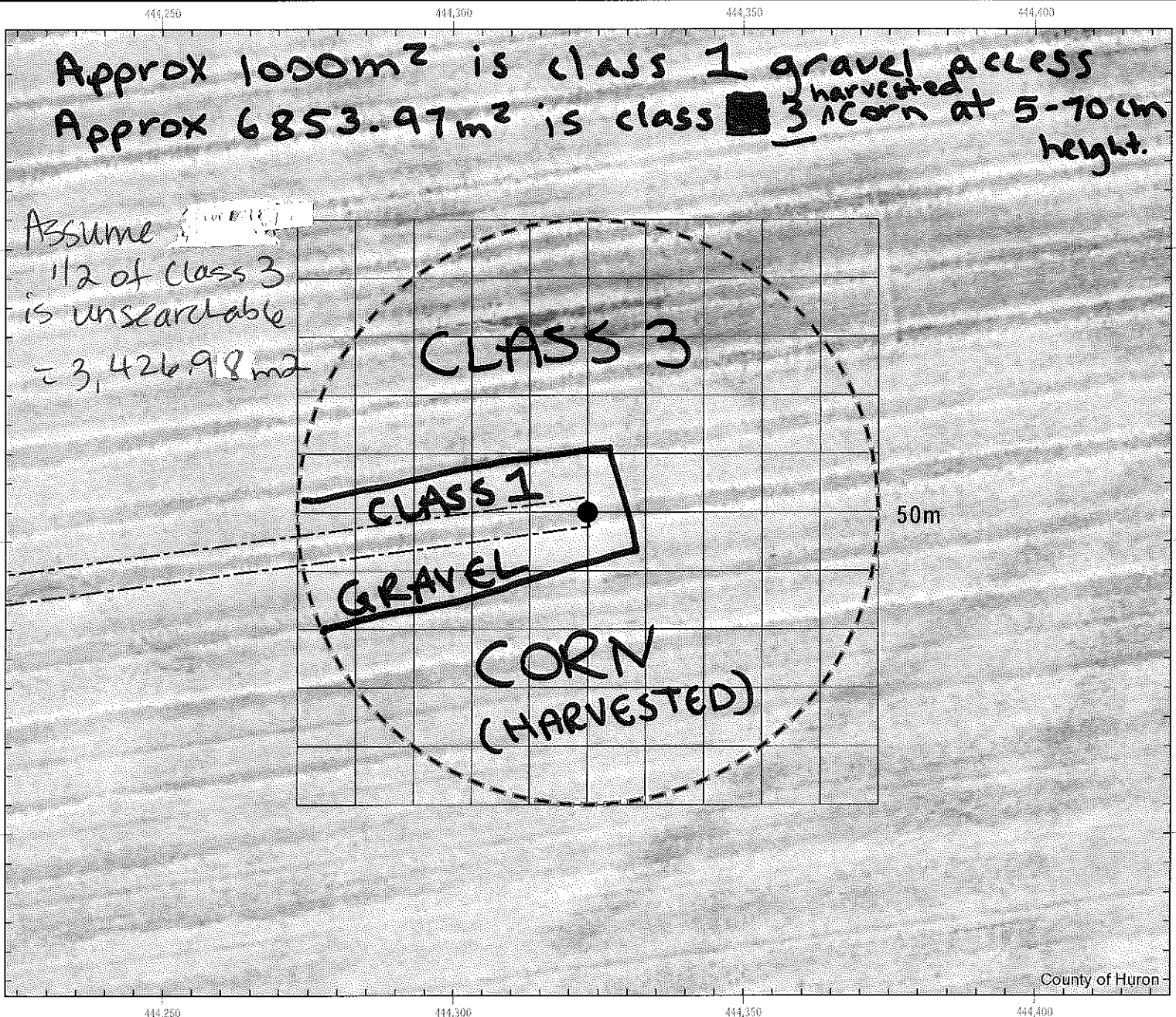
Site Number: T-09

Survey Date: 04/22/19

Actual Searched Area (m²): 4,426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson, Sara Henry



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

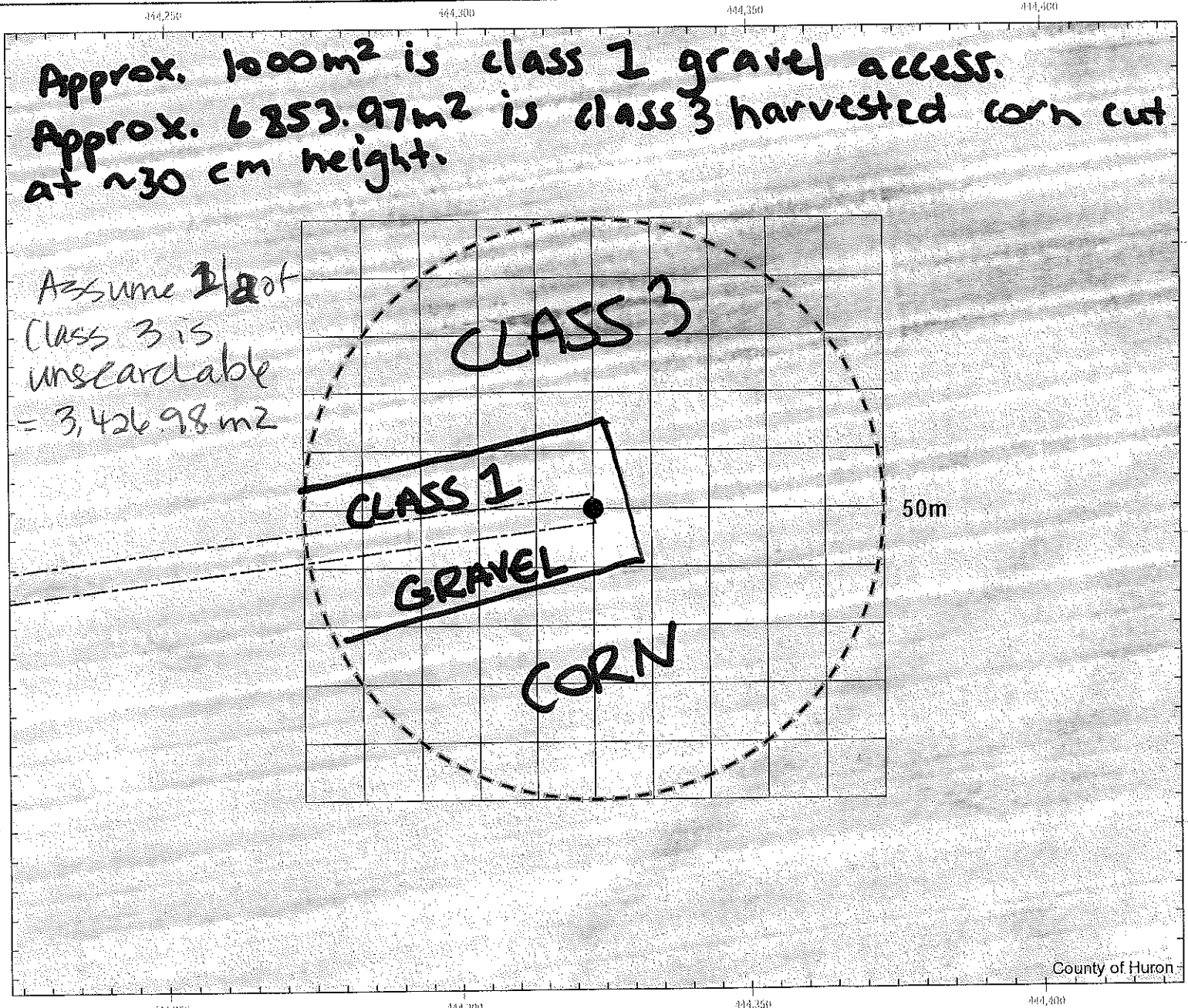
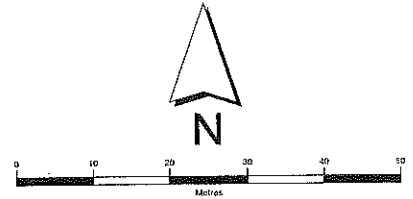
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-09

Survey Date: Nov 21/19

Actual Searched Area (m²): 4,426.99 m²
(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRID

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

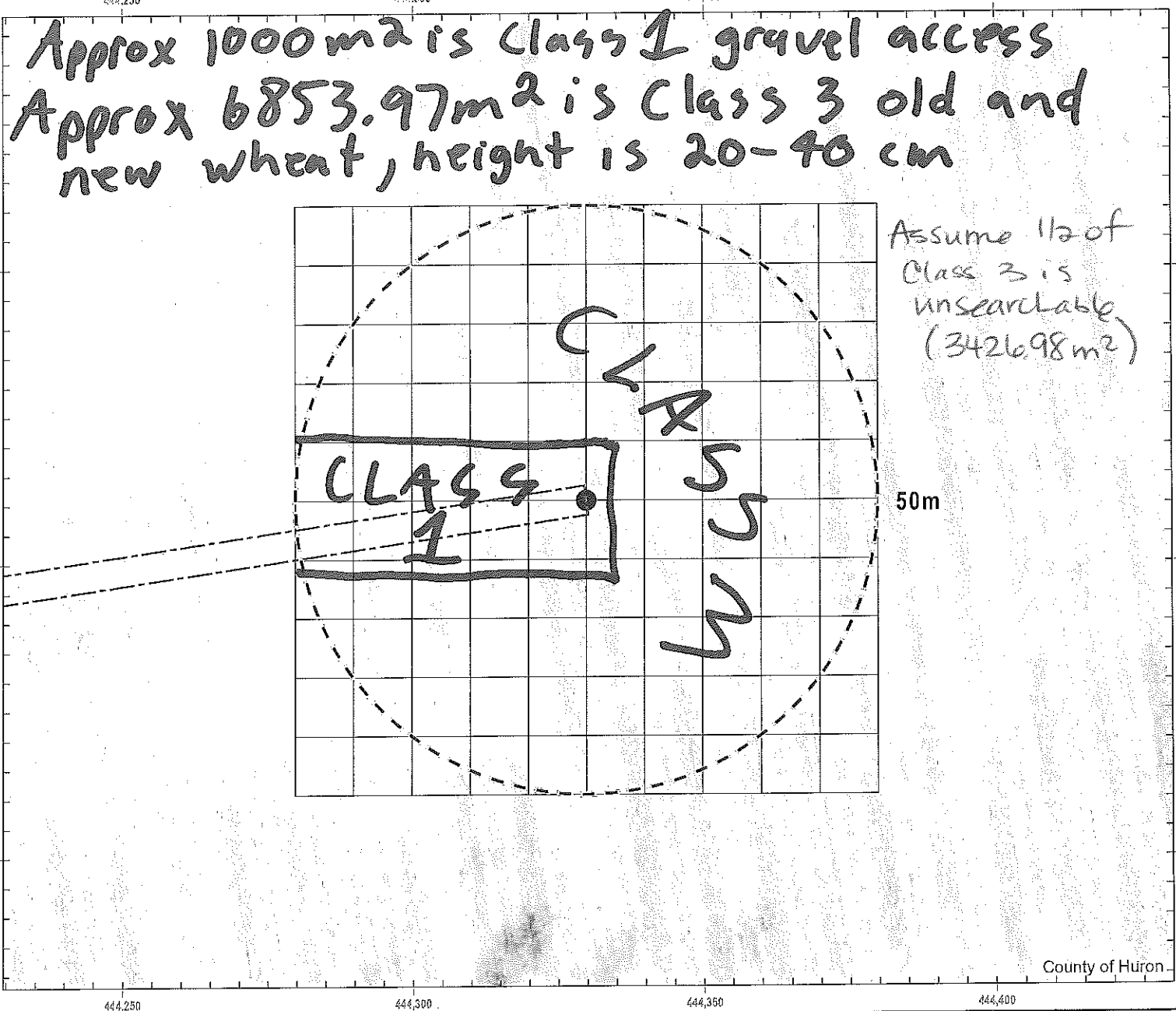
Site Number: T-11

Survey Date: May 3 / 19

Actual Searched Area (m²): 4426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-11

Survey Date: June 18 / 19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

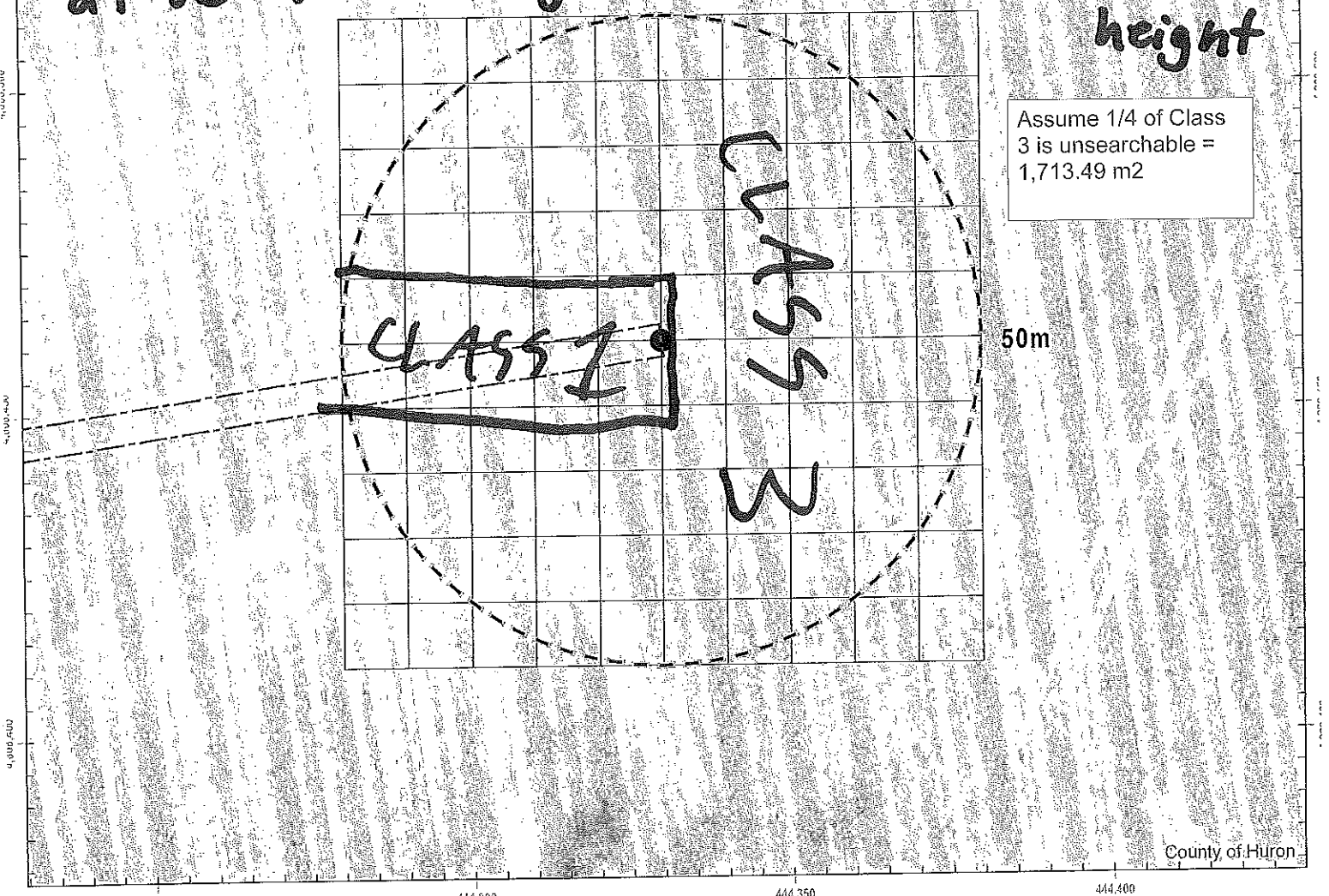
Observers: Sara Henry, Sarah Jackson

6,140.48 m²



444,250 444,300 444,350 444,400

Approx 1000m² is class 1 gravel access
Approx 6853.97m² is class 3 old wheat
at 20-30cm height and new corn at 25cm
height



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

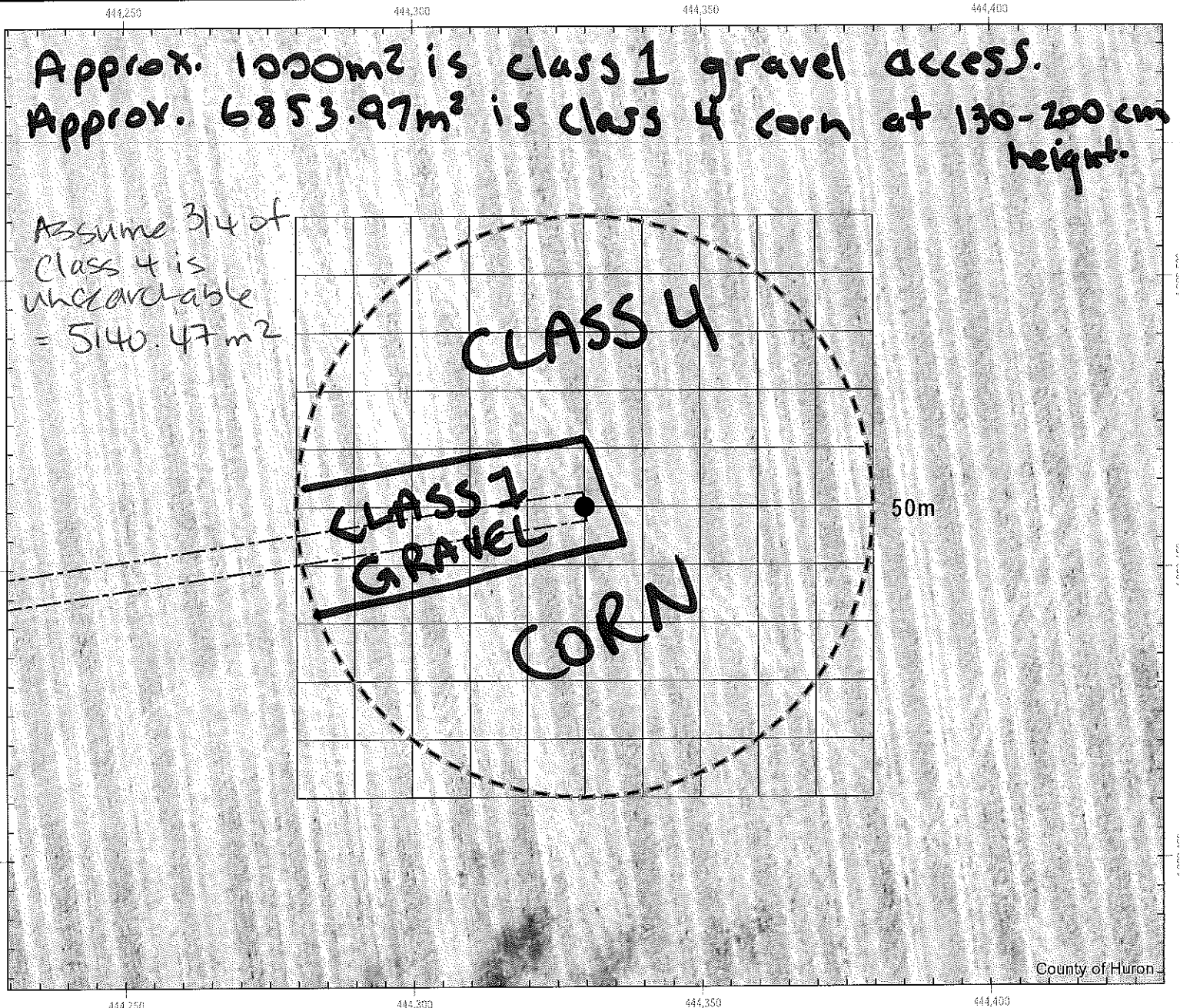
Site Number: I-11

Survey Date: July 23/19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
little or no bare ground	> 25% > 30cm tall	Class 4 (Very Difficult)

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

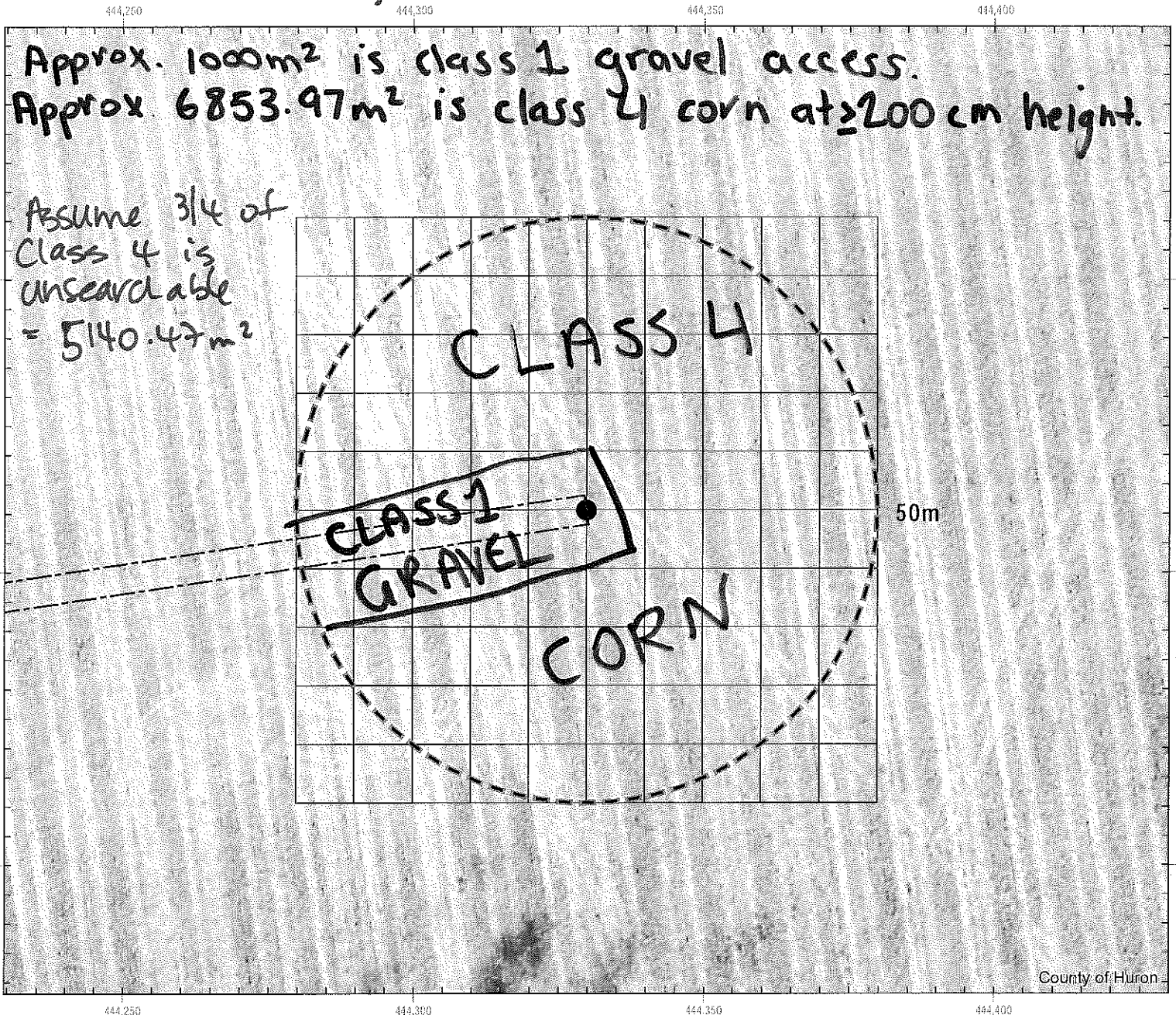
Site Number: T-11

Survey Date: Aug 20/19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

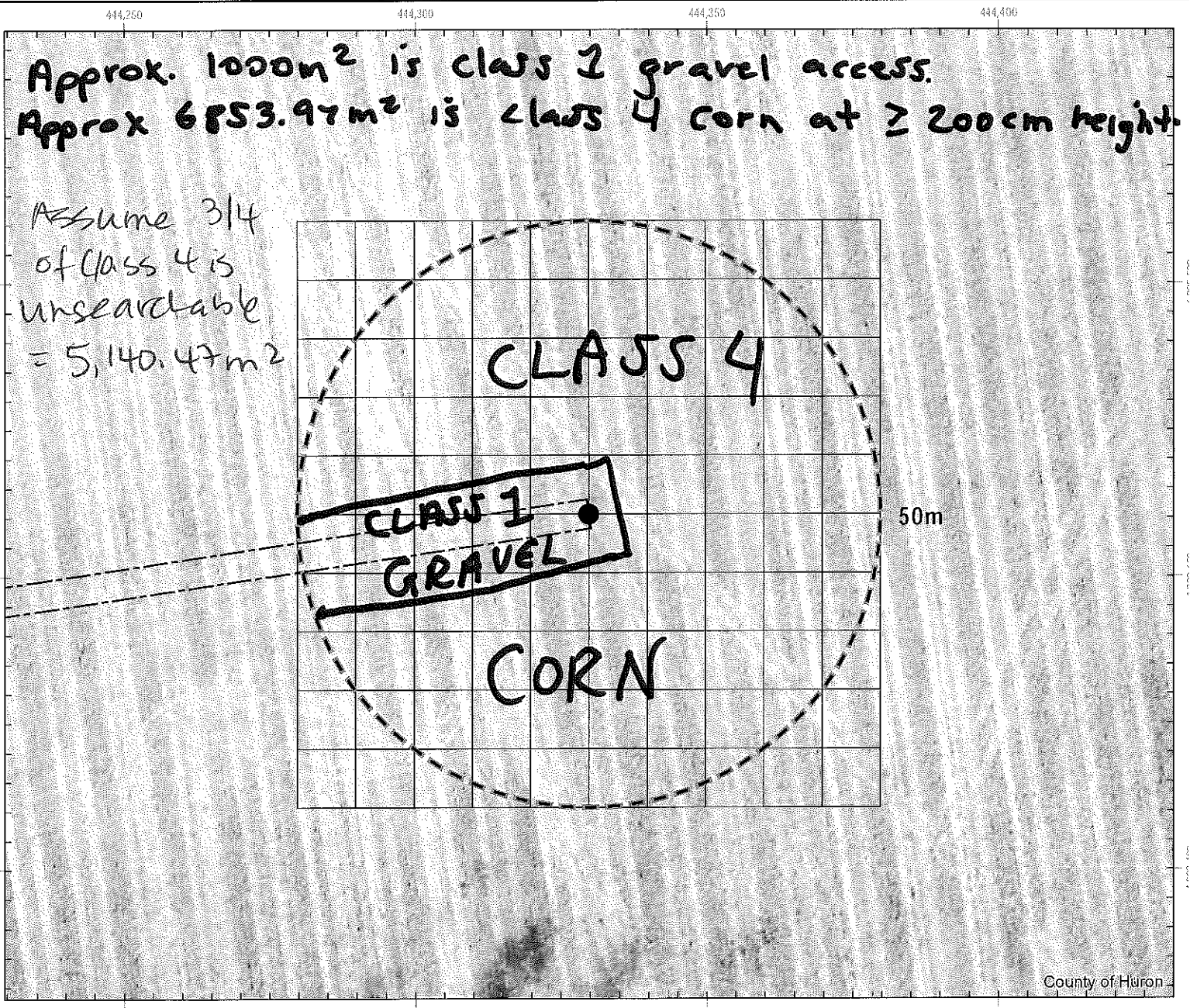
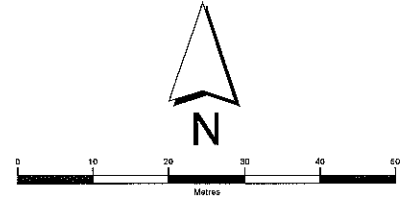
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-11

Survey Date: Sept 17/19

Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

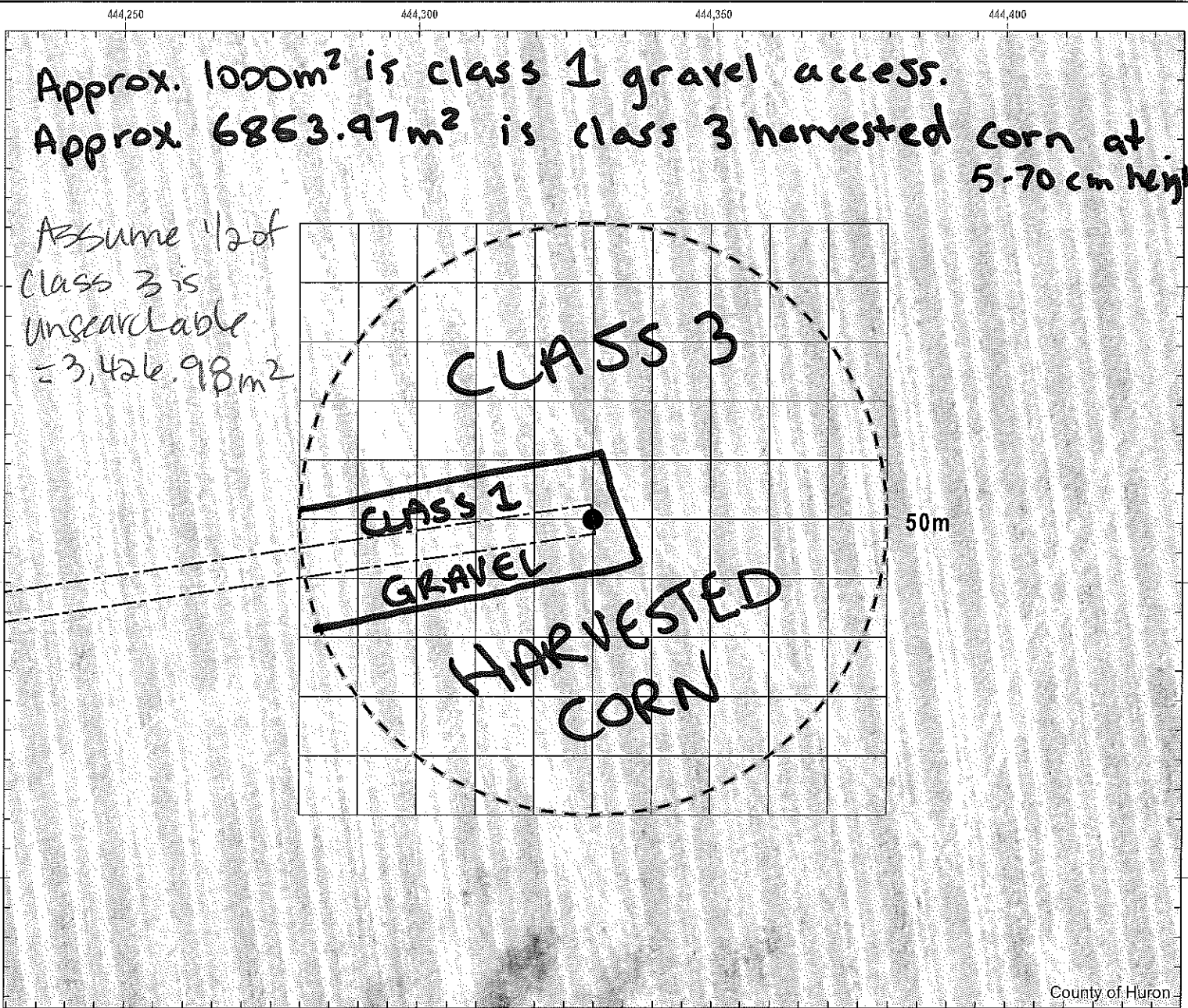
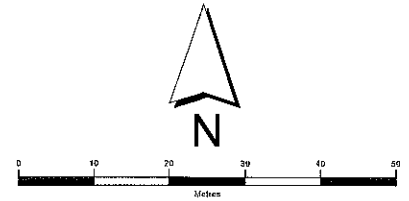
Site Number: T-11

Survey Date: Oct. 22/19

Actual Searched Area (m²): 4,426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson, Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

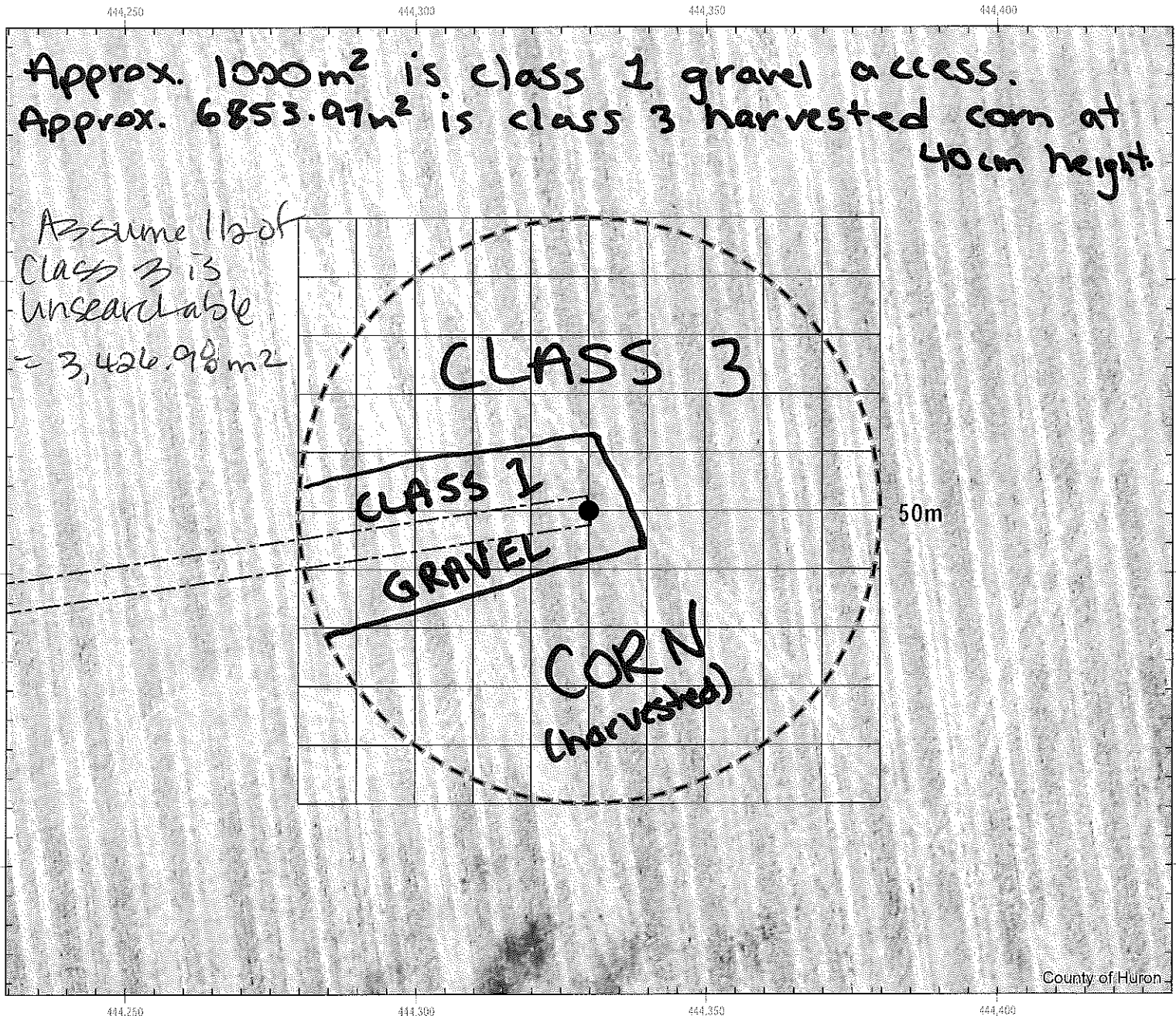
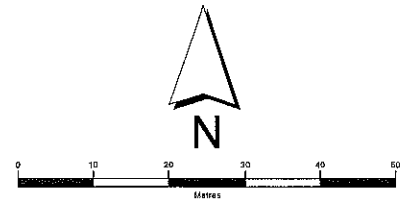
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-11

Survey Date: Nov 20/19

Actual Searched Area (m²): 4,426.99 m²
(subtract from total search area - 7853.97 m²)

Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

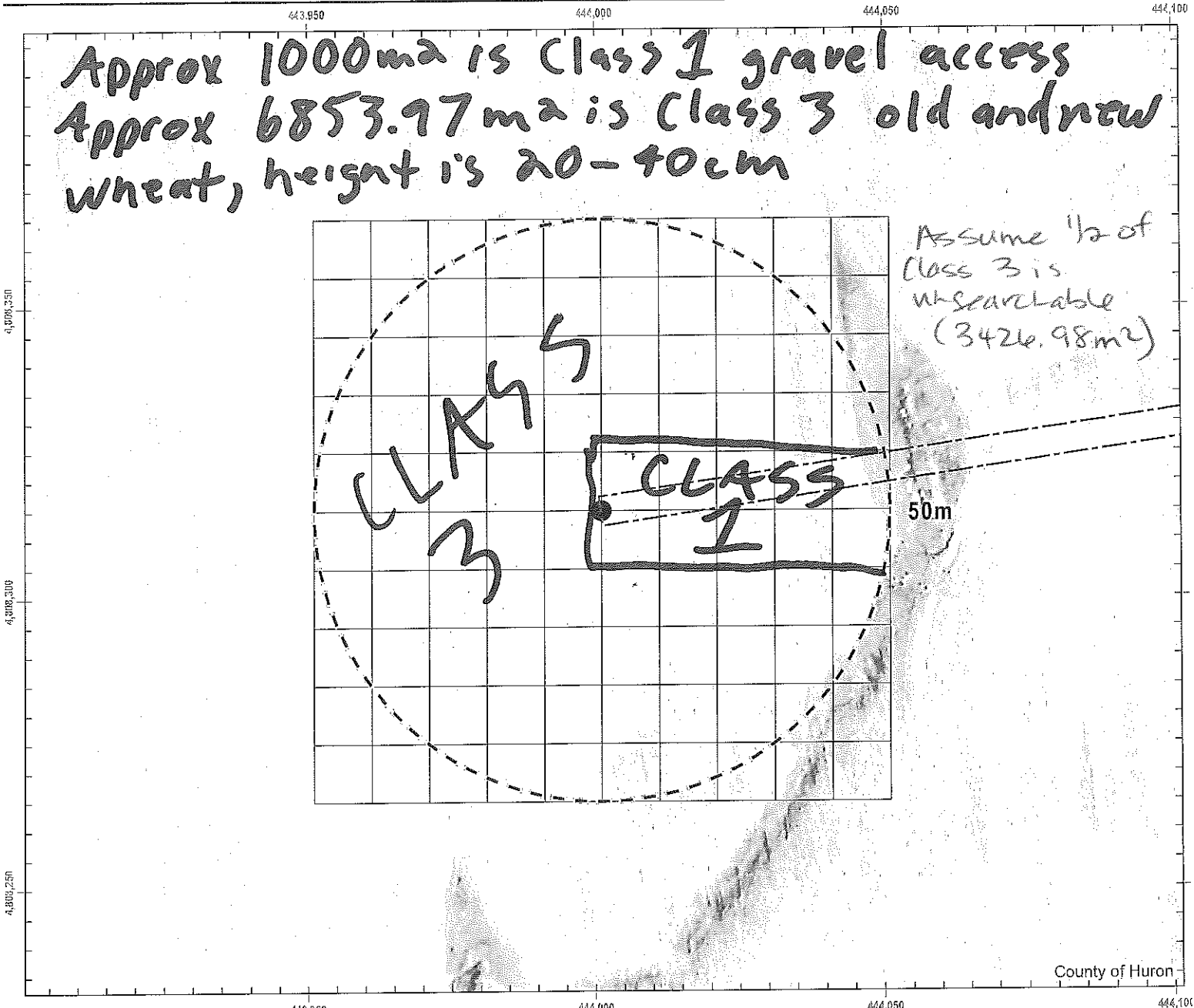
Site Number: T-12

Survey Date: Apr 30 / 19

Actual Searched Area (m²): 4426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-12

Survey Date: June 12 / 19

Actual Searched Area (m²): 6,997.22 m²

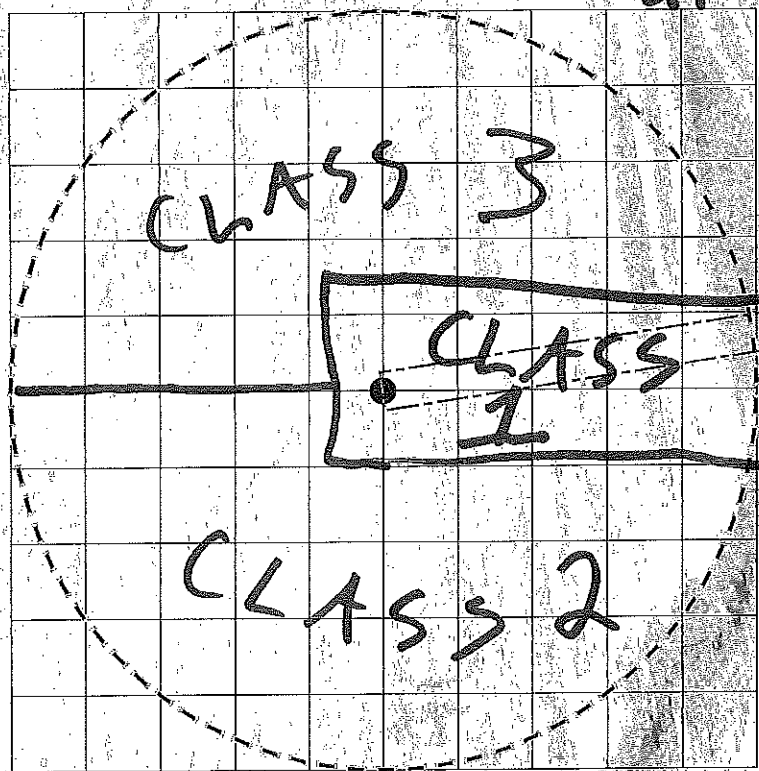
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



443,950 444,000 444,050 444,100

Approx 1000m² is Class 1 gravel access
 Approx 3427m² is Class 3 old wheat
 at 20-30cm height and new corn
 at 8cm height



Assume 1/4 of Class 3 is unsearchable = 856.75 m²

Approx 3426.97m² is Class 2 cultivated
 field with old wheat remnants
 and new corn growth at 8cm height

443,950 444,000 444,050 444,100

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

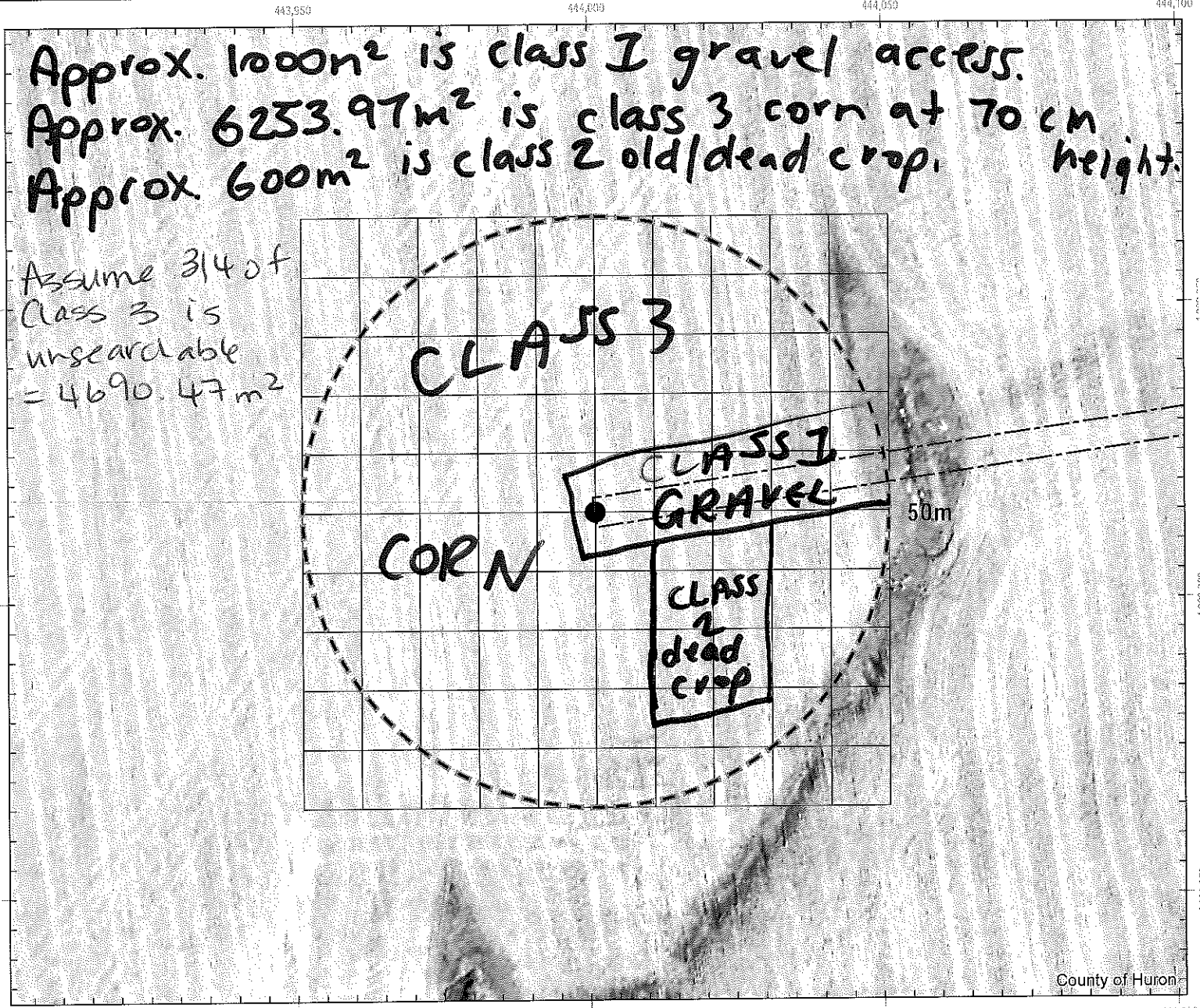
Site Number: T-12

Survey Date: July 10/19

Actual Searched Area (m²): 3163.50m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

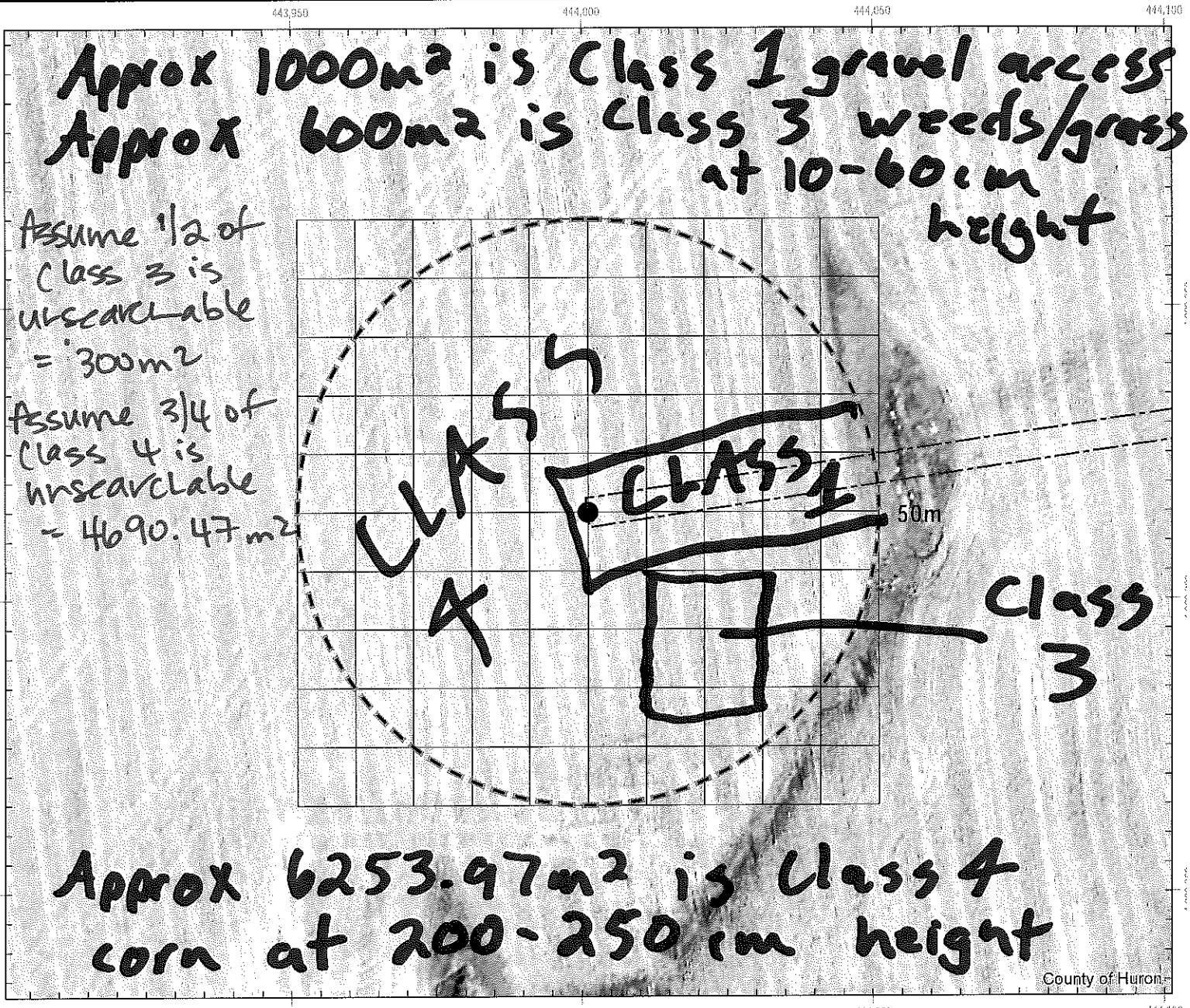
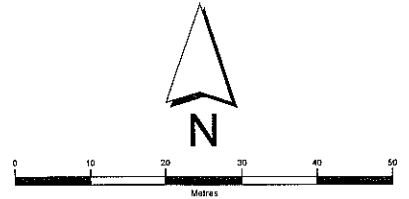
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-12

Survey Date: Aug 17 / 19

Actual Searched Area (m²): 2863.50 m²
(subtract from total search area - 7853.97m²)

Observers: Sam Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

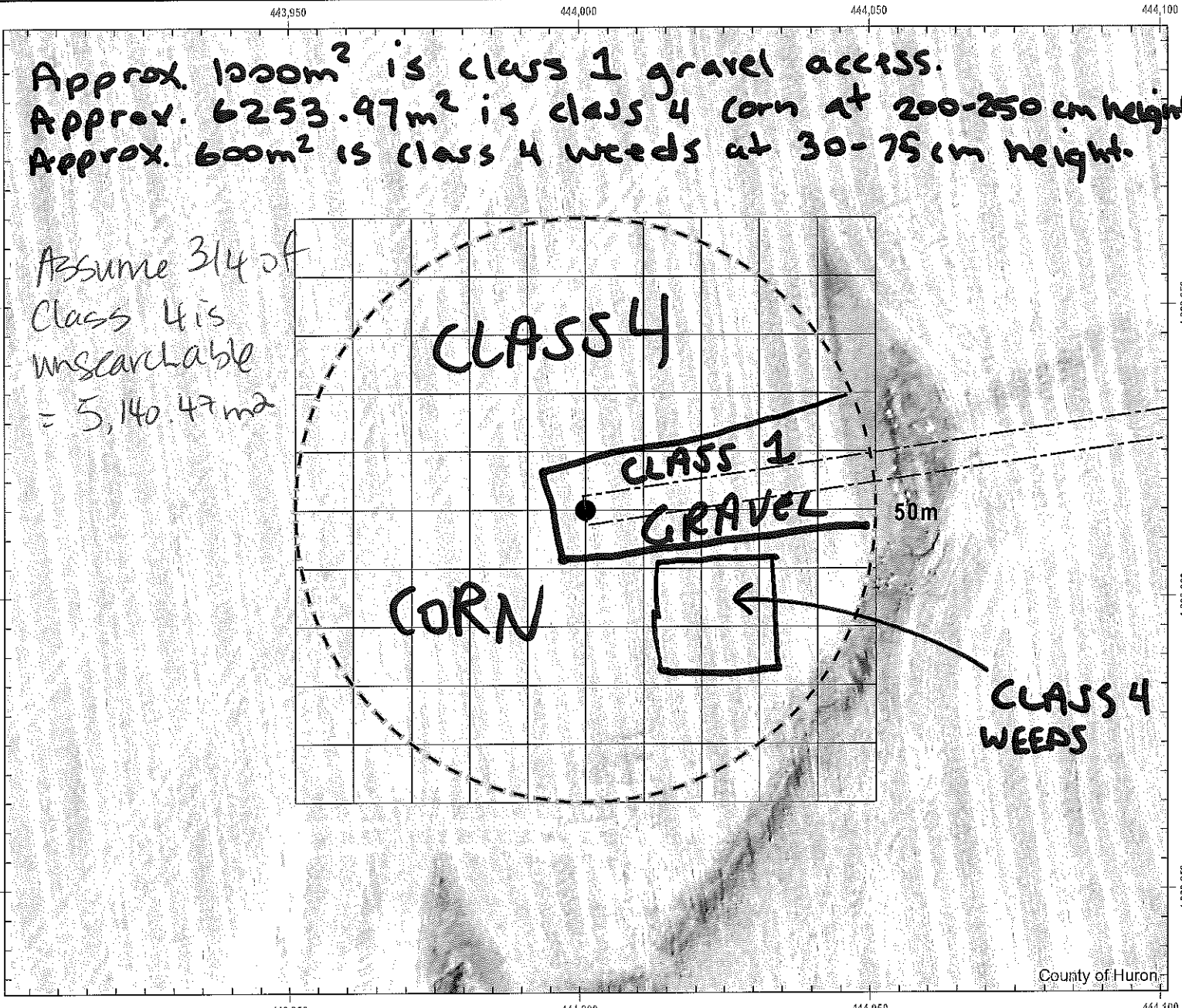
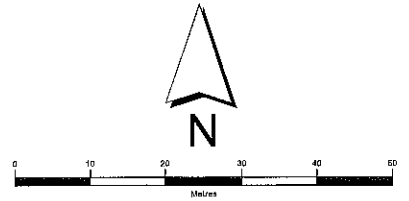


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-12
 Survey Date: Sept. 11/19
 Actual Searched Area (m²): 2713.50m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

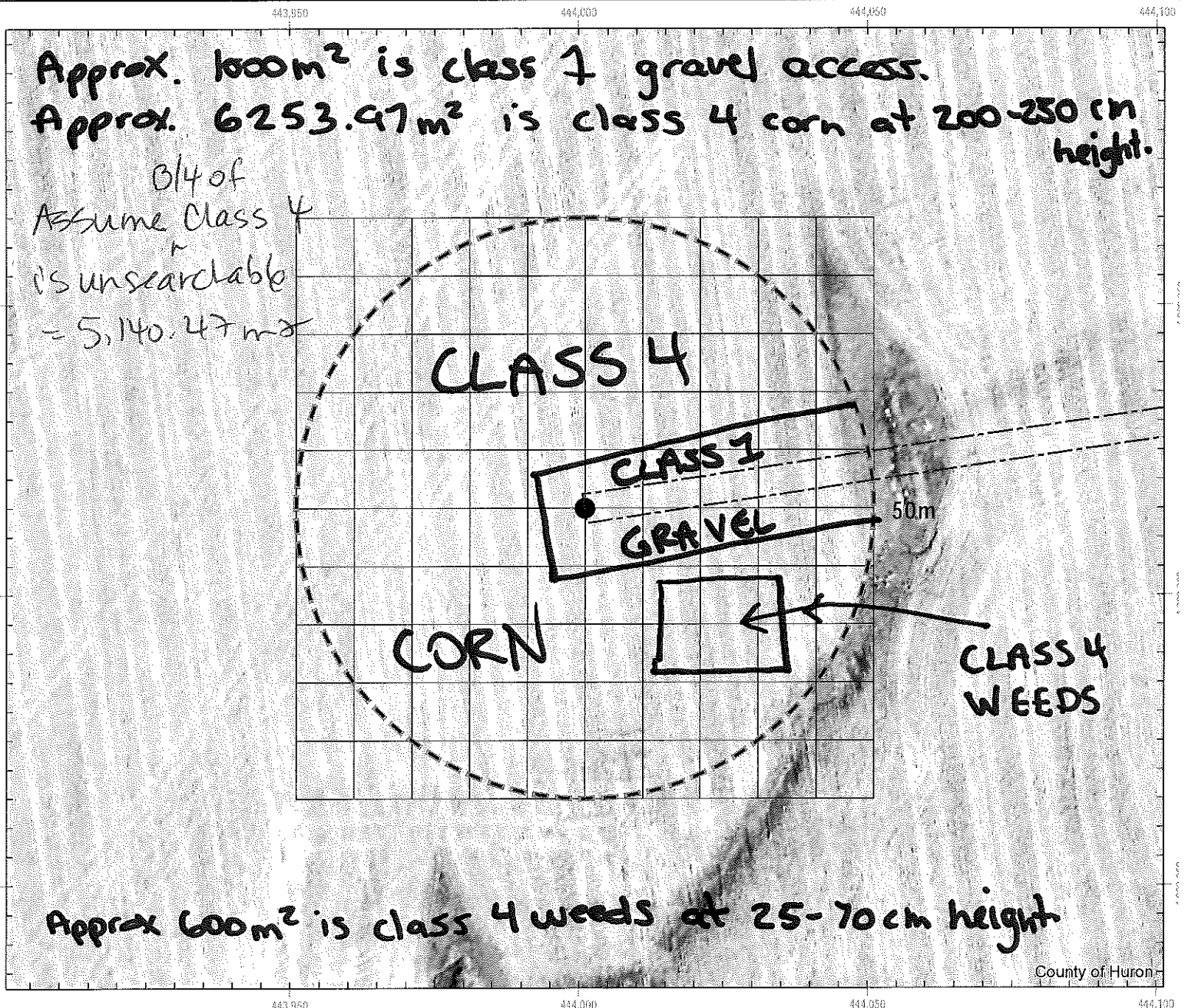
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-12

Survey Date: Oct 9/19

Actual Searched Area (m²): 2,713.50 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

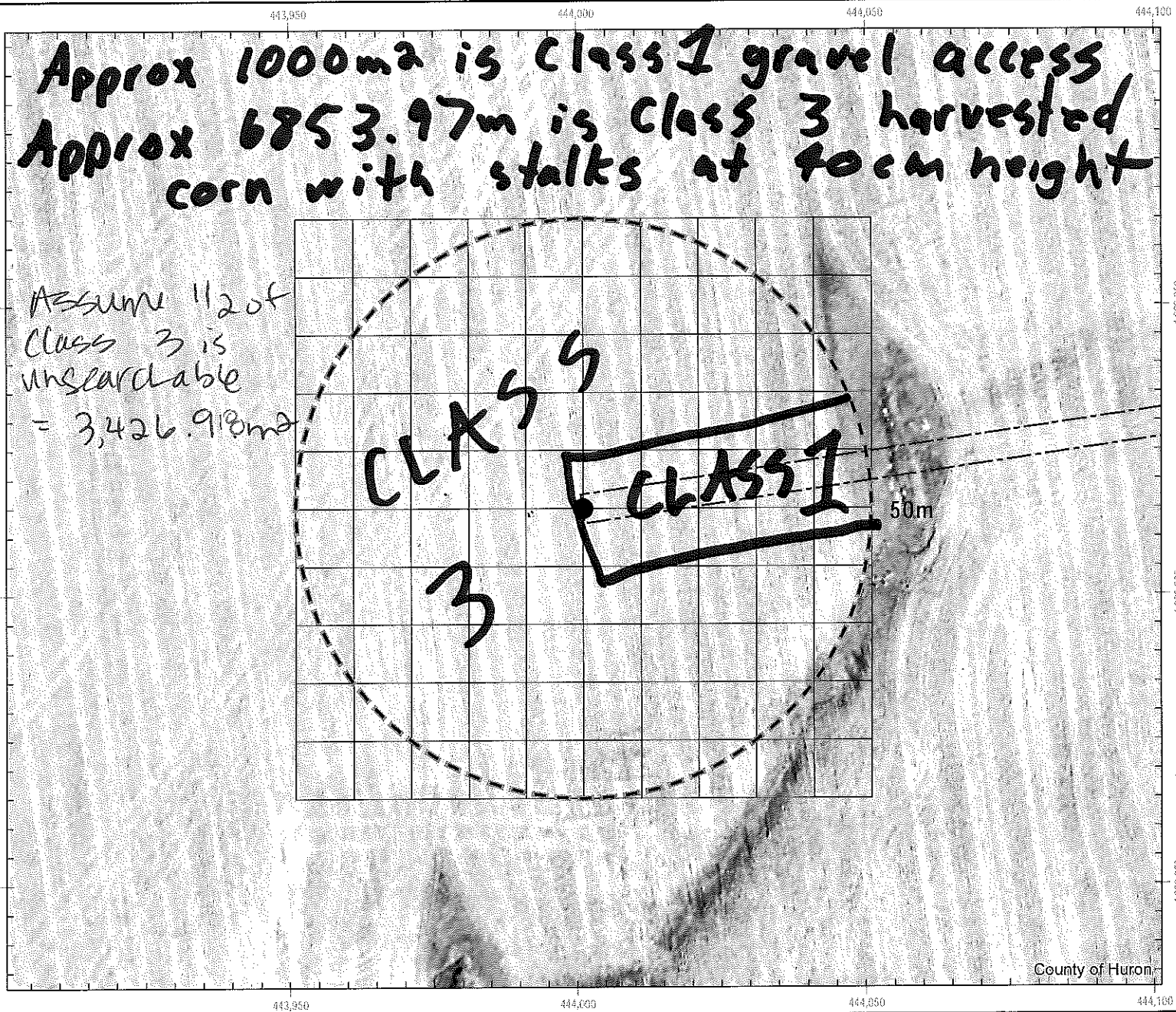
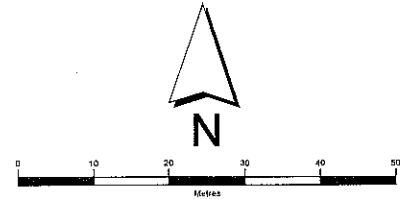
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-12

Survey Date: Nov 14 / 19

Actual Searched Area (m²): 4,426.99 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

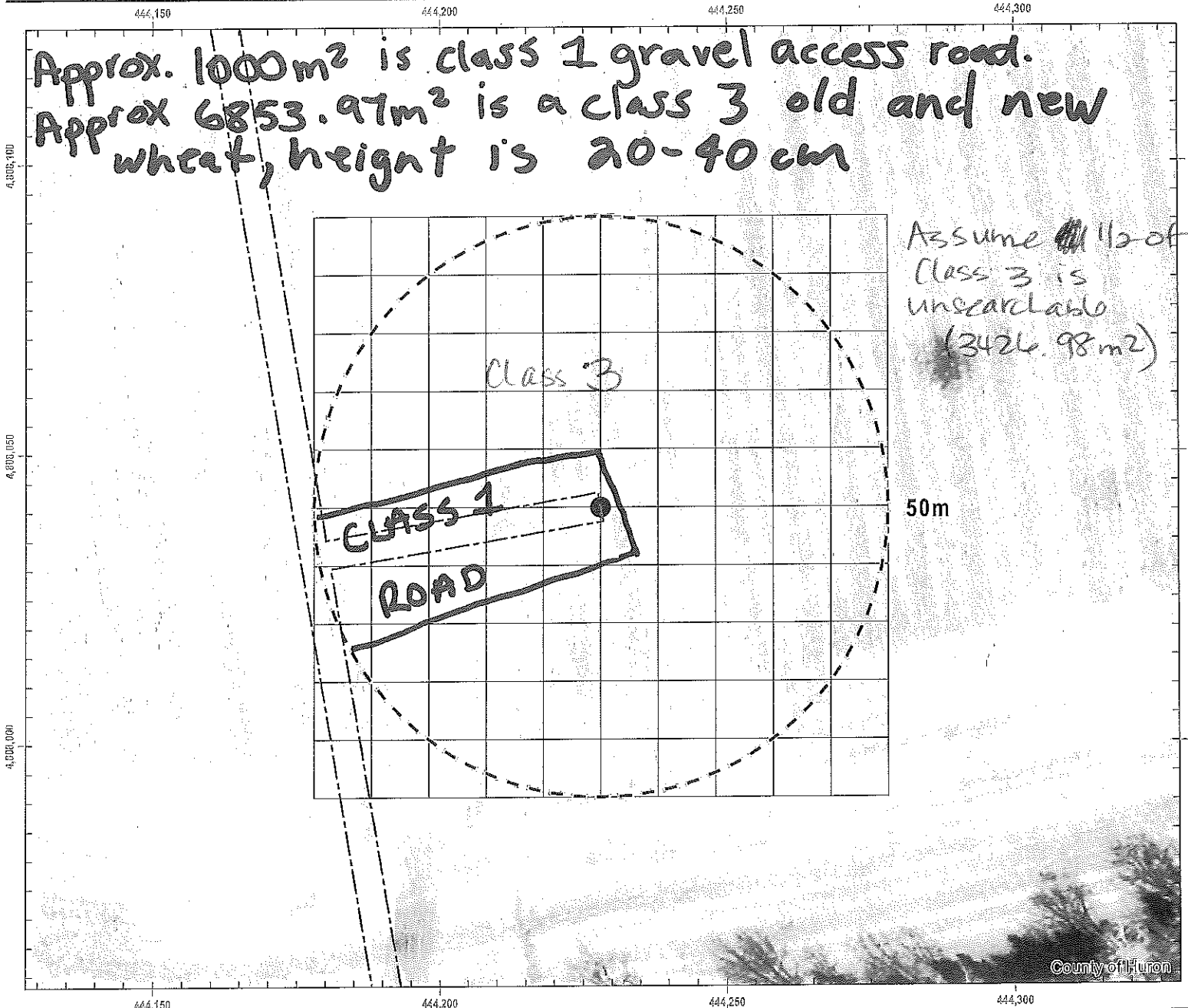
Site Number: T-13

Survey Date: ~~May 1~~ 2019 Apr. 30

Actual Searched Area (m²): 4426.99m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

6,140.48 m²

Site Number: T-13

Survey Date: June 12/19

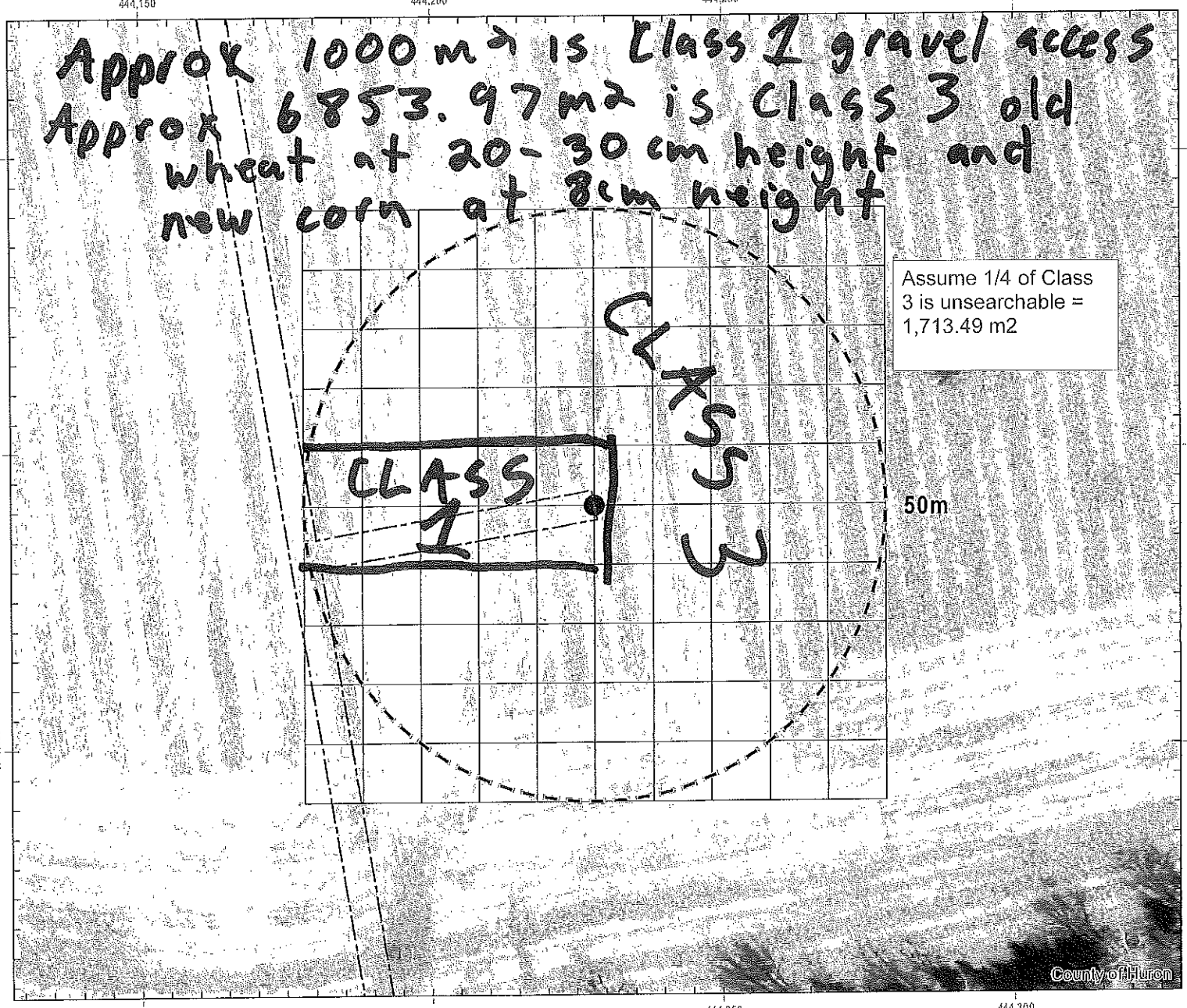
Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



444,150 444,200 444,250 444,300



County of Huron

444,150 444,200 444,250 444,300

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

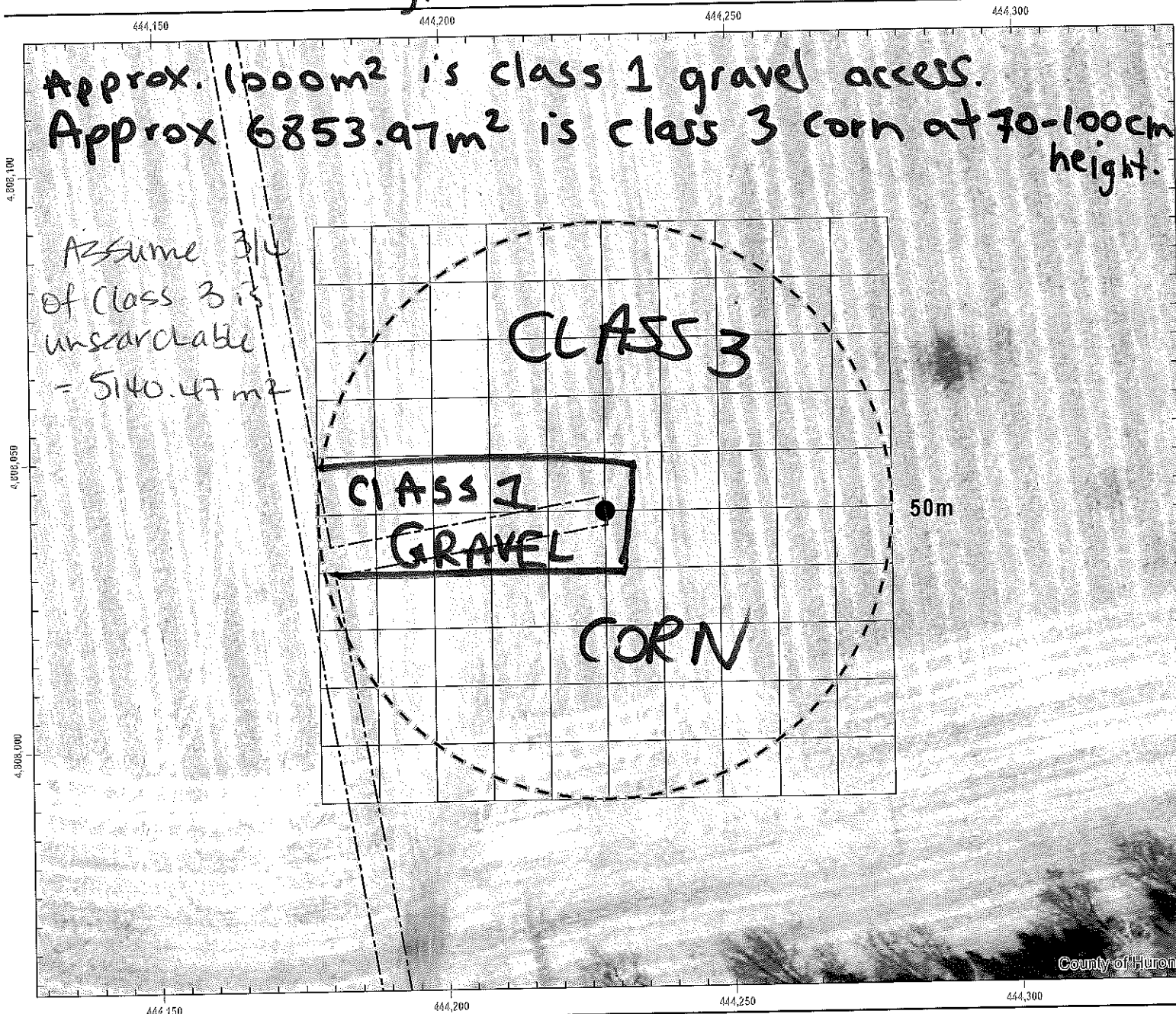
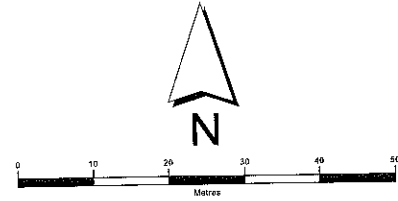
Site Number: T-13

Survey Date: July 10/19

Actual Searched Area (m²): 2713.50m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



BURNSIDE

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

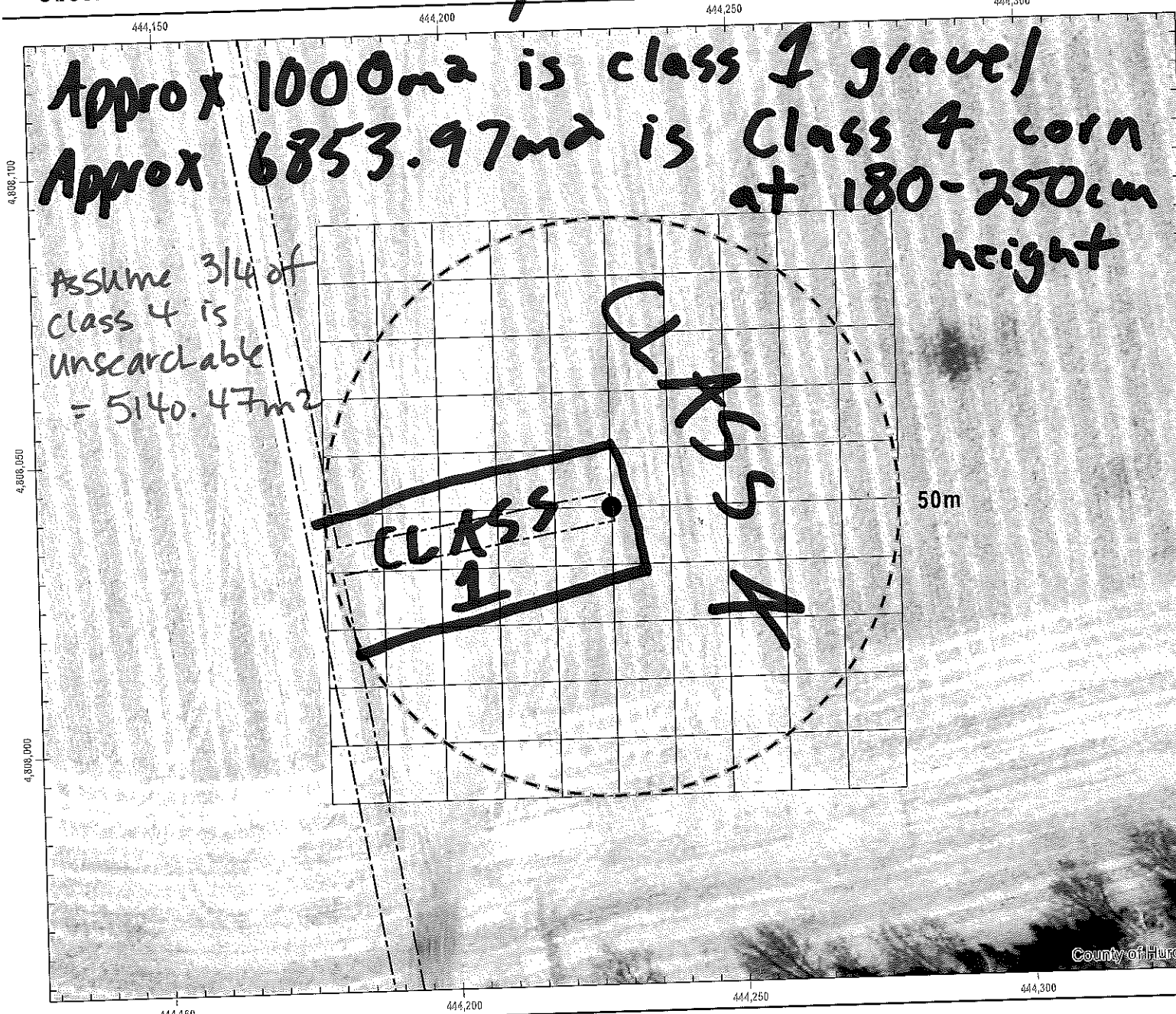
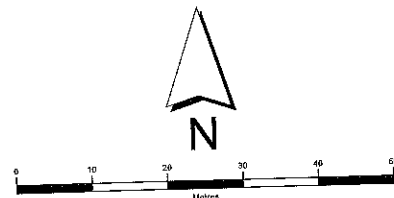
Site Number: T-13

Survey Date: Aug 14 / 19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



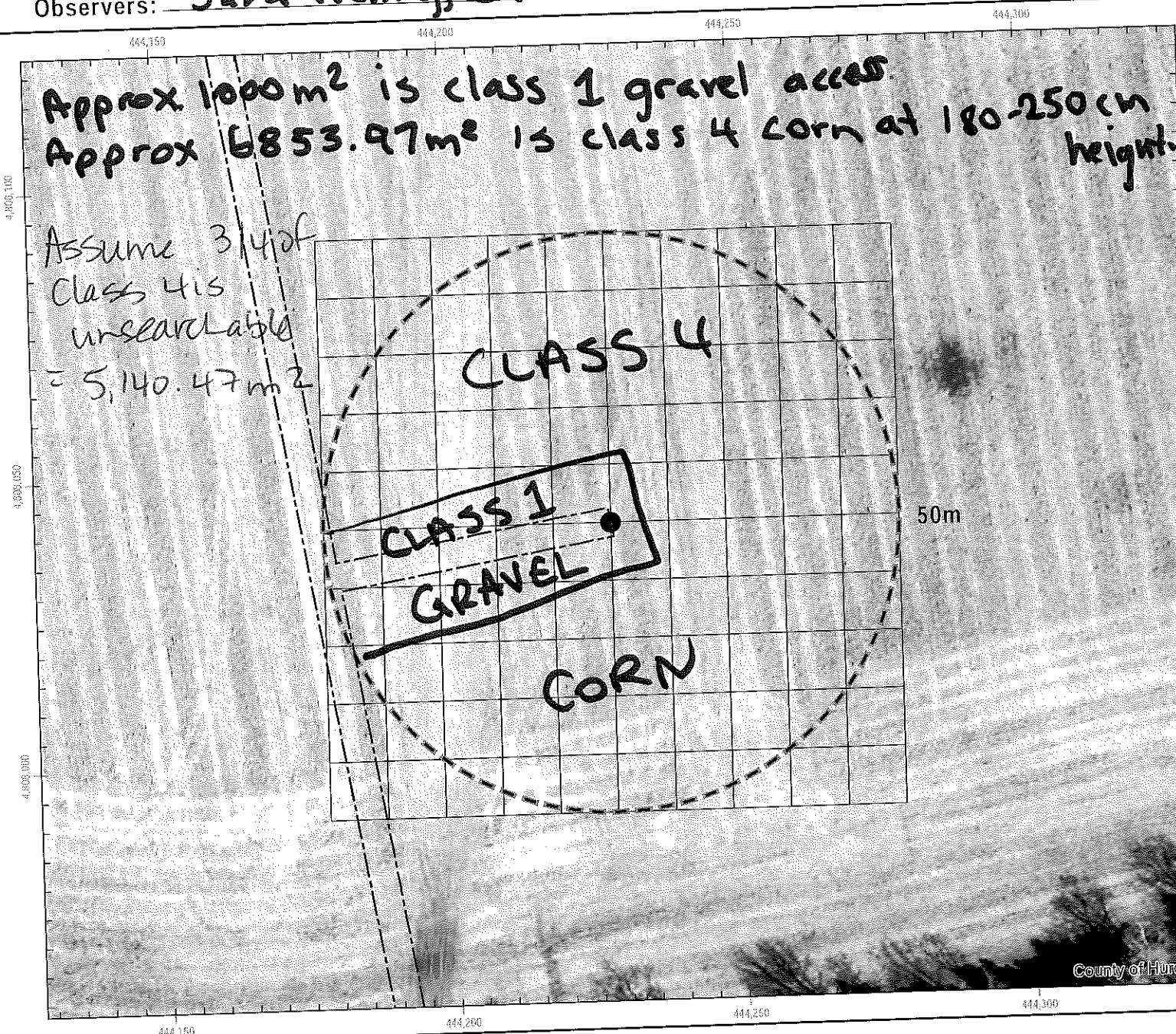
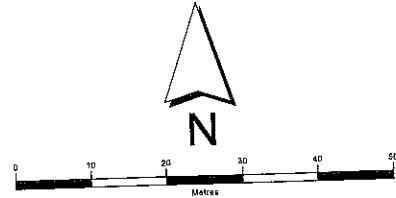
County of Huron

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-13
 Survey Date: Sept 12/19
 Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



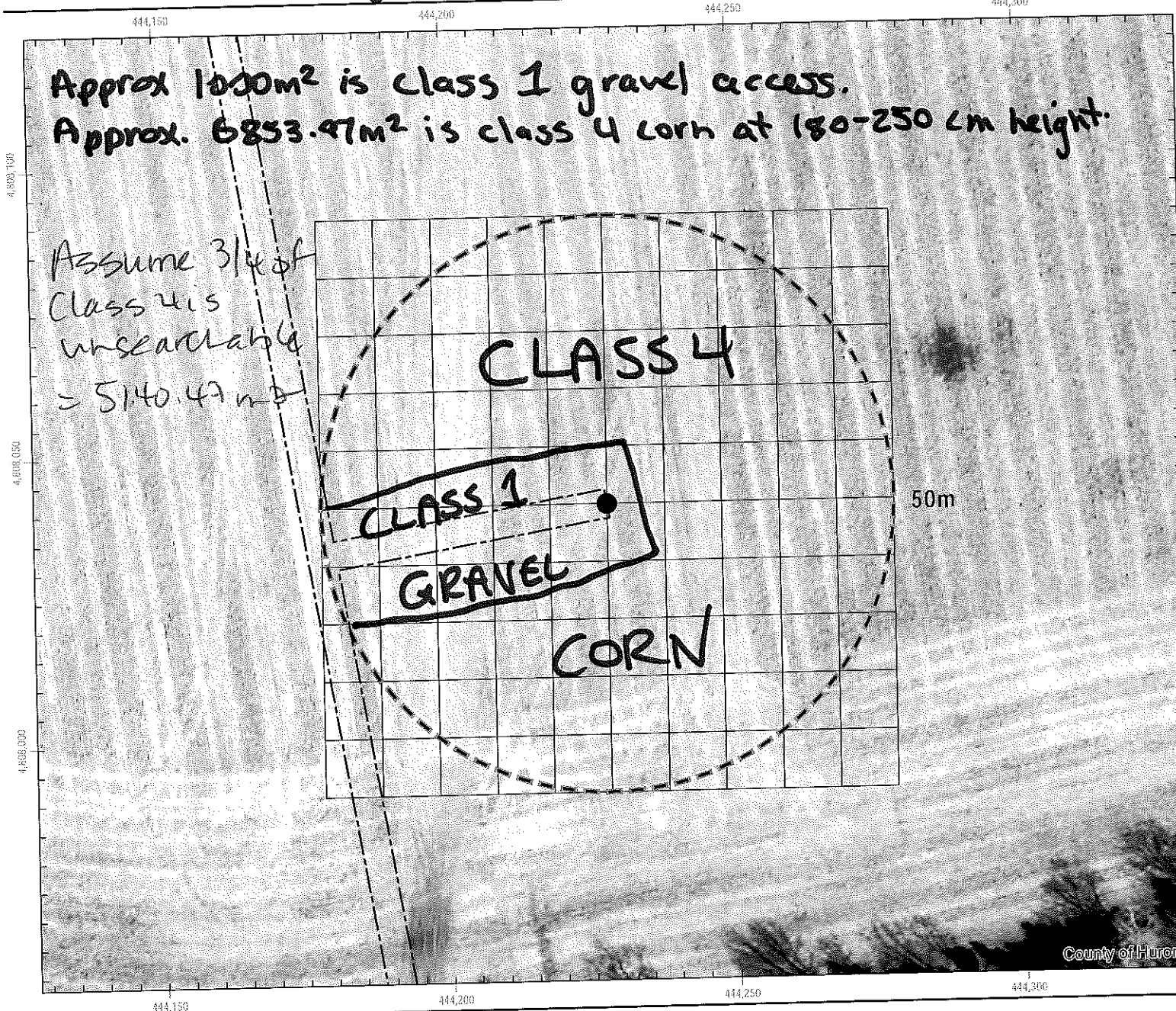
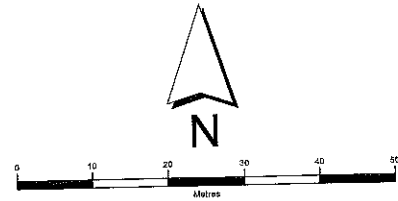
County of Huron

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-13
 Survey Date: Oct 9/19
 Actual Searched Area (m²): 2713.80m²
 (subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



County of Huron

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

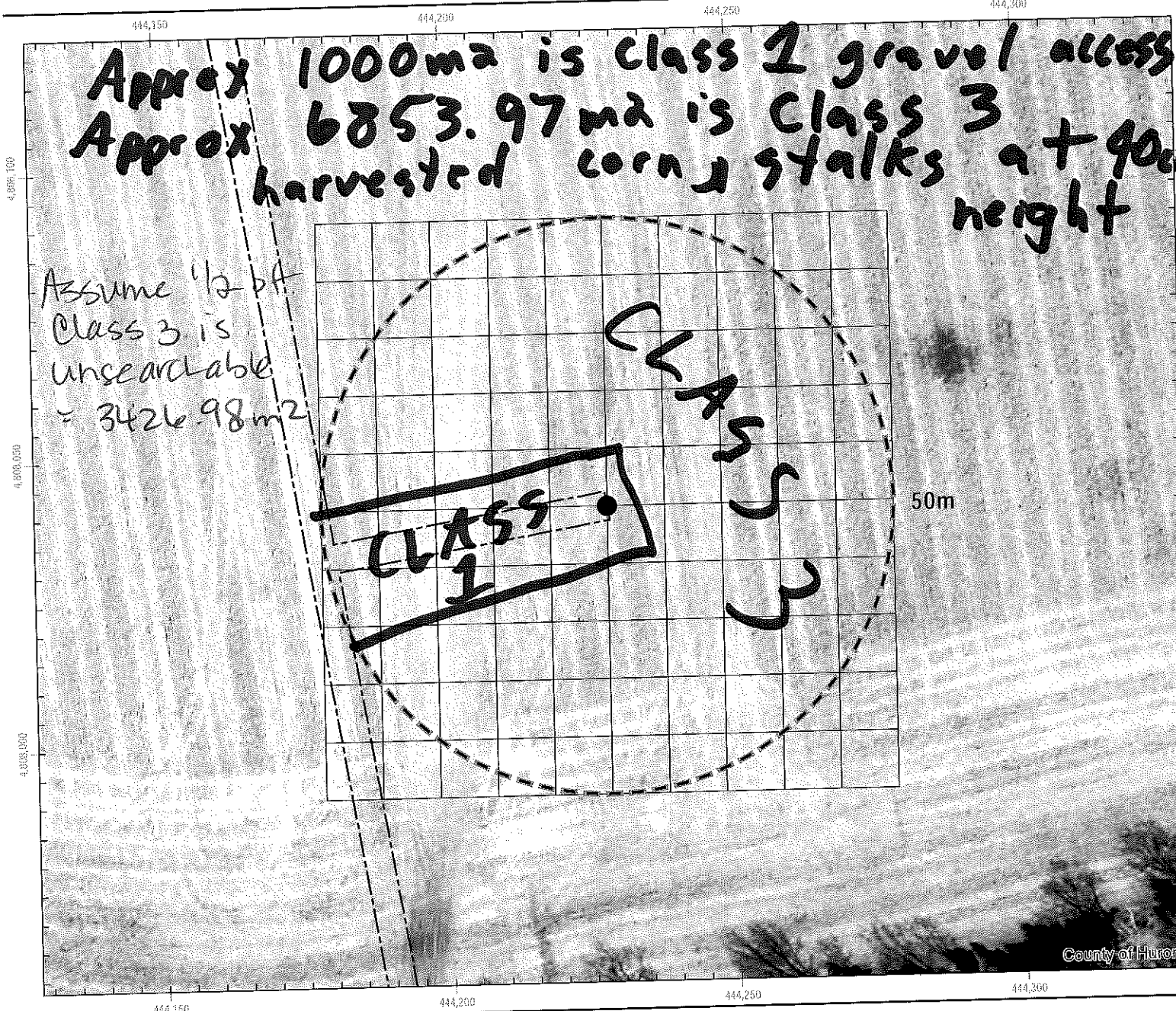
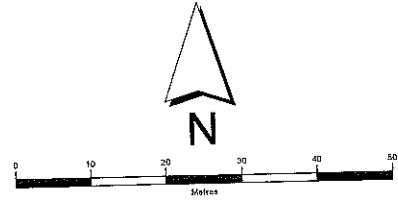
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-13

Survey Date: Nov 14 / 19

Actual Searched Area (m²): 4426.97 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



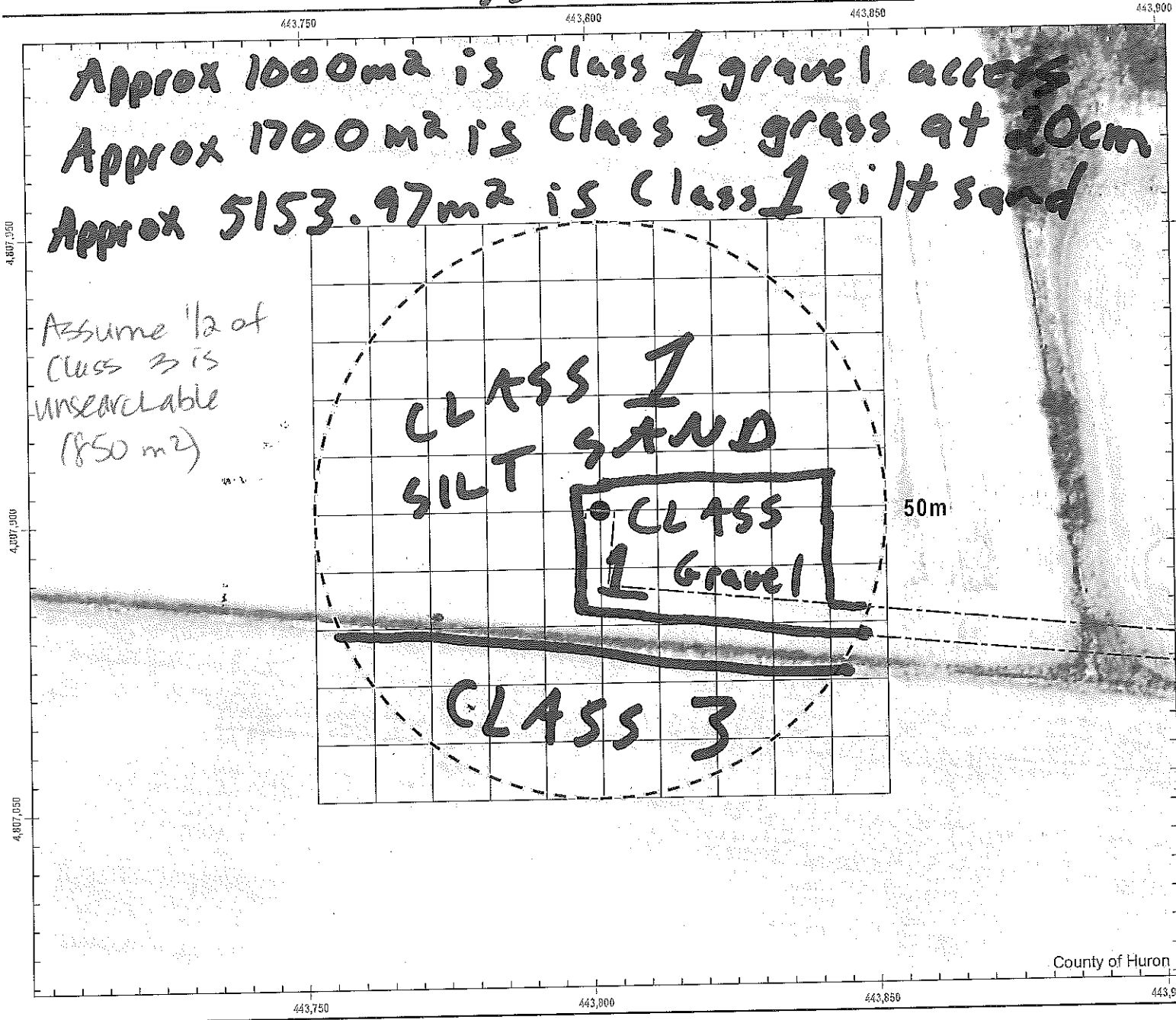
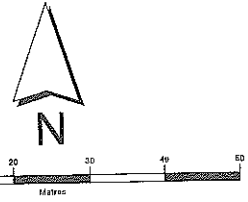
County of Huron

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-14
 Survey Date: May 3/19
 Actual Searched Area (m²): 7003.97m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

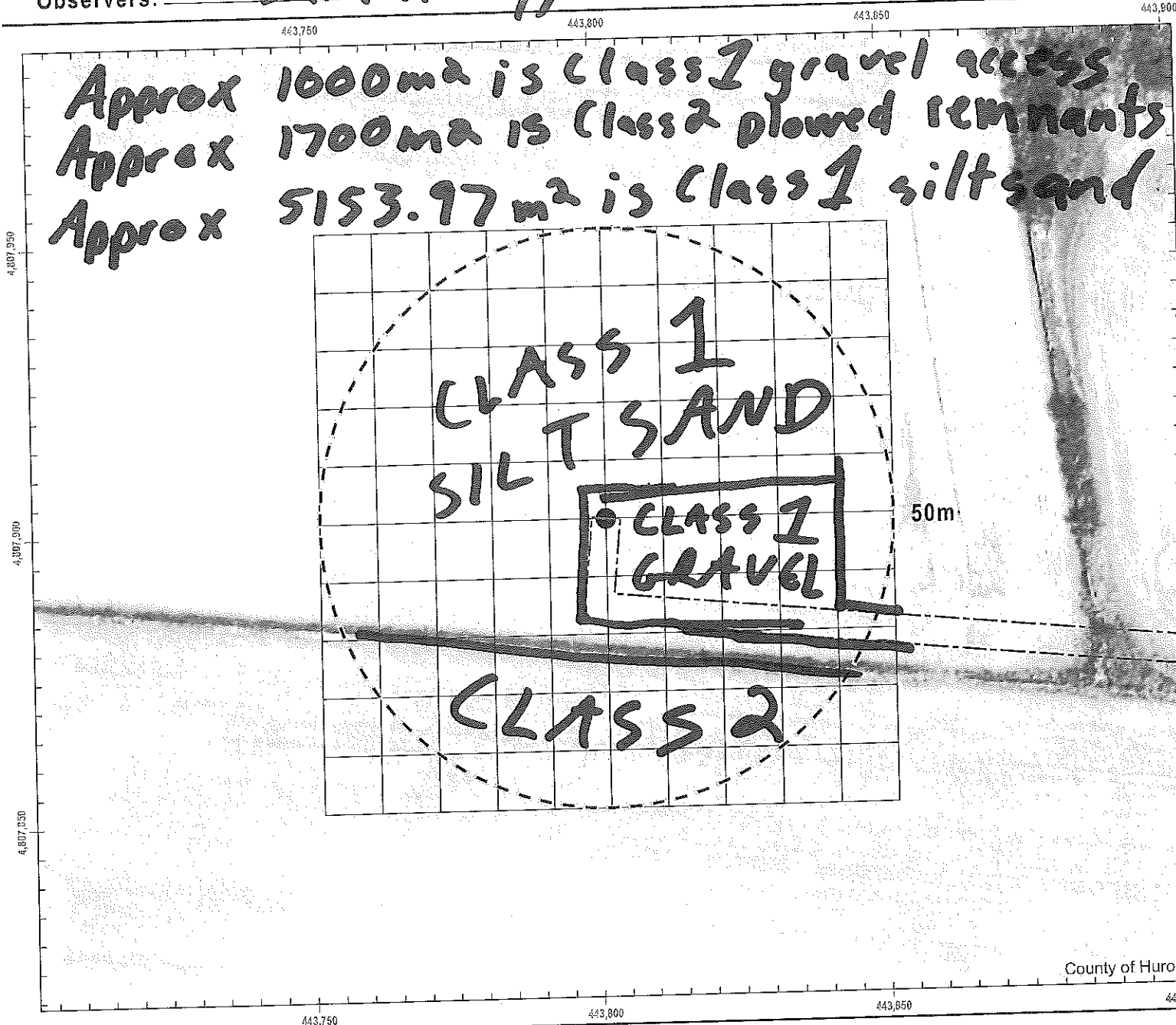


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-14
 Survey Date: May 21 / 19
 Actual Searched Area (m²): 7853.97m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-14

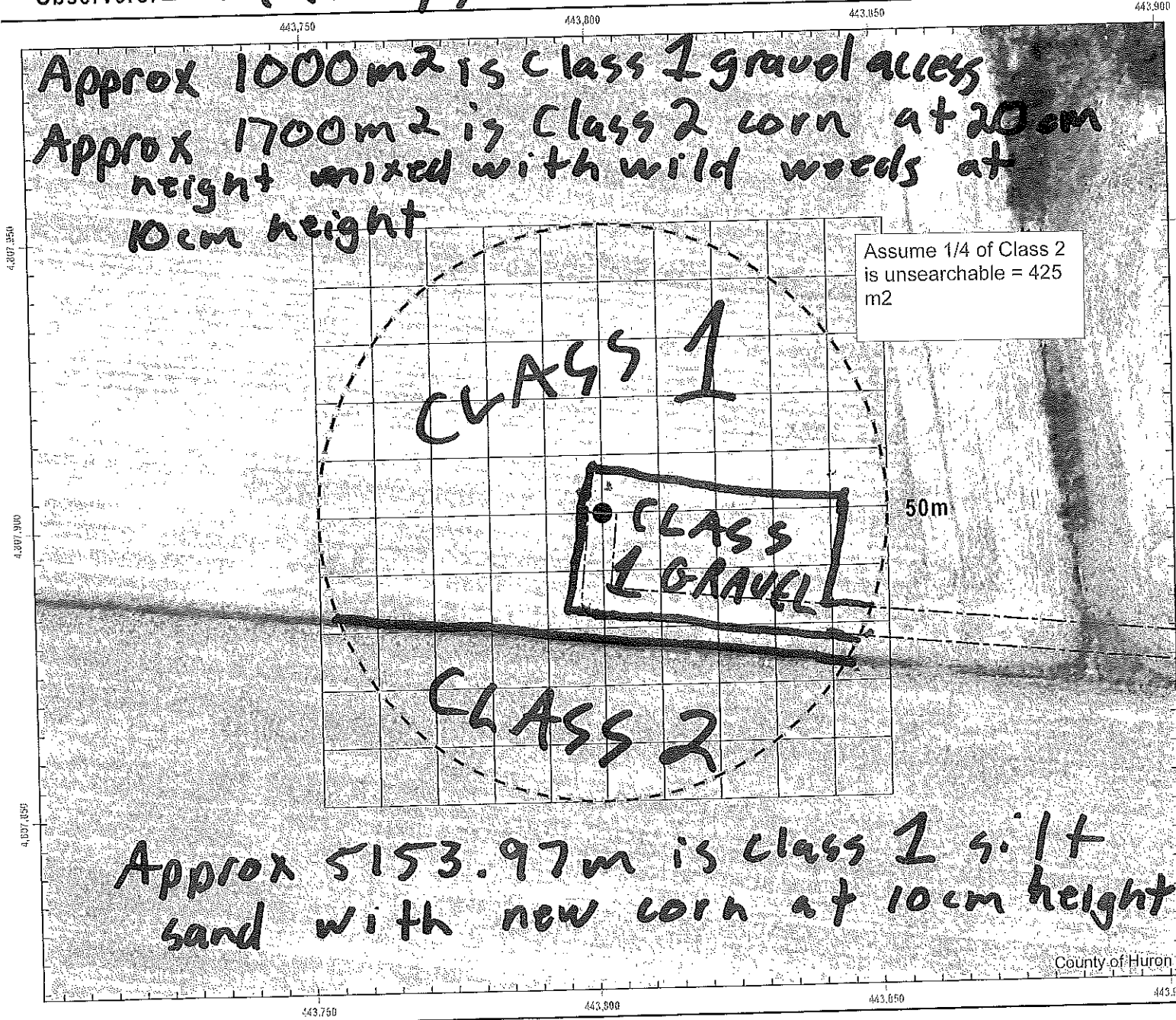
Survey Date: June 18

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

7,428.97 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



BURNSIDE

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

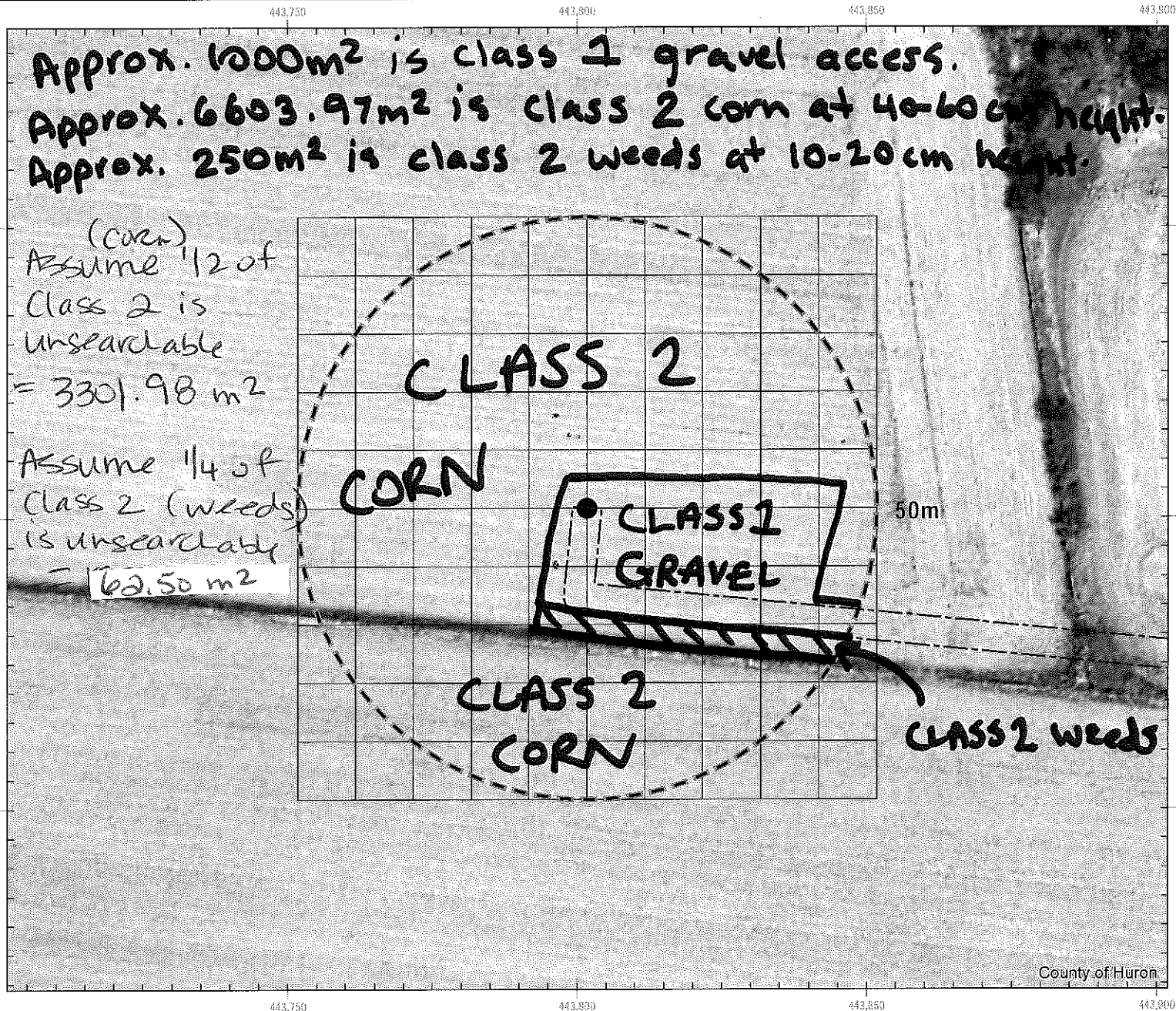
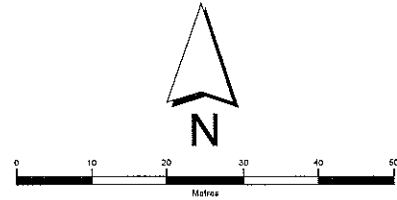
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-14

Survey Date: July 9/19

Actual Searched Area (m²): 4489.49 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

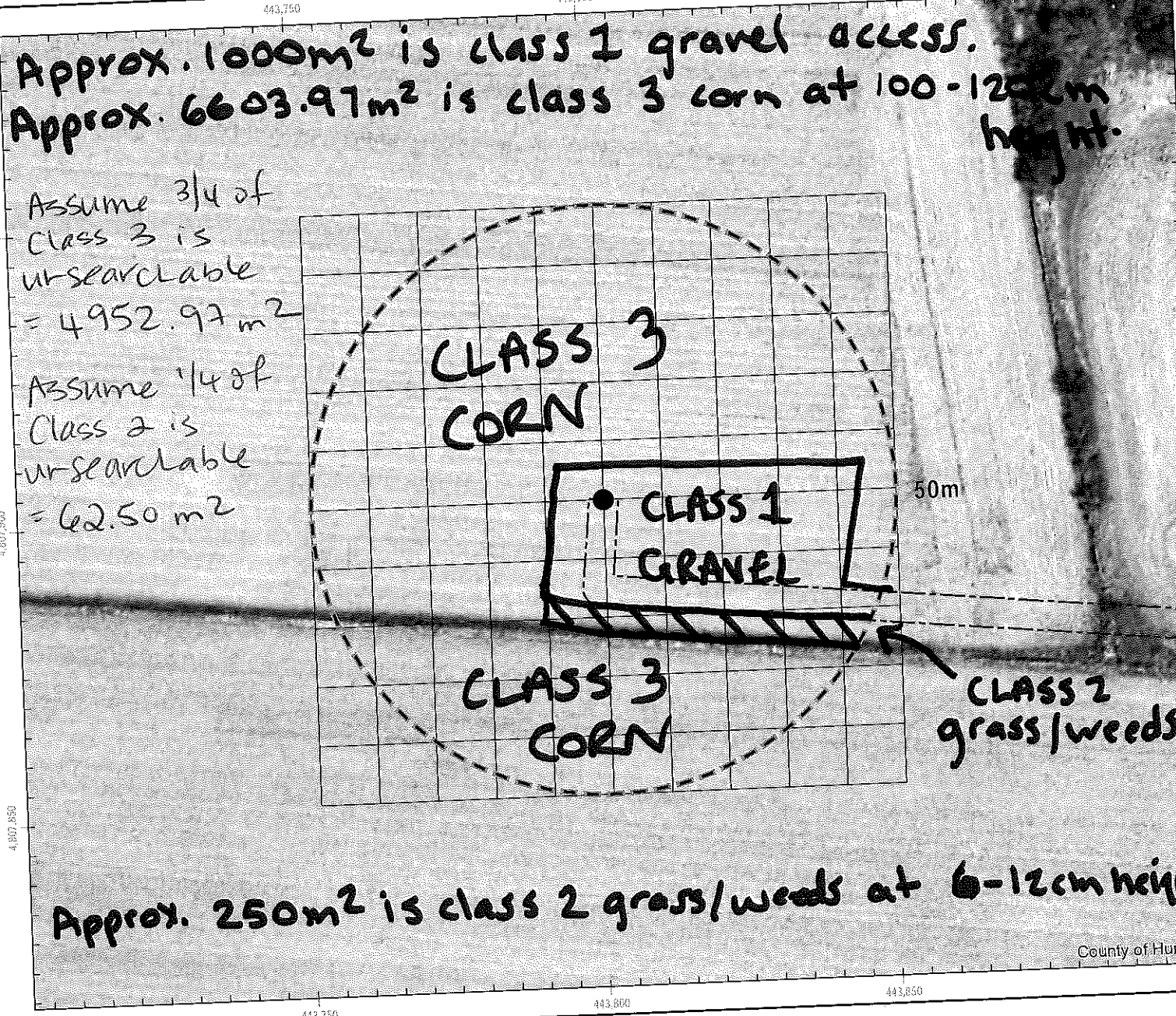
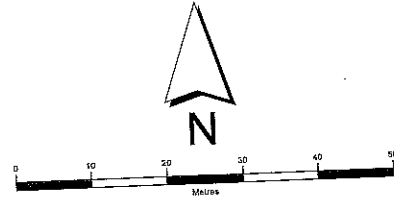


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-14
 Survey Date: July 23/19
 Actual Searched Area (m²): 2838.50 m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

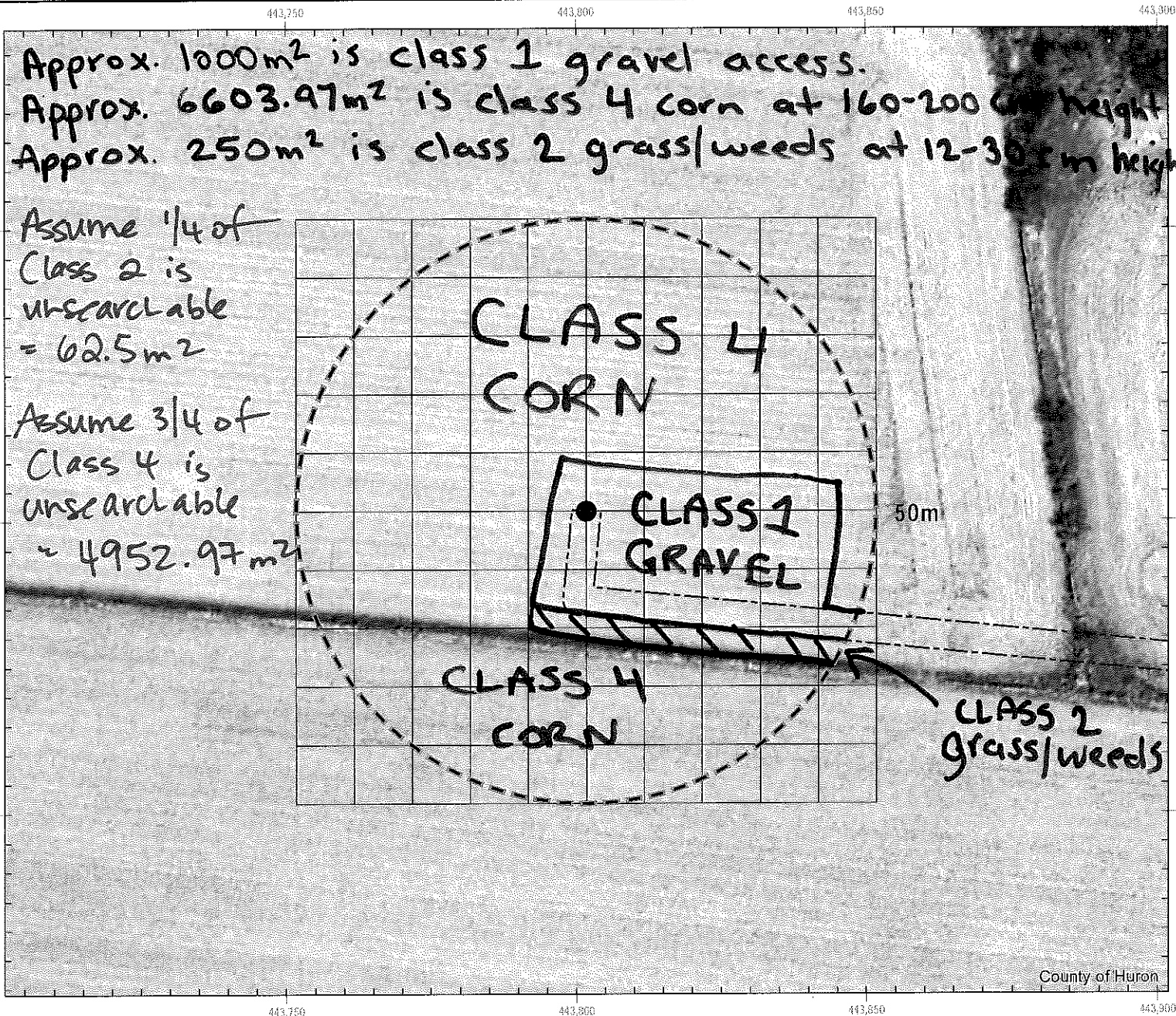
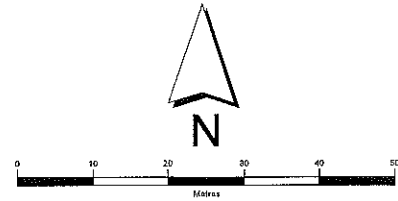
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-14

Survey Date: Aug 13/19

Actual Searched Area (m²): 2838.50 m²
(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

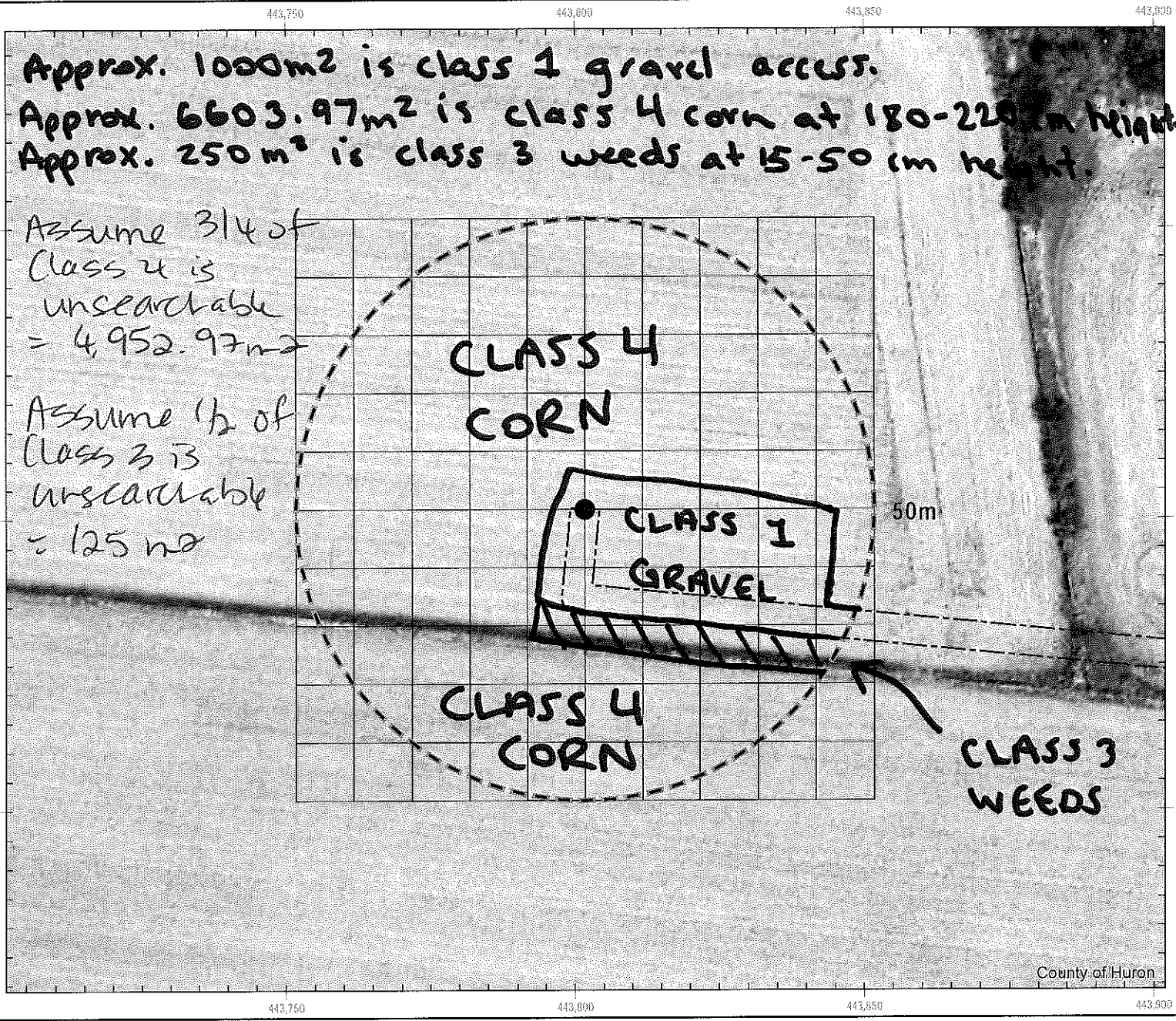
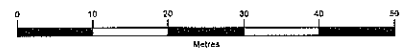
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-14

Survey Date: Sept 24/19

Actual Searched Area (m²): 2276 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henny, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

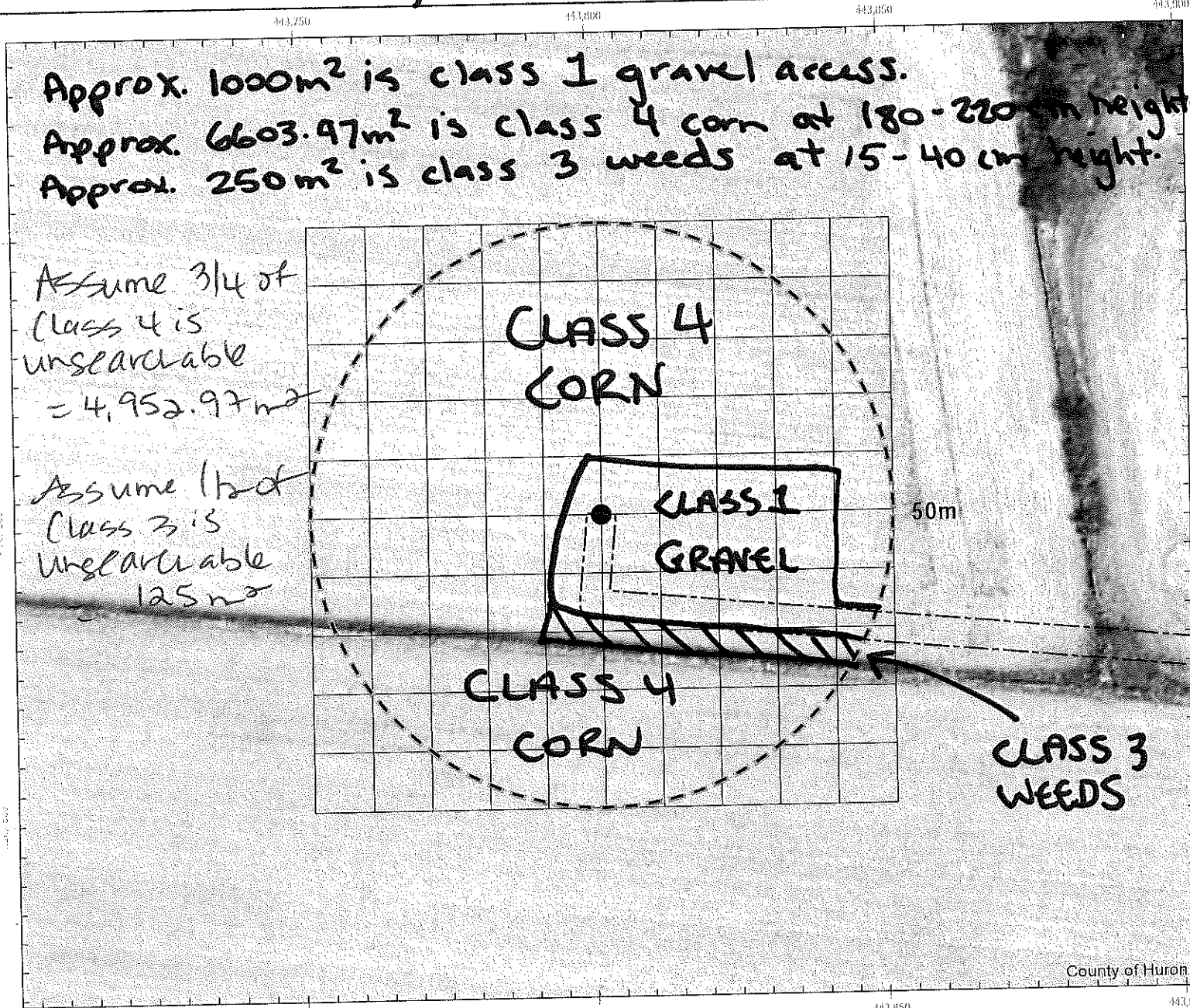
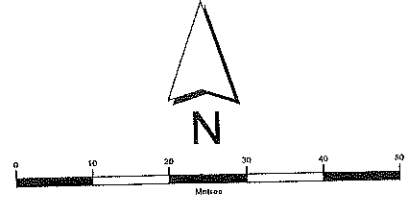


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-14
 Survey Date: Oct 22/19
 Actual Searched Area (m²): 2276 m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

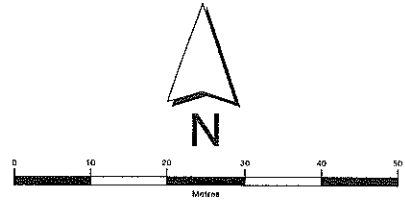
SEARCH AREA IS DISPLAYED AS 1M BY 1M SQUARE CELLS

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

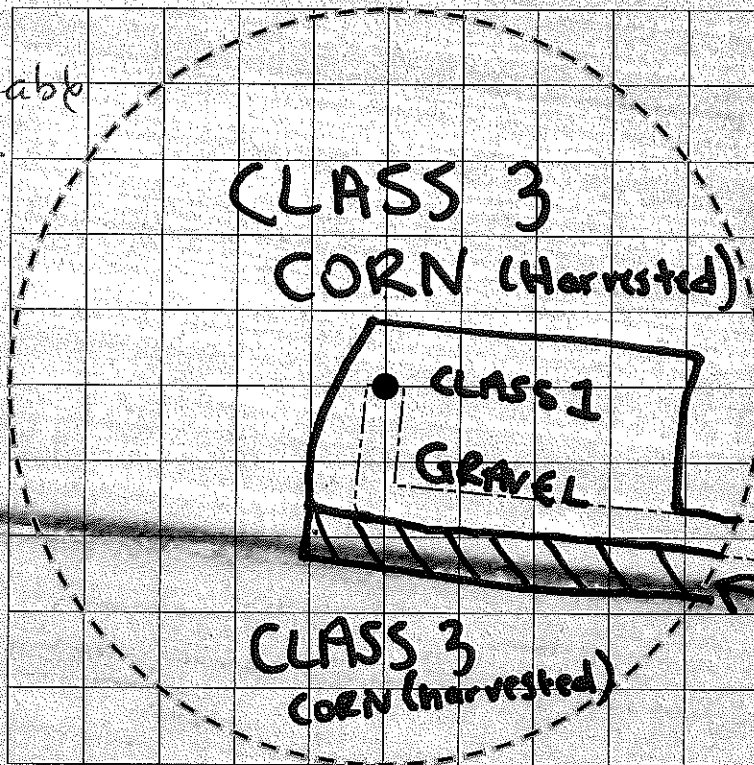
Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-14
 Survey Date: Nov 20/19
 Actual Searched Area (m²): 4426.99 m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



Approx. 1000m² is class 1 gravel access.
 Approx. 6603.97m² is class 3 harvested corn at 20 cm
 Approx. 250m² is class 3 weeds at 15-40cm high height.

Assume 1/2 of
 class is unsearchable
 = 3,426.98m²



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRID

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

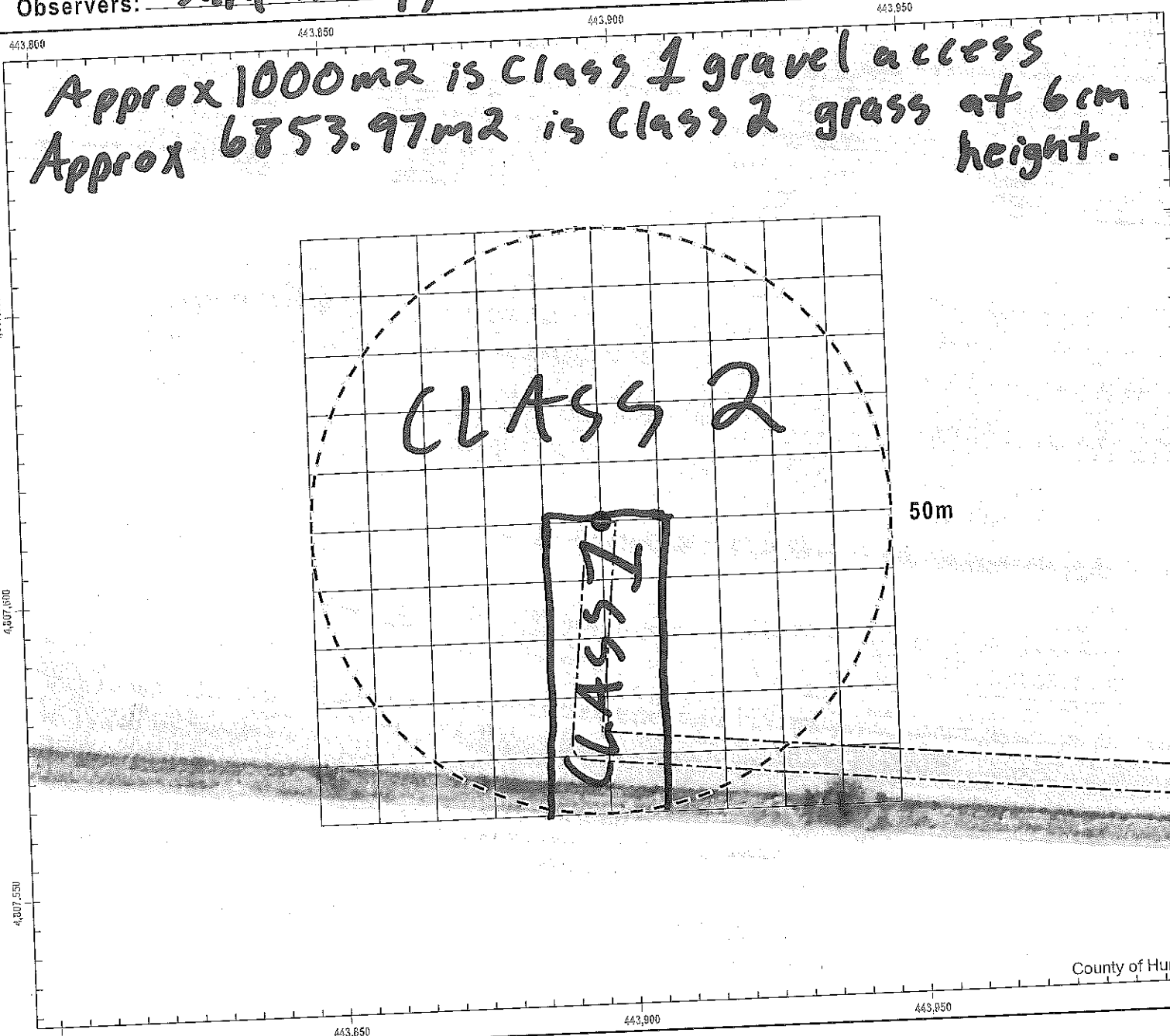
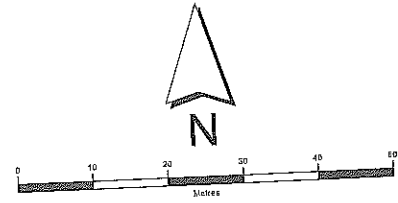
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-16

Survey Date: May 3/19

Actual Searched Area (m²): 7853.97m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-16

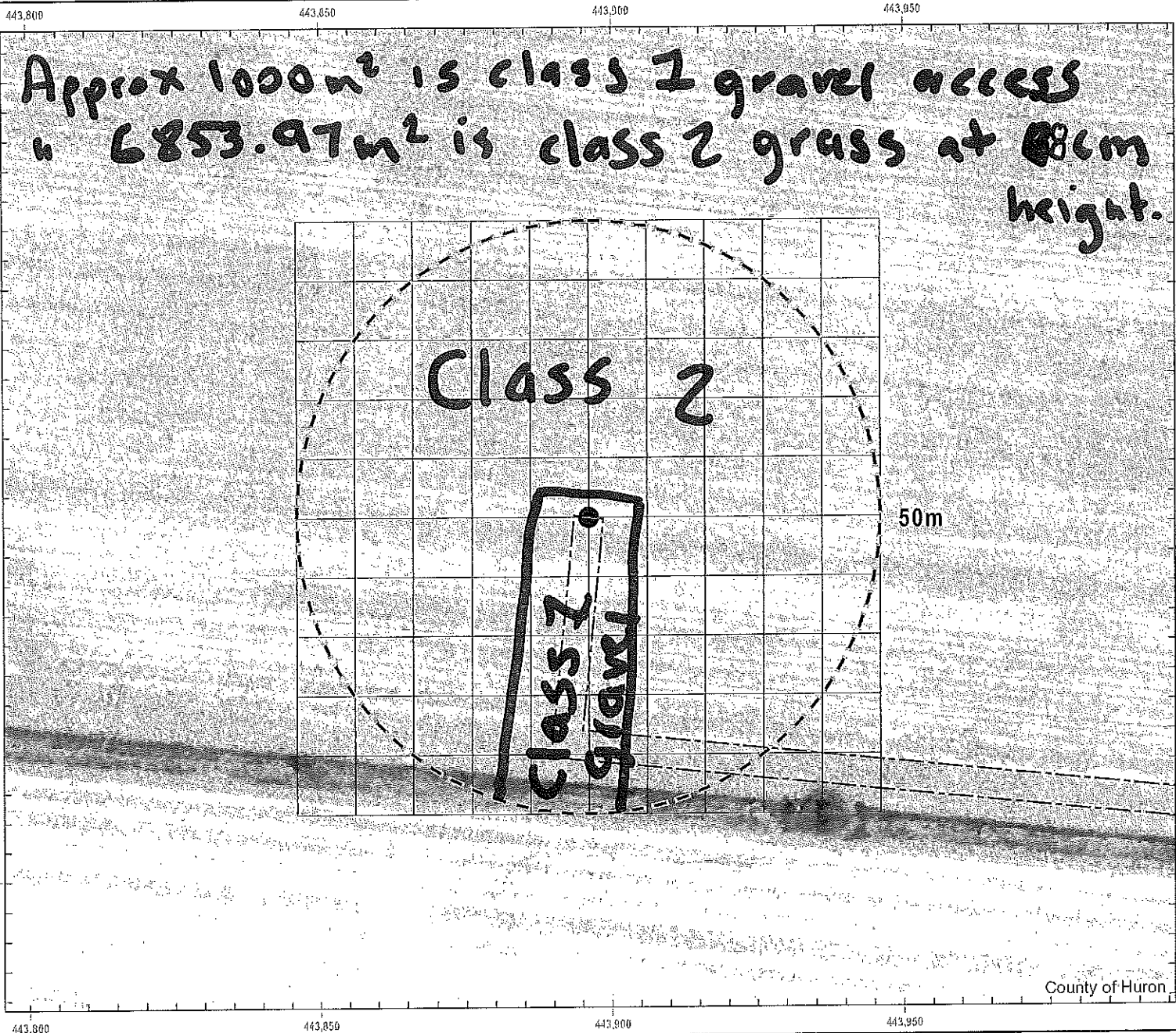
Survey Date: June 18/19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

7853.97 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

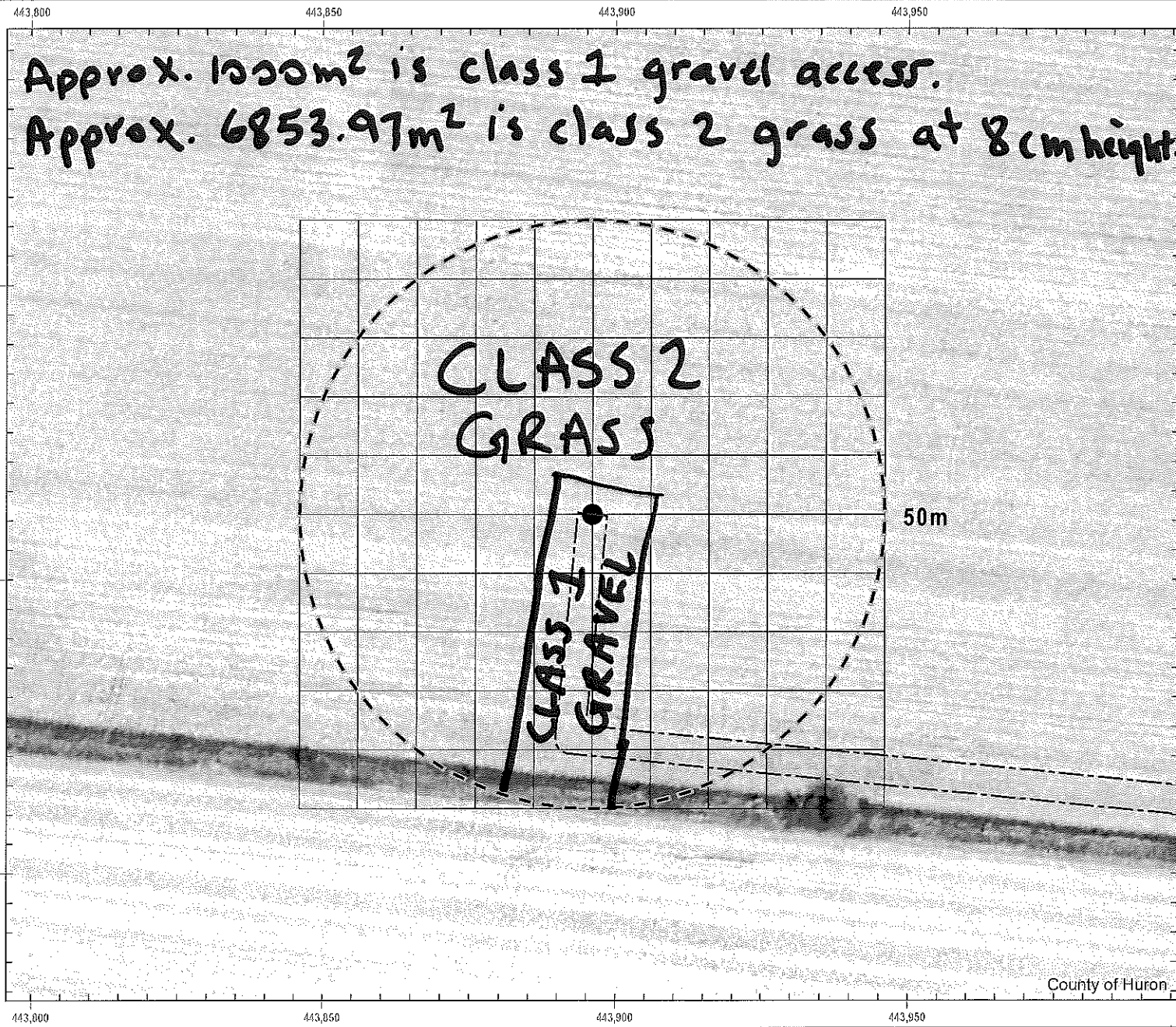
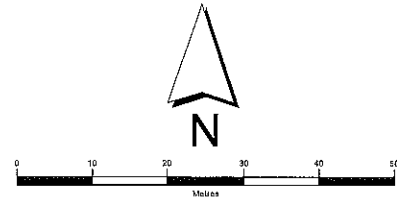
SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-16
 Survey Date: July 23/19
 Actual Searched Area (m²): 7853.97 m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

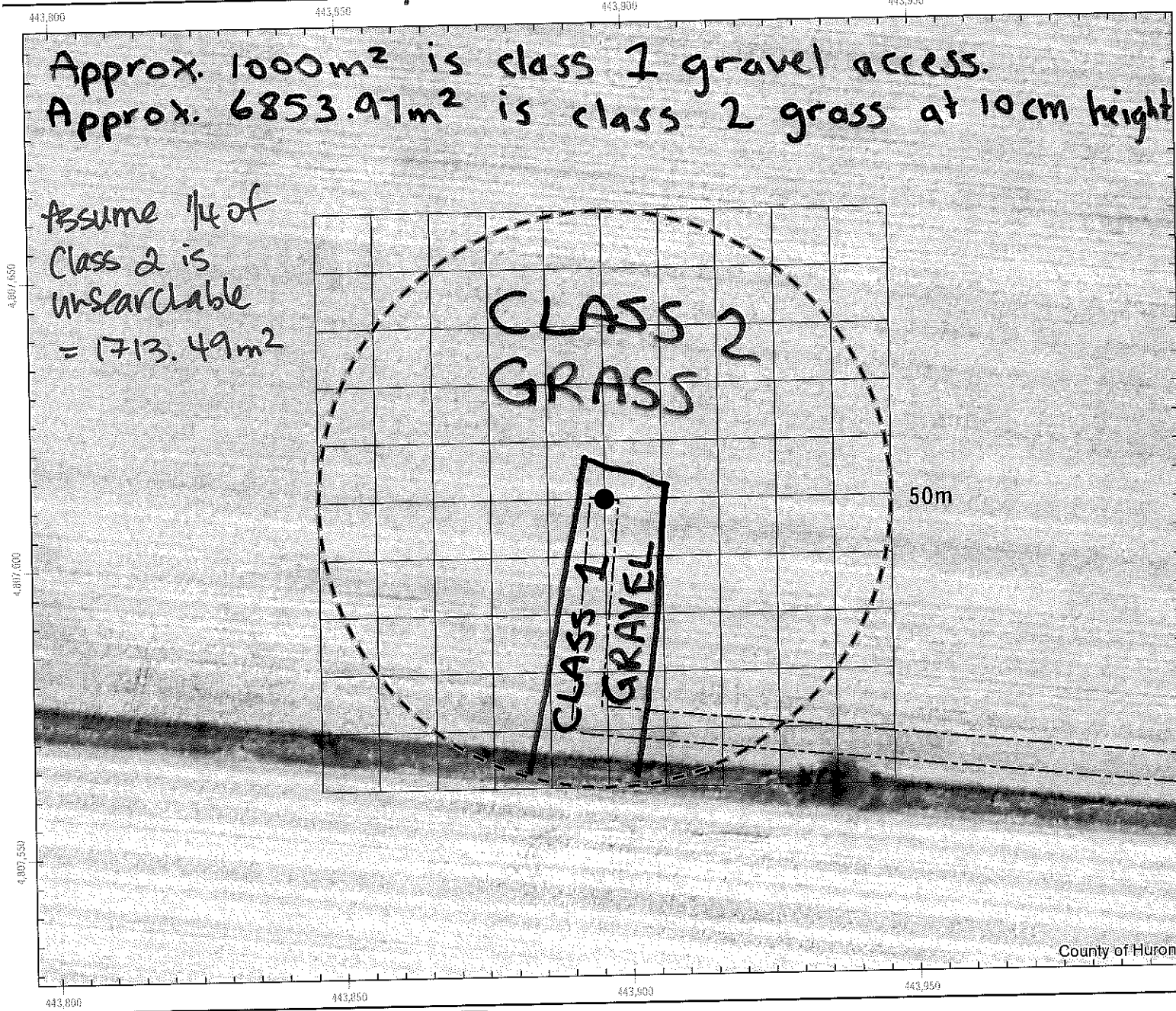
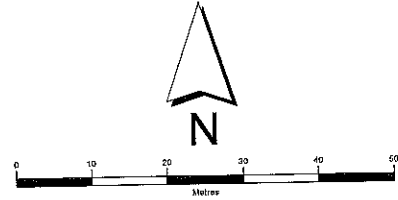
Site Number: T-16

Survey Date: Aug 20/19

Actual Searched Area (m²): 6140.48 m²

(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

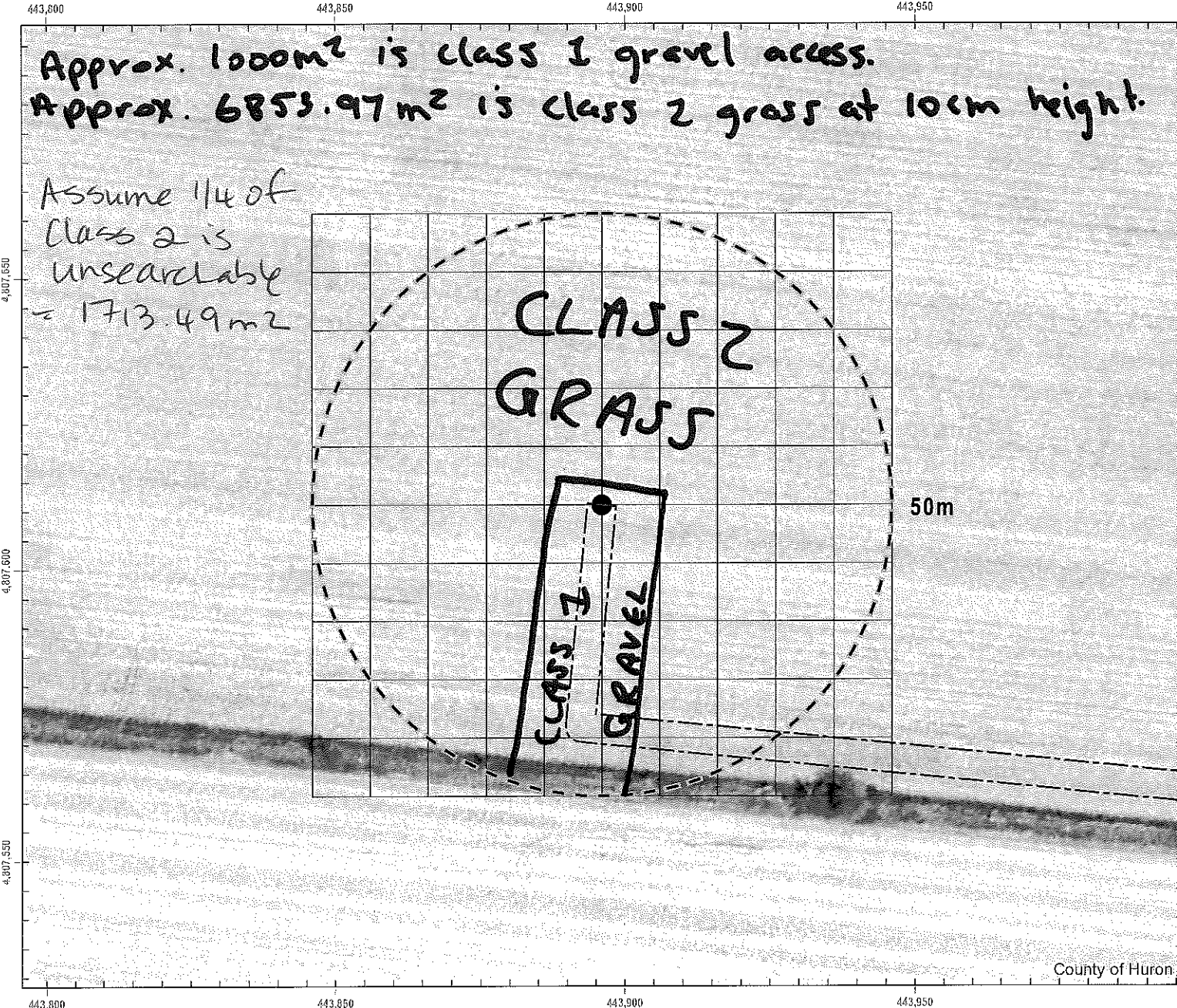
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-16

Survey Date: Sept 24/19

Actual Searched Area (m²): 6,140.48 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

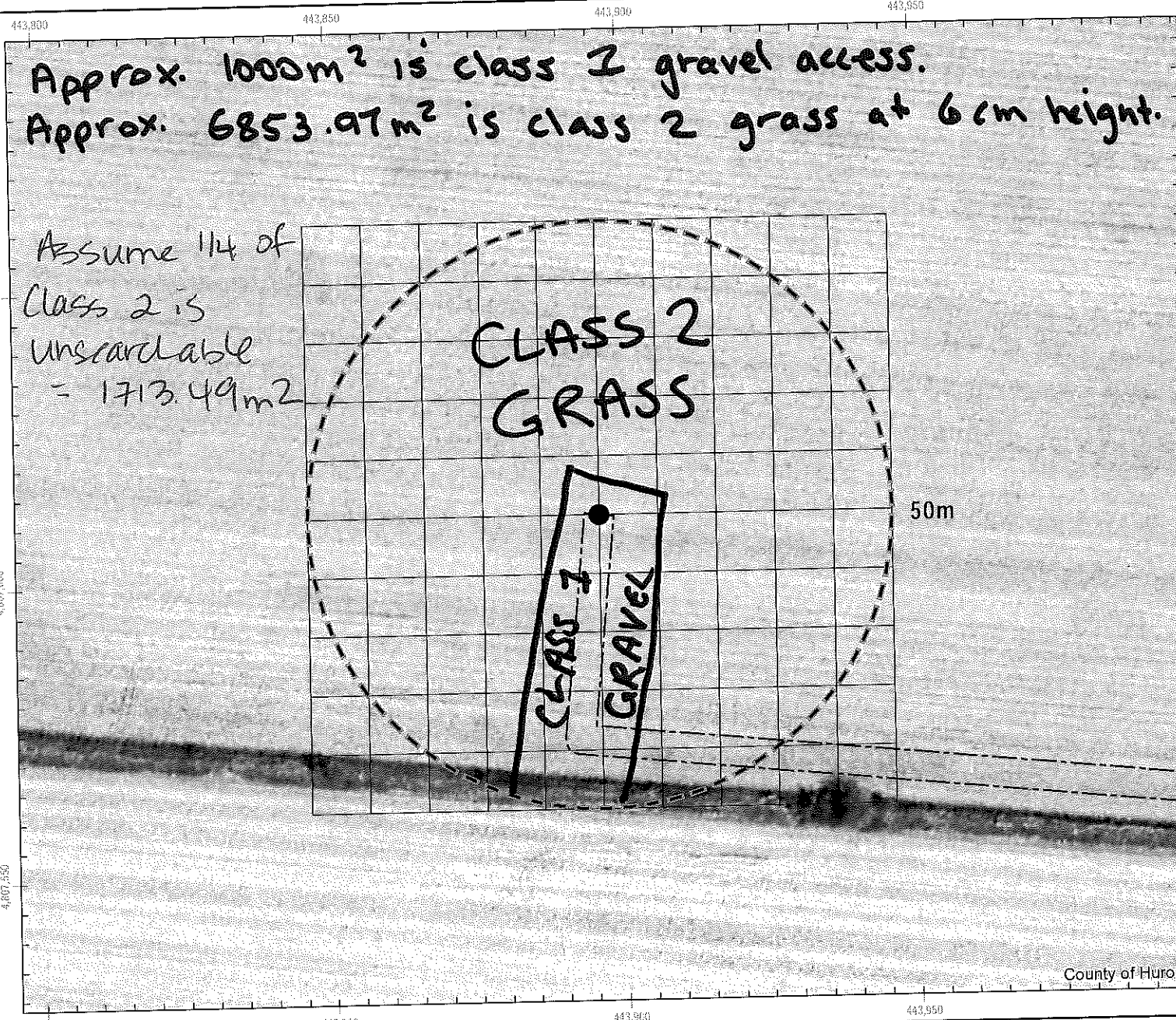
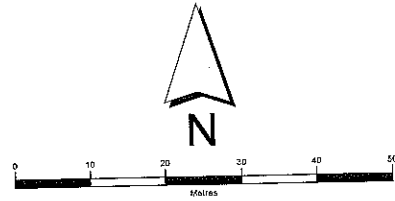
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-16

Survey Date: Oct 22 / 19

Actual Searched Area (m²): 6140.48 m²
(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson, Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

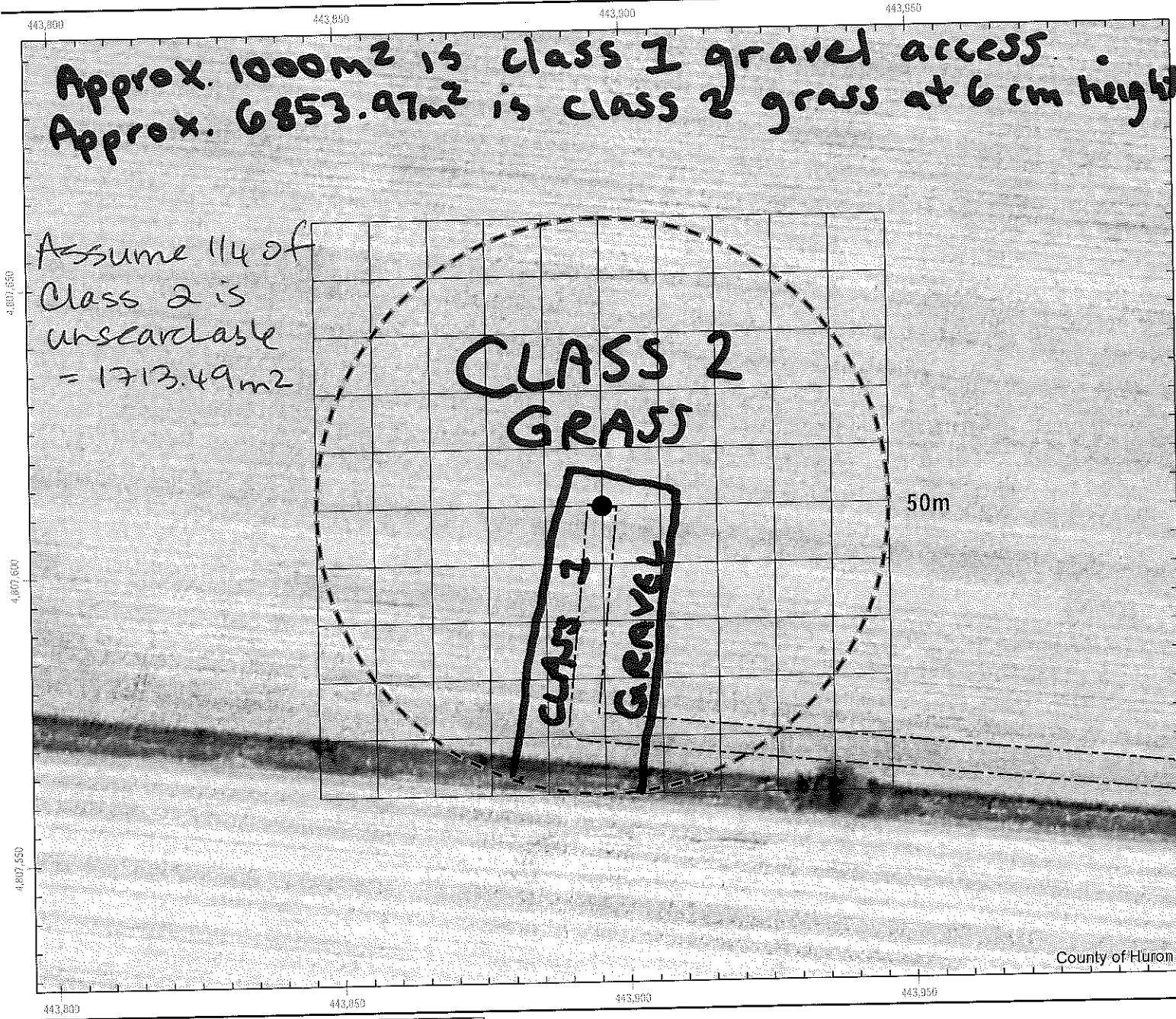
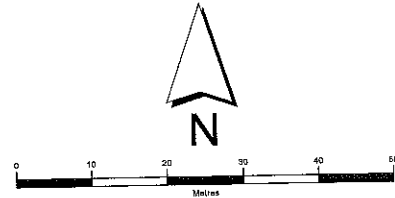


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-16
 Survey Date: Nov 21/19
 Actual Searched Area (m²): 6140.48m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

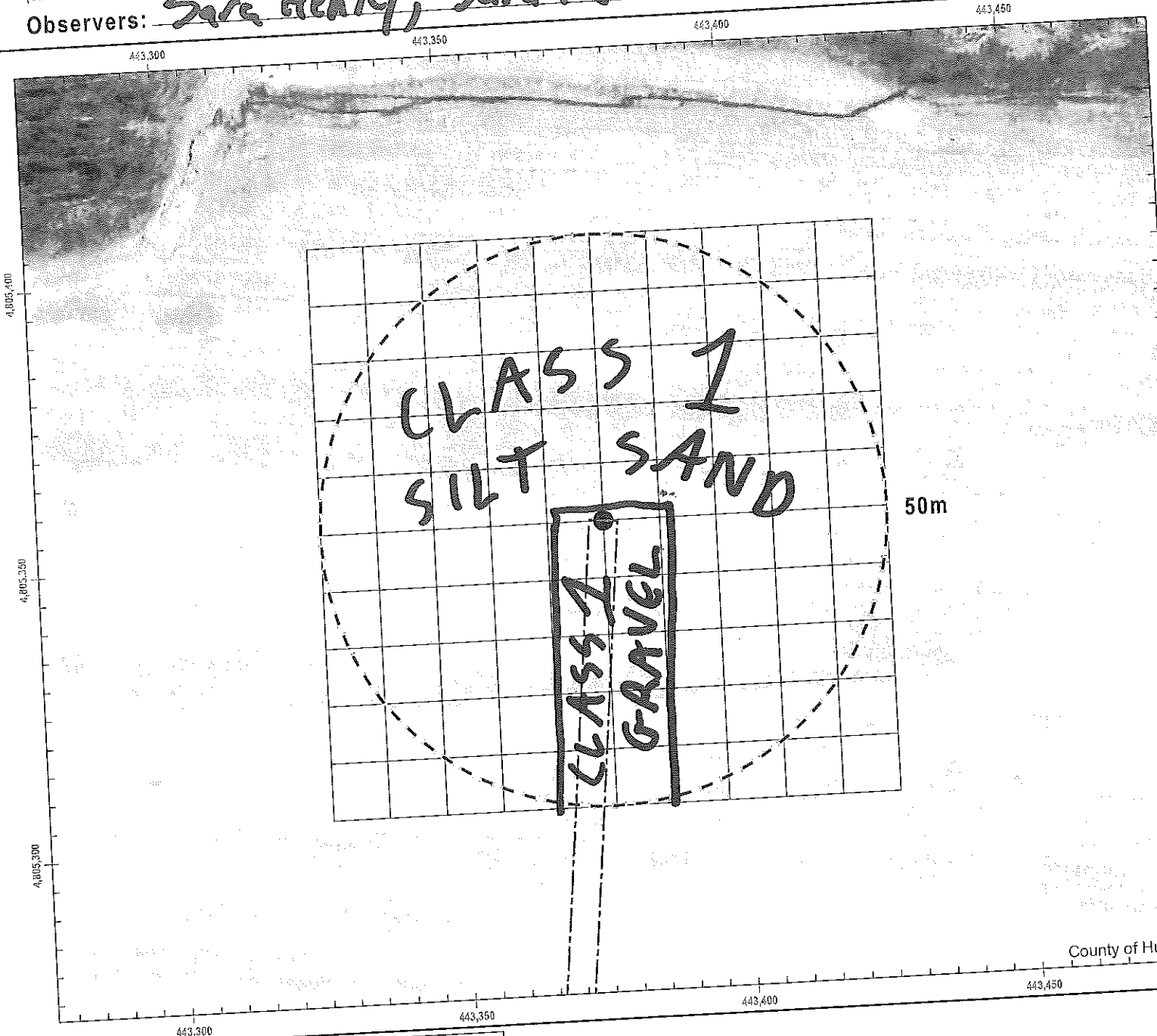
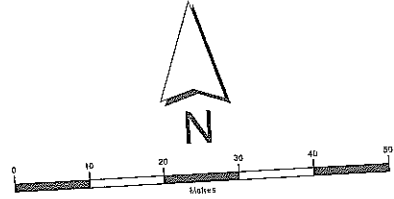
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-17

Survey Date: May 3 / 19

Actual Searched Area (m²): 7853.97 m²
(subtract from total search area - 7853.97 m²)

Observers: Sara Henly, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

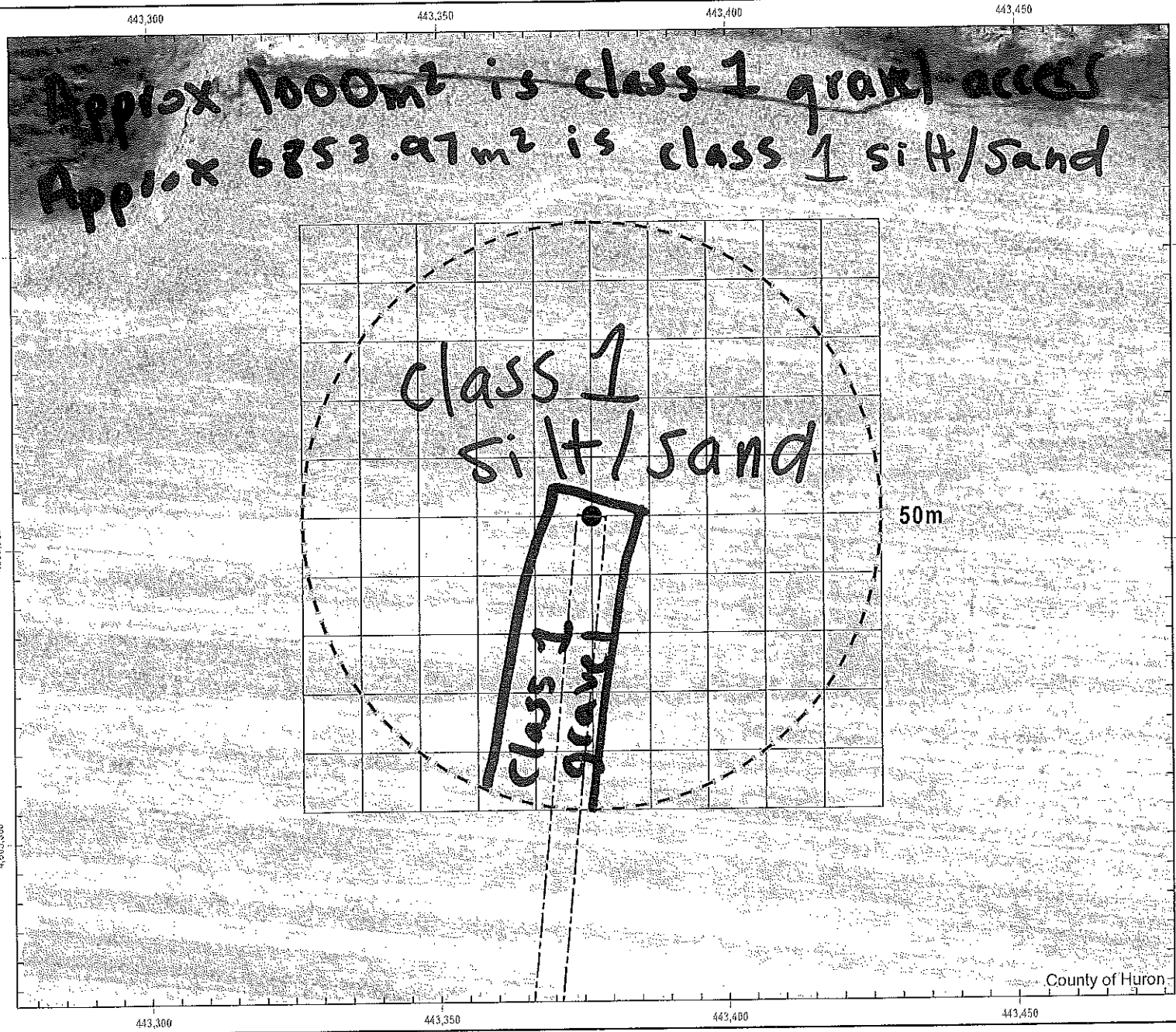
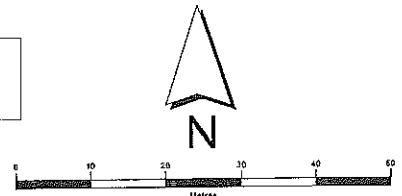
WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-17
 Survey Date: June 7/19
 Actual Searched Area (m²): _____
 (subtract from total search area - 7853.97 m²)
 Observers: Sarah Jackson, Sara Henry

7853.97 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

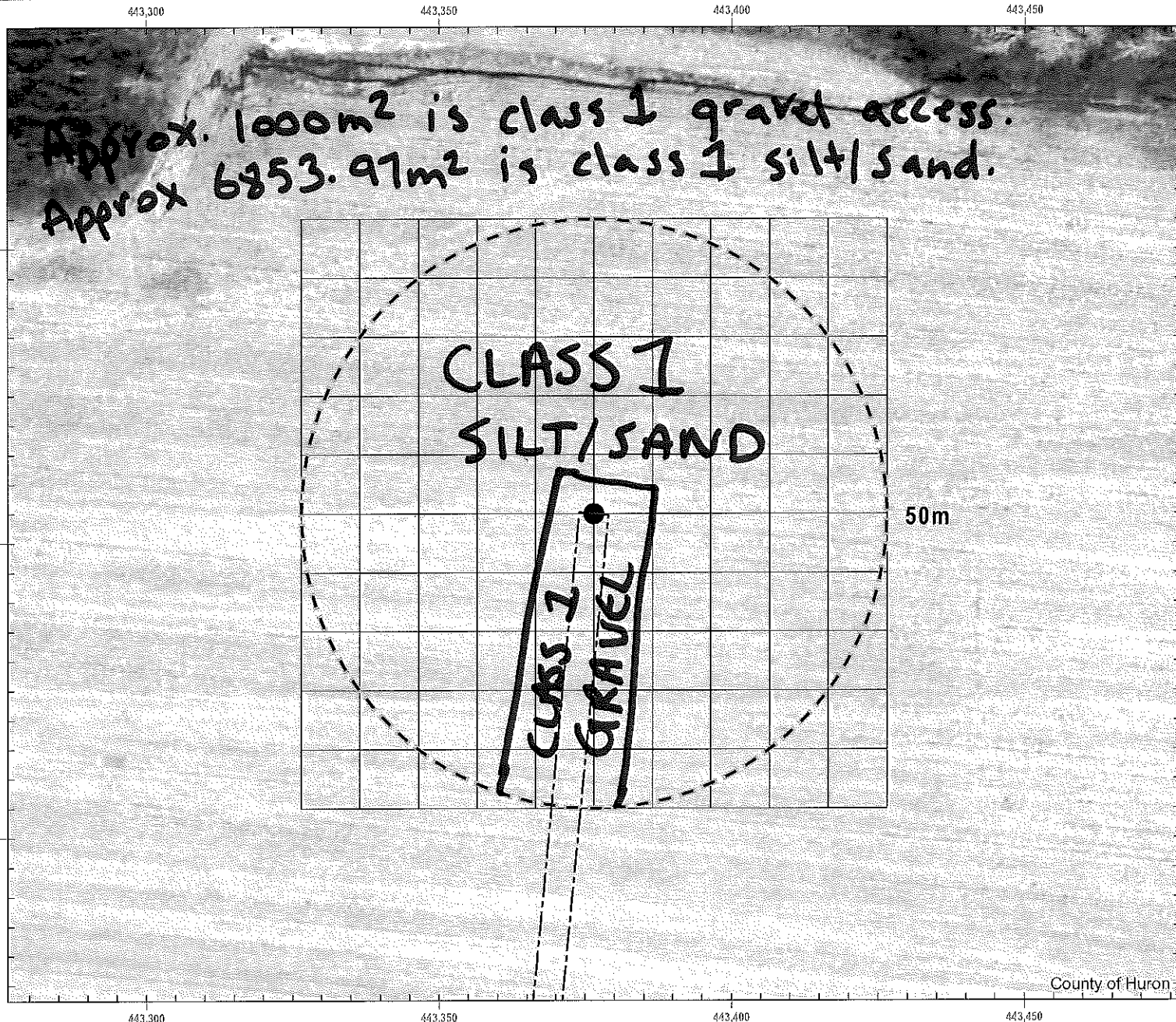
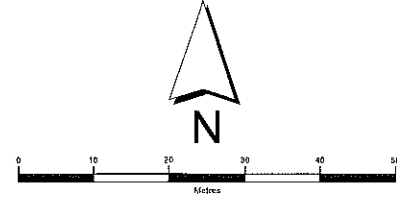
SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-17
 Survey Date: July 9/19
 Actual Searched Area (m²): 7853.97m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

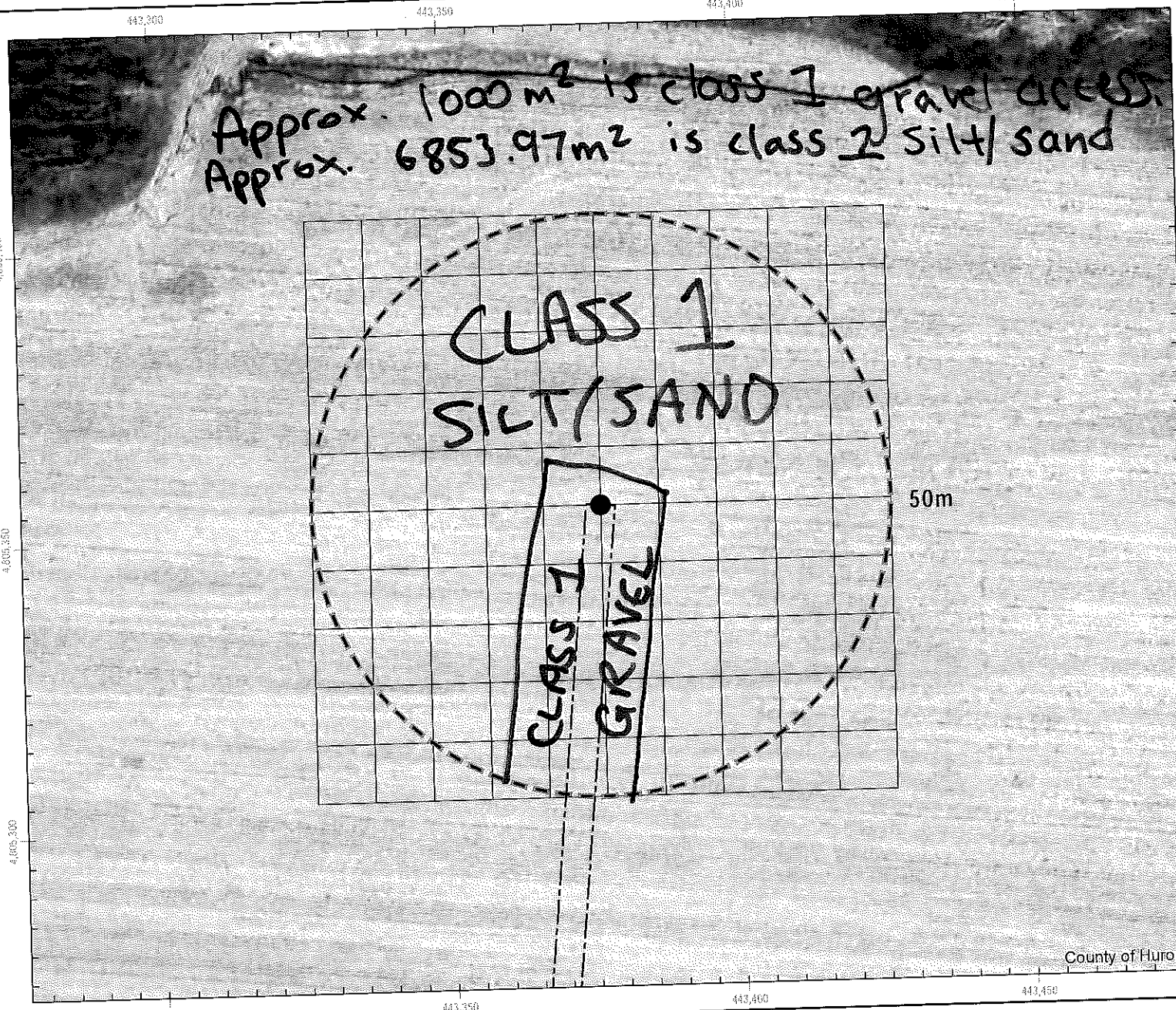
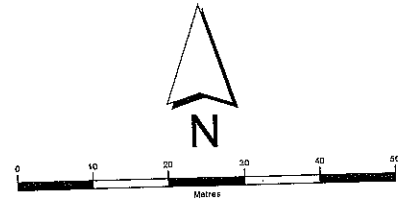
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-17

Survey Date: Aug 20/19

Actual Searched Area (m²): 7853.97 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henny, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

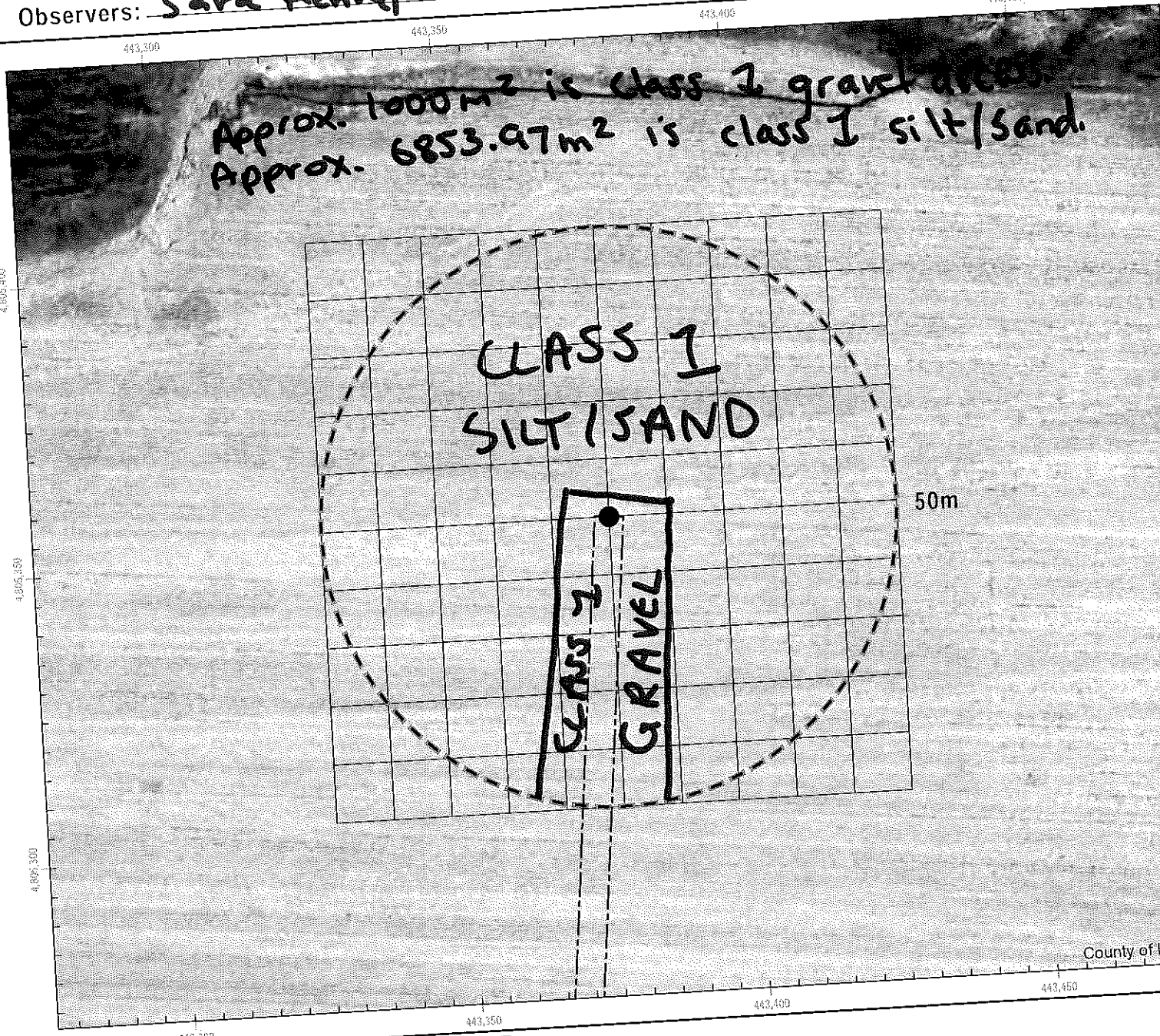
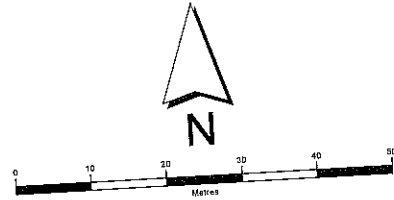
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-17

Survey Date: Sept. 17/19

Actual Searched Area (m²): 7853.97 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

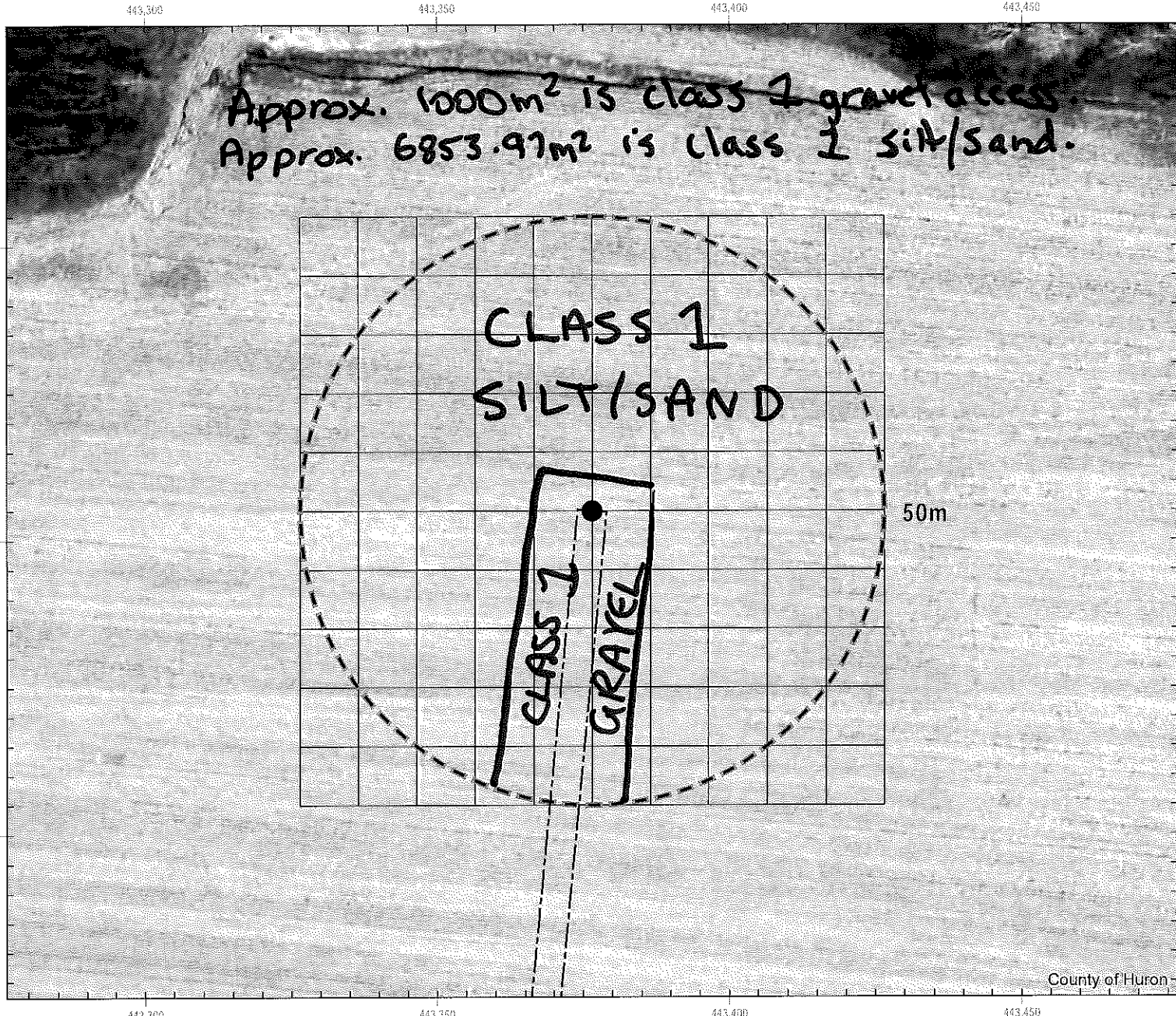
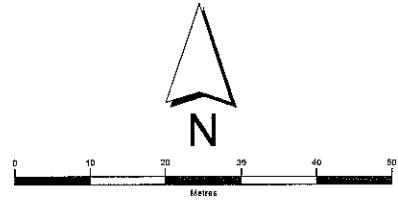


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-17
 Survey Date: Oct/22/19
 Actual Searched Area (m²): 7853.97m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson, Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

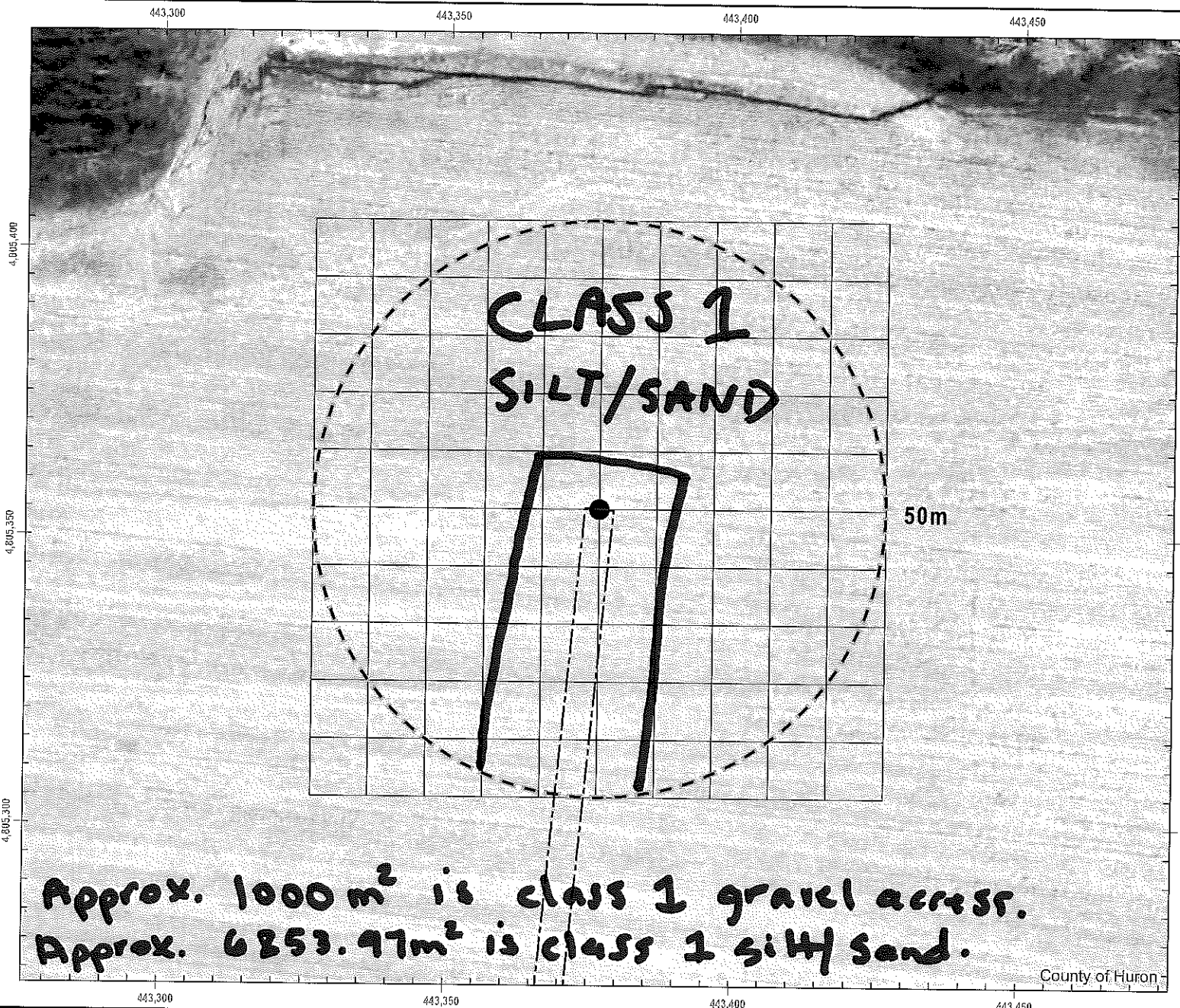
Site Number: T-17

Survey Date: Nov. 21/19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

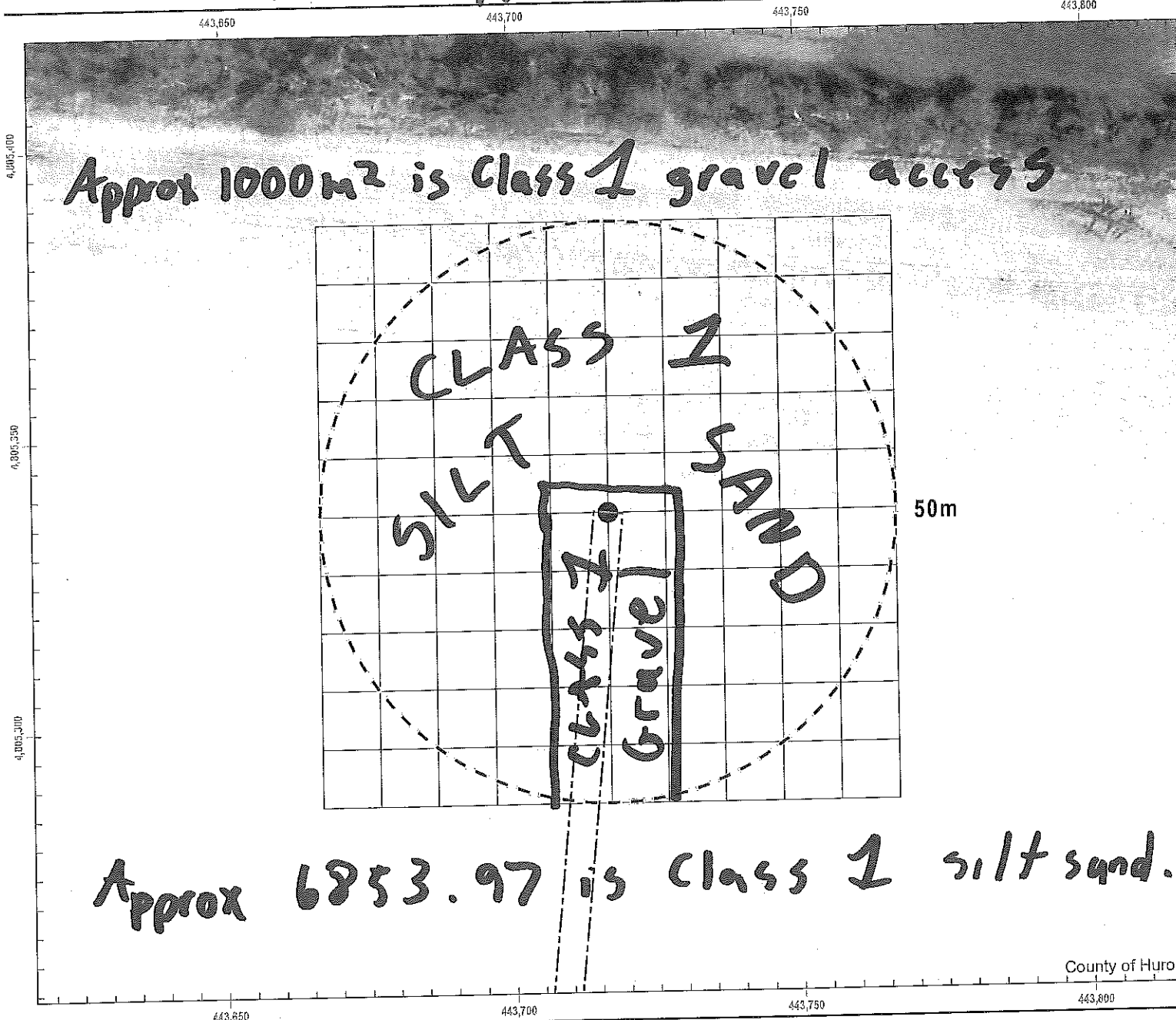
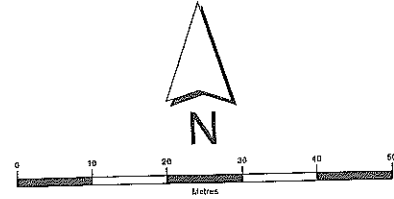
Site Number: T-18

Survey Date: May 3/19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-18

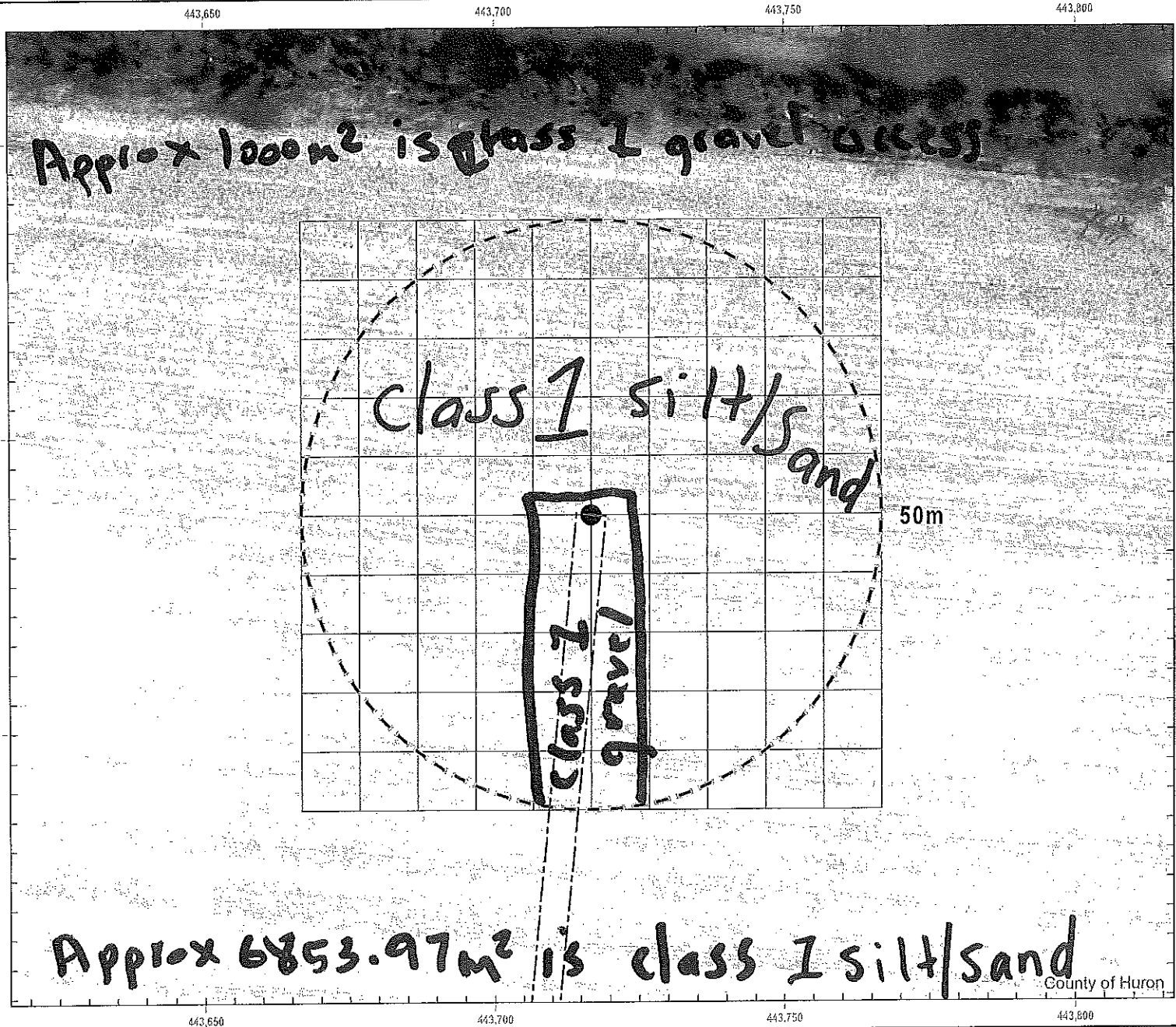
Survey Date: June 7/19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

7853.97 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

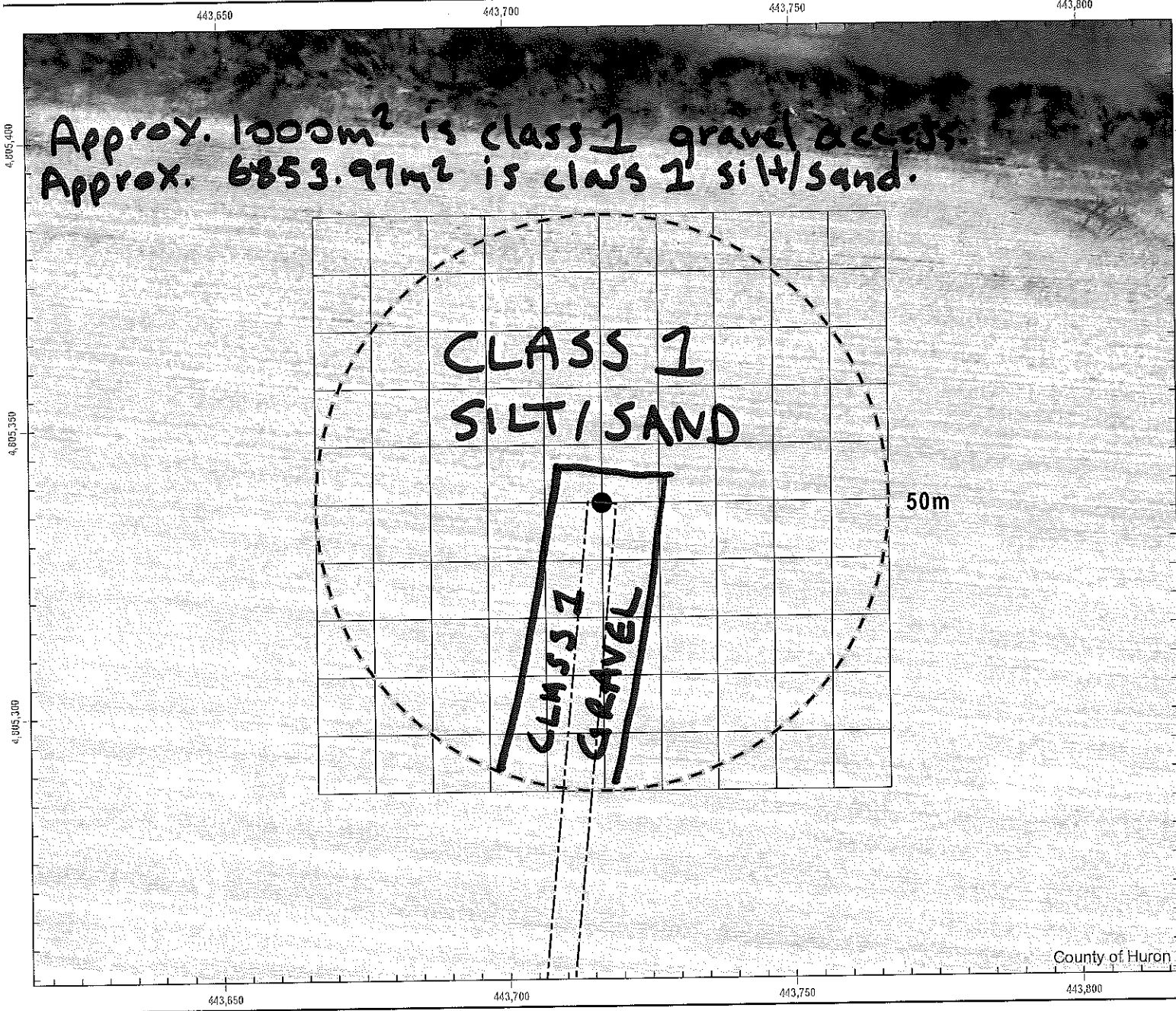
Site Number: T-18

Survey Date: July 23/19

Actual Searched Area (m²): 7853.97 m²

(subtract from total search area - 7853.97 m²)

Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

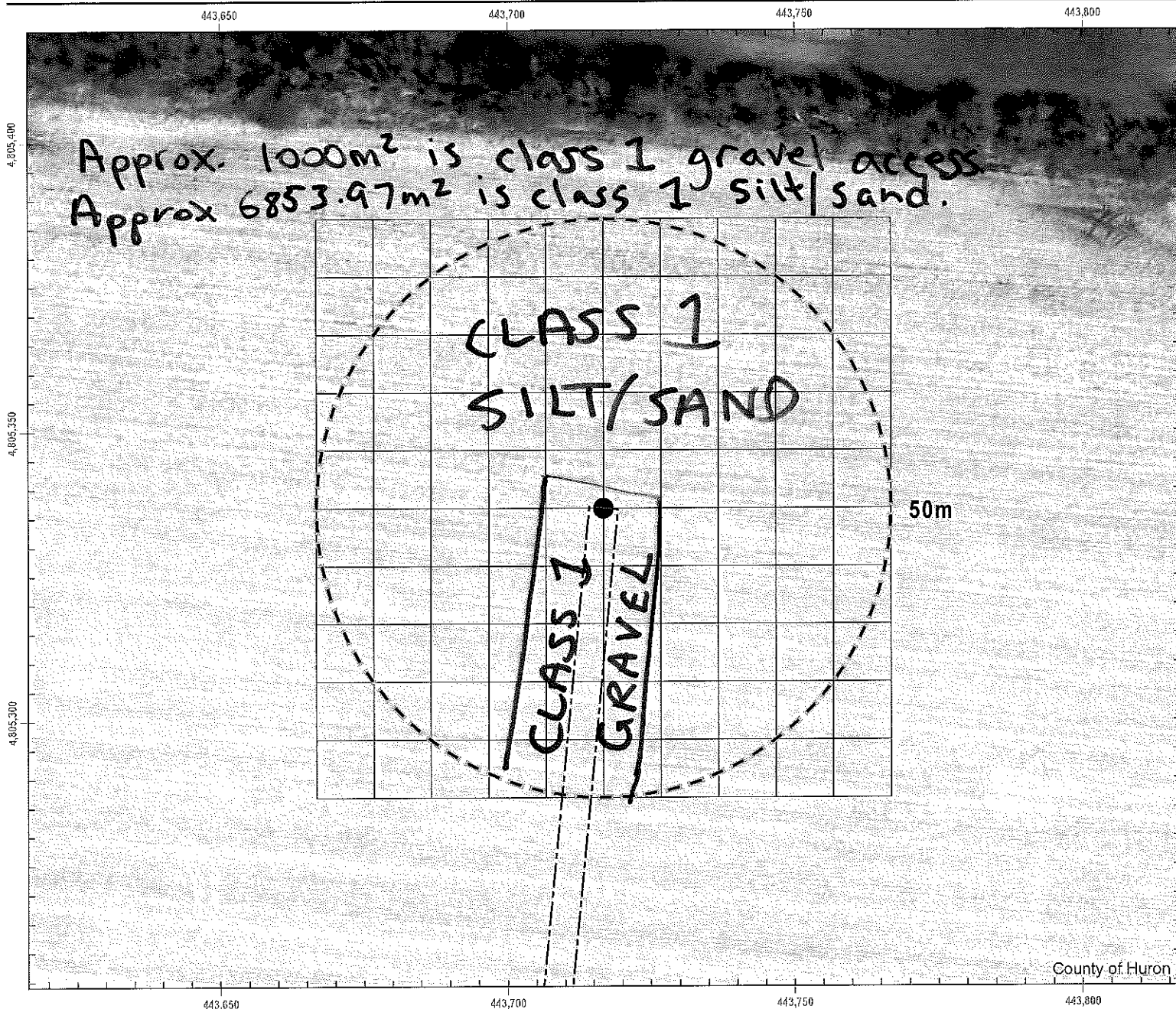
Site Number: T-18

Survey Date: Aug 20/19

Actual Searched Area (m²): 7853.97 m²

(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson, Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

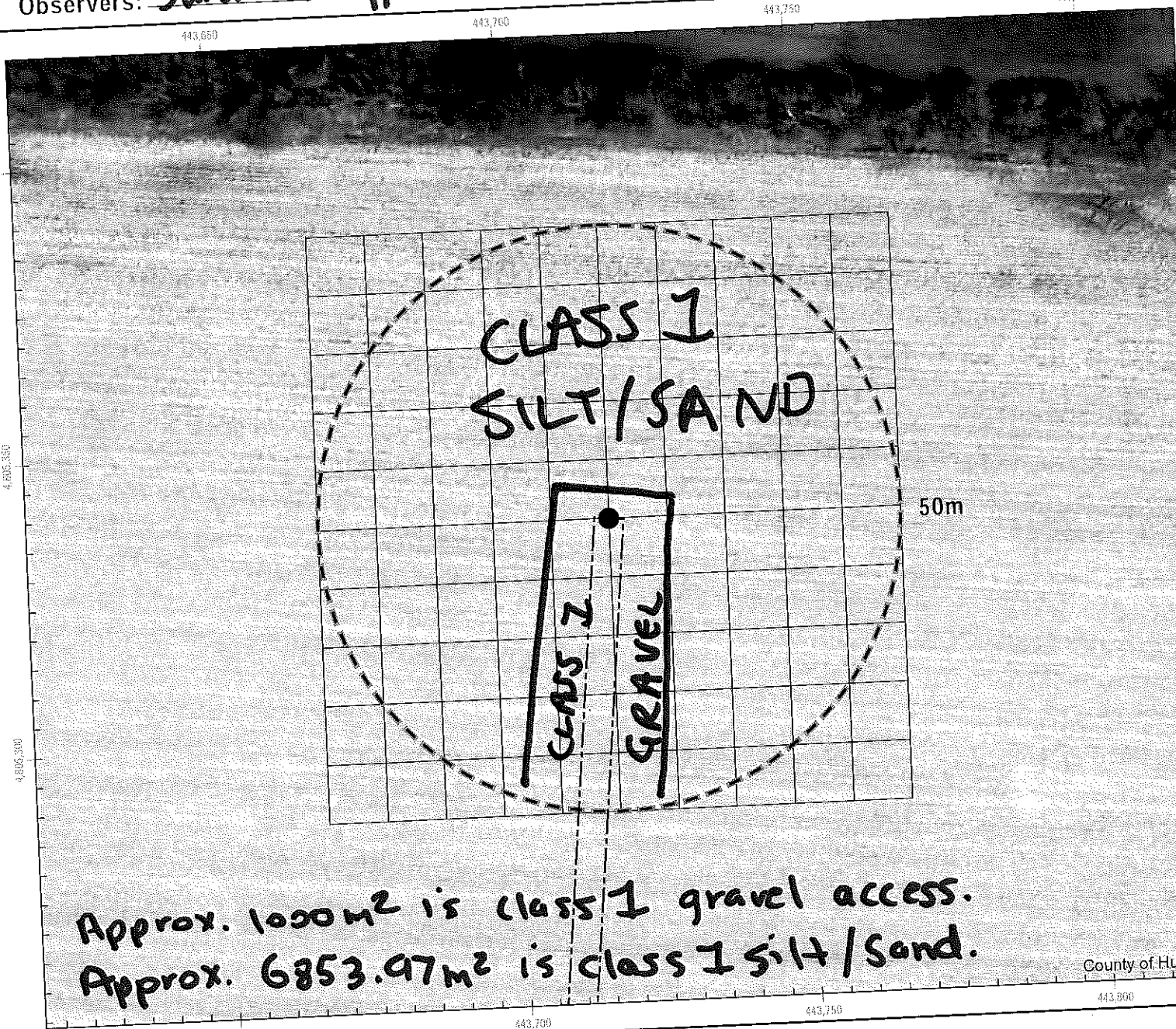
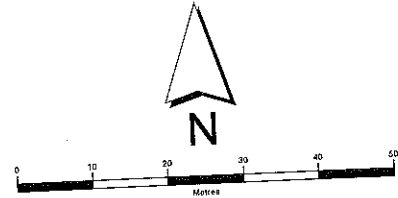
Site Number: T-18

Survey Date: Sept. 17. 19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.87m²)

Observers: Sara Henry, Sarah Jackson



Approx. 1000m² is class 1 gravel access.
Approx. 6853.97m² is class 1 silt/sand.

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

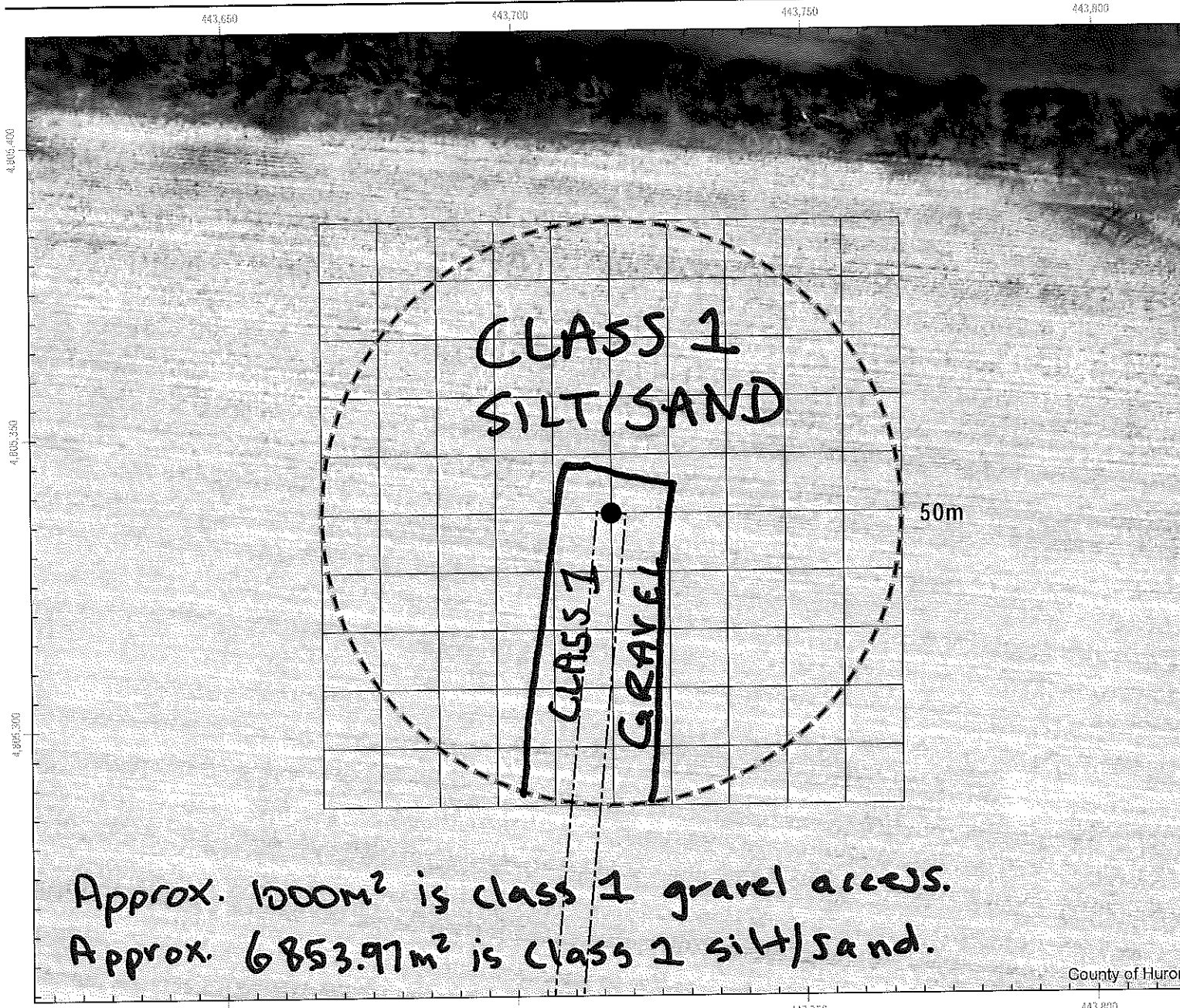
Site Number: T-18

Survey Date: Oct/22/19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson, Sara Henry



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

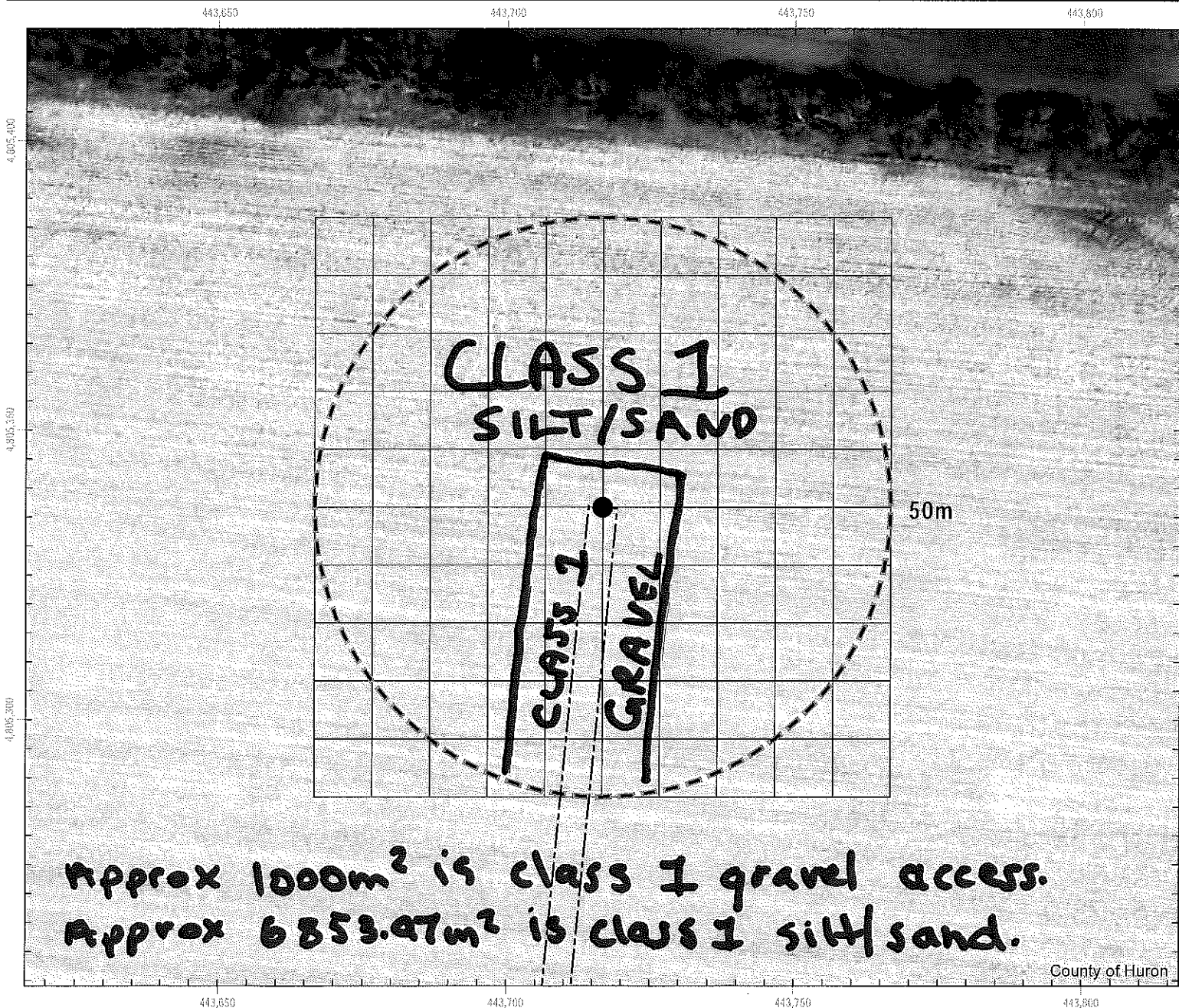
Site Number: T-18

Survey Date: Nov 21/19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

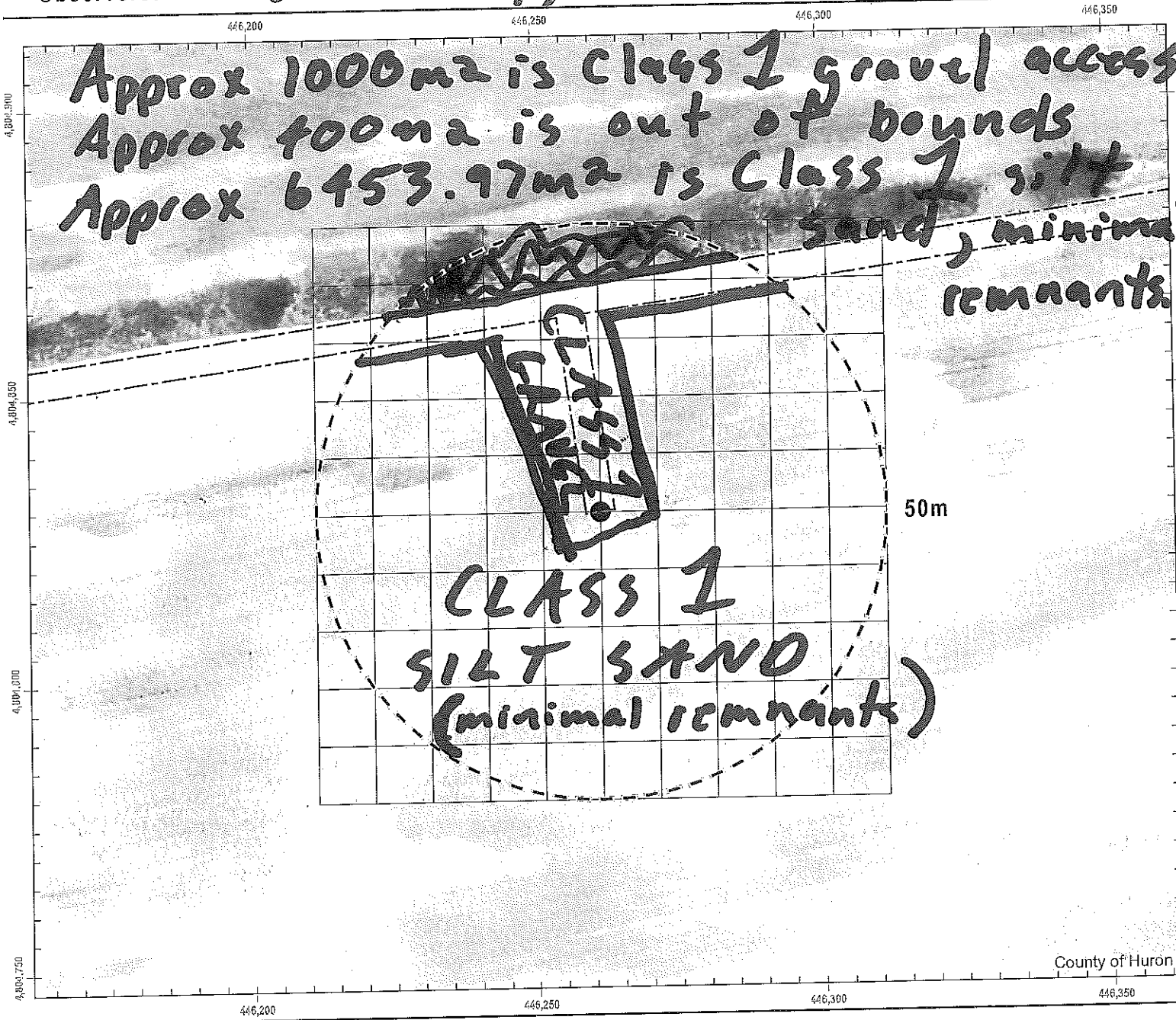
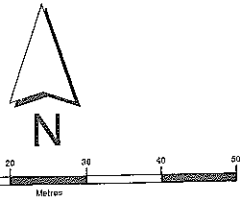
SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-19
 Survey Date: May 8/19
 Actual Searched Area (m²): 7453.97 m²
(subtract from total search area - 7853.97 m²)
 Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-19

Survey Date: June 12 / 19

7453.97 m²

Actual Searched Area (m²):

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

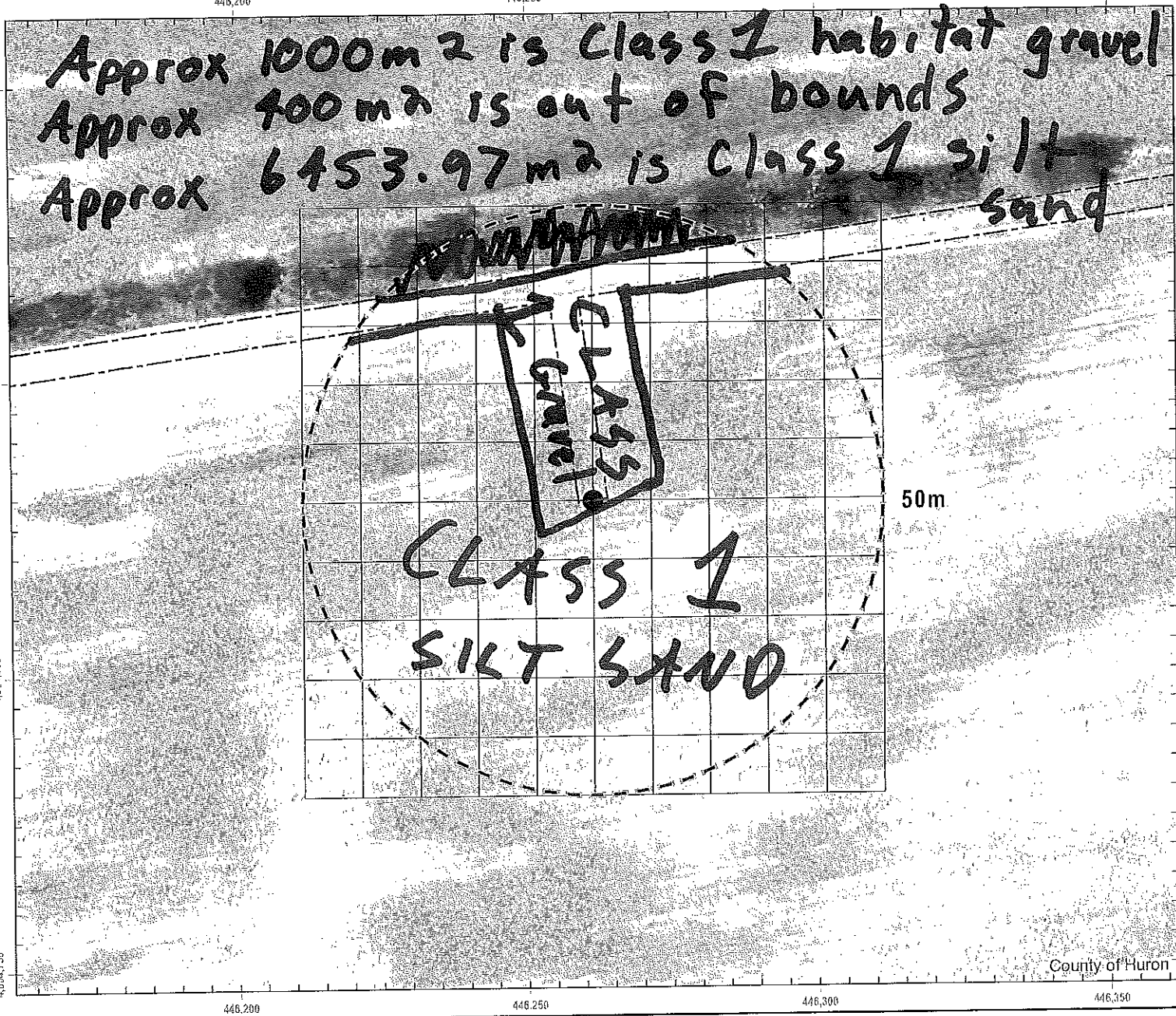


446,200

446,250

446,300

446,350



446,200

446,250

446,300

446,350

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

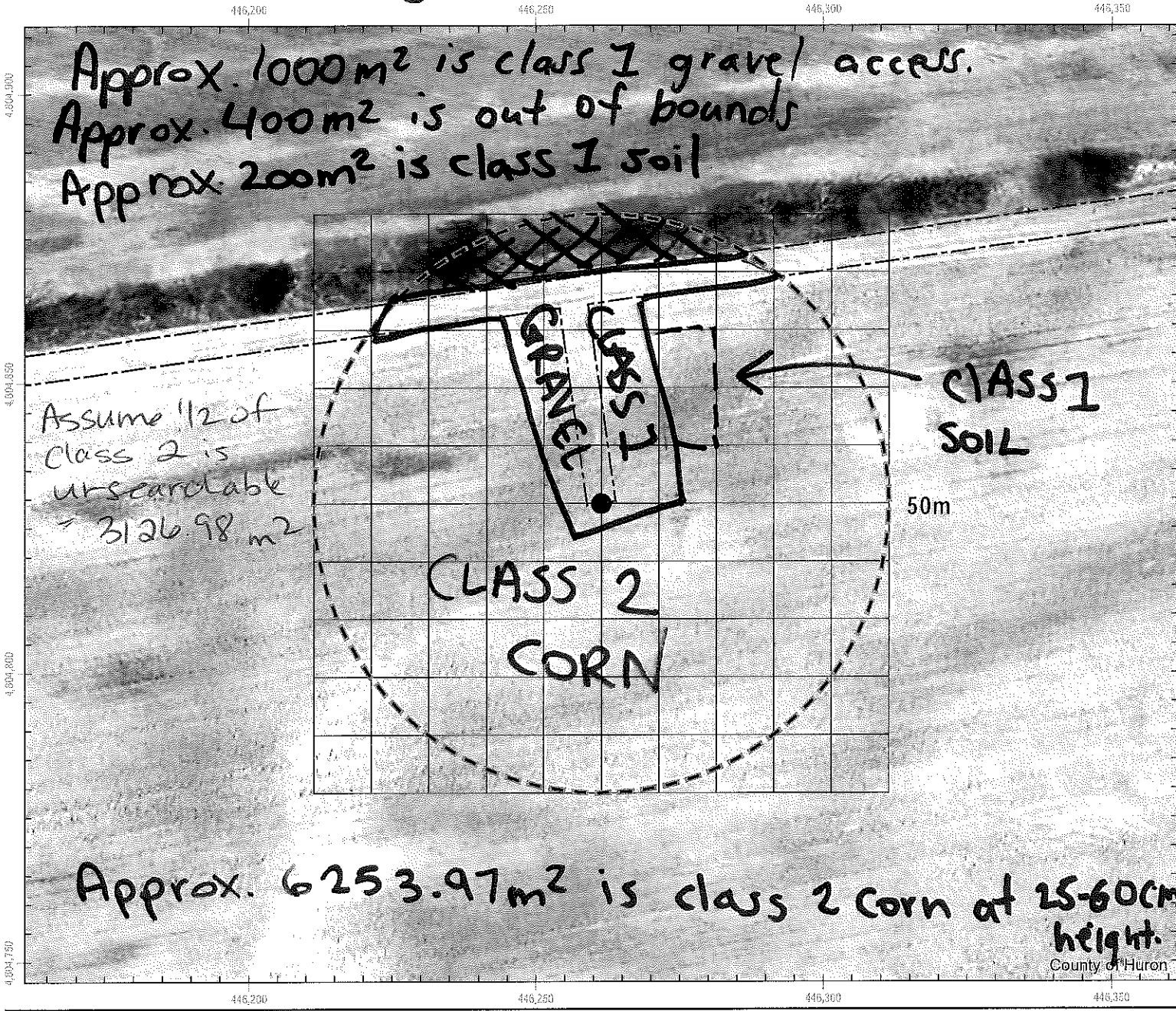
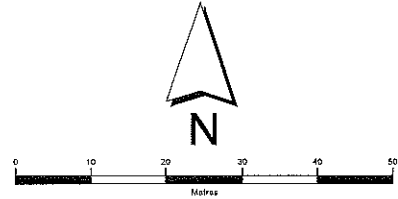
Site Number: T-19

Survey Date: July 10/19

Actual Searched Area (m²): 4326.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

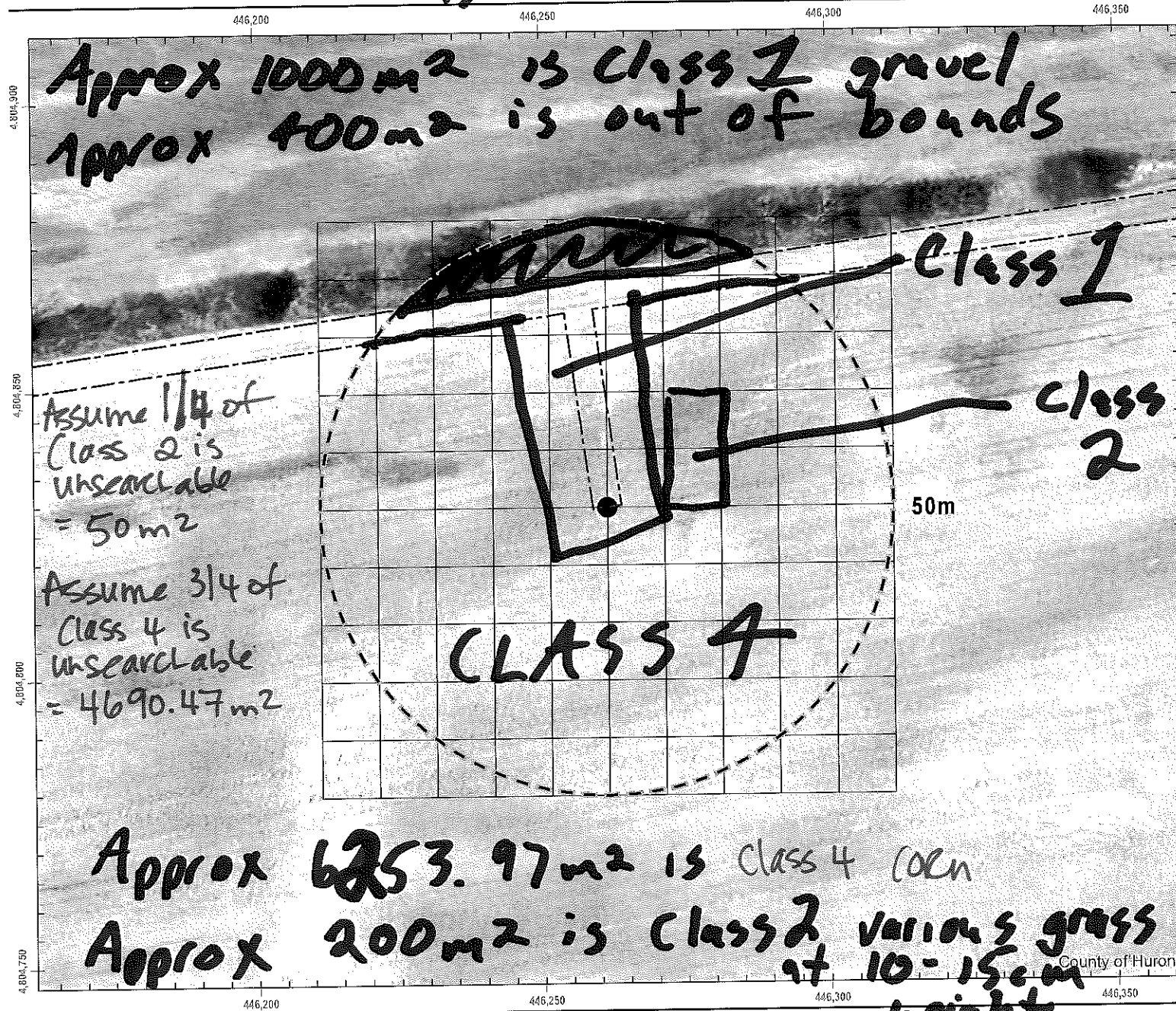
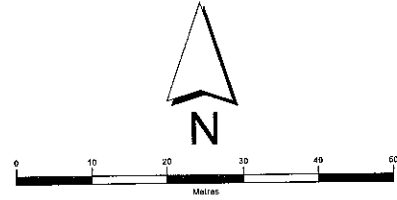
Site Number: T-19

Survey Date: Aug 14/19

Actual Searched Area (m²): 3113.50 m²

(subtract from total search area - 7853.97 m²)

Observers: Sean Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

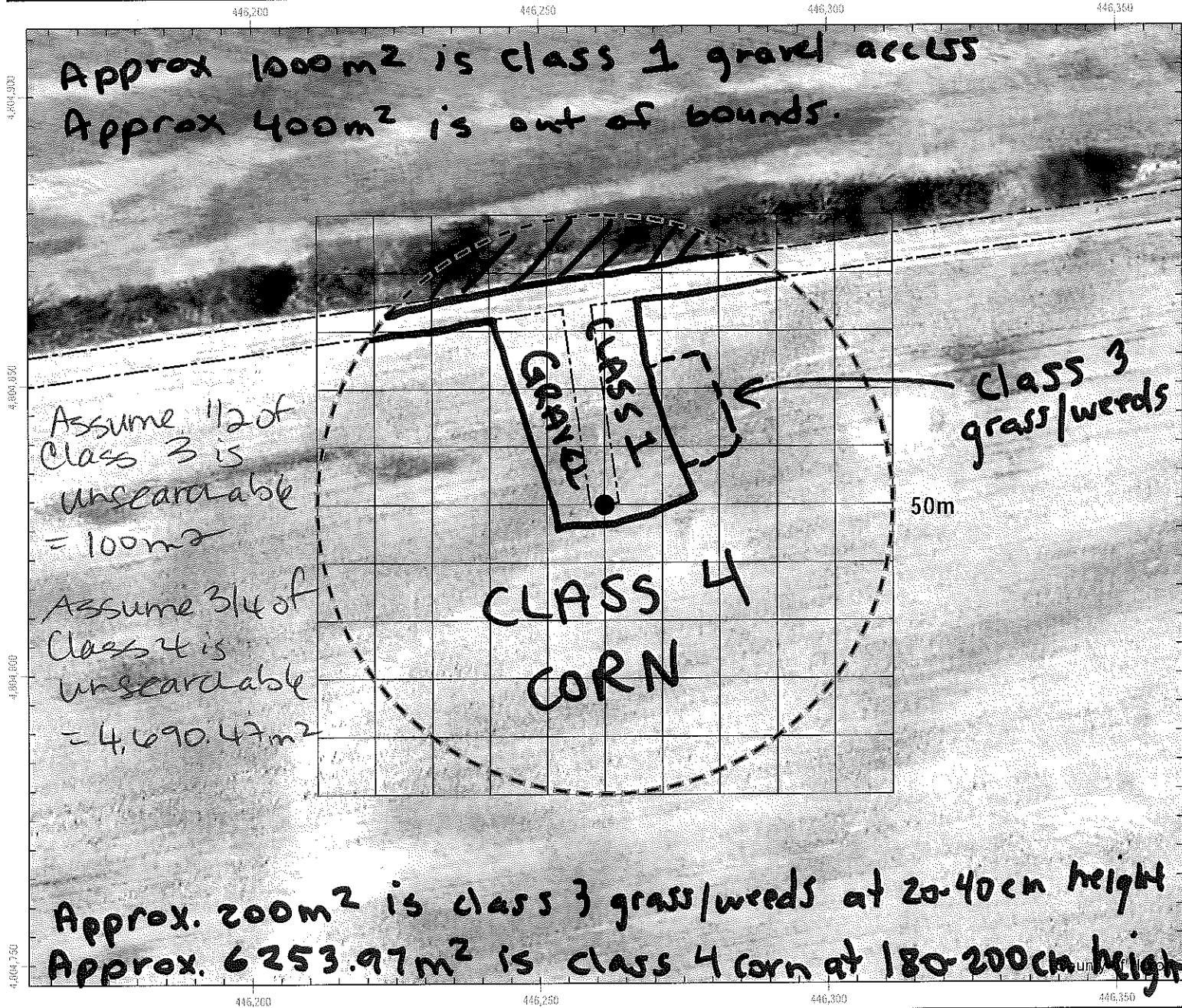
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-19

Survey Date: Sept 16/19

Actual Searched Area (m²): 2663.50 m²
(subtract from total search area - 7453.97 m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

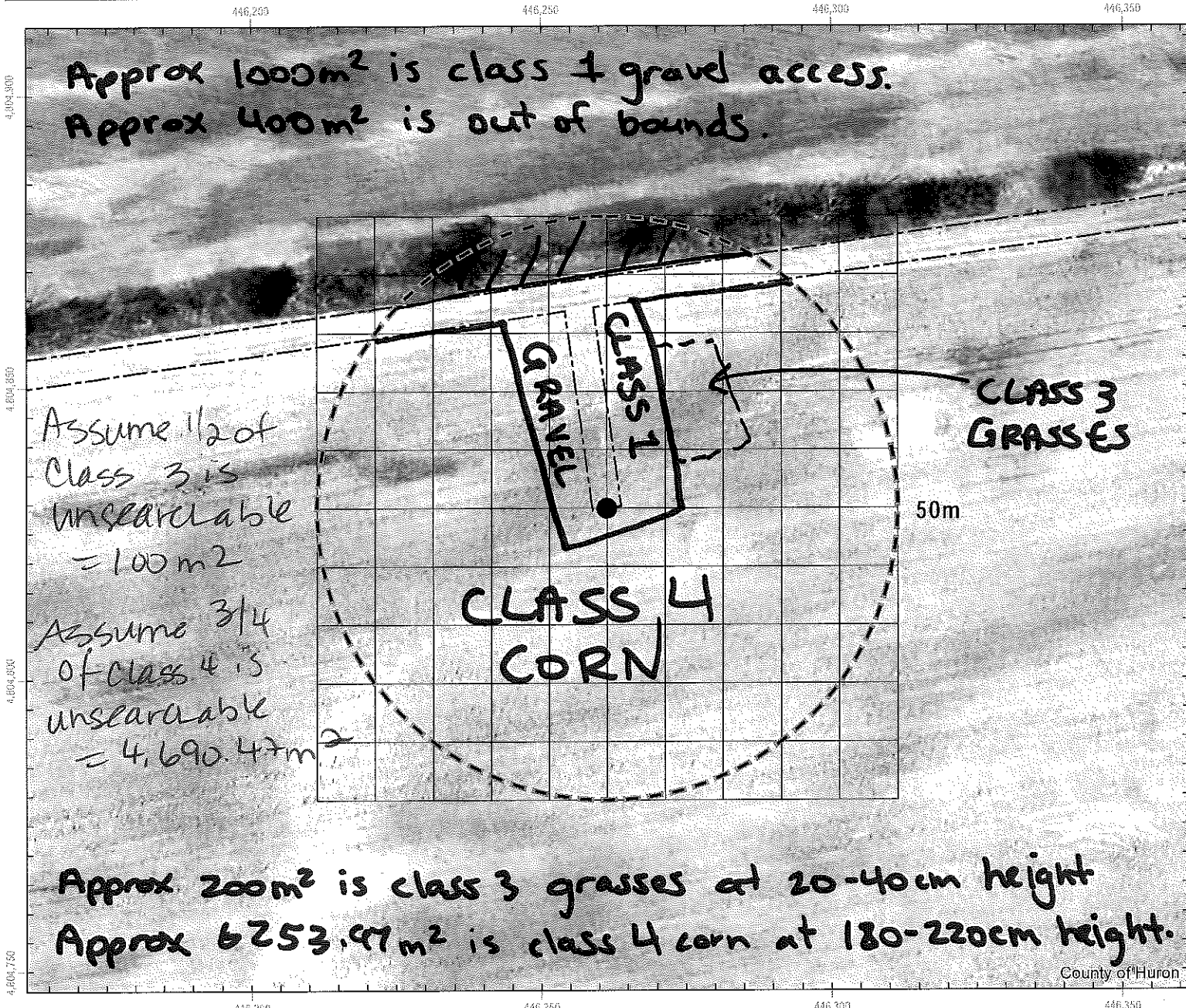
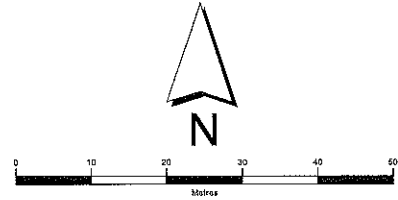
SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-19
 Survey Date: Oct 19/19
 Actual Searched Area (m²): 2663.50 m²
 (subtract from total search area - ~~7053.97 m²~~) 7453.97 m²
 Observers: Sara Henry, Sarah Jackson



Approx 200m² is class 3 grasses at 20-40cm height
 Approx 6253.97m² is class 4 corn at 180-220cm height.

County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

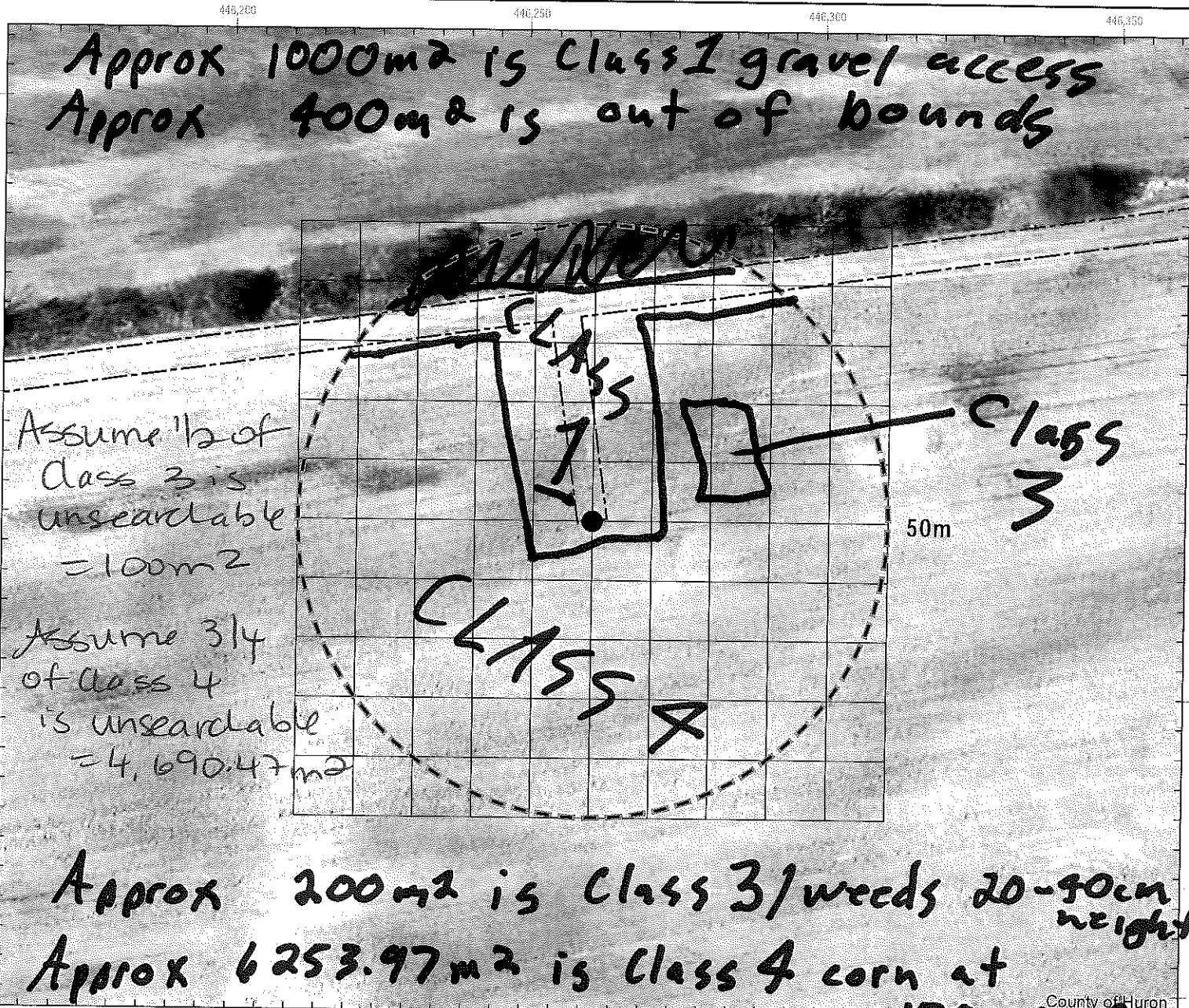
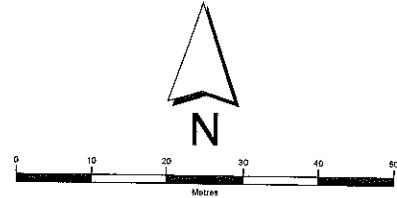
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-19

Survey Date: Nov 14/19

Actual Searched Area (m²): 2663.50m²
(subtract from total search area - 7853.97m²) 7153.97m²

Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

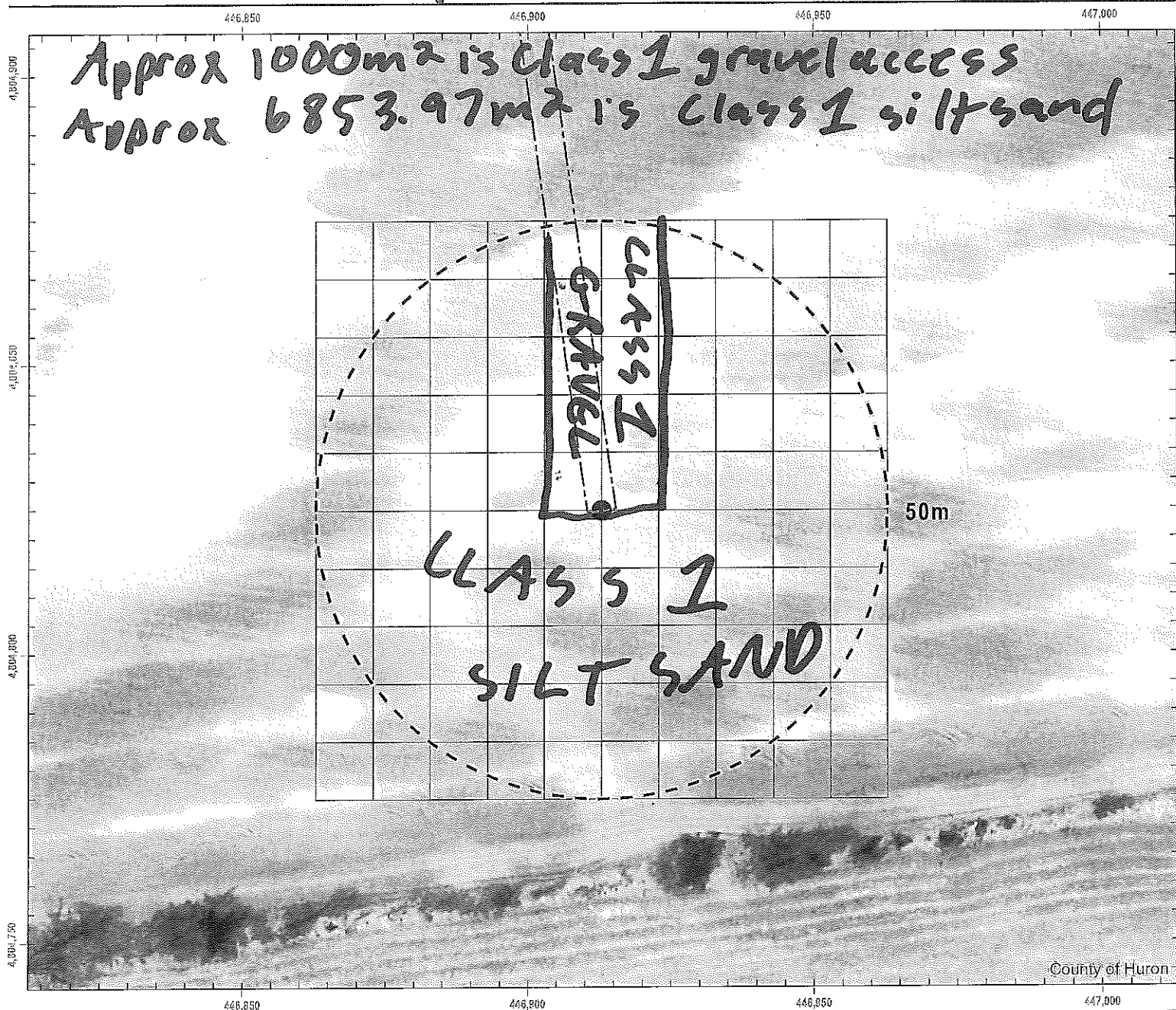
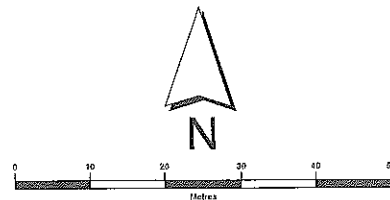
Site Number: T-20

Survey Date: May 2 / 19

Actual Searched Area (m²): 7853.97 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-20

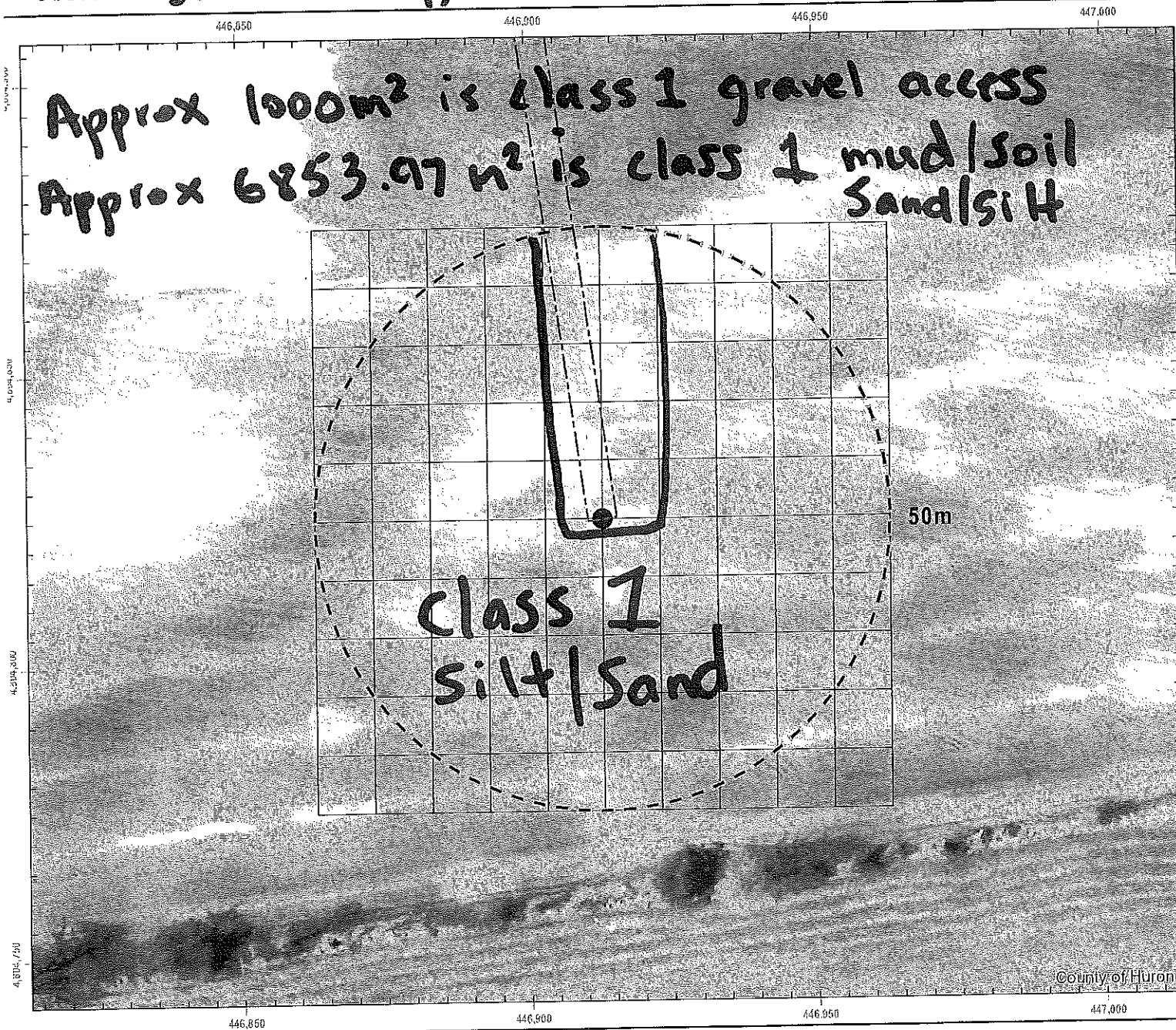
Survey Date: June 9/19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

7853.97 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

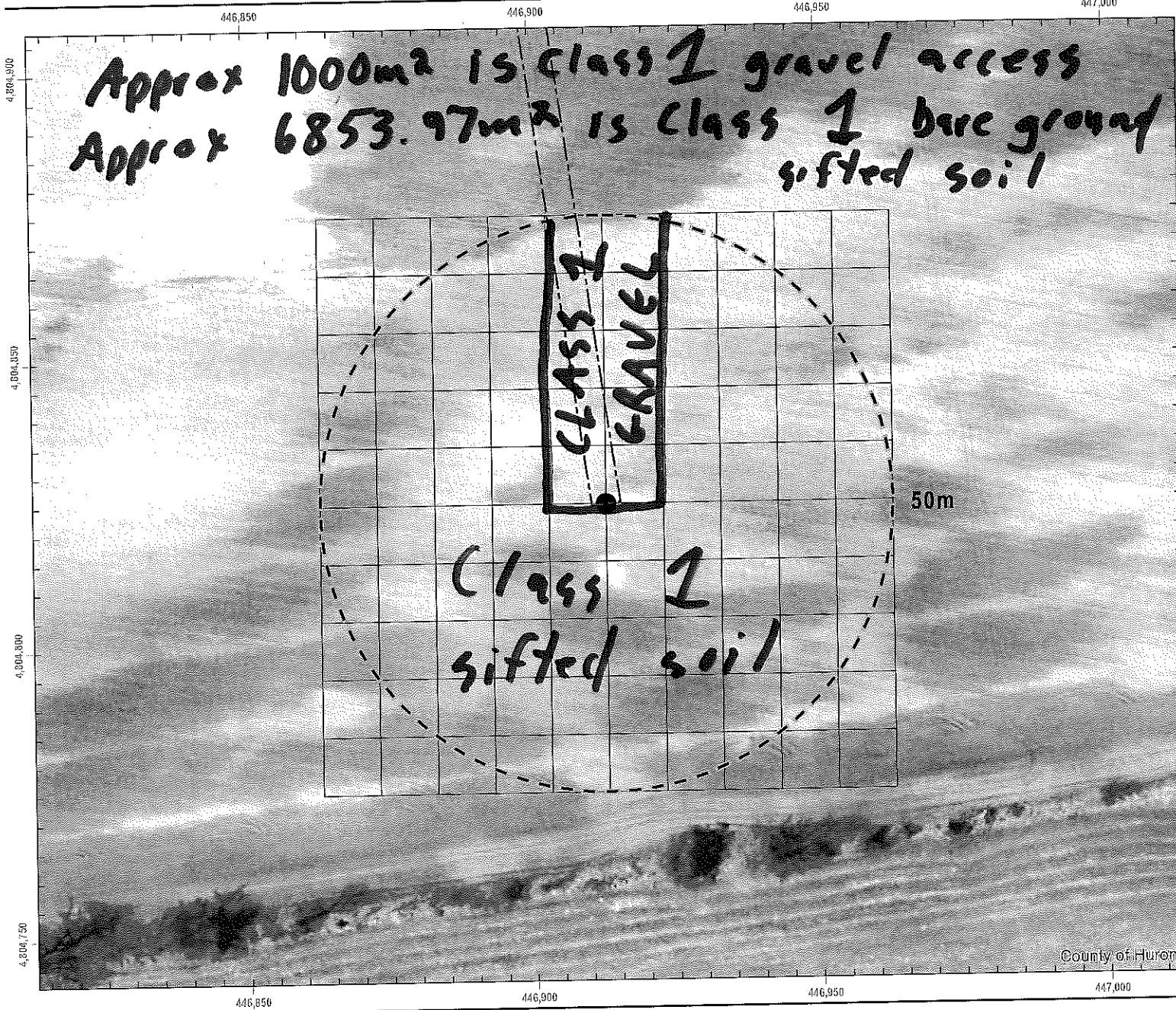
Site Number: T-20

Survey Date: Aug 1 / 19

Actual Searched Area (m²): 7853.97 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sara h Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

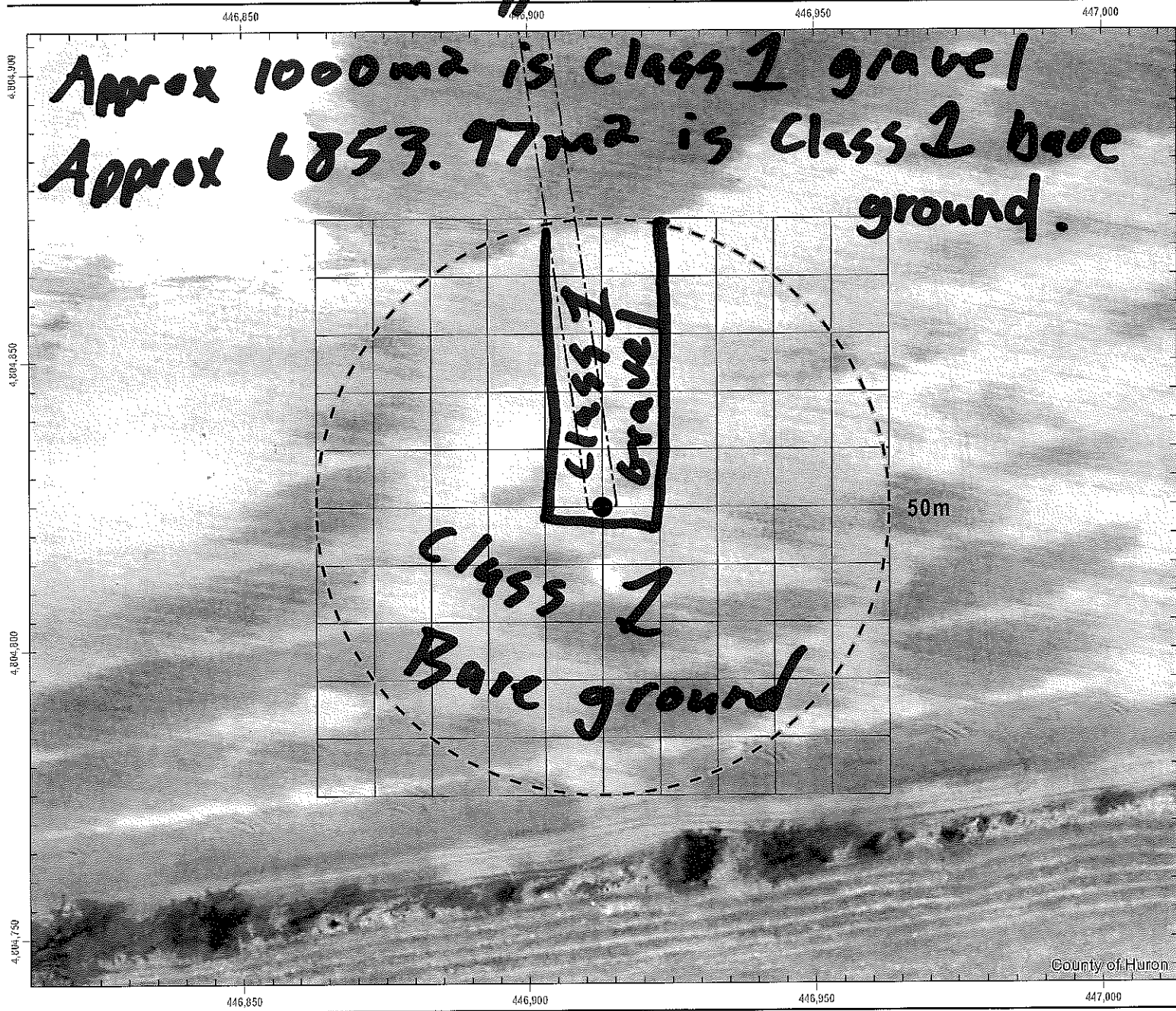
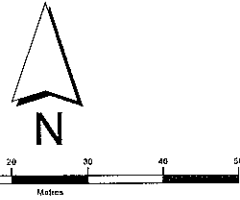
Site Number: T-20

Survey Date: Aug 17/19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

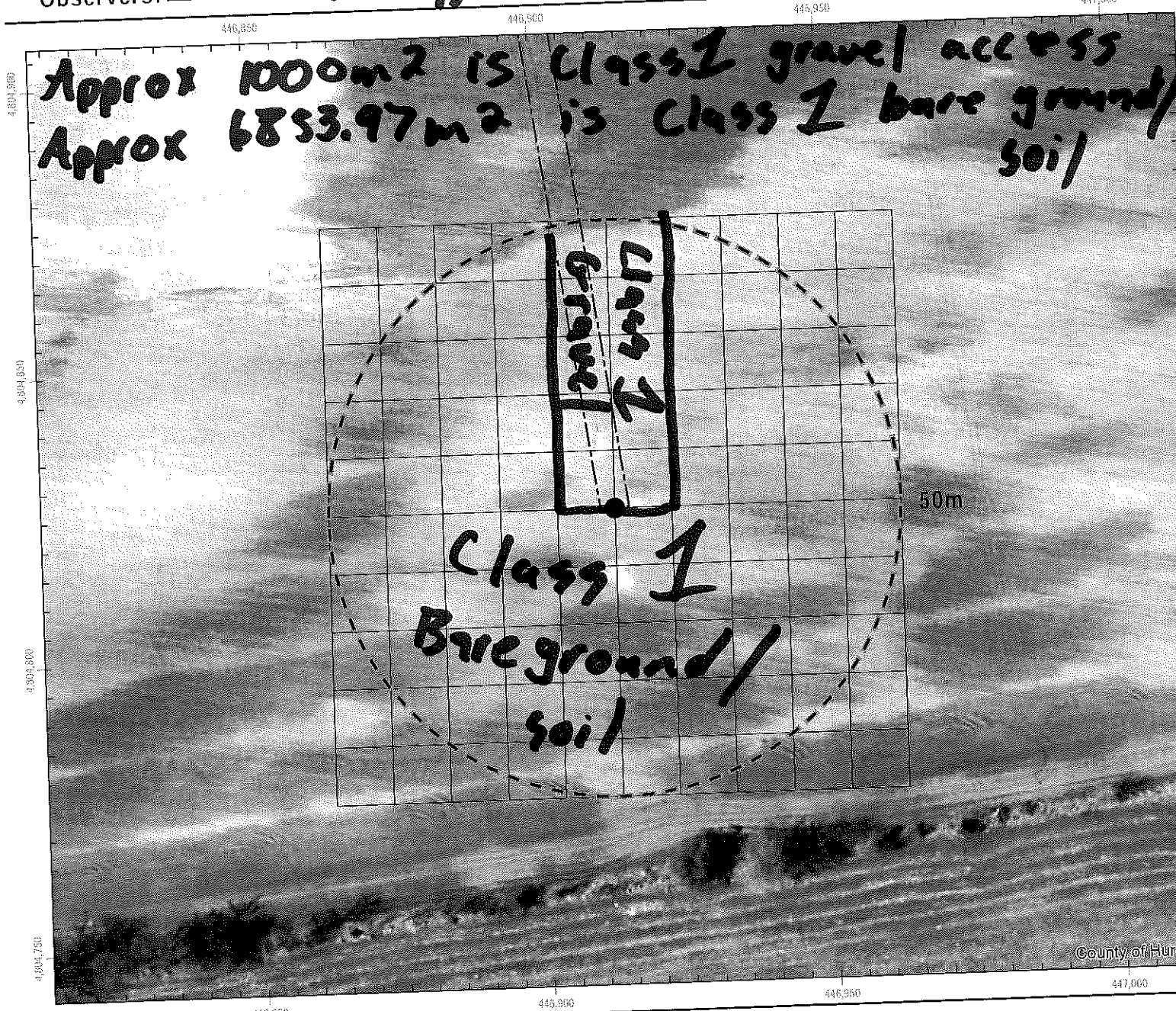
Site Number: T-20

Survey Date: Sept 16/19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sara Healy, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

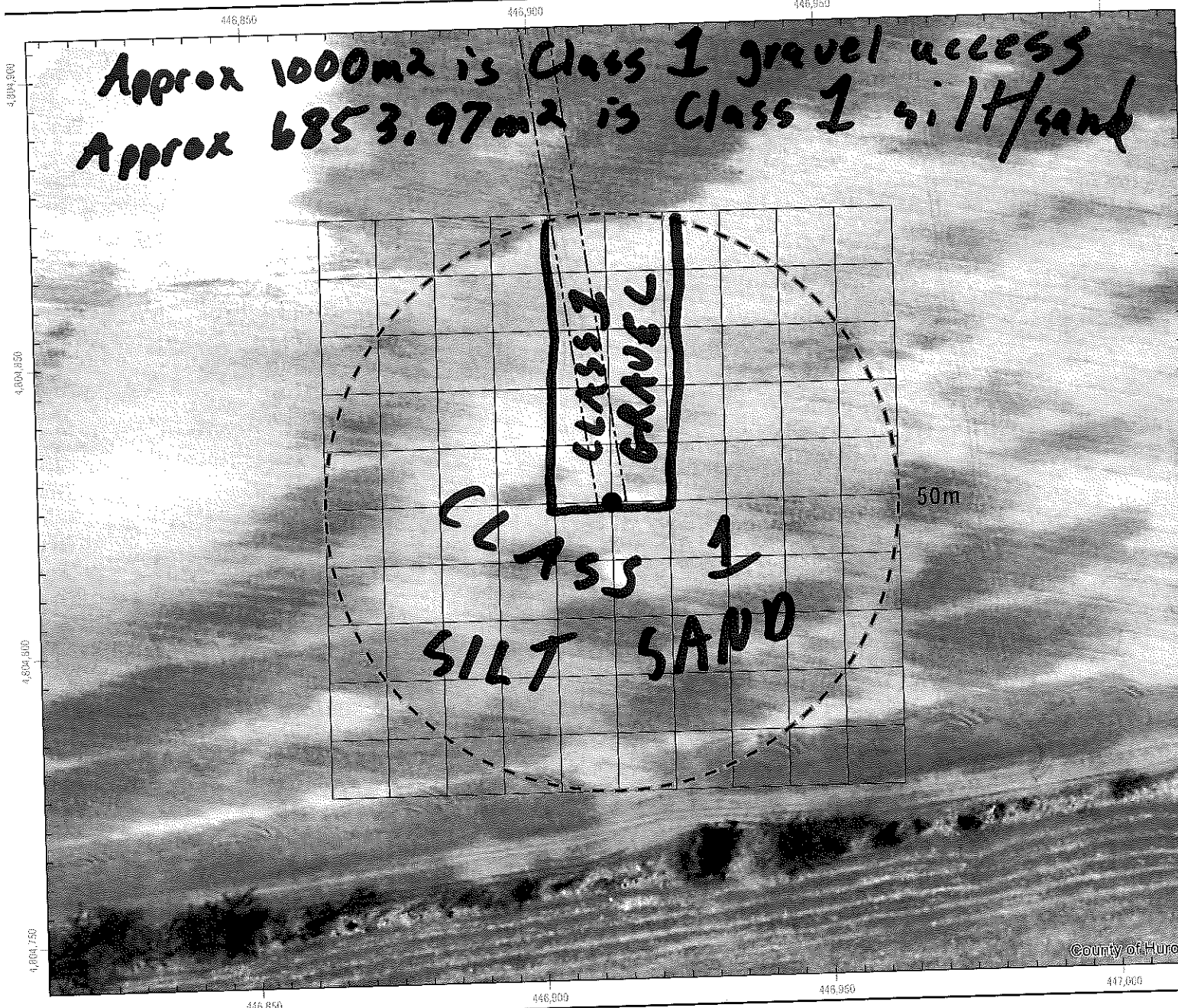
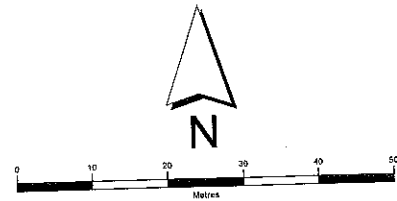
Site Number: T-20

Survey Date: Oct 29 / 19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

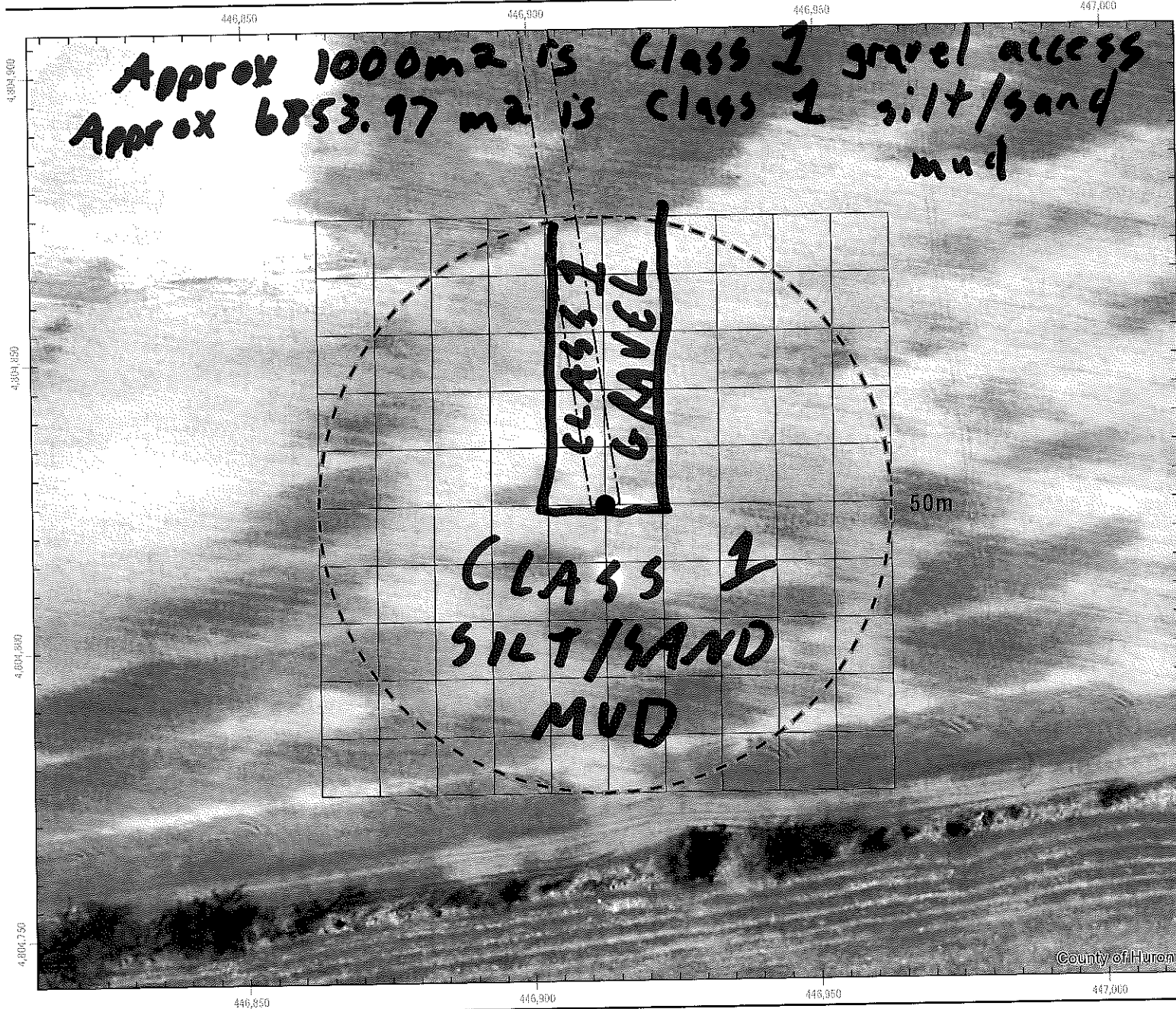
Site Number: T-20

Survey Date: Nov 18/19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

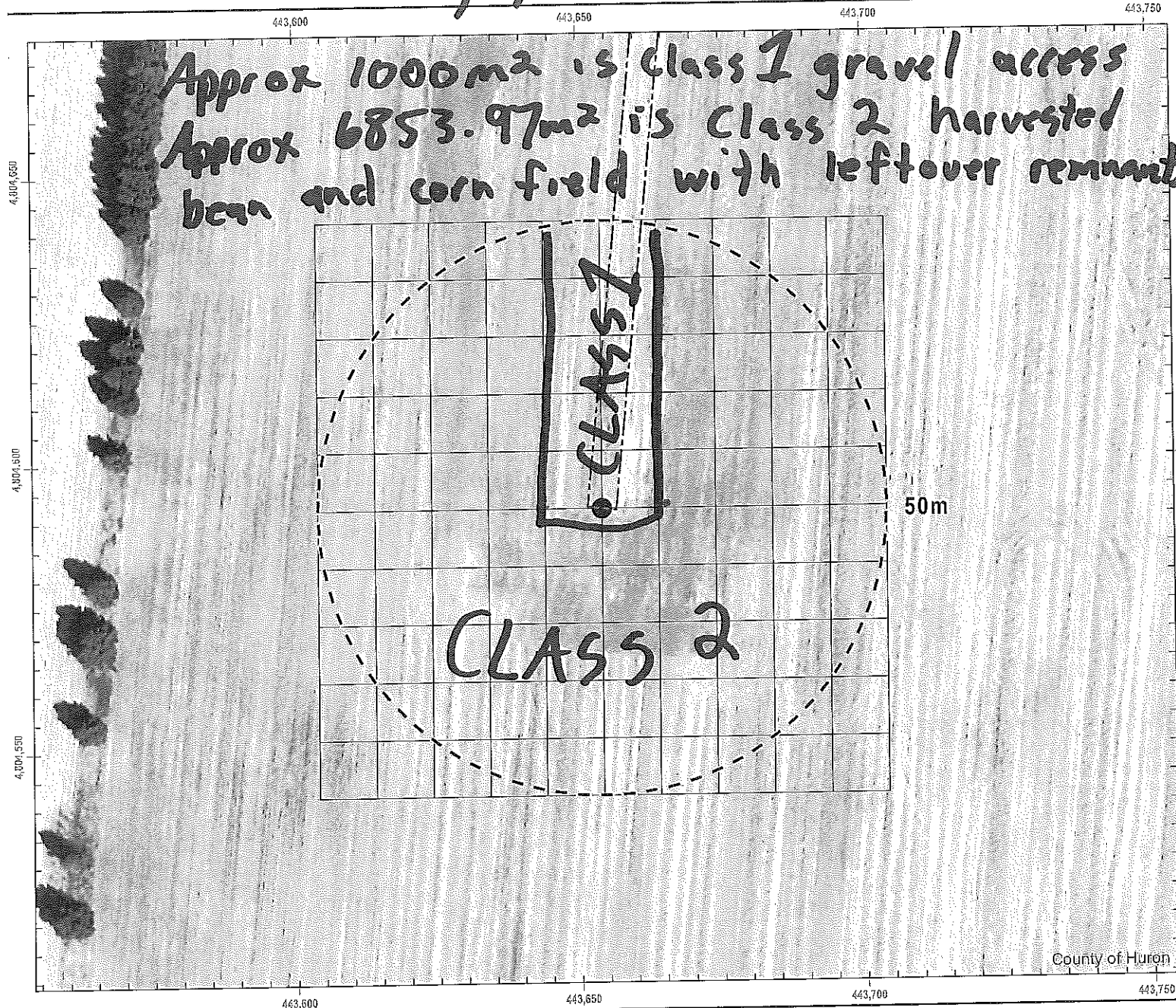
Site Number: T-21

Survey Date: May 3/19

Actual Searched Area (m²): 6853.97m²

(subtract from total search area - 7553.97m²)

Observers: Sara Honey, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-21

Survey Date: May 21 / 19

Actual Searched Area (m²): 7853.97 m²

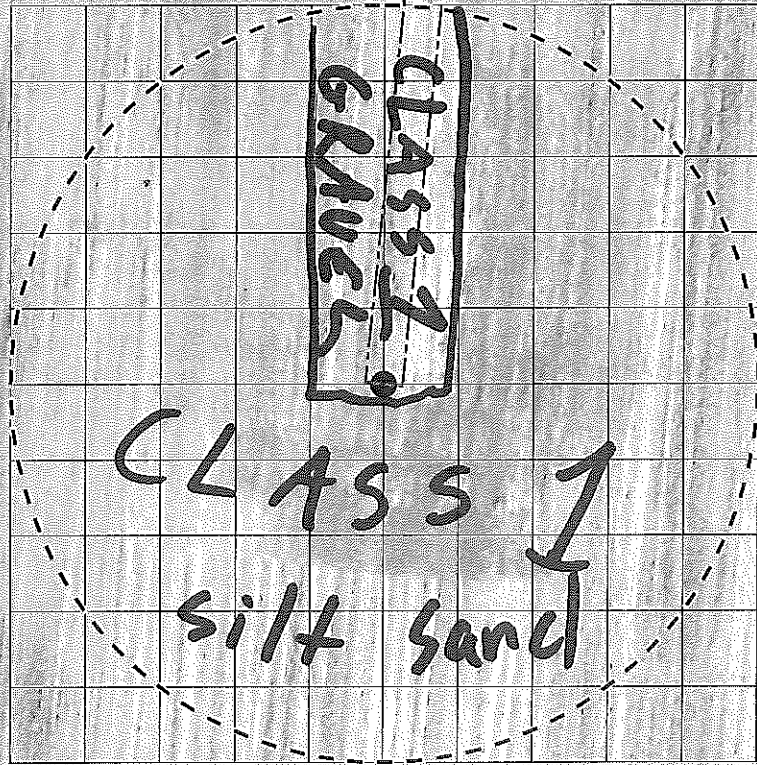
(subtract from total search area - 7853.97m²)

Observers: Sara Henry



443,600 443,650 443,700 443,750

Approx 1000m² is Class 1 gravel access
Approx 6853.97m² is Class 1 sifted silt sand.



County of Huron

443,600 443,650 443,700 443,750

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

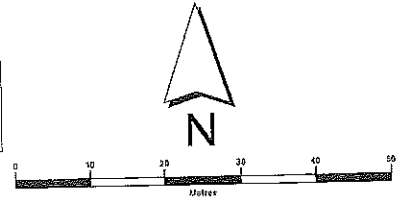
Site Number: T-21

Survey Date: June 18/19

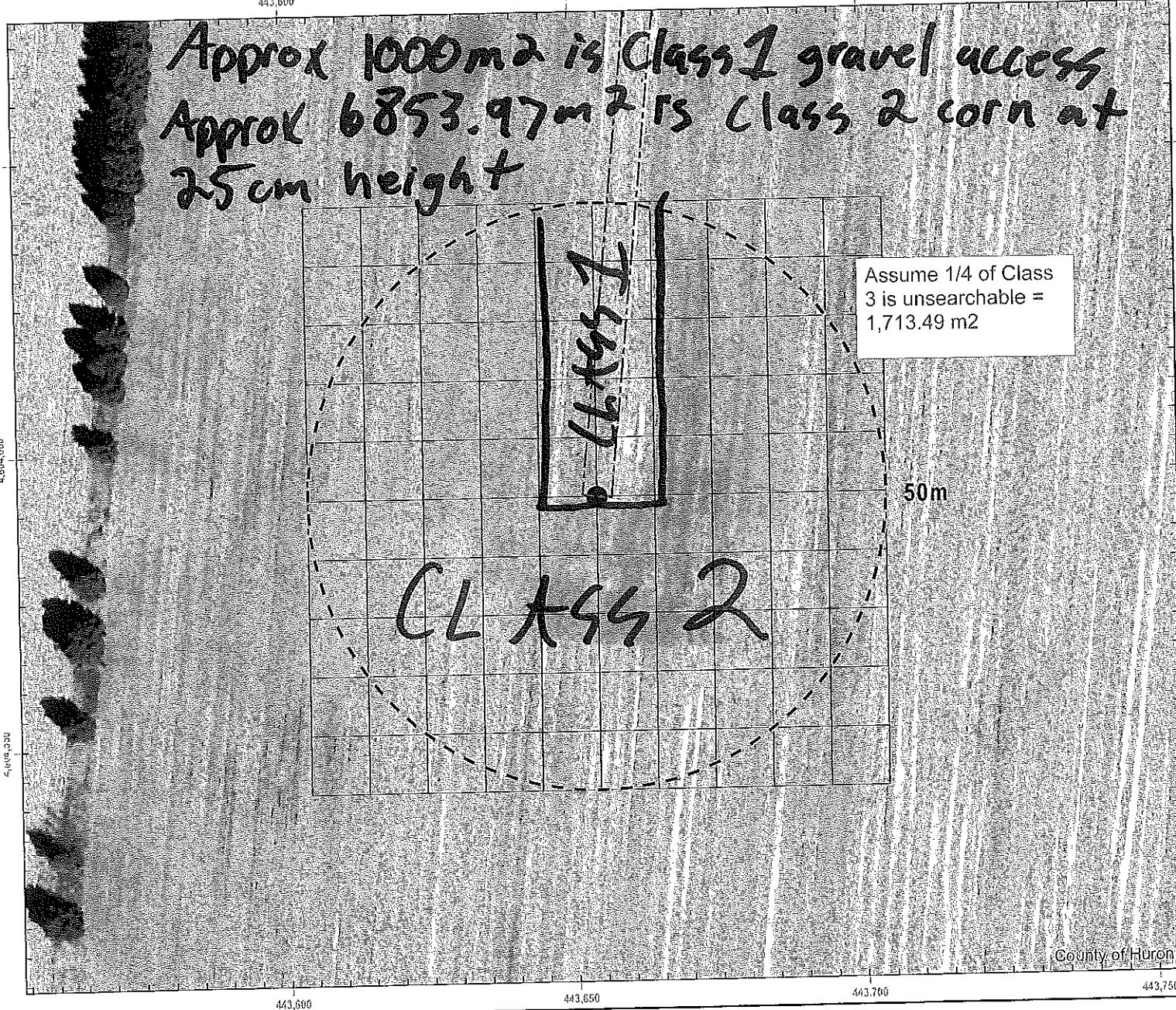
Actual Searched Area (m²): _____
(subtract from total search area - 7853.97m²)

Observers: Sara Henry

6,140.48 m²



443,600 443,650 443,700 443,750



County of Huron

443,600 443,650 443,700 443,750

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

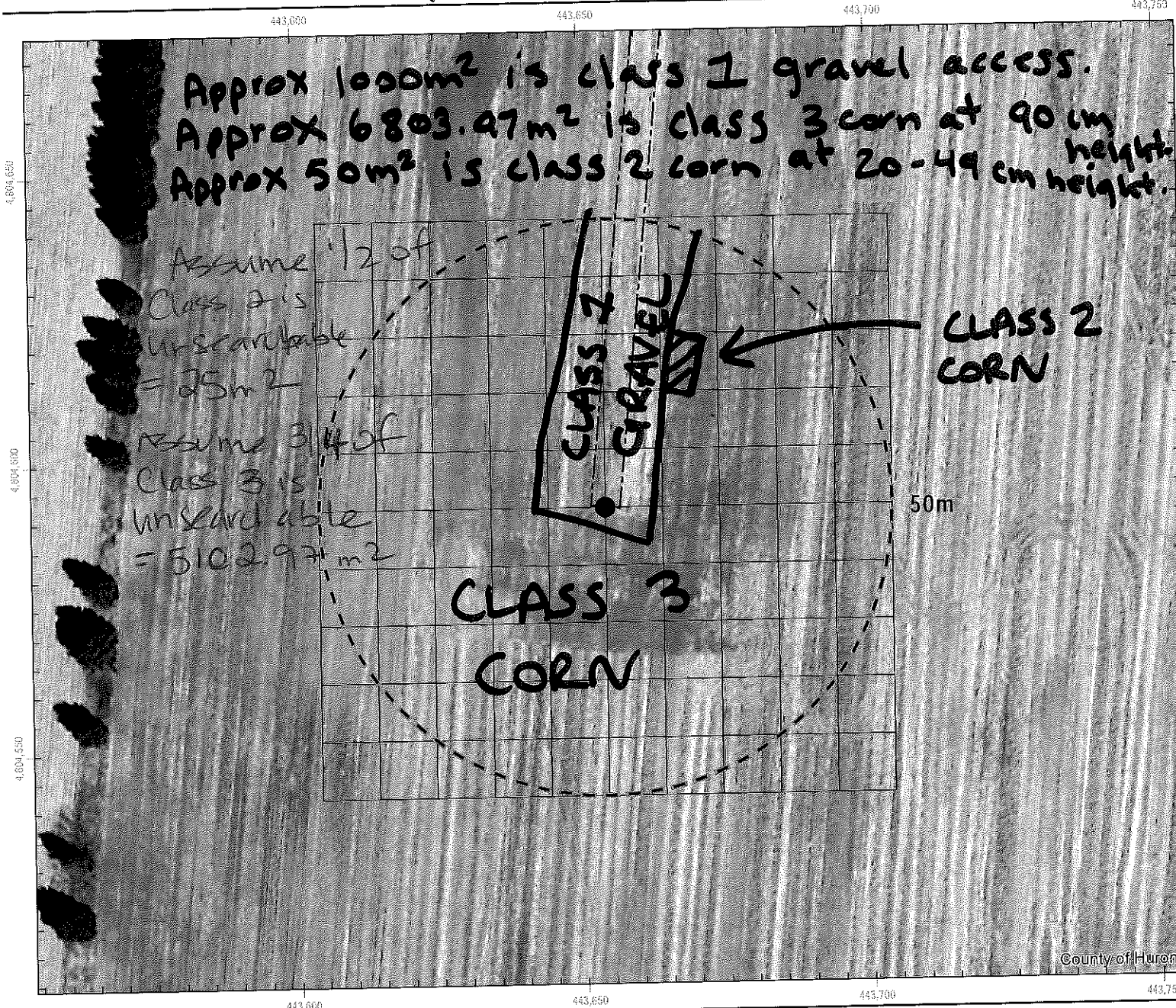
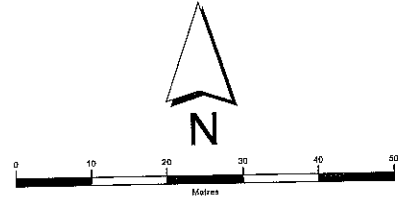
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-21

Survey Date: July 2/19

Actual Searched Area (m²): 2726 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

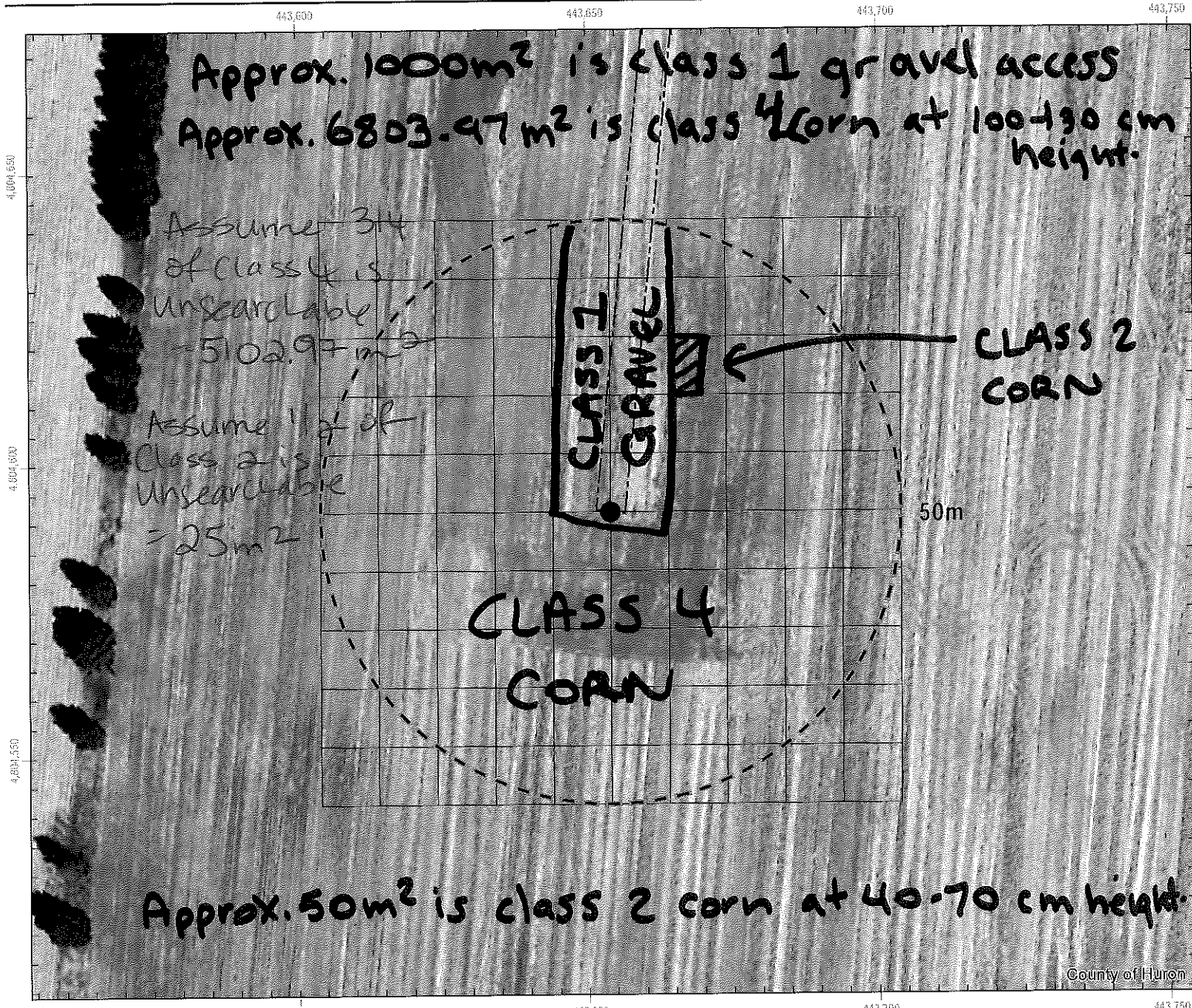
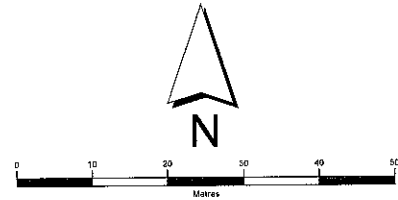


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-21
 Survey Date: July 9/19
 Actual Searched Area (m²): 2726 m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

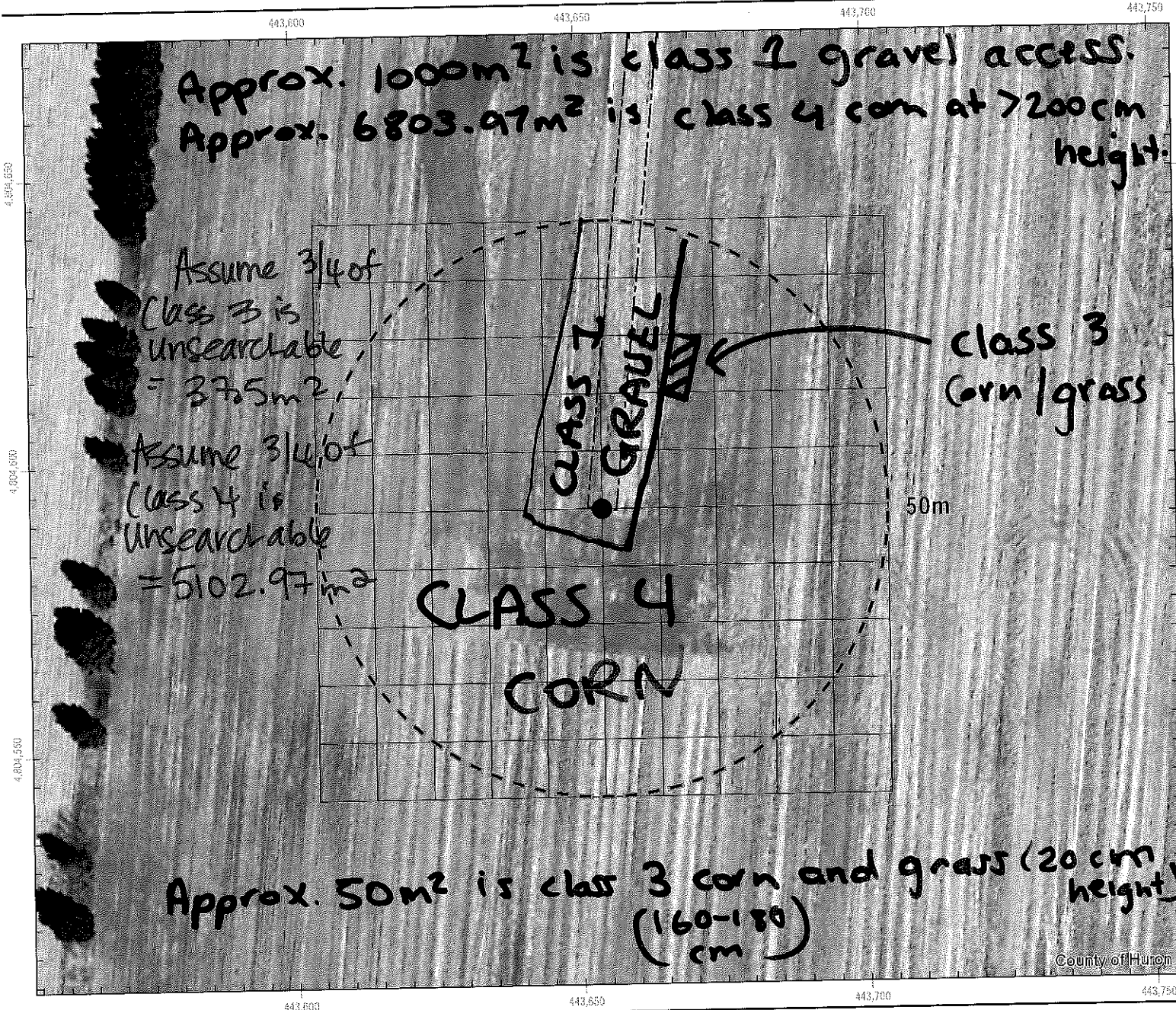
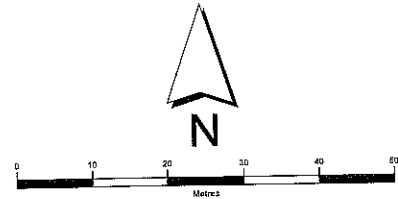


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-21
 Survey Date: Aug 20/19
 Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)



SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

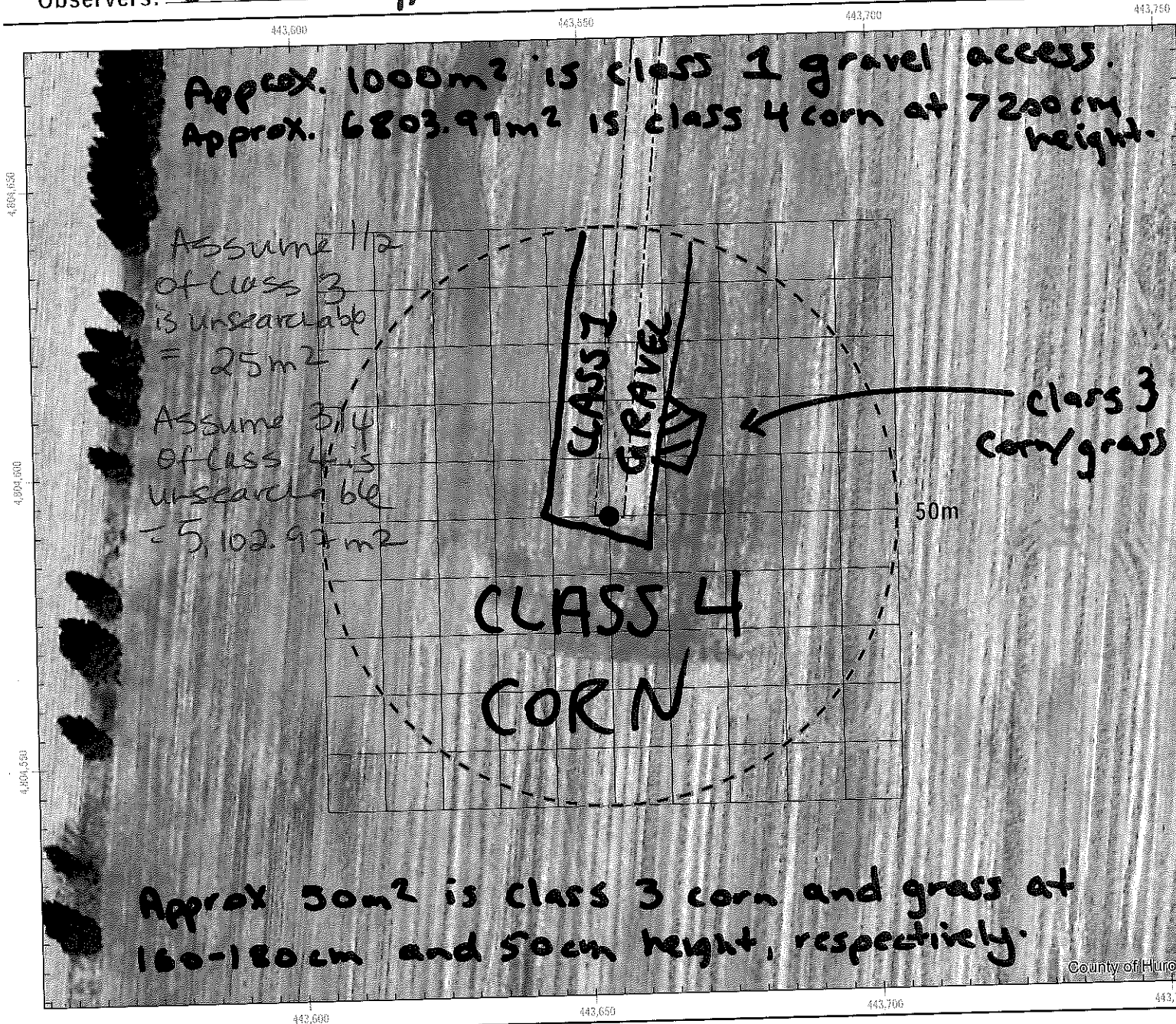
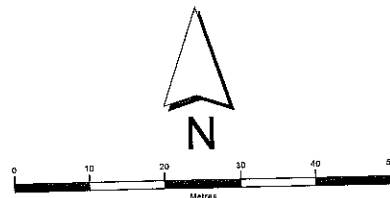
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-21

Survey Date: Sept. 16/19

Actual Searched Area (m²): 2,726.00 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

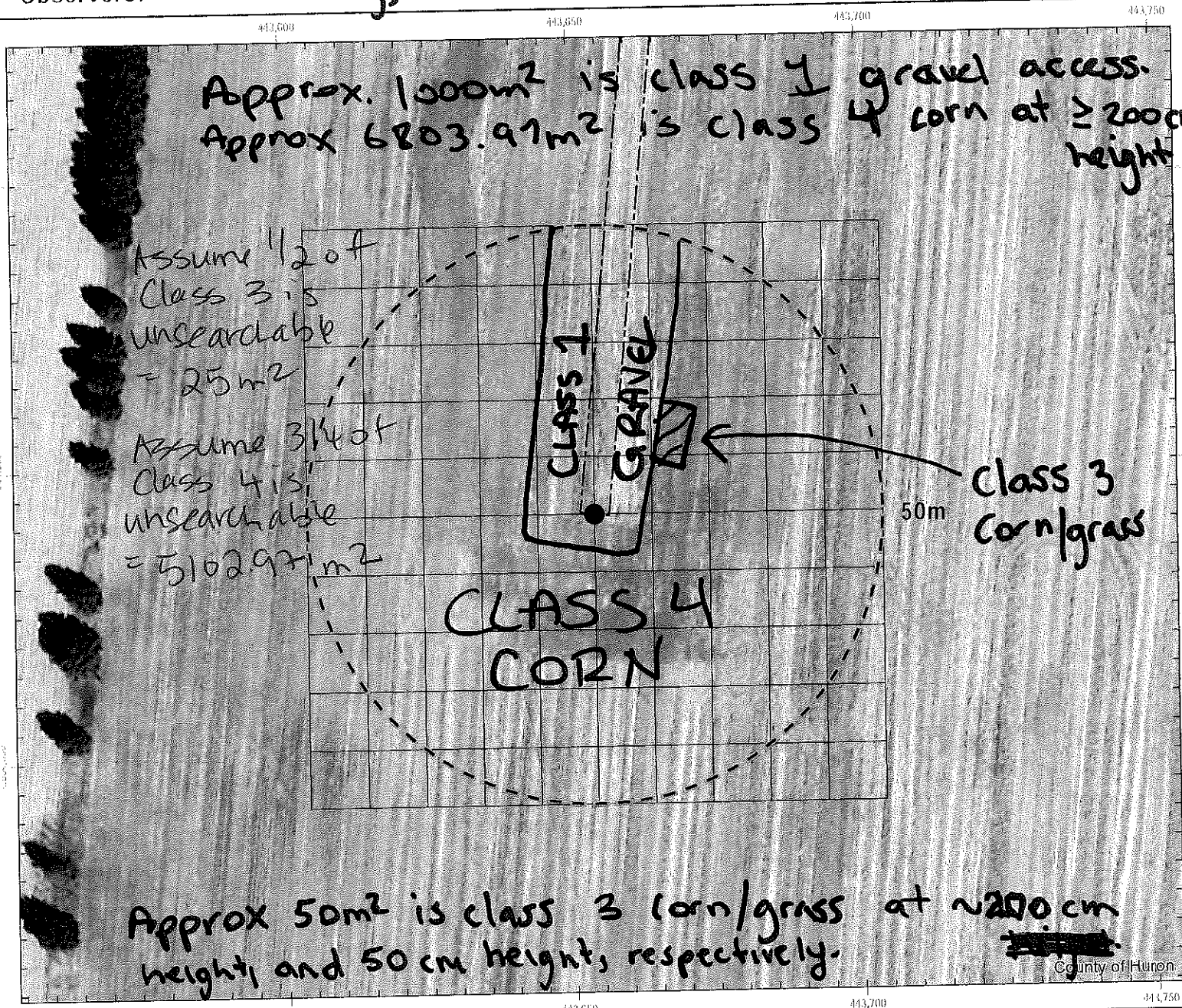
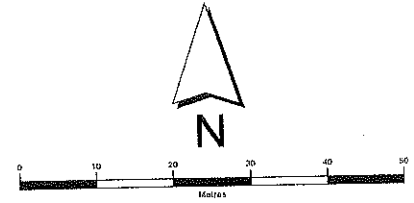


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-21
 Survey Date: Oct/25/19
 Actual Searched Area (m²): 2726.00 m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS

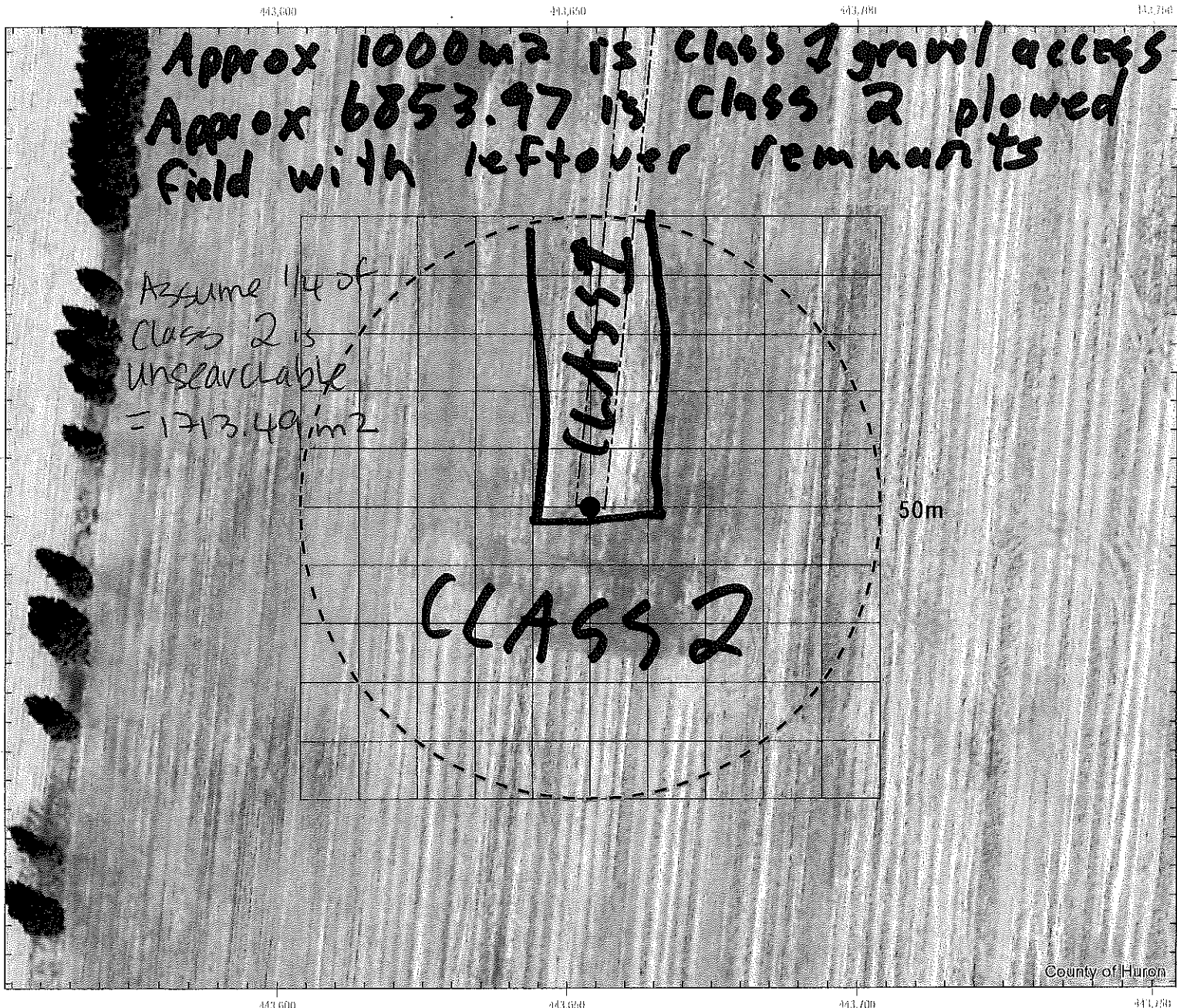
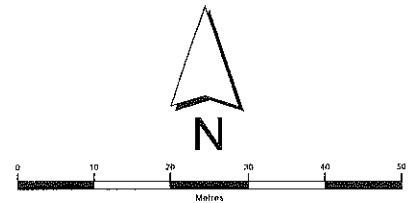


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-21
 Survey Date: Nov 19 / 19
 Actual Searched Area (m²): 6140.48 m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE CELLS

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

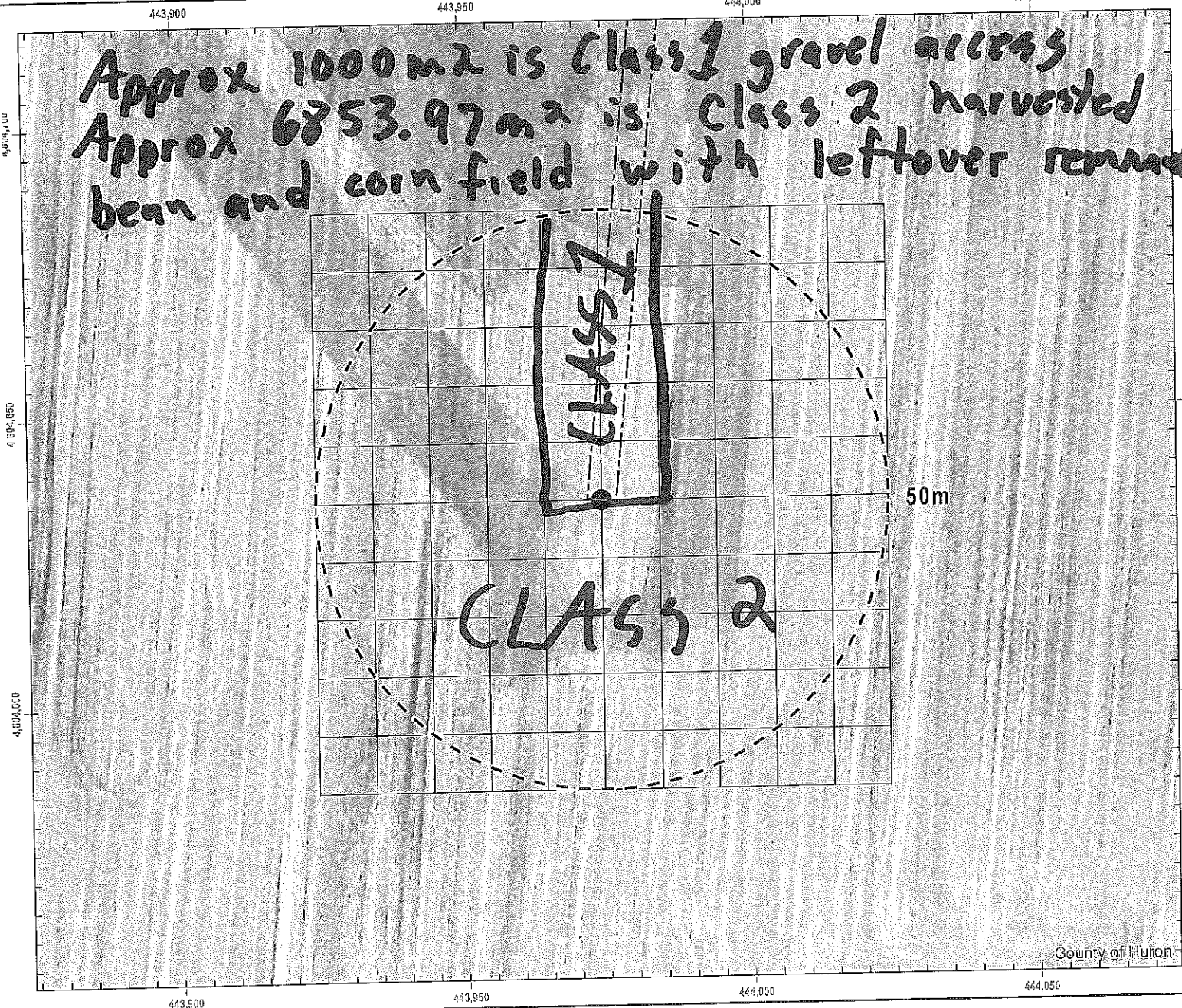
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-22

Survey Date: May 3/19

Actual Searched Area (m²): 7853.97 m²
(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

6,140.48 m²

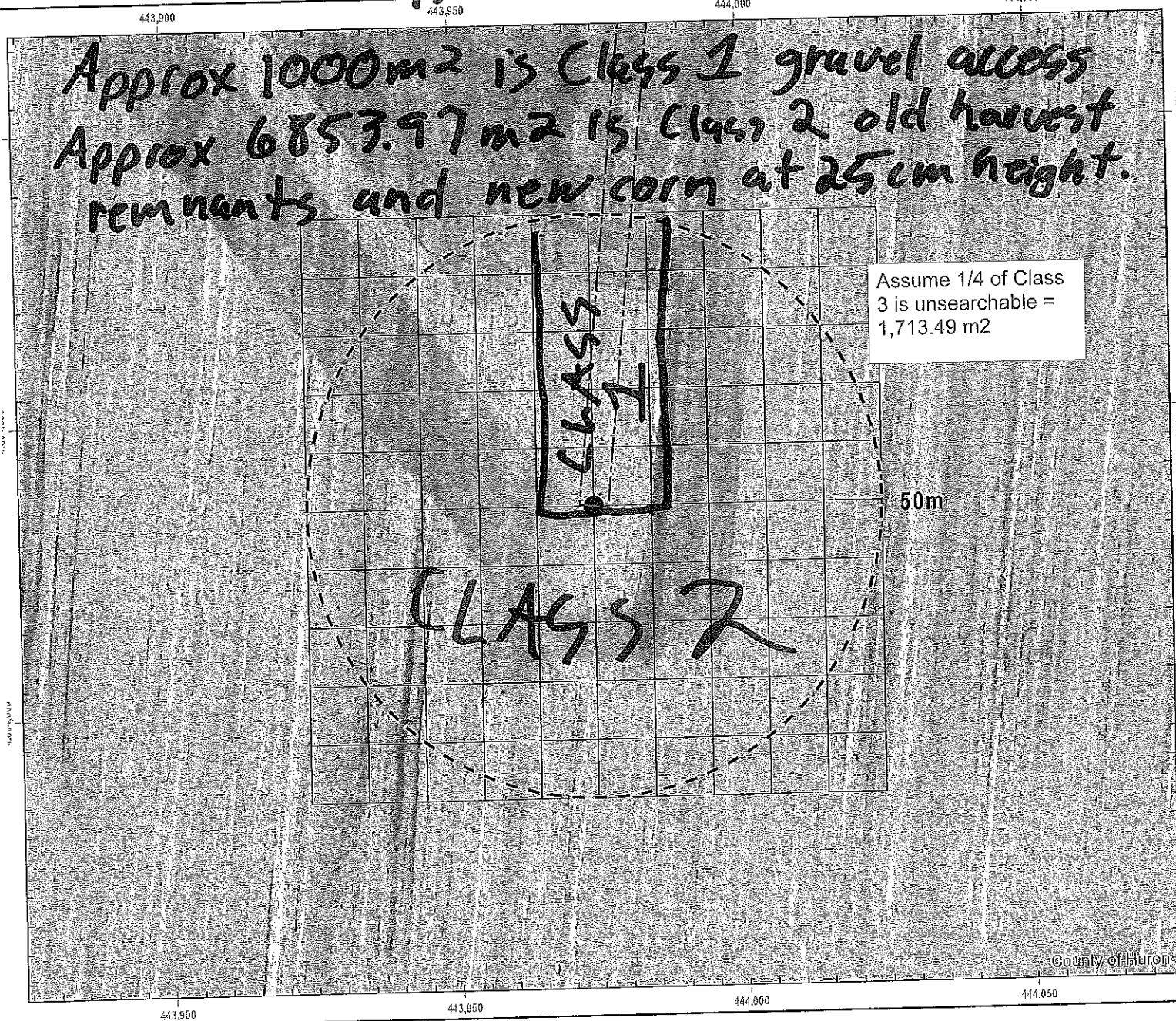
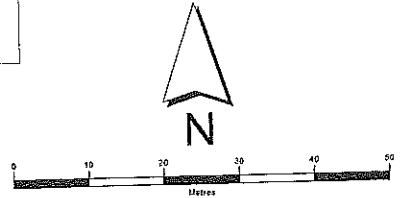
Site Number: T-22

Survey Date: June 18 / 19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

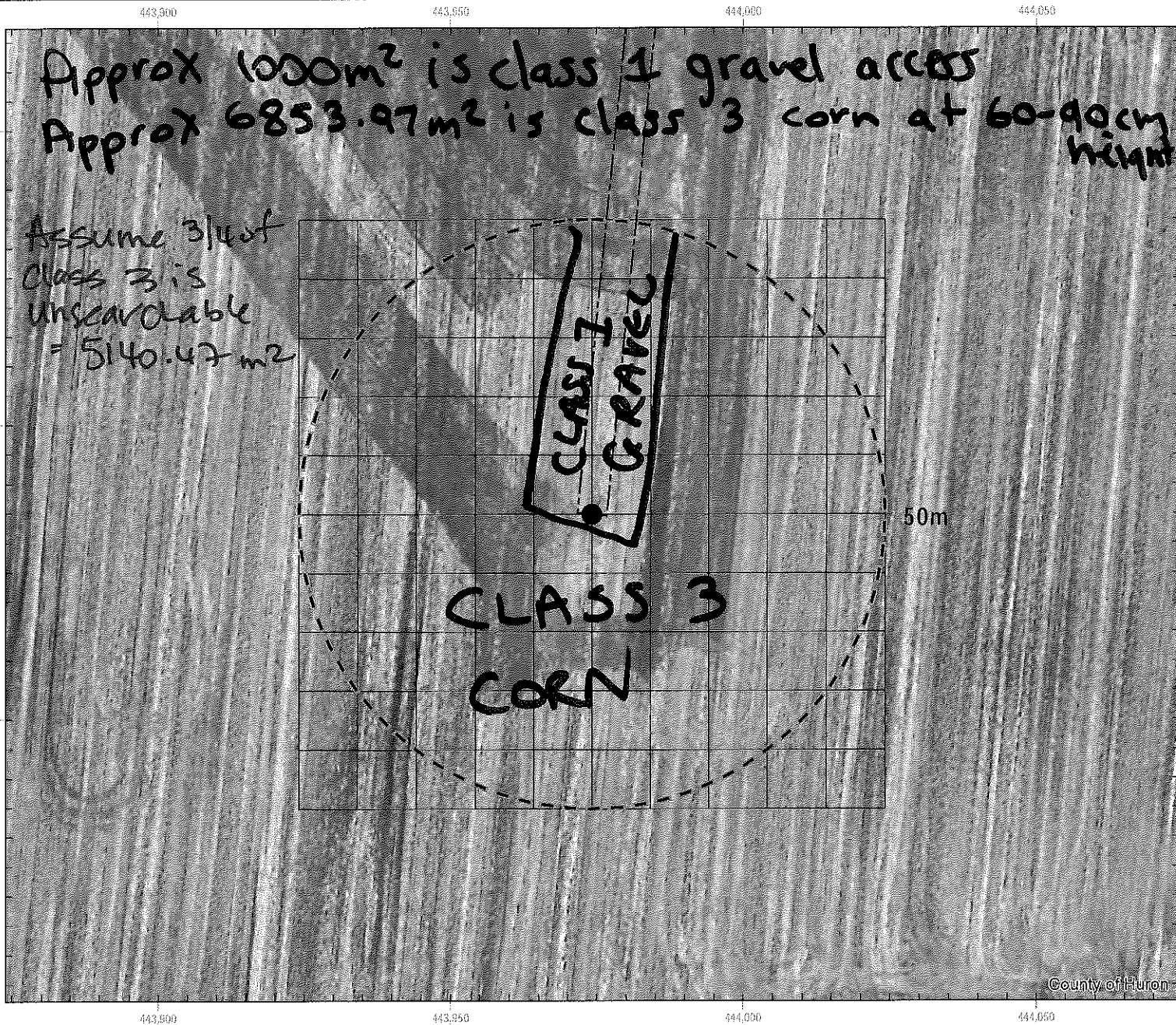
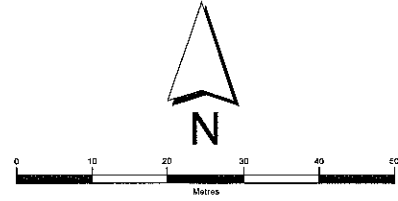
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-22

Survey Date: July 9/19

Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

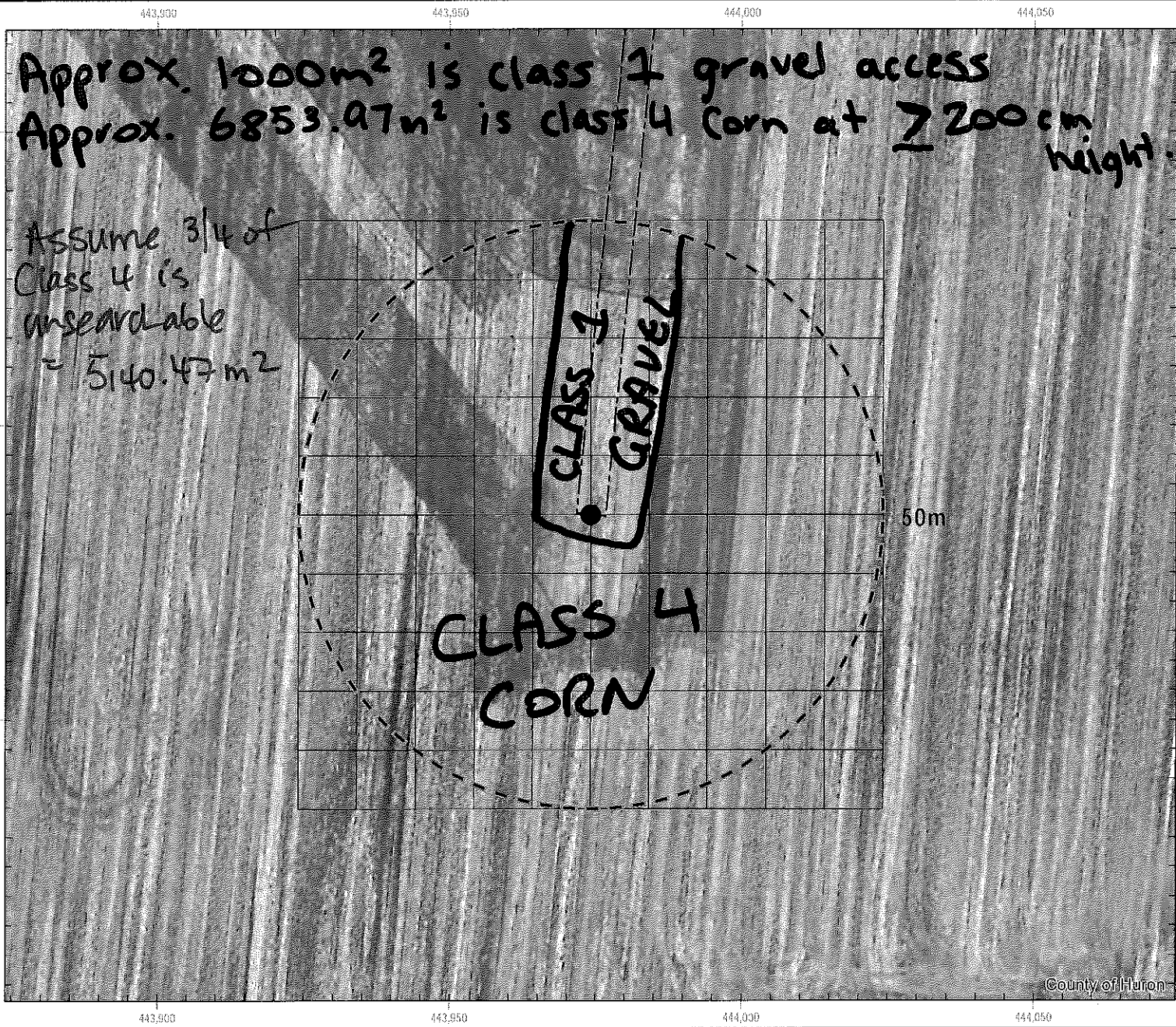
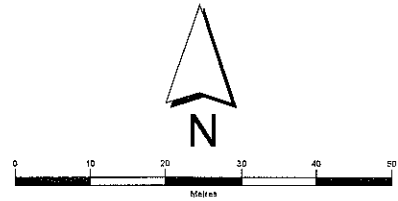
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-22

Survey Date: Aug. 20/19

Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

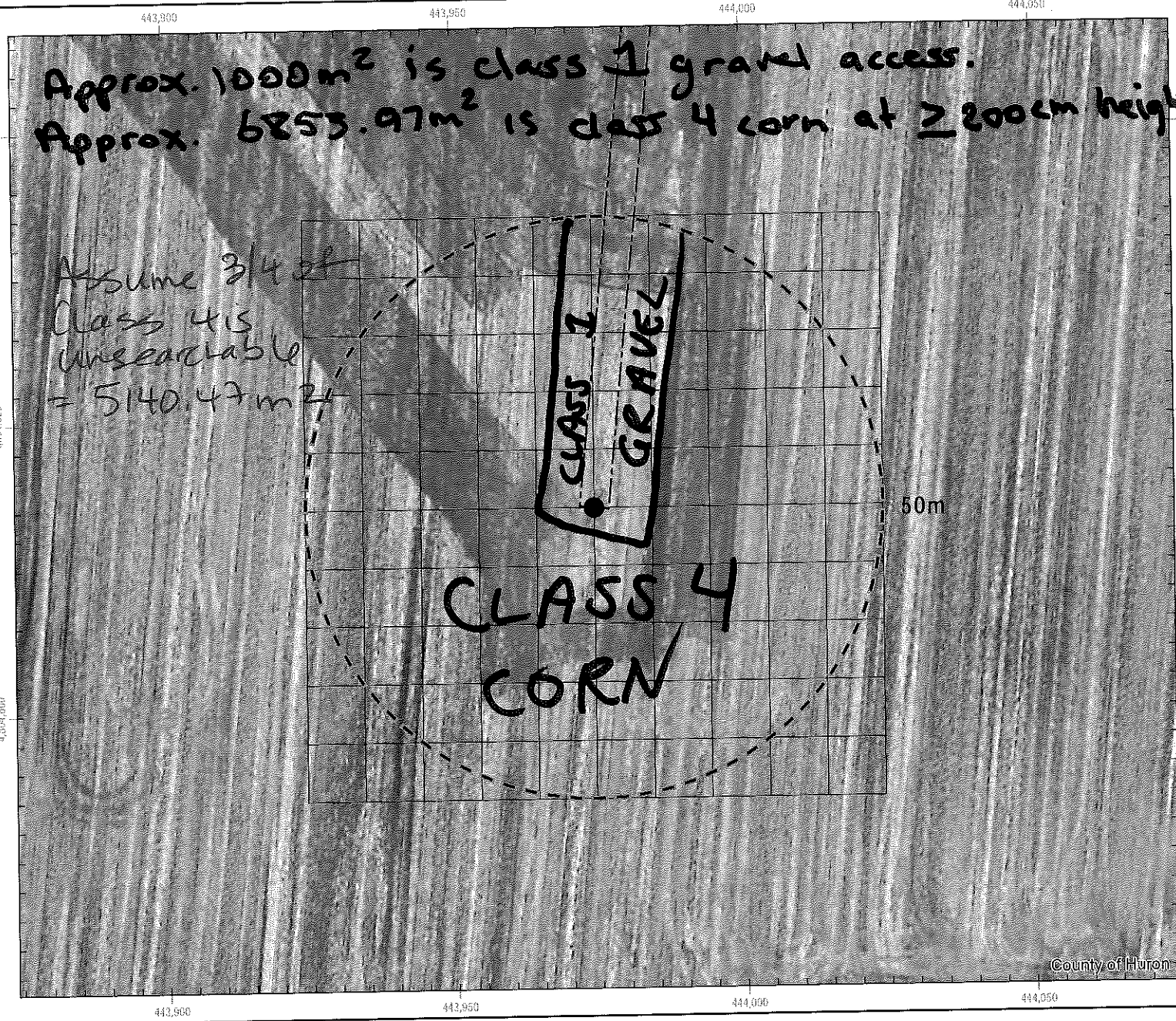
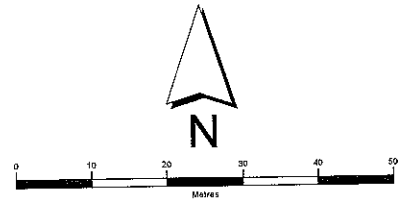
SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-22
 Survey Date: Sept. 16/19
 Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

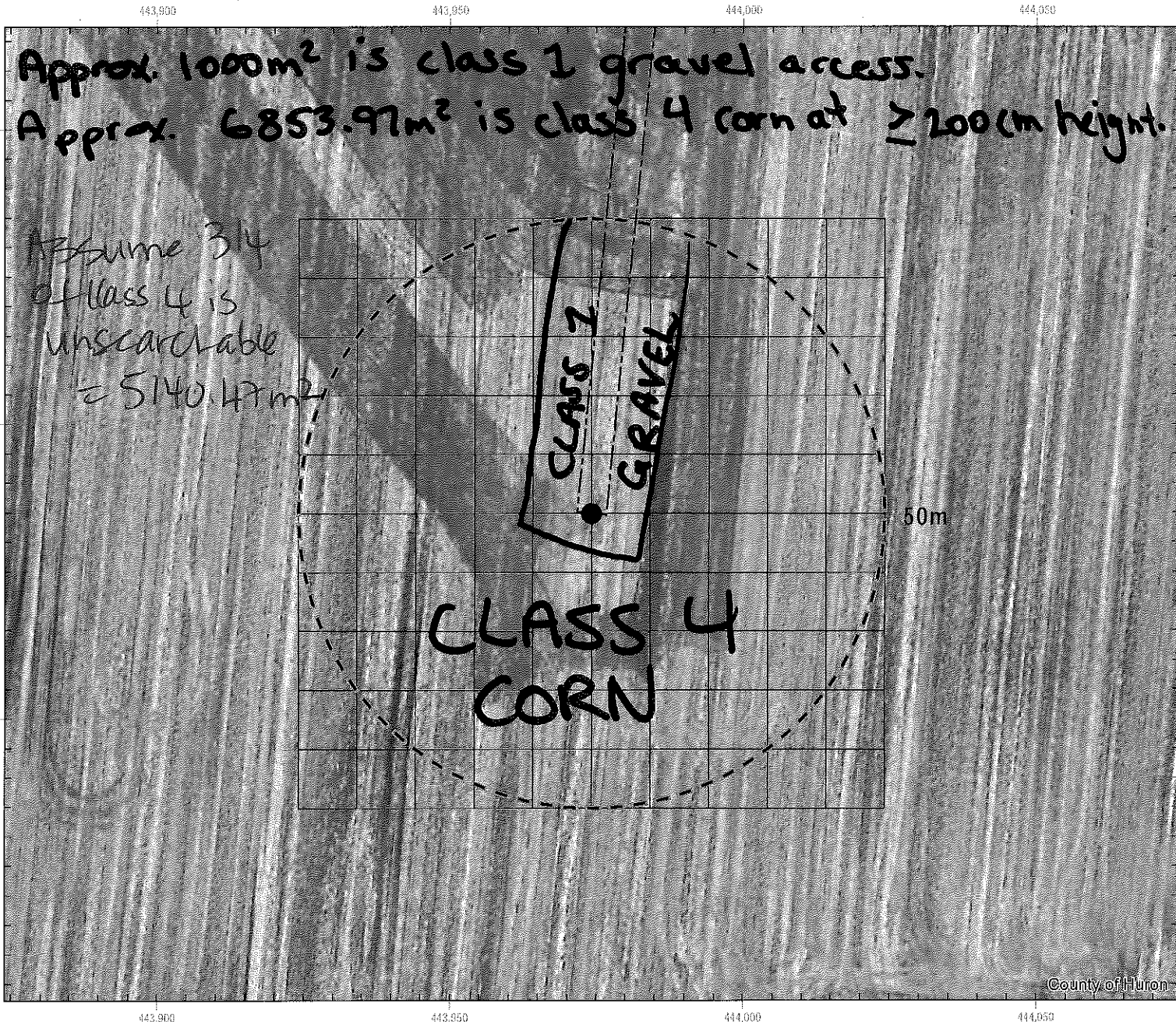
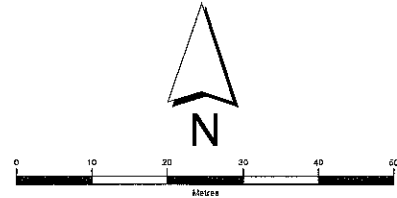
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-22

Survey Date: Oct/25/19

Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

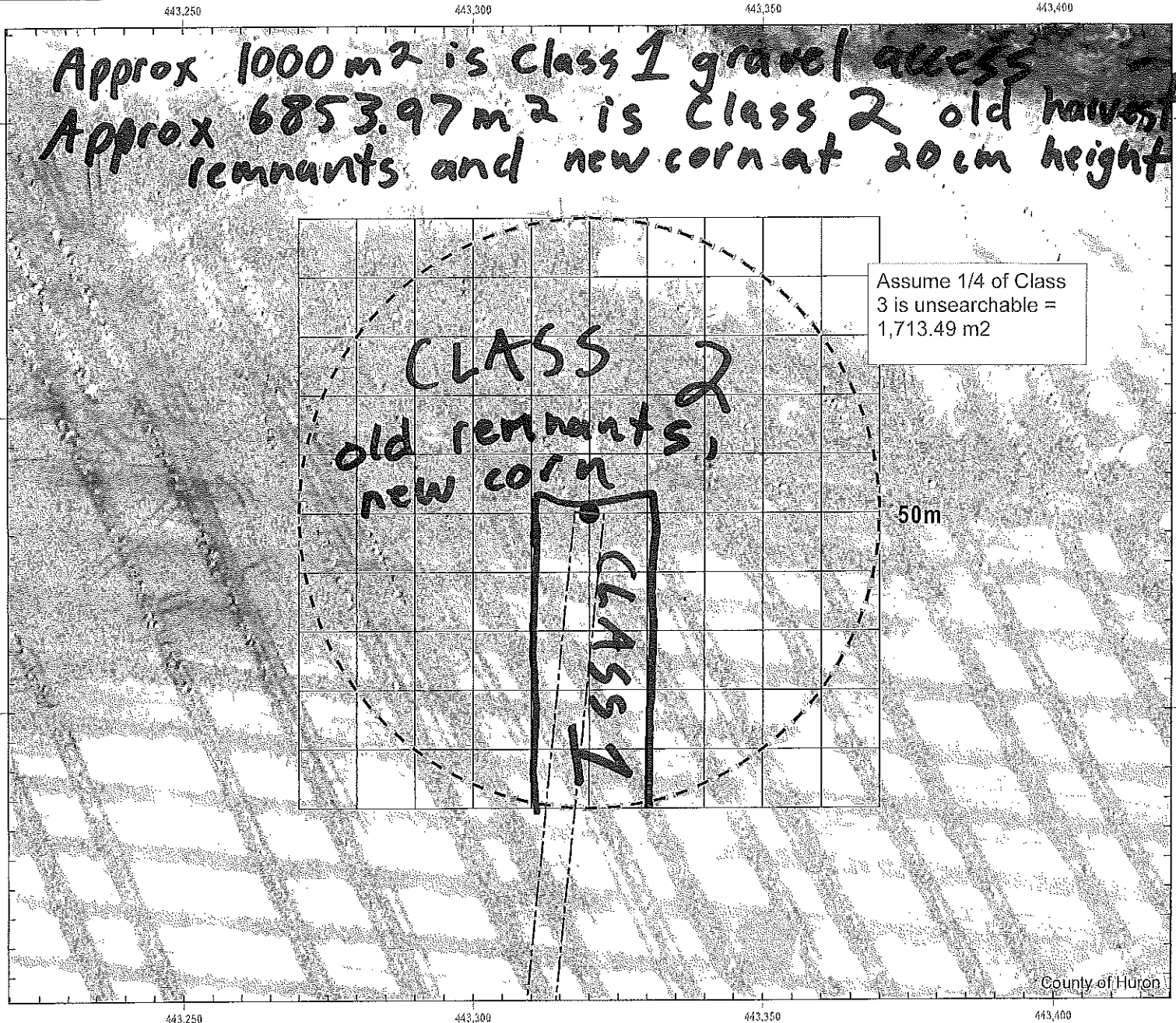
WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-23
 Survey Date: June 19/19
 Actual Searched Area (m²): _____
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sarah Jackson

6,140.48 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

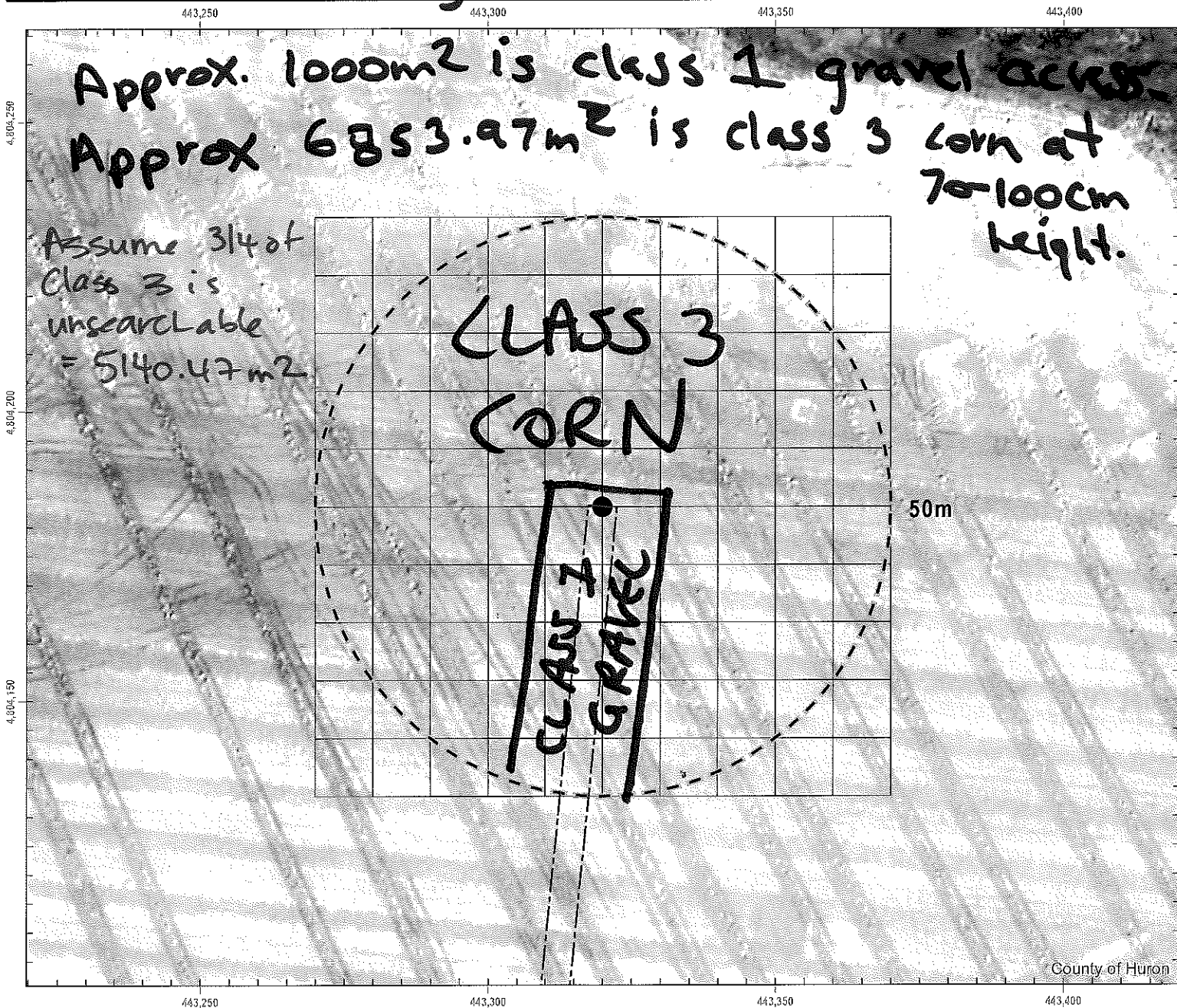
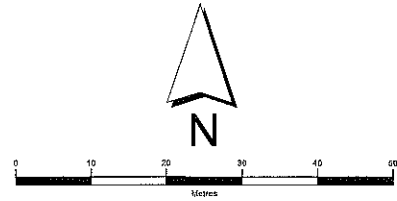
Site Number: T-23

Survey Date: July 17/19

Actual Searched Area (m²): 2213.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

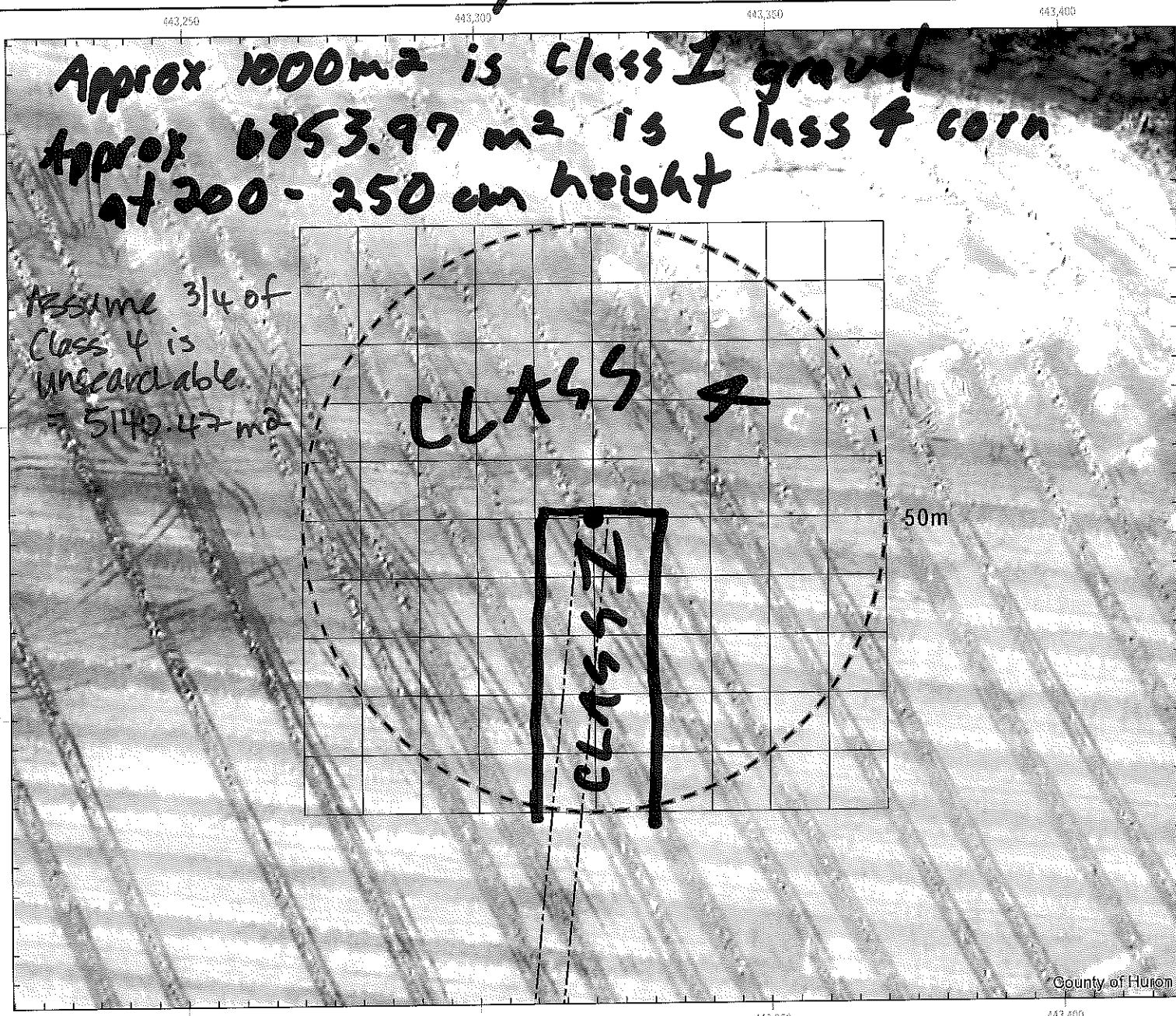
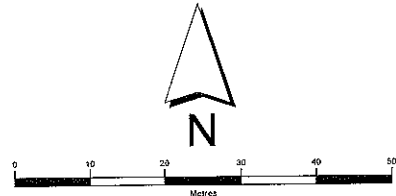
SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-23
 Survey Date: Aug 21/19
 Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97 m²)
 Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

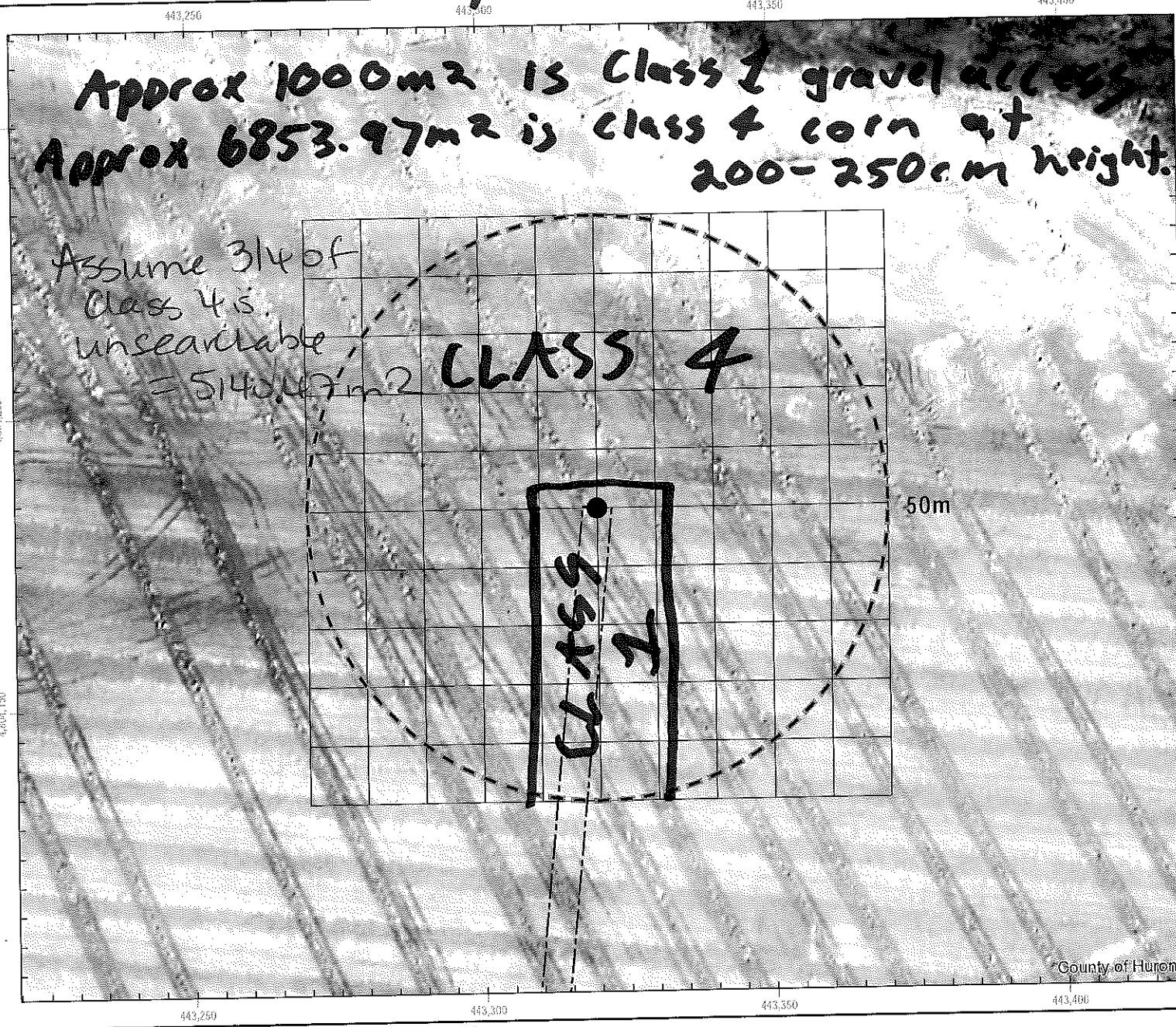
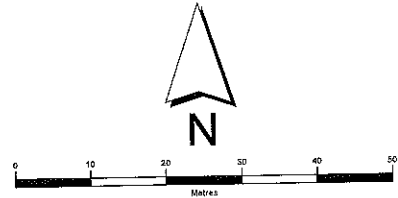
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-23

Survey Date: Sept 18/19

Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



County of Huron

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

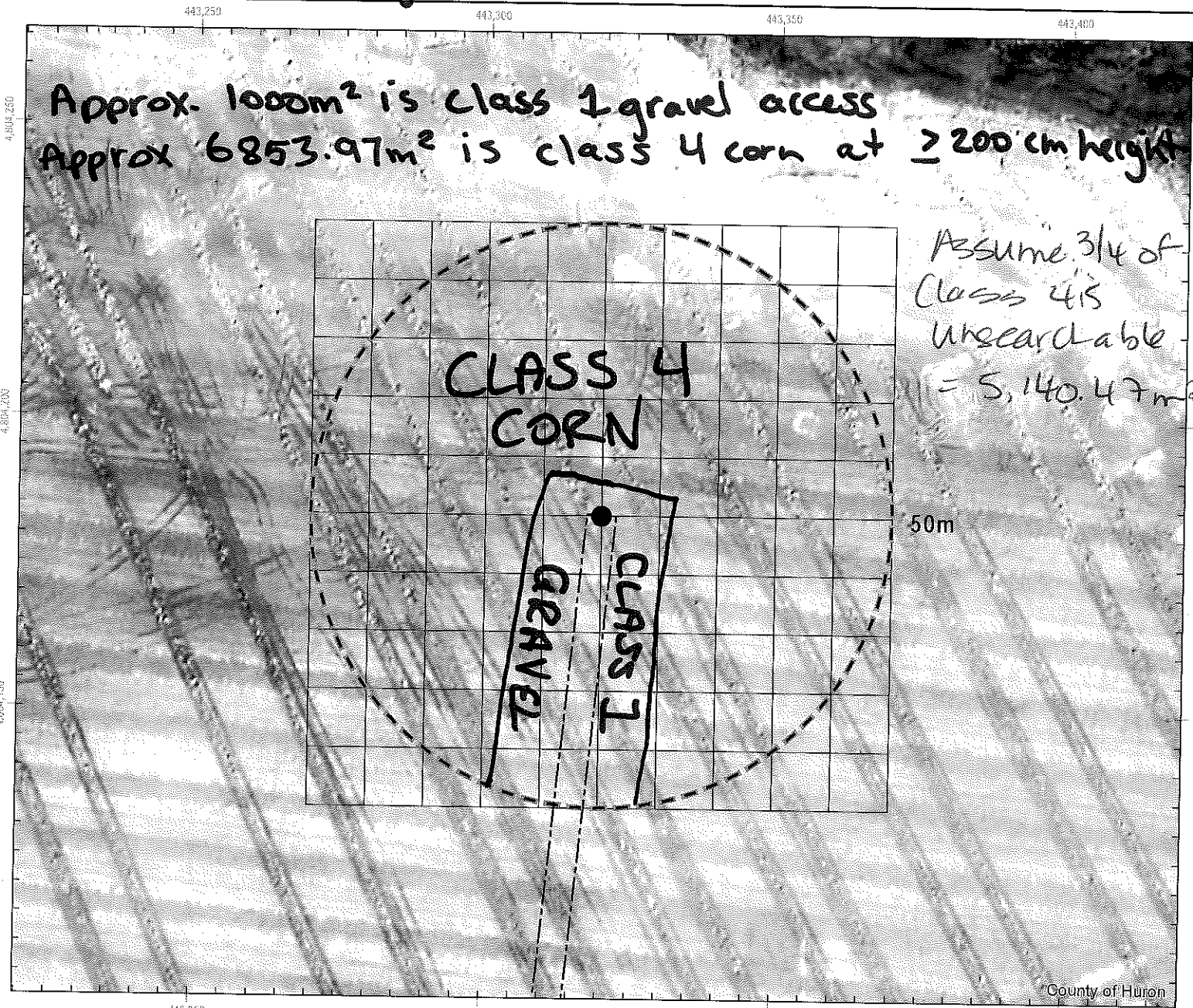
Site Number: T-23

Survey Date: Oct 23/19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

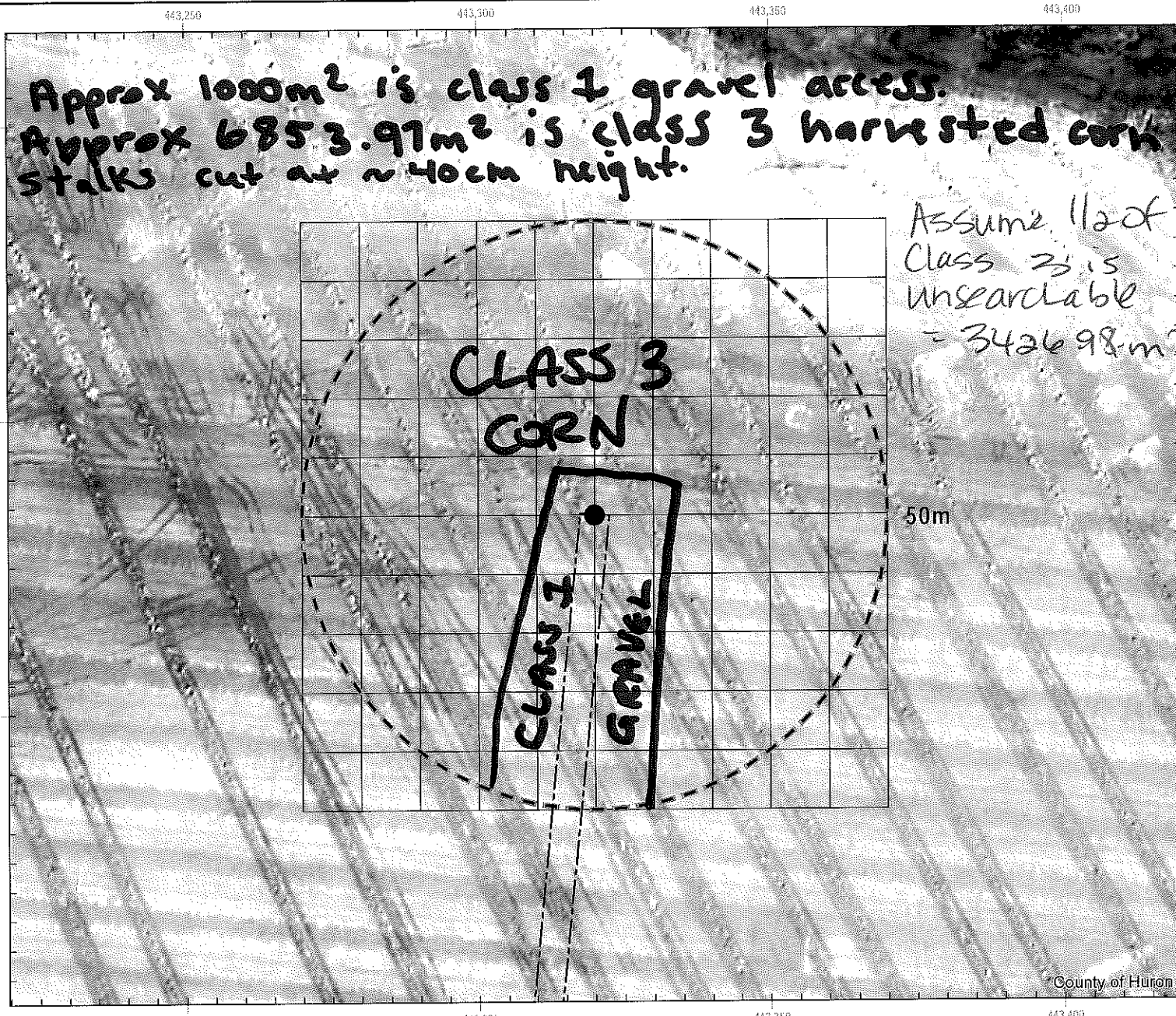
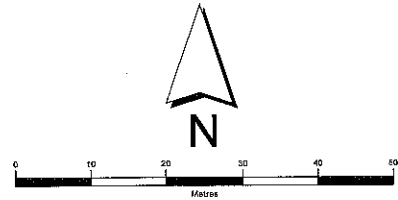


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-23
 Survey Date: Nov 22/19
 Actual Searched Area (m²): 4,426.99 m²
 (subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



County of Huron

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

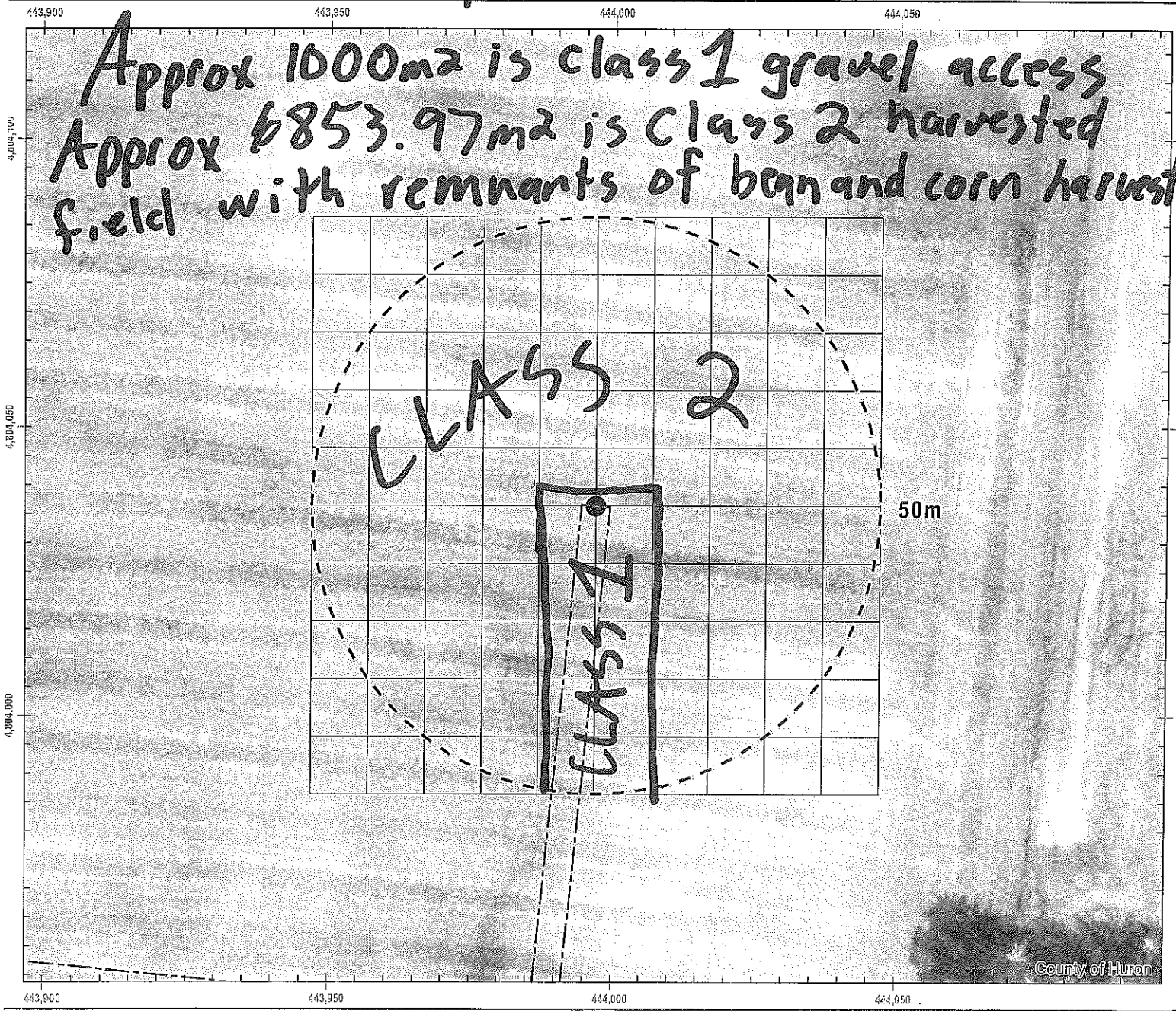
Site Number: T-25

Survey Date: May 3/19

Actual Searched Area (m²): No search, for pics only 7853.97m²

(subtract from total search area: 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



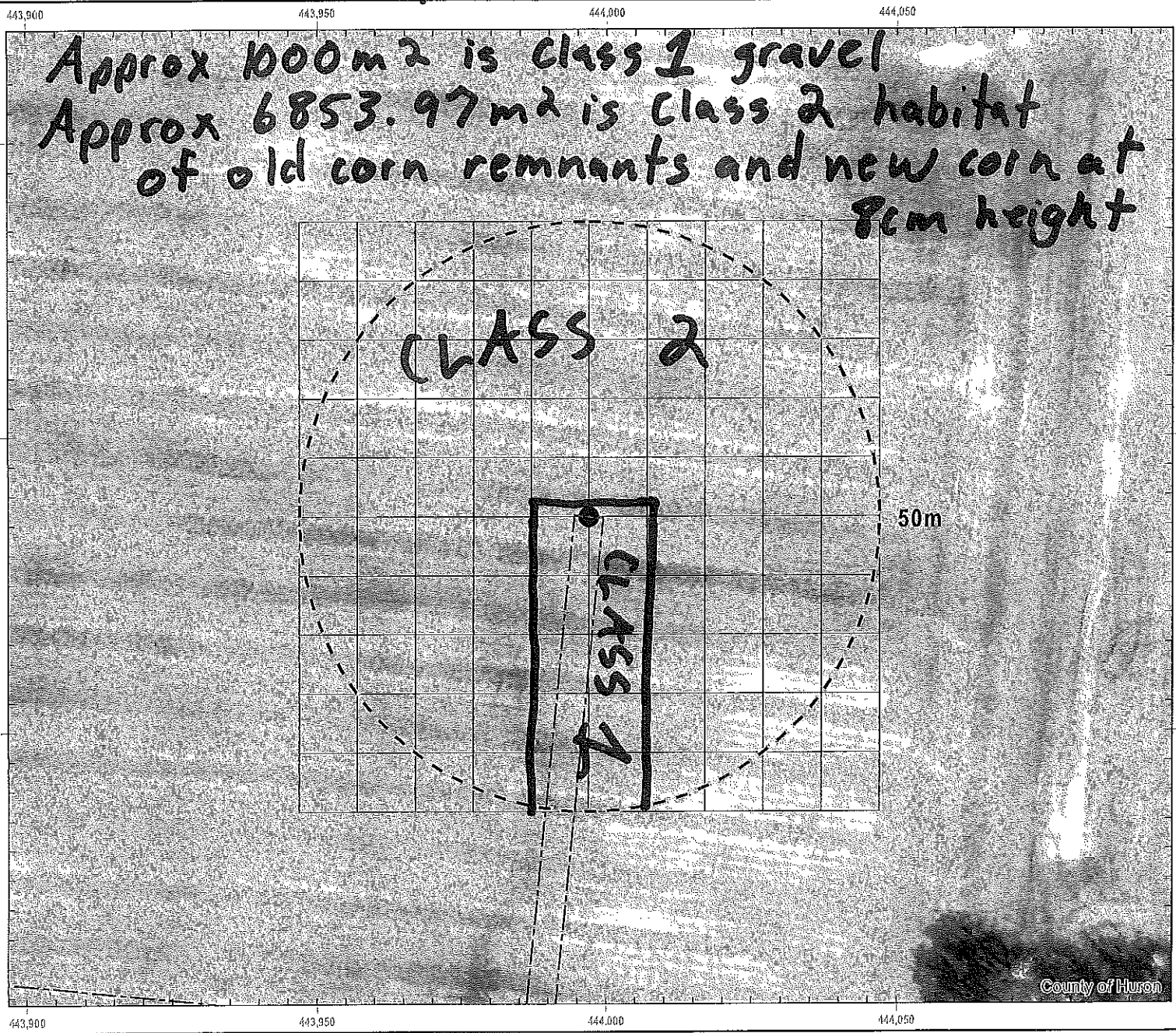
WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-25
 Survey Date: June 19/19
 Actual Searched Area (m²): _____
 (subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sarah Jackson

7853.97 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



County of Huron

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

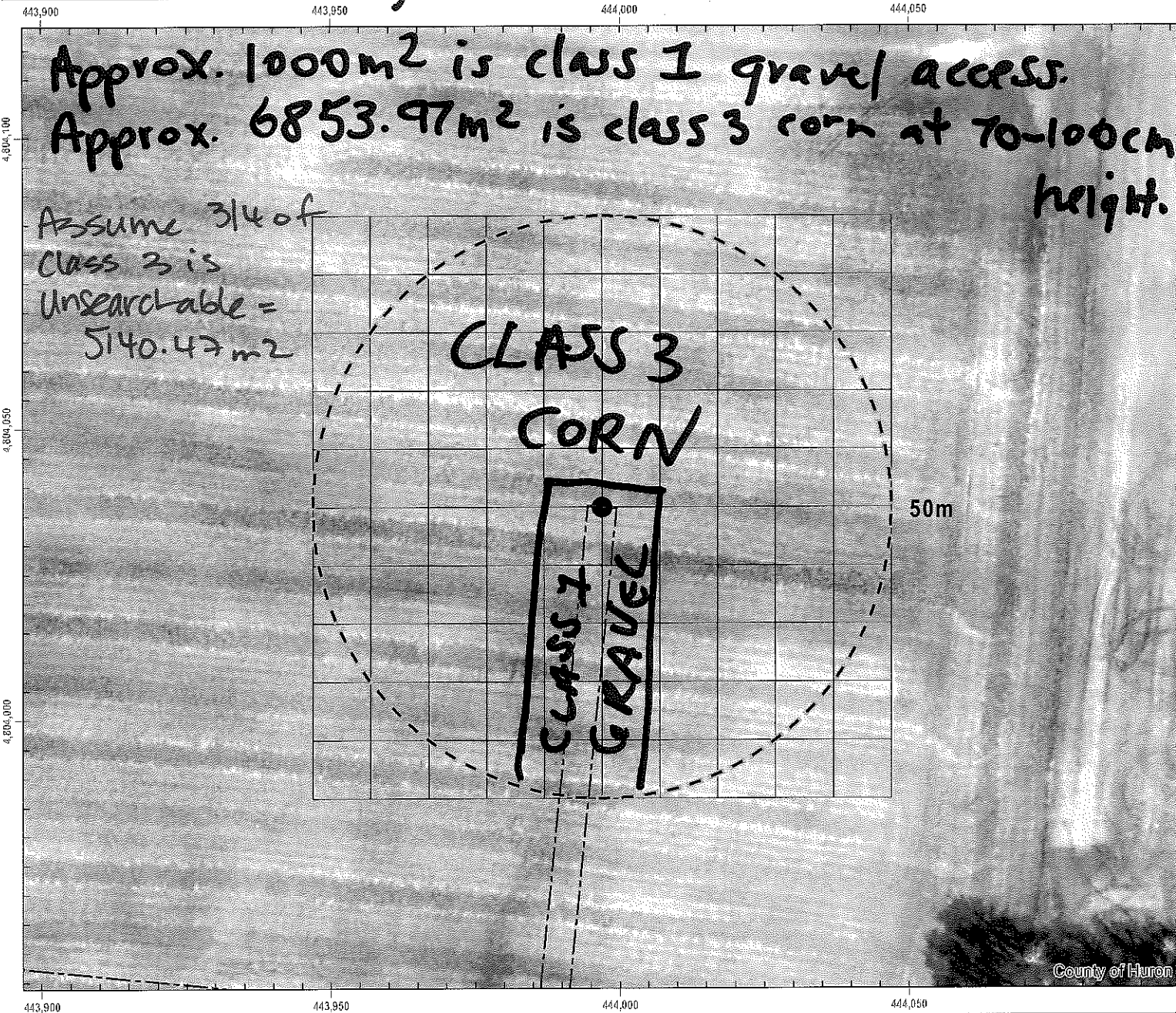
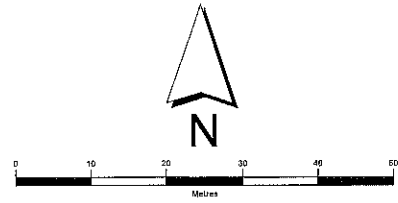
Site Number: T-25

Survey Date: July 17/19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

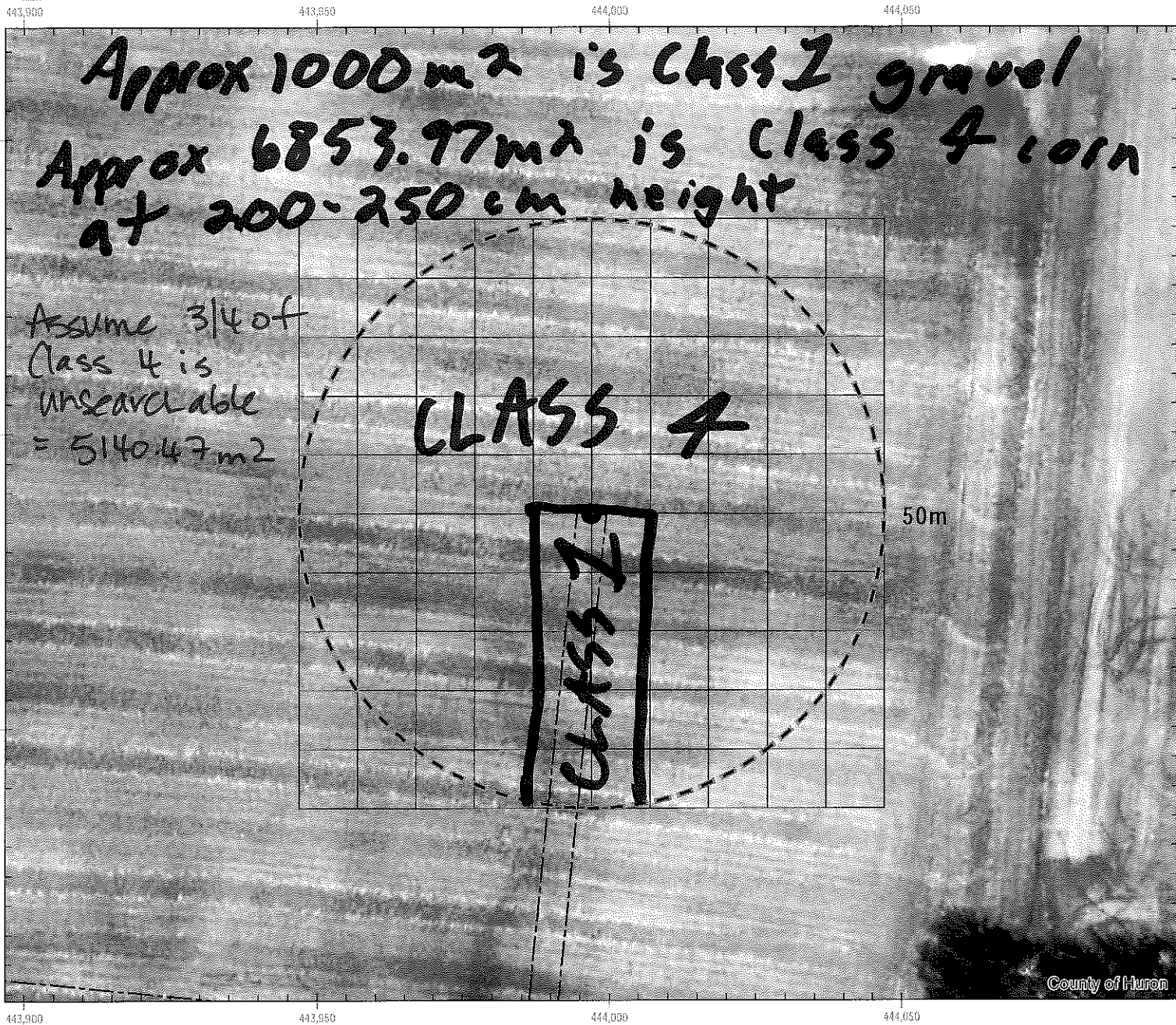
Site Number: T-25

Survey Date: Aug 21 / 19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

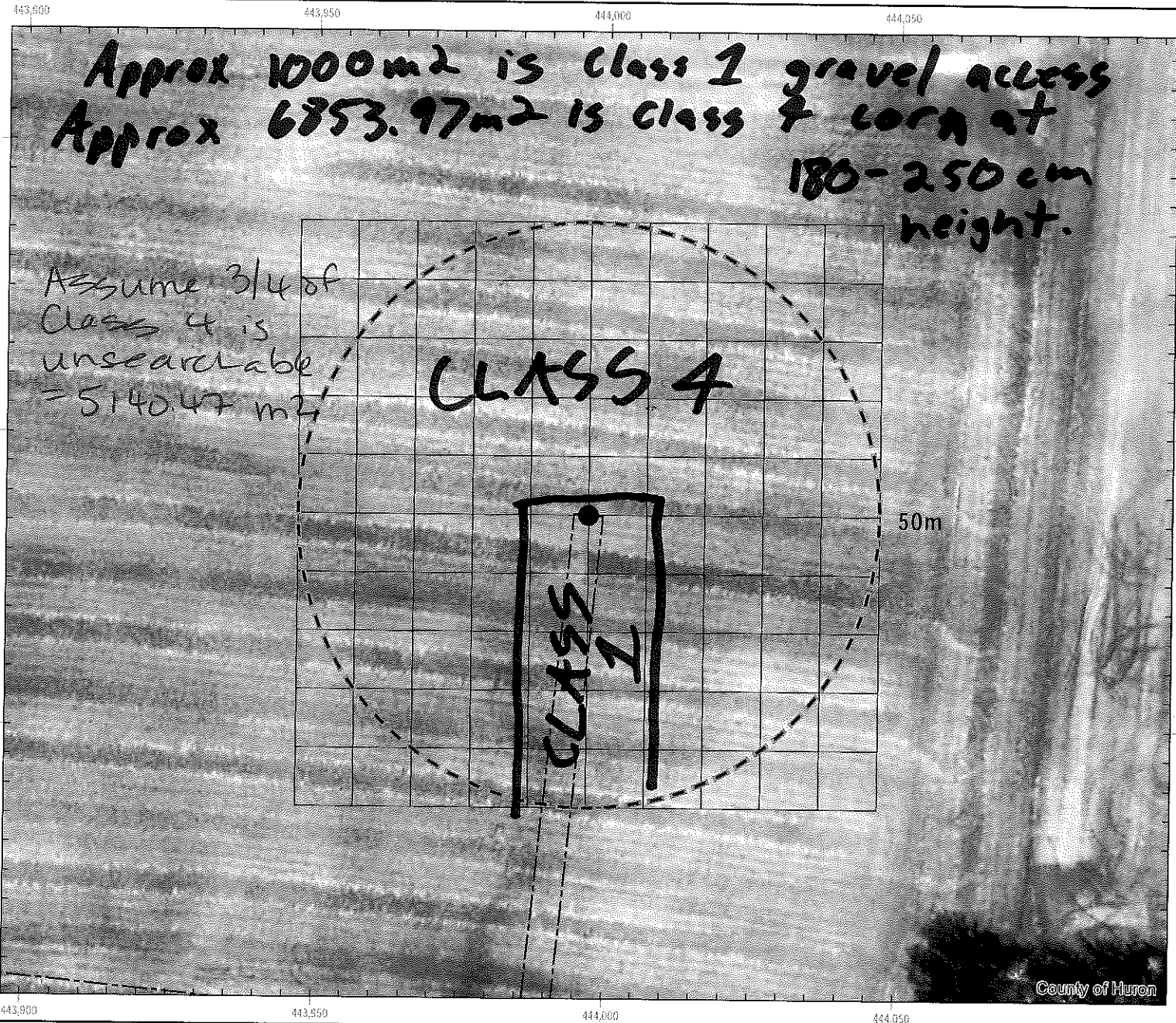
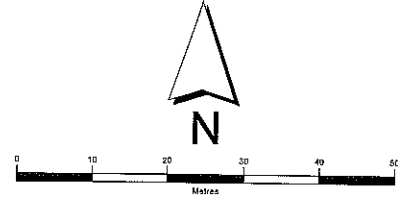
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-25

Survey Date: Sept 18/19

Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

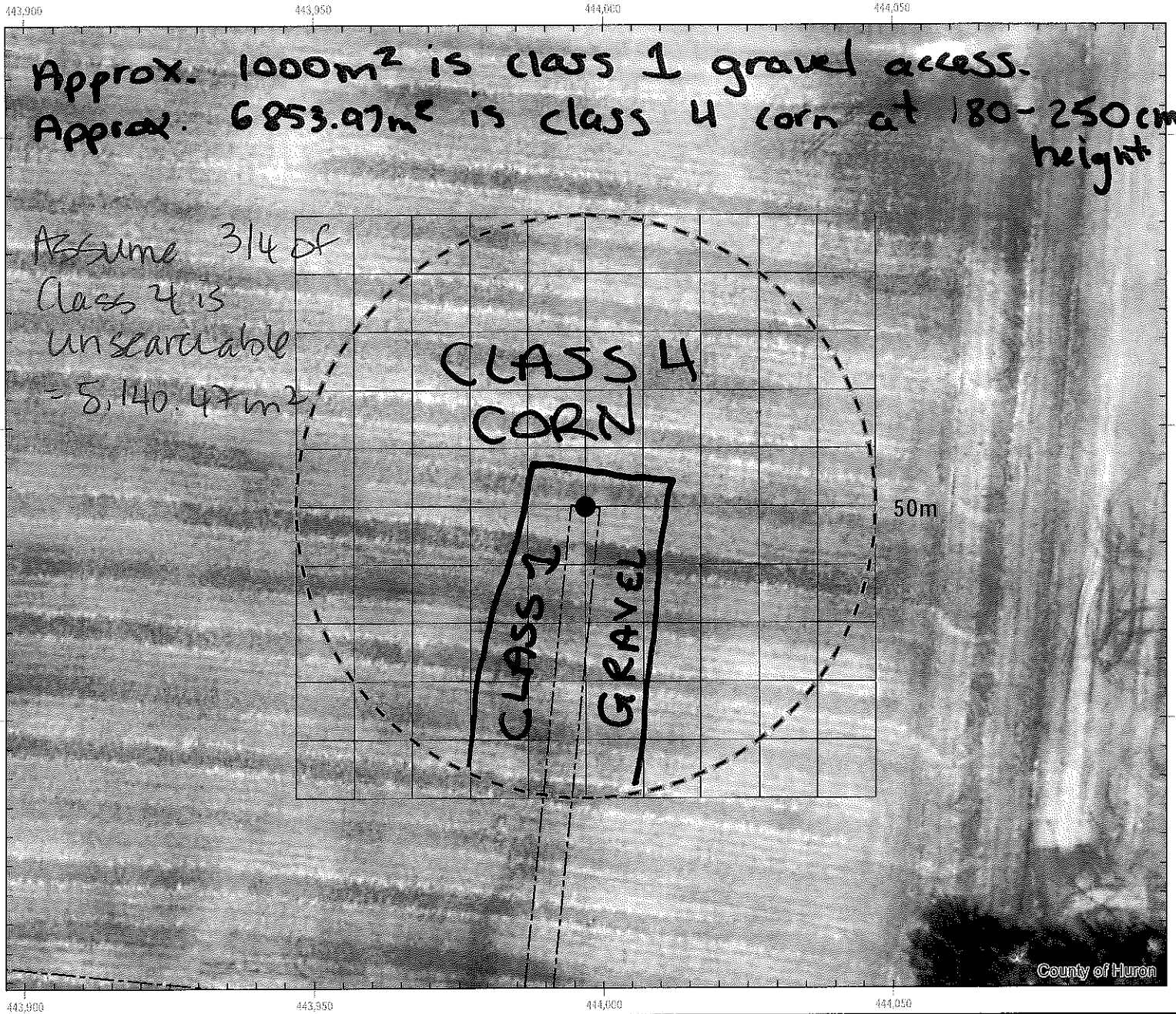
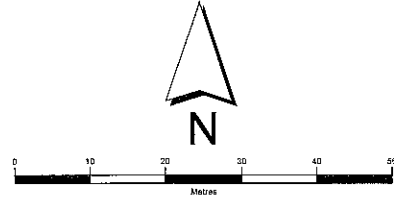
Site Number: T-25

Survey Date: Oct 23/19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

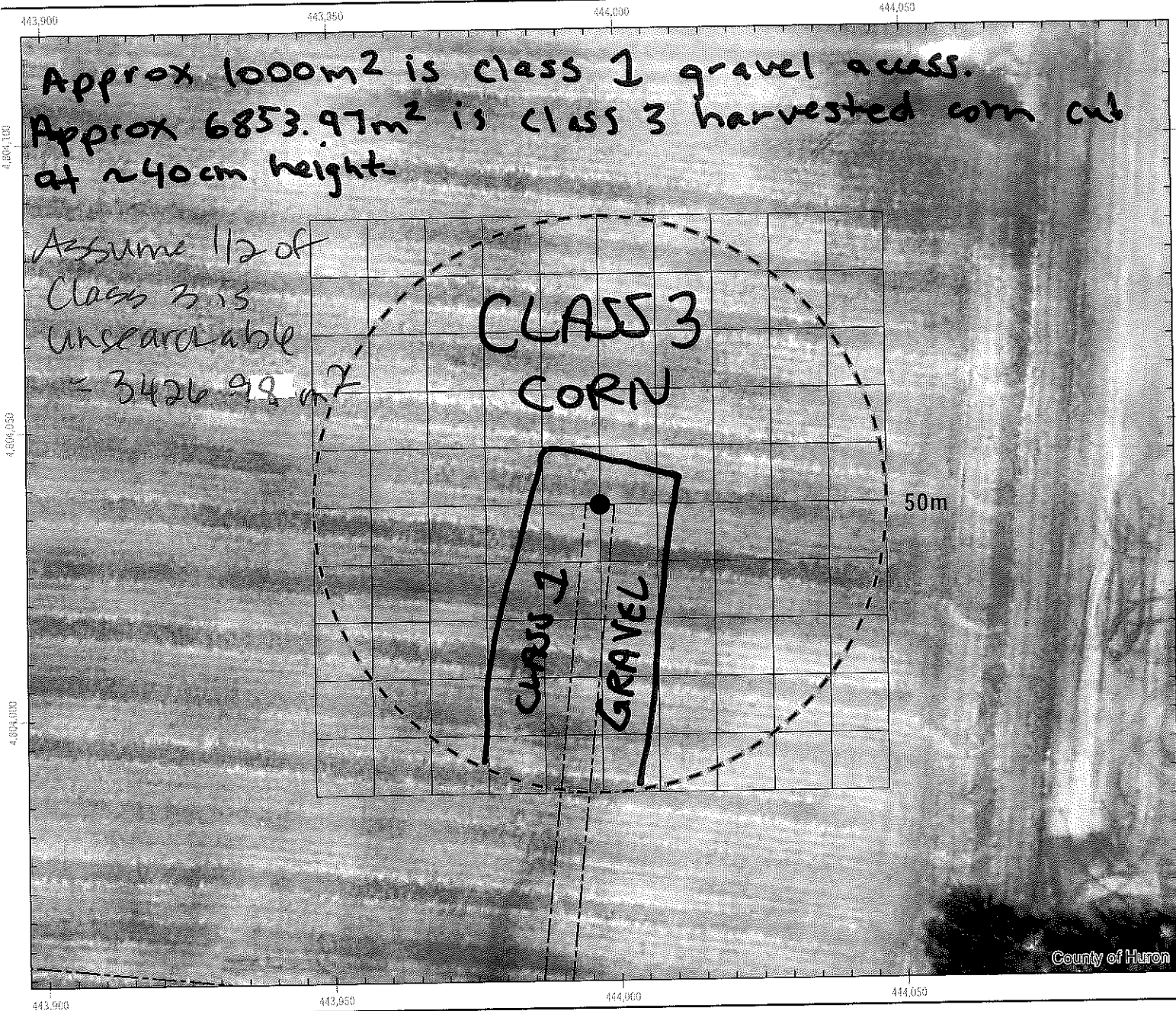
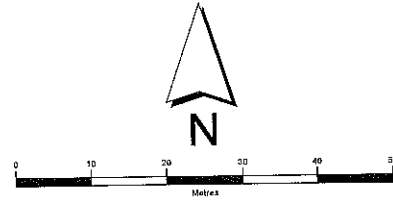


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-25
 Survey Date: Nov 21/19
 Actual Searched Area (m²): 4426.99 m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

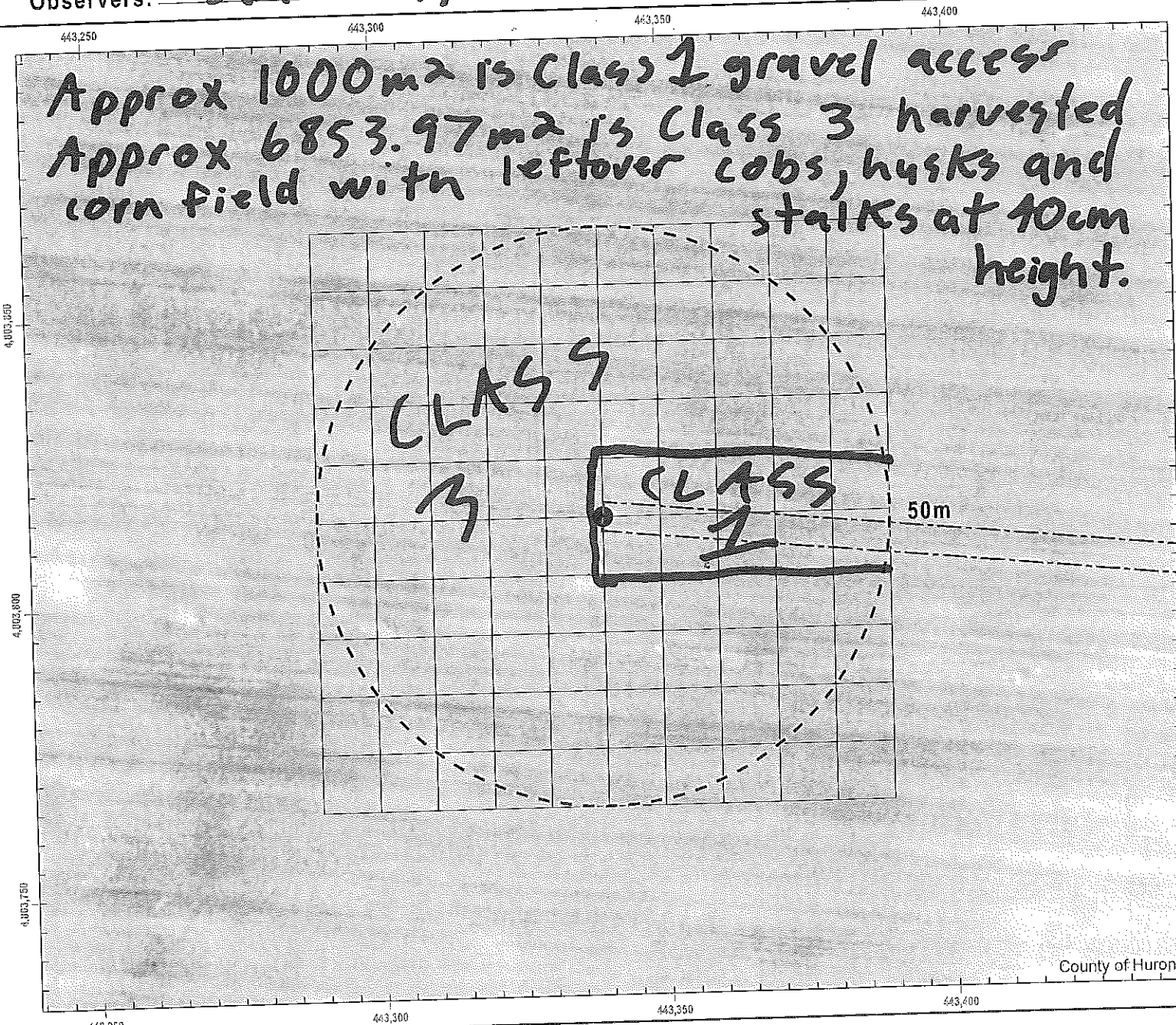
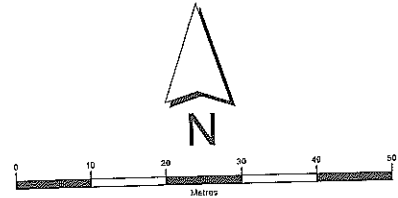
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-26

Survey Date: May 2 / 19

Actual Searched Area (m²): 7853.97m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-26

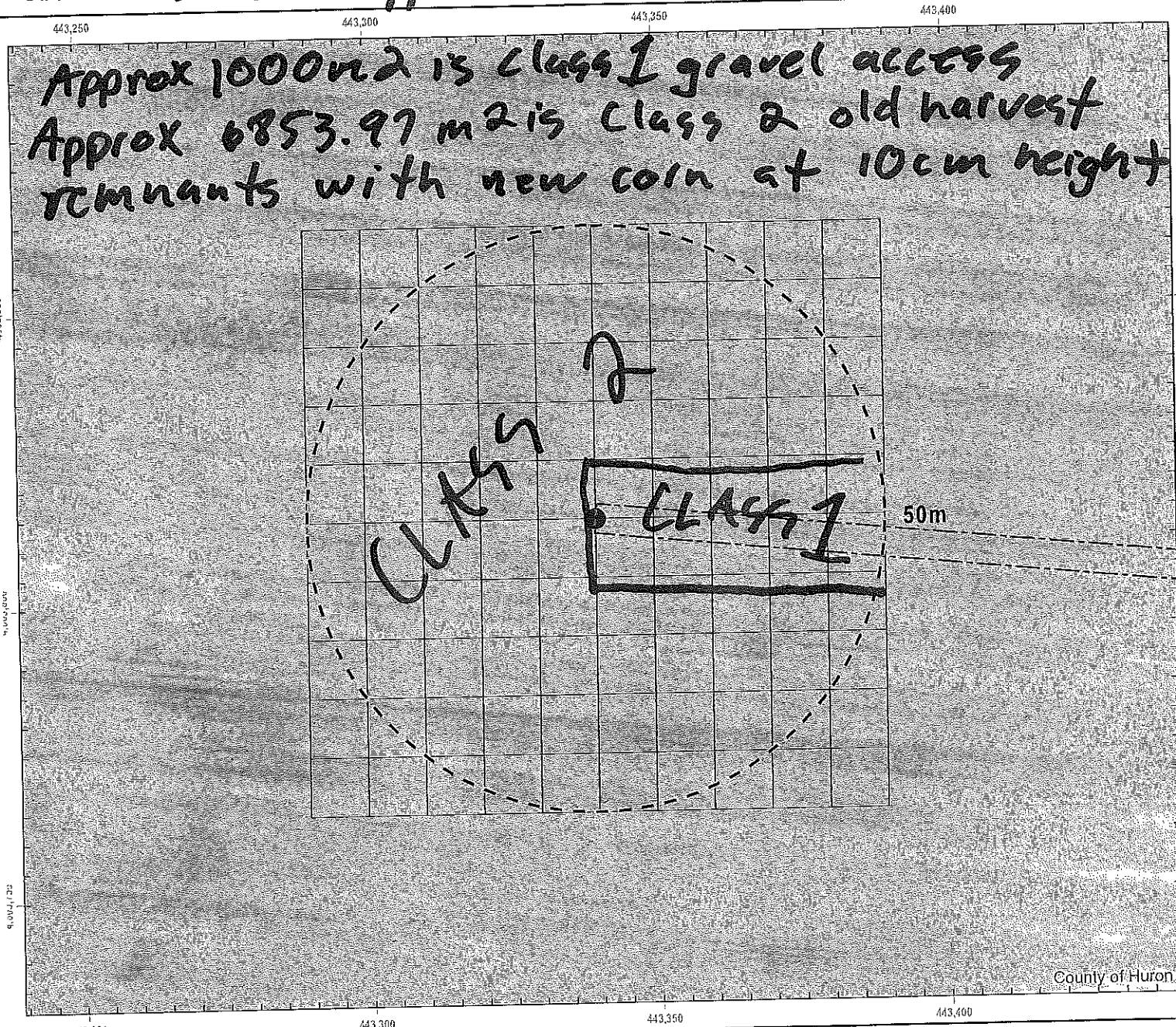
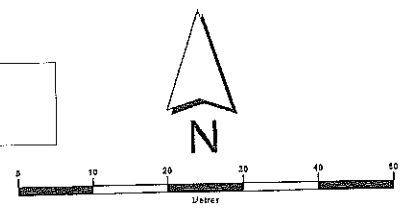
Survey Date: June 17 / 19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

7853.97 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

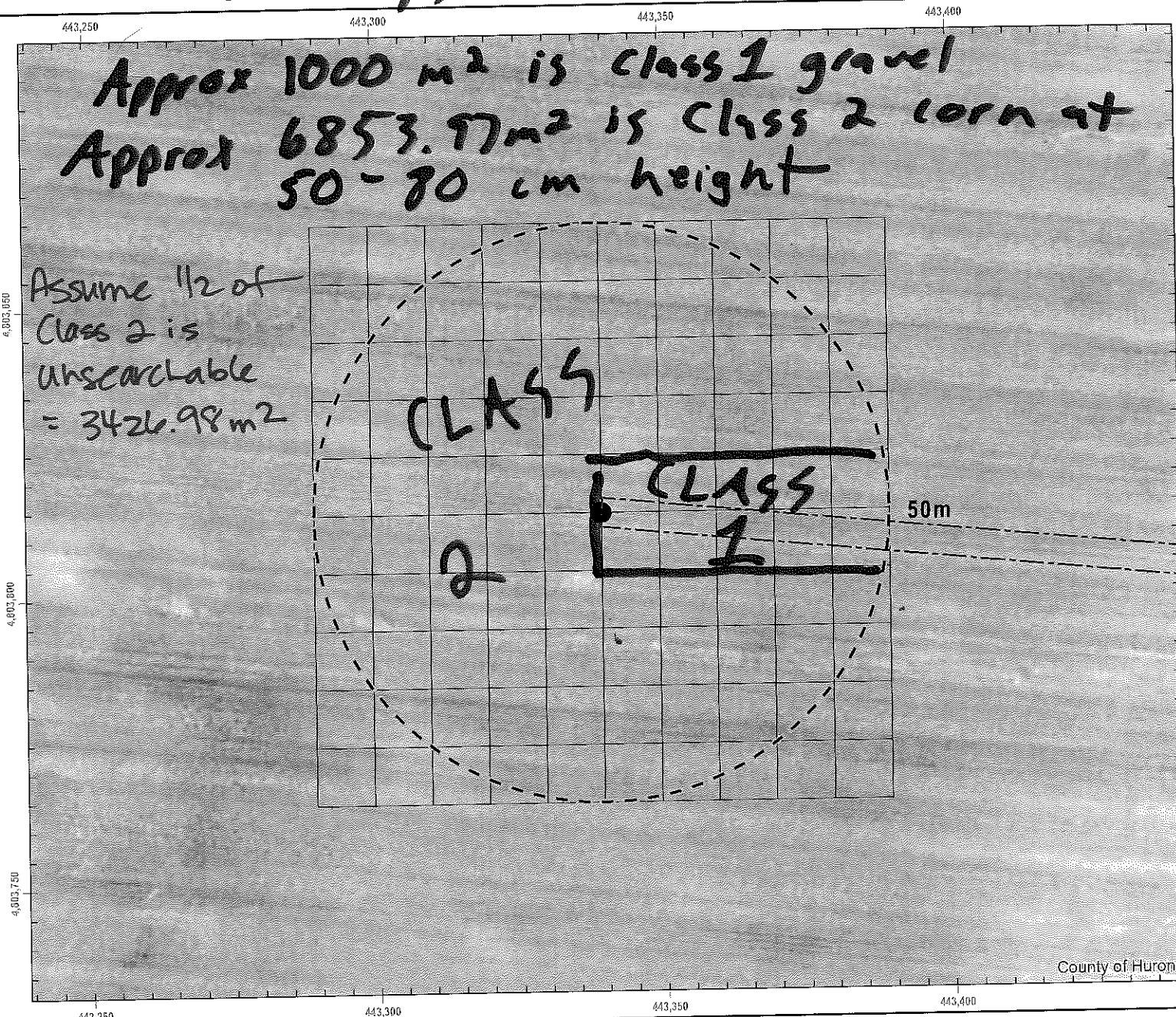
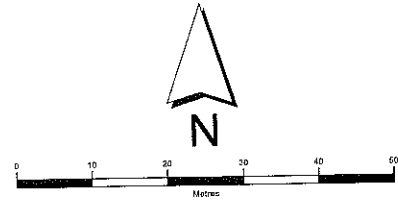
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-26

Survey Date: July 11/19

Actual Searched Area (m²): 4426.99m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≥ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

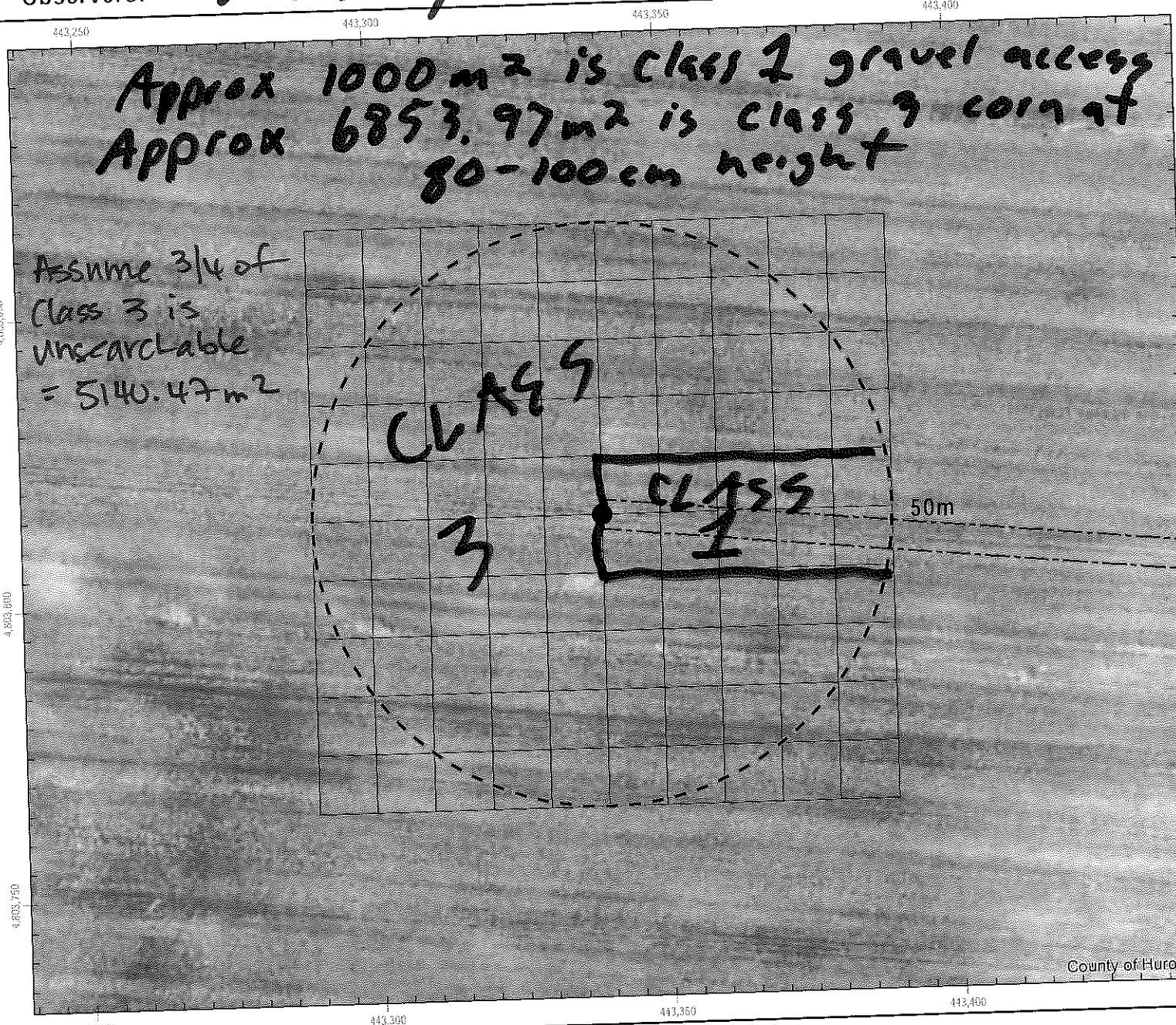
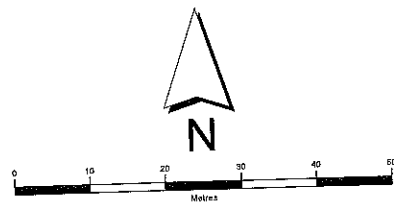


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-26
 Survey Date: July 18 / 19
 Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

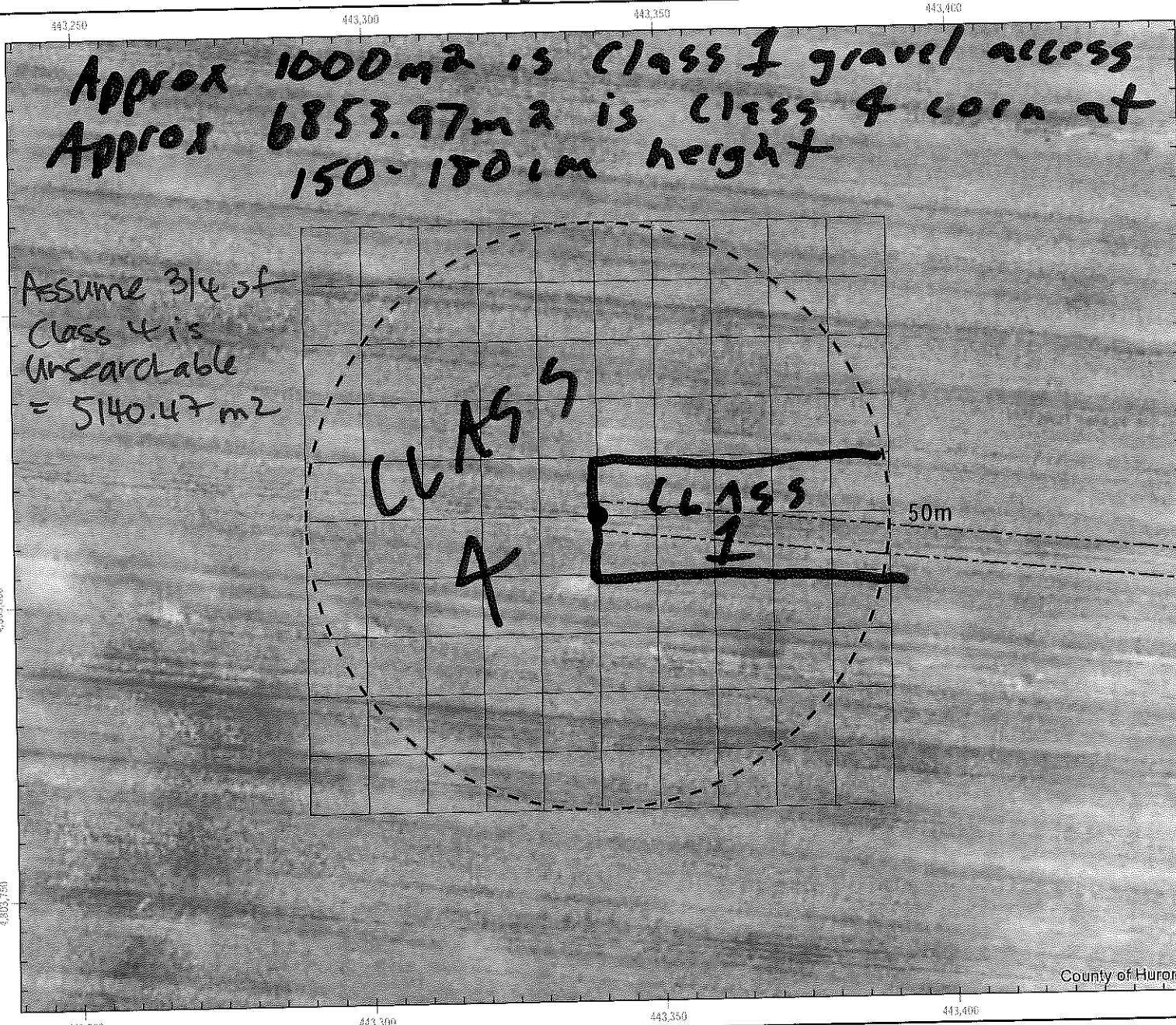
Site Number: T-26

Survey Date: July 29 / 19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

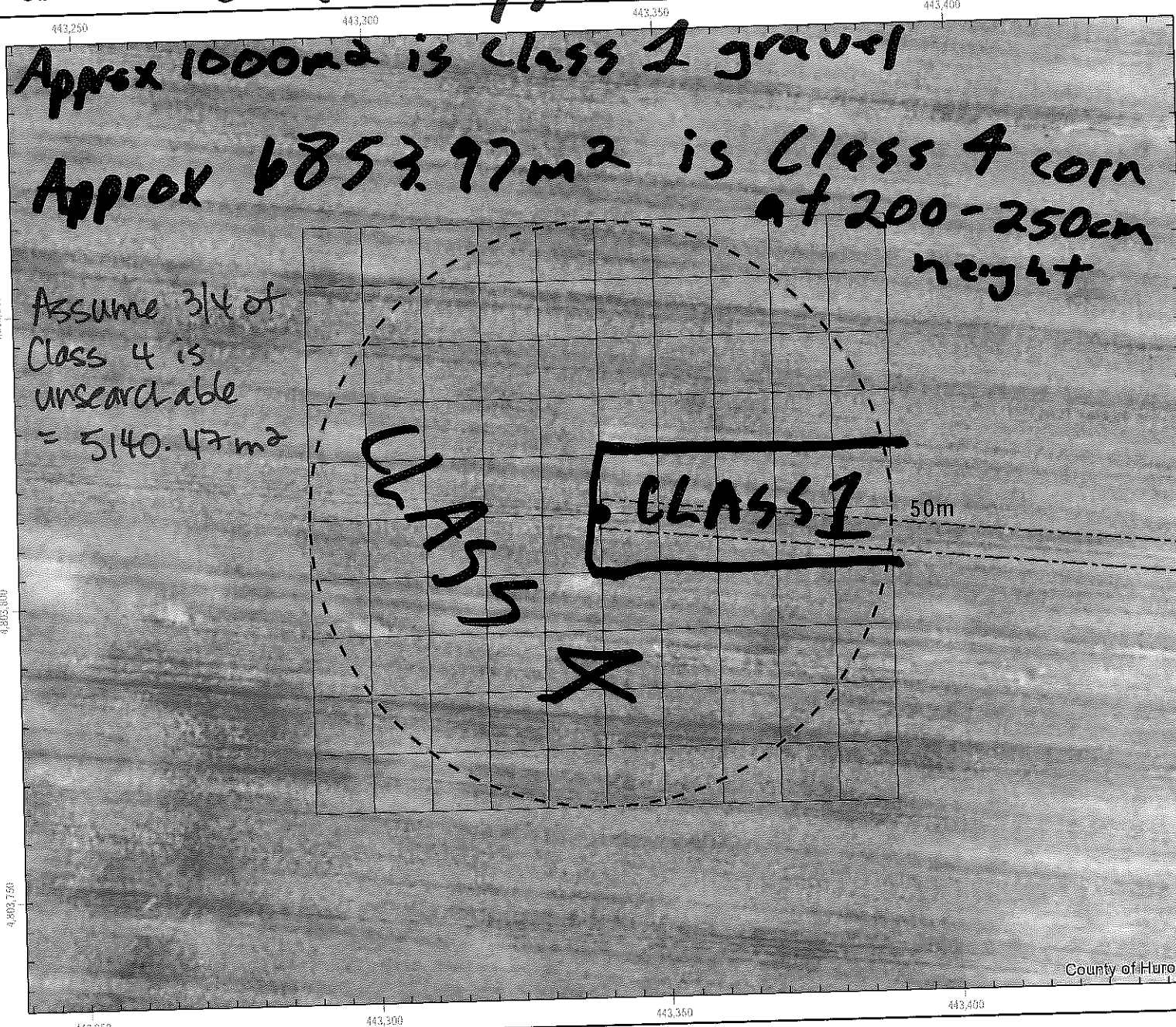
Site Number: T-26

Survey Date: Aug 19/19

Actual Searched Area (m²): 2713.50m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

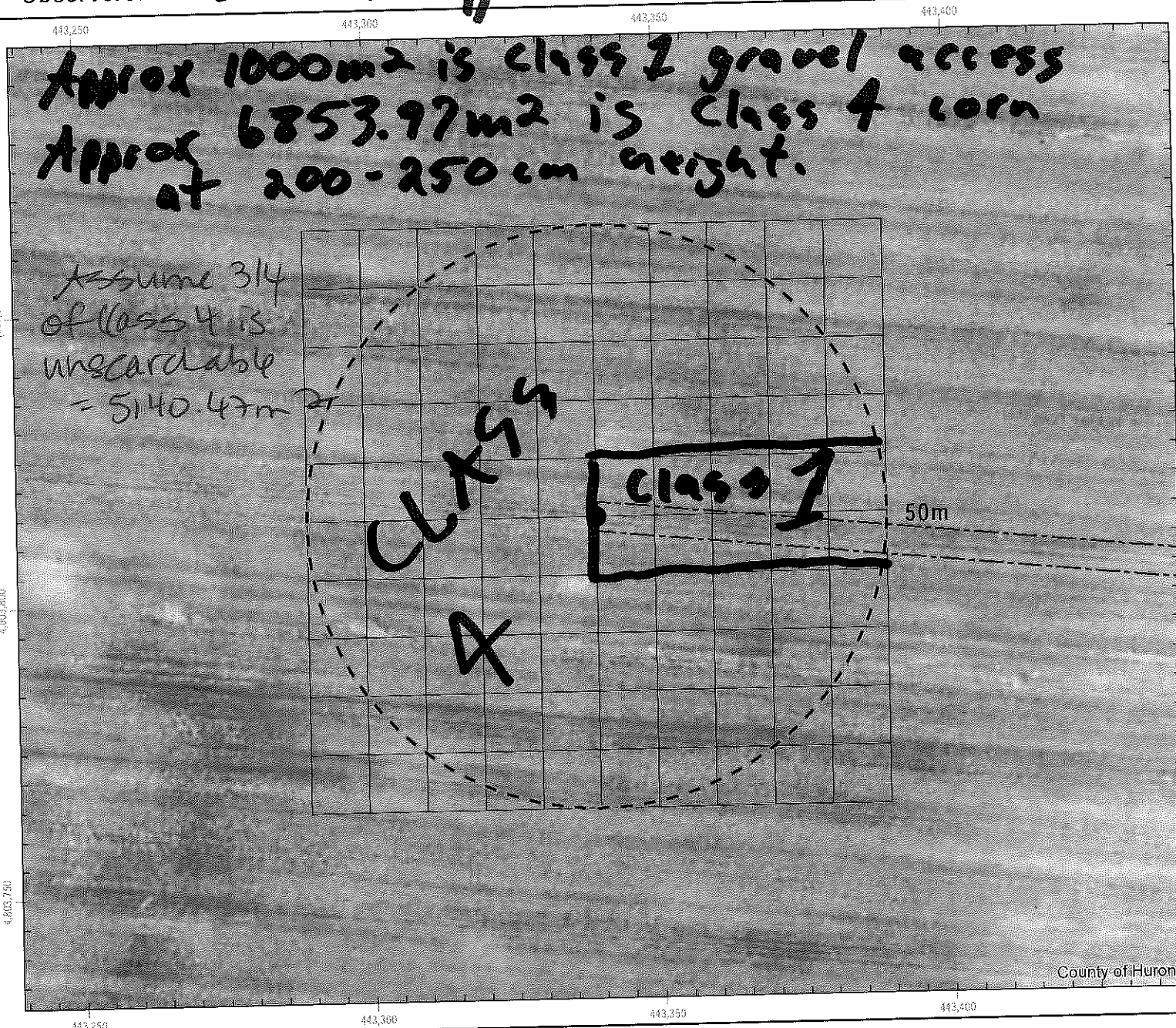
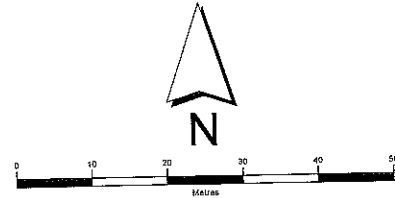
Site Number: T-26

Survey Date: Sept 16/19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

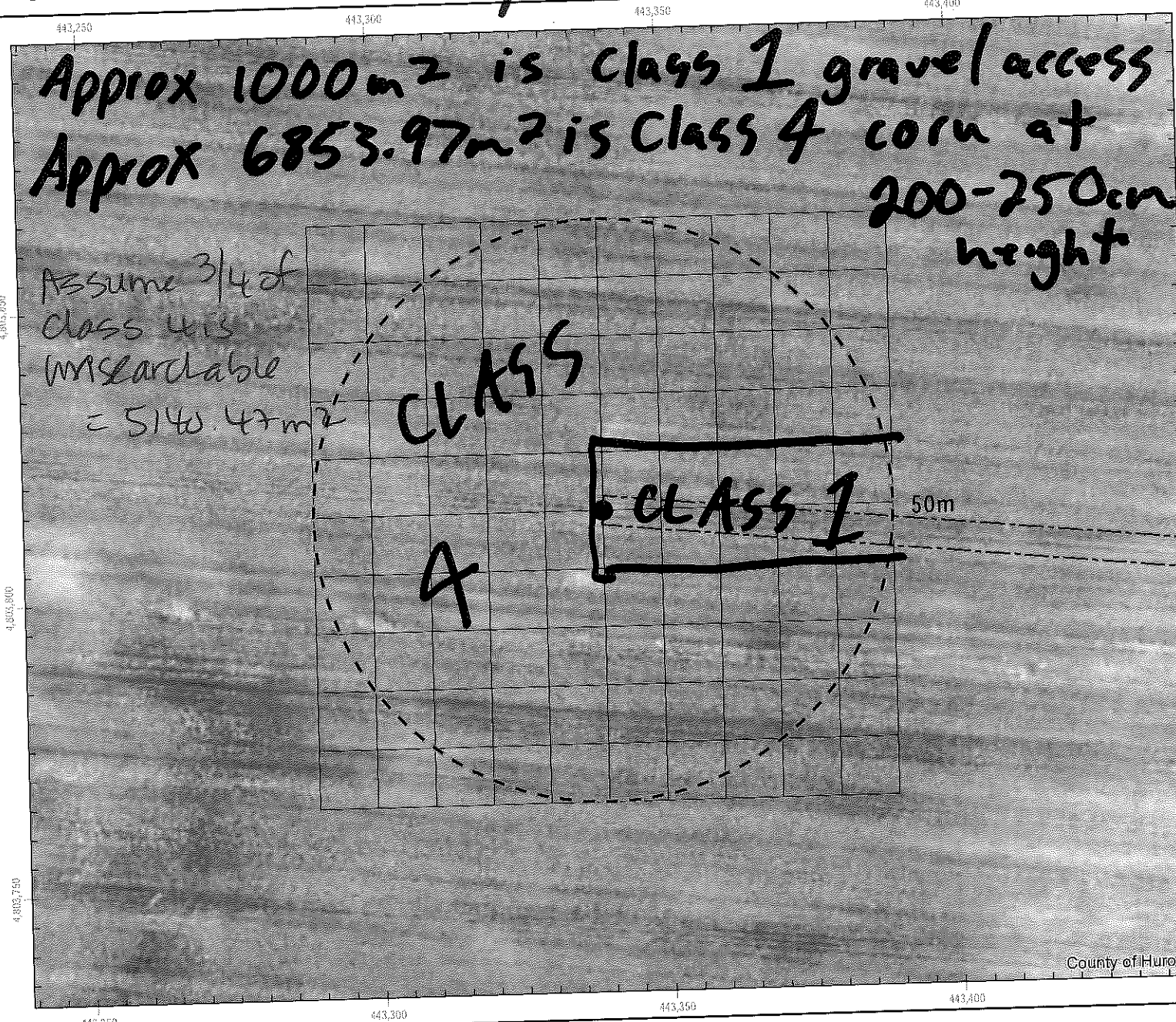
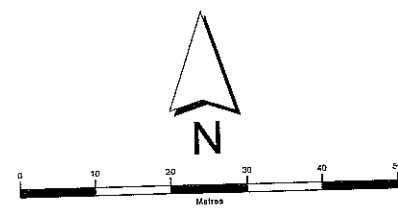


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-26
 Survey Date: Oct 24/19
 Actual Searched Area (m²): 2713.80m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

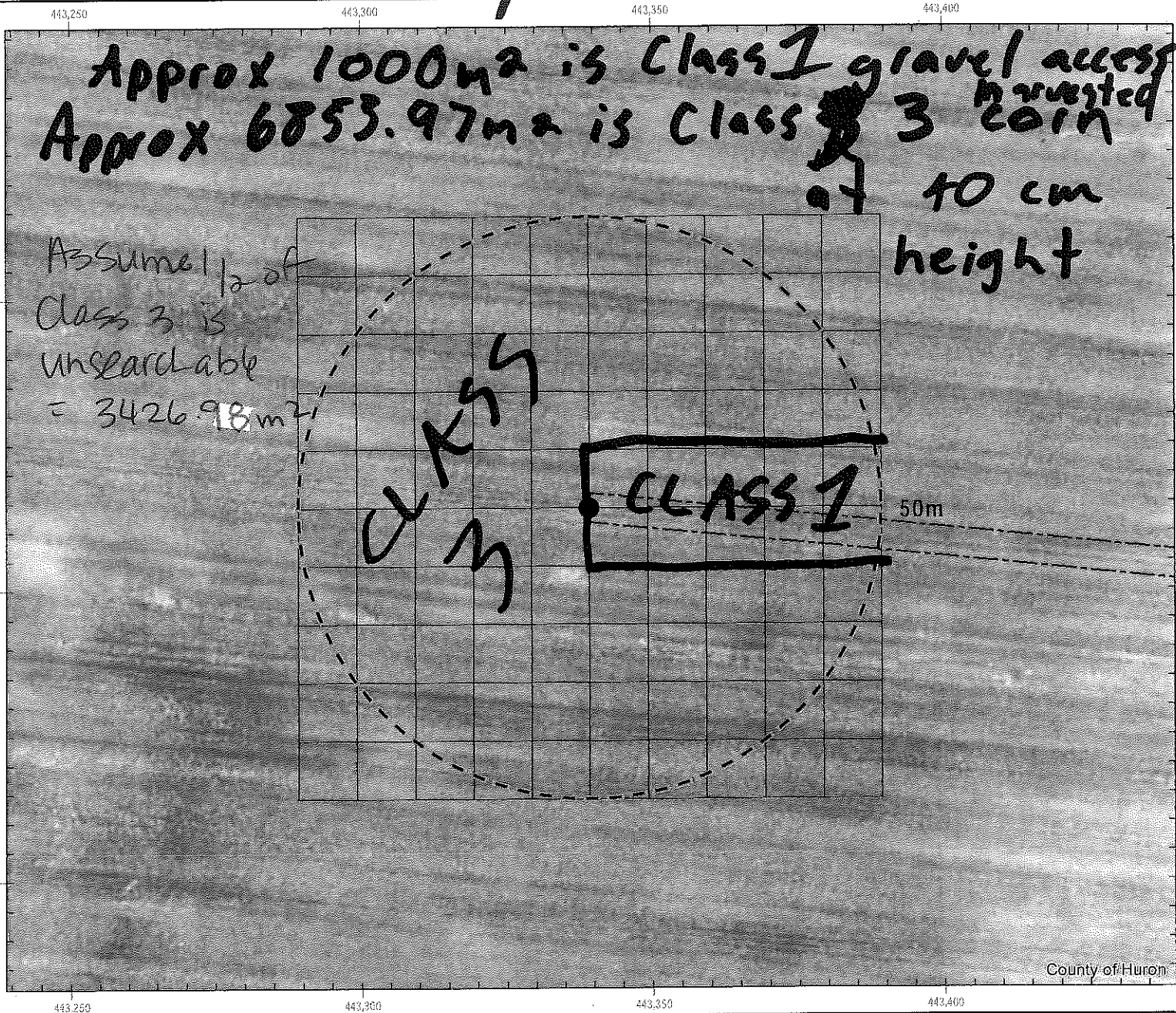
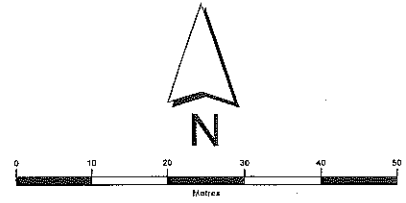
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-26

Survey Date: Nov 19/19

Actual Searched Area (m²): 4426.99 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

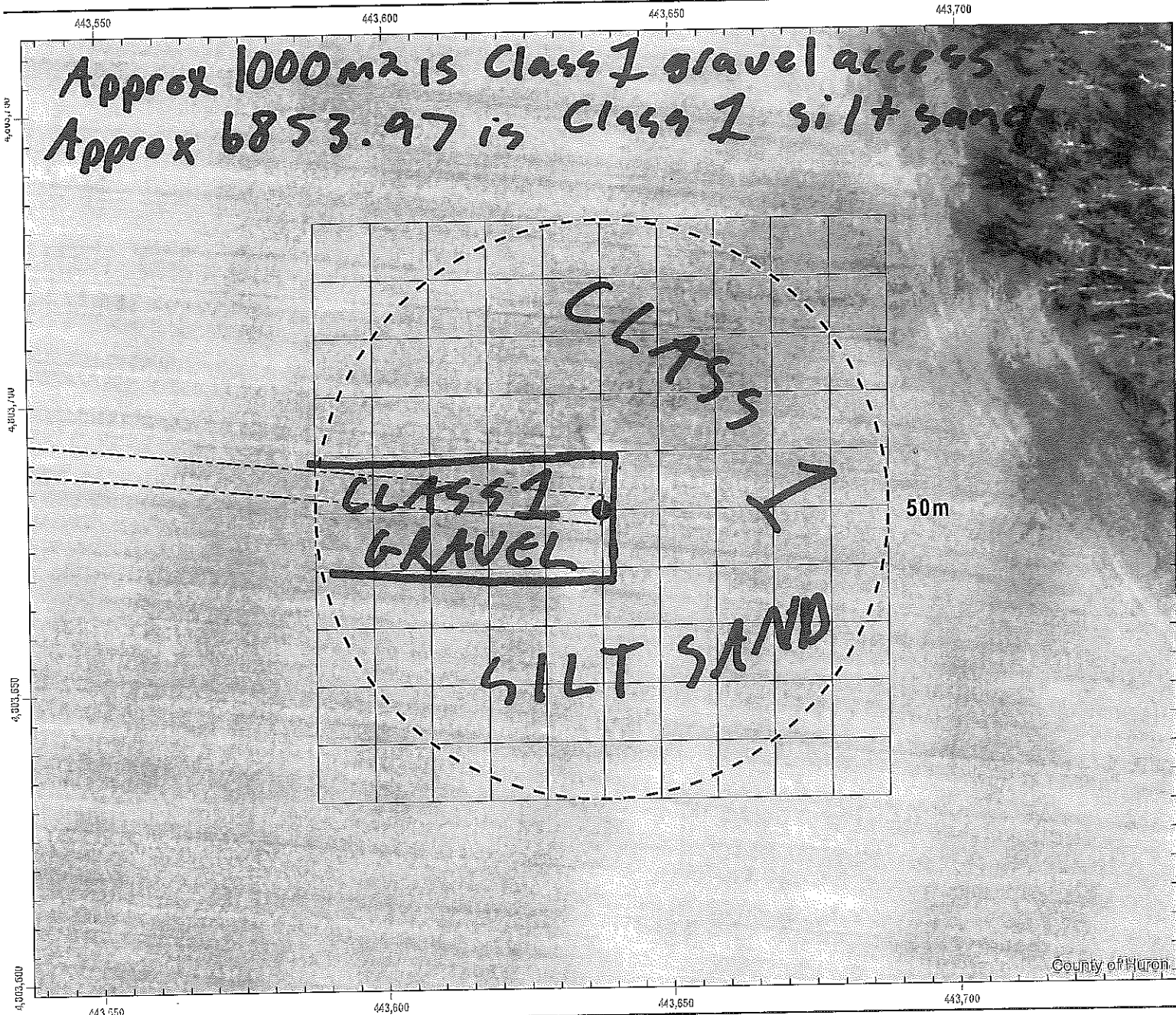
Site Number: T-27

Survey Date: May 2 / 19

Actual Searched Area (m²): 7853.97 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-27

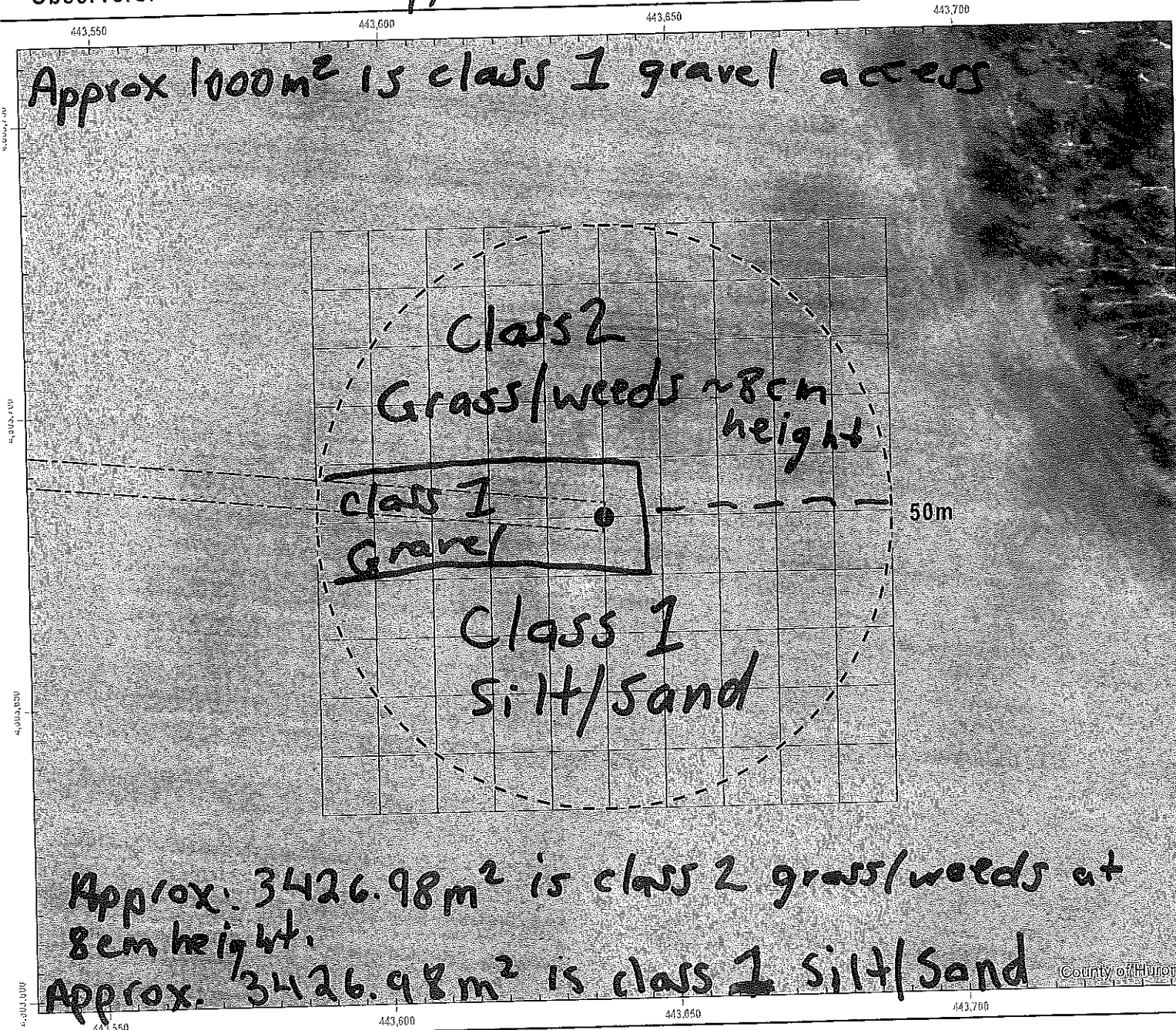
Survey Date: May 30/19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

7853.97 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-27

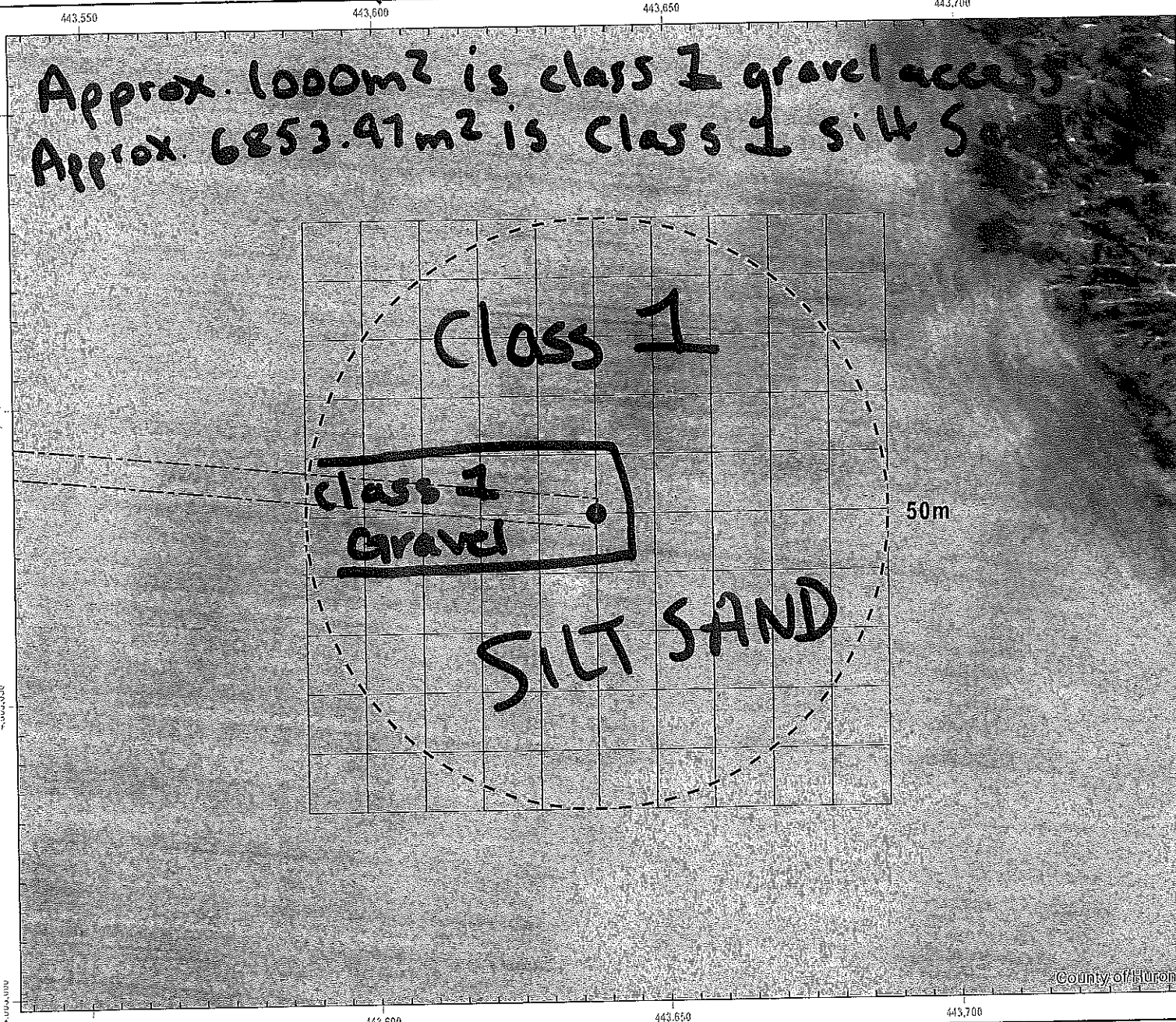
Survey Date: June 9/19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

7853.97 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

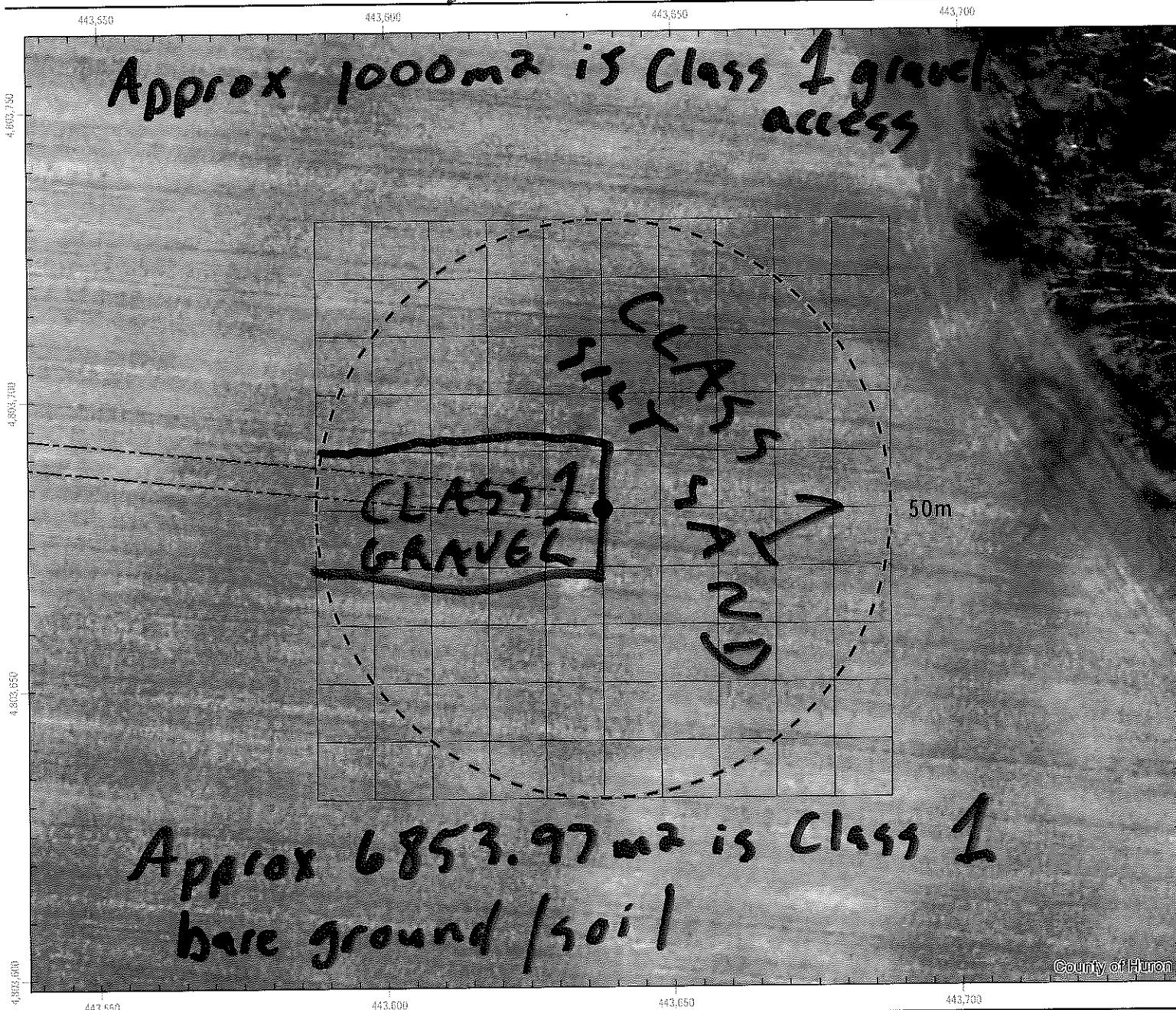
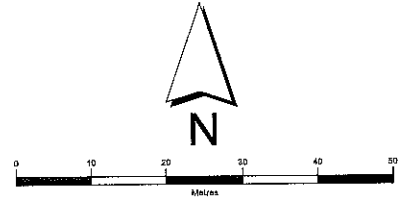


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-27
 Survey Date: July 25 / 19
 Actual Searched Area (m²): 7853.97 m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henly



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

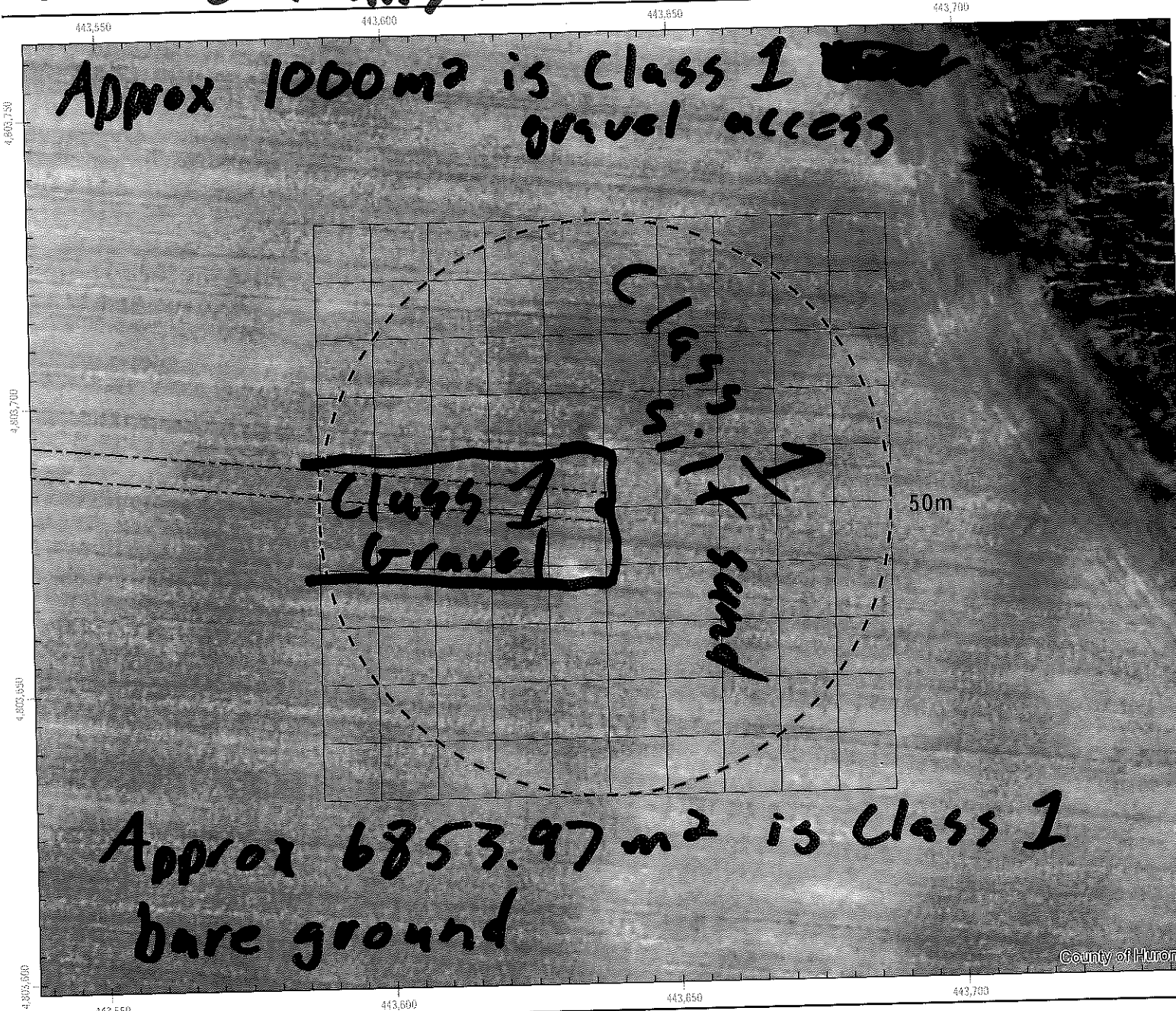
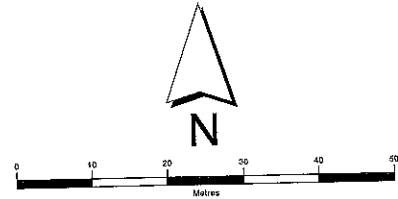
Site Number: T-27

Survey Date: Aug 19/19

Actual Searched Area (m²): 7853.97 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

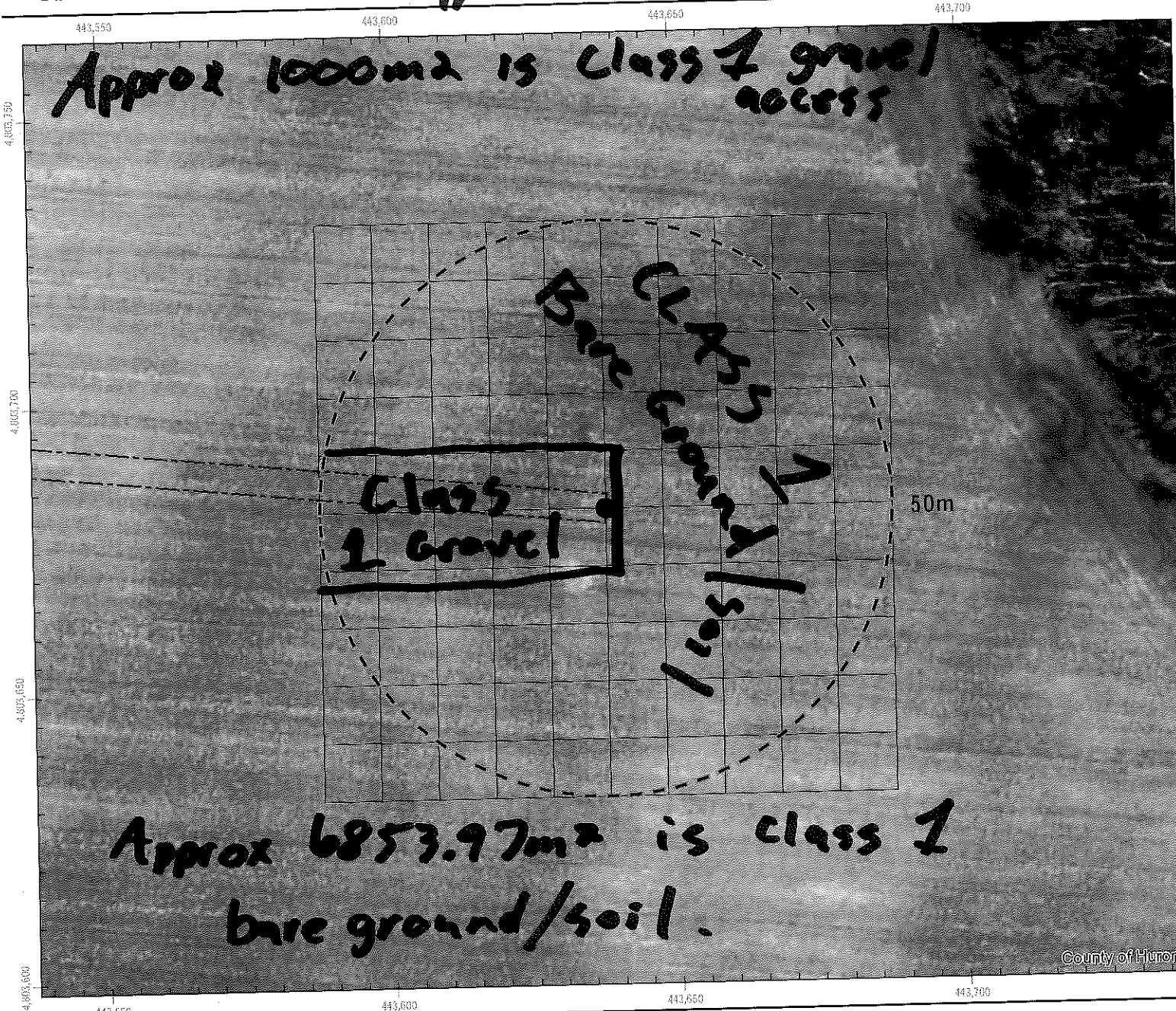
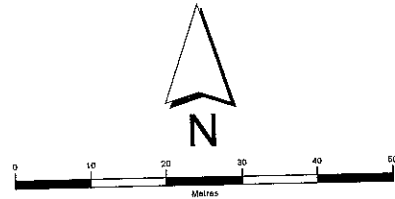
Site Number: T-27

Survey Date: Sept 16 / 19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area = 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

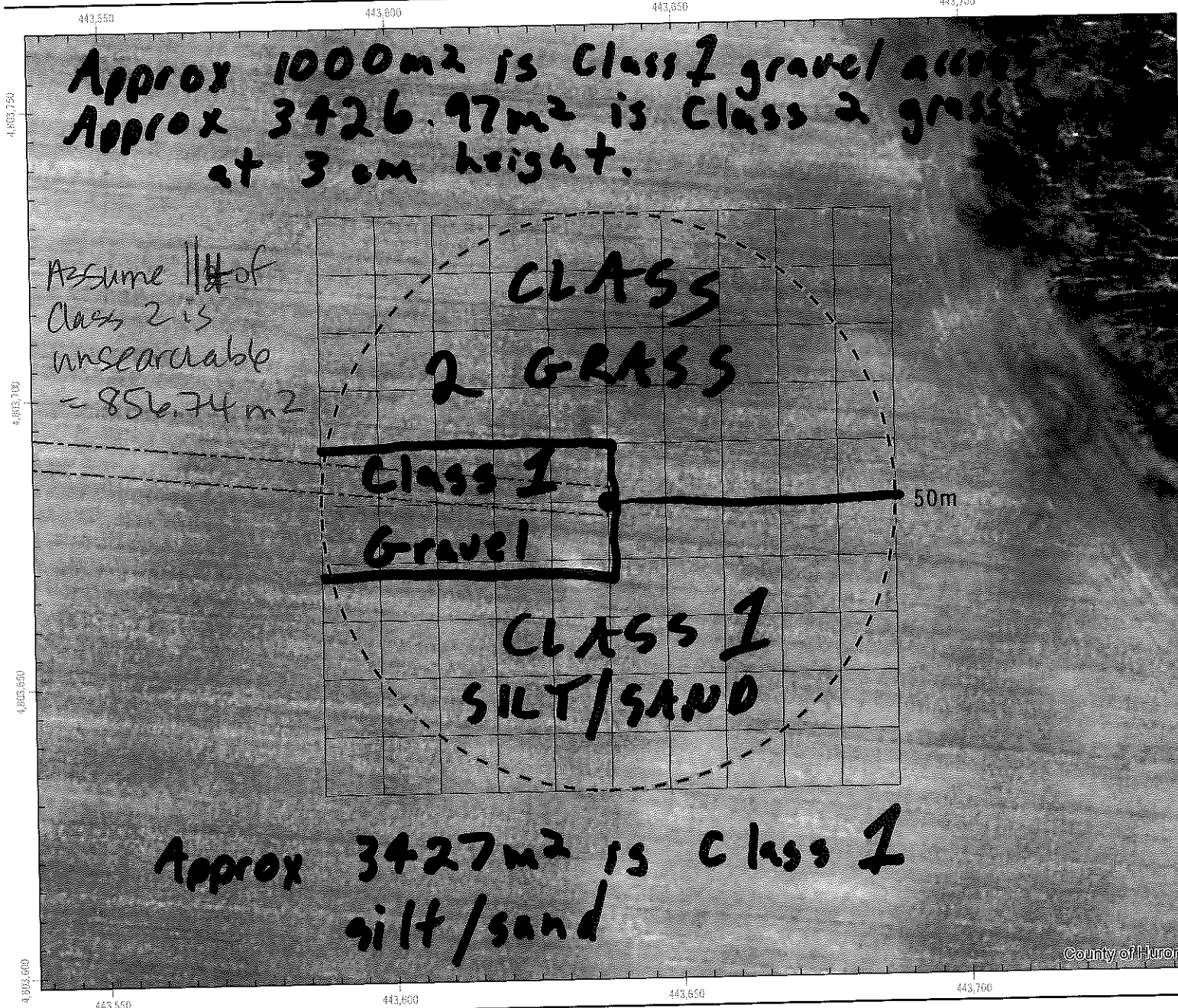
Site Number: T-27

Survey Date: Oct 14 / 19

Actual Searched Area (m²): 6997.23 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

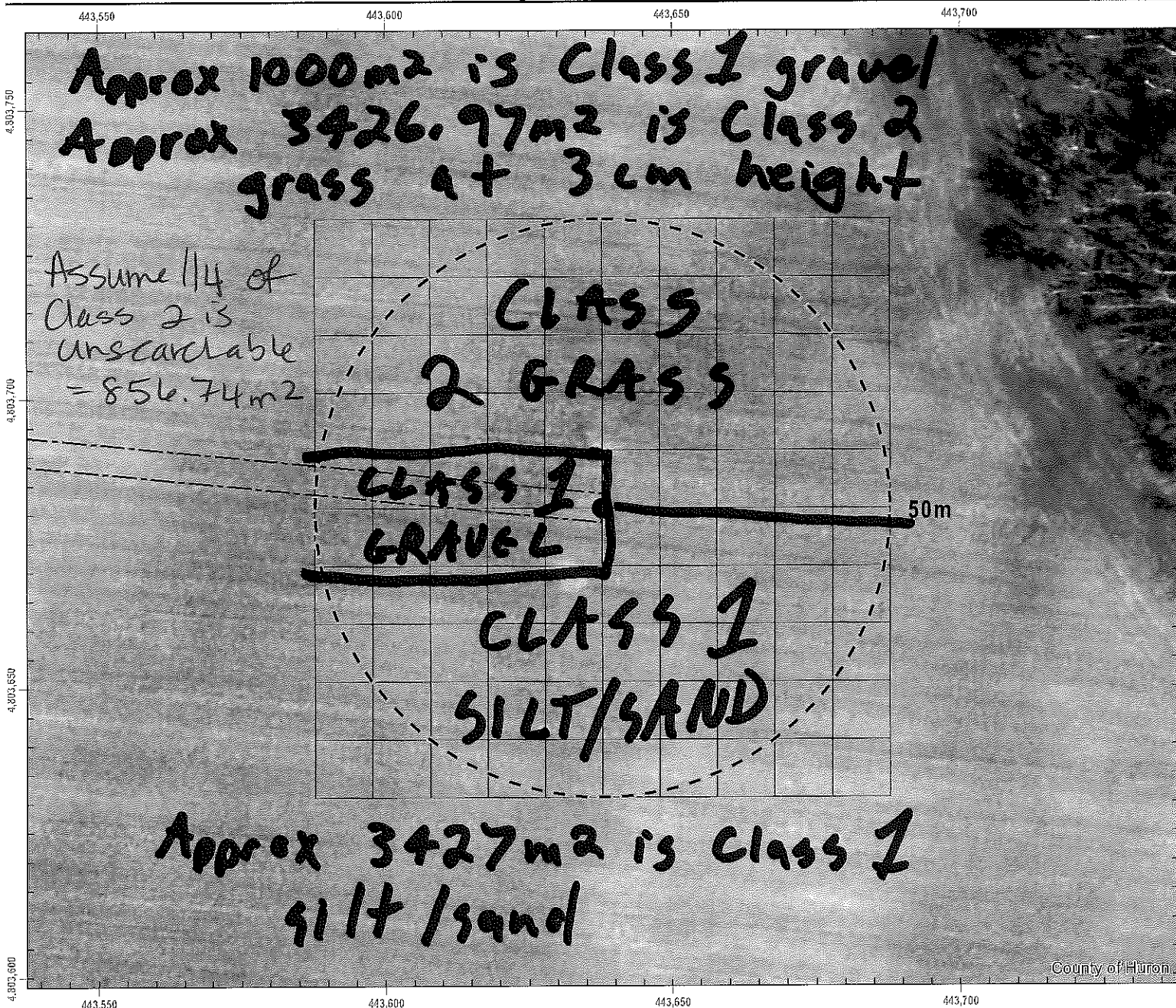
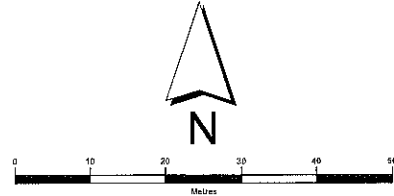
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-27

Survey Date: Nov 18/19

Actual Searched Area (m²): 6997.23 m²
(subtract from total search area - 7853.97m²)

Observers: Sam Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

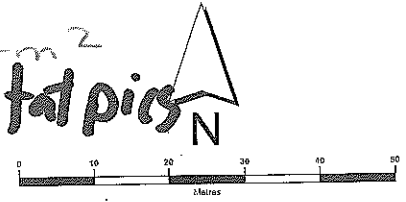
Site Number: T-29

Survey Date: May 3 11/9

Actual Searched Area (m²): 7853.97m² No search, just habitat pics

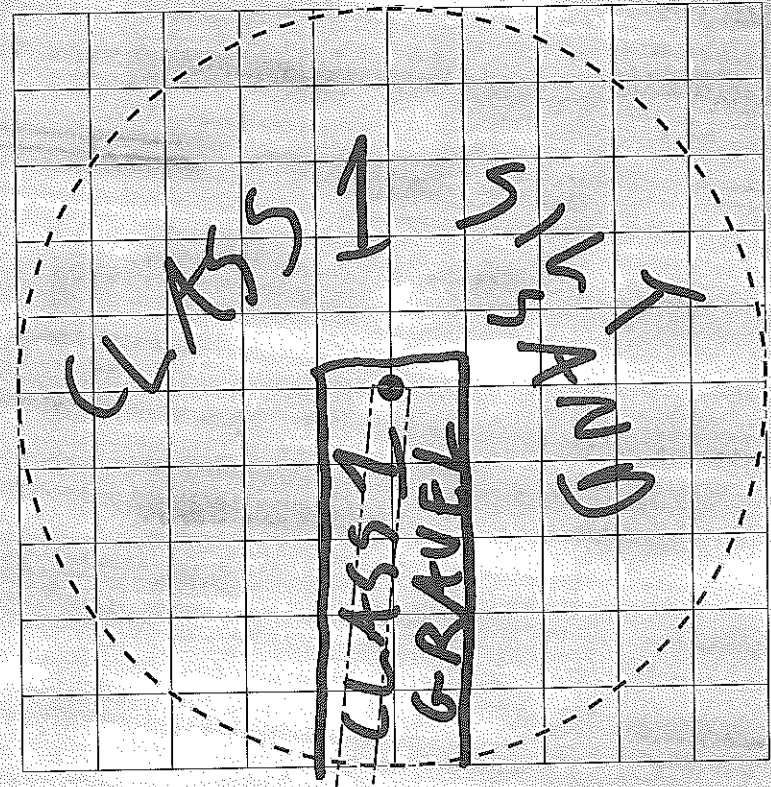
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



443,100 443,150 443,200 443,250

Approx 1000m² is Class 1 gravel access
 Approx 6853.97m² is Class 1 silt sand with minimal leftover wheat harvest.



County of Huron

443,100 443,150 443,200 443,250

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-29

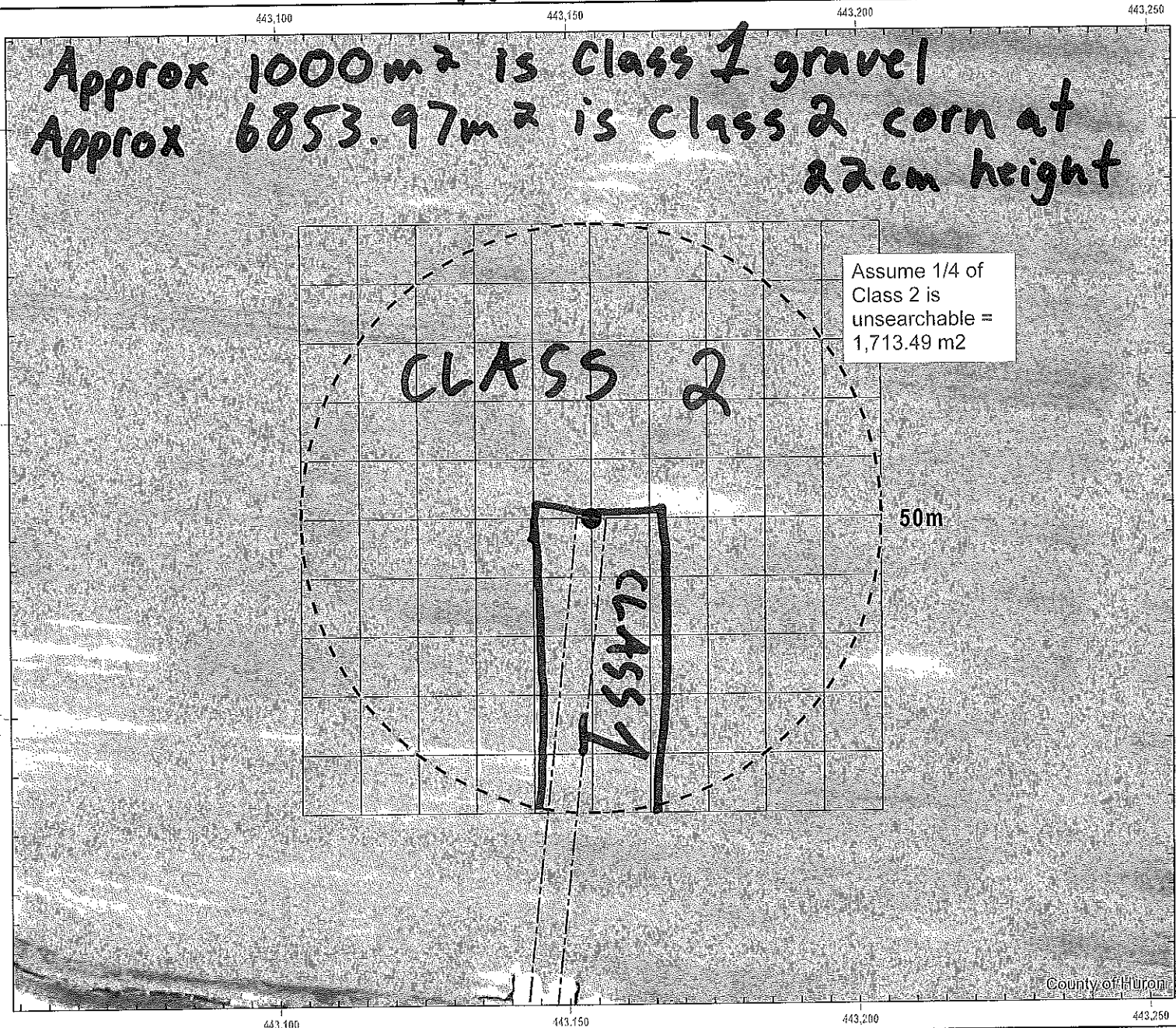
Survey Date: June 19 / 19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

6,140.48 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

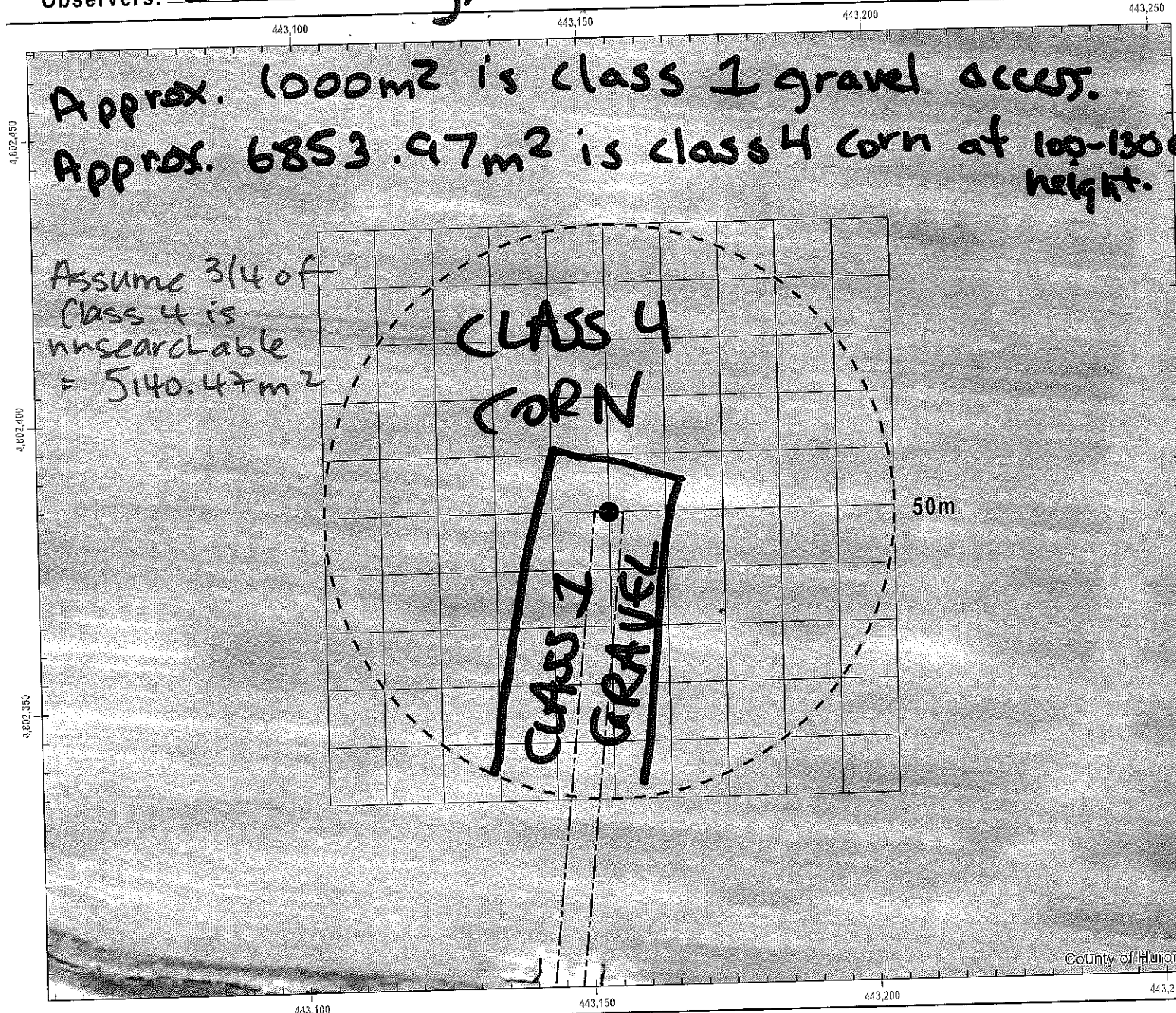
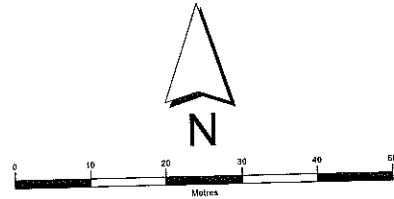
Site Number: T-29

Survey Date: July 17/19

Actual Searched Area (m²): 2713.50m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

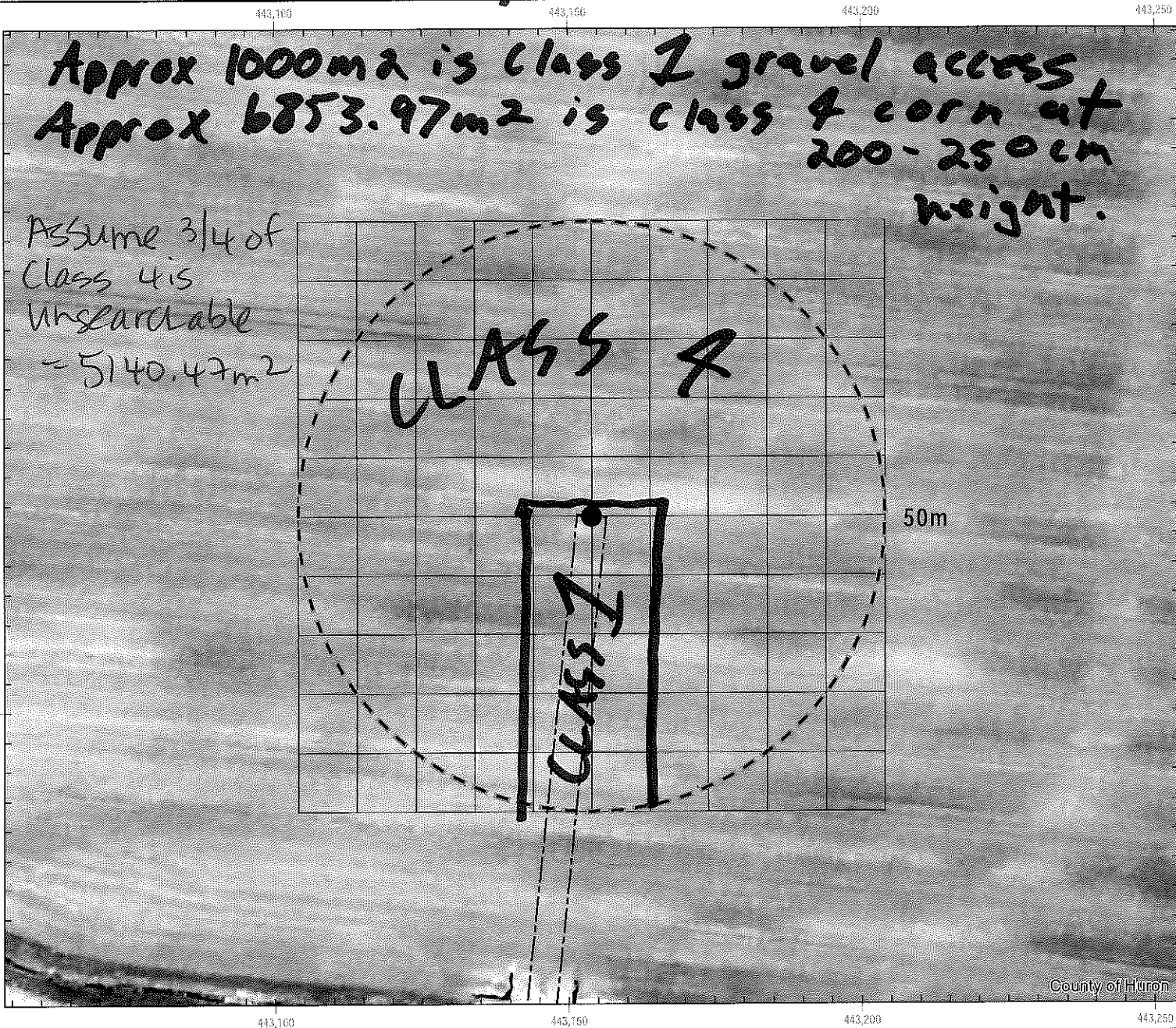
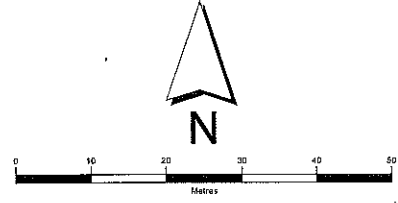
Site Number: T-29

Survey Date: Sept 18/19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

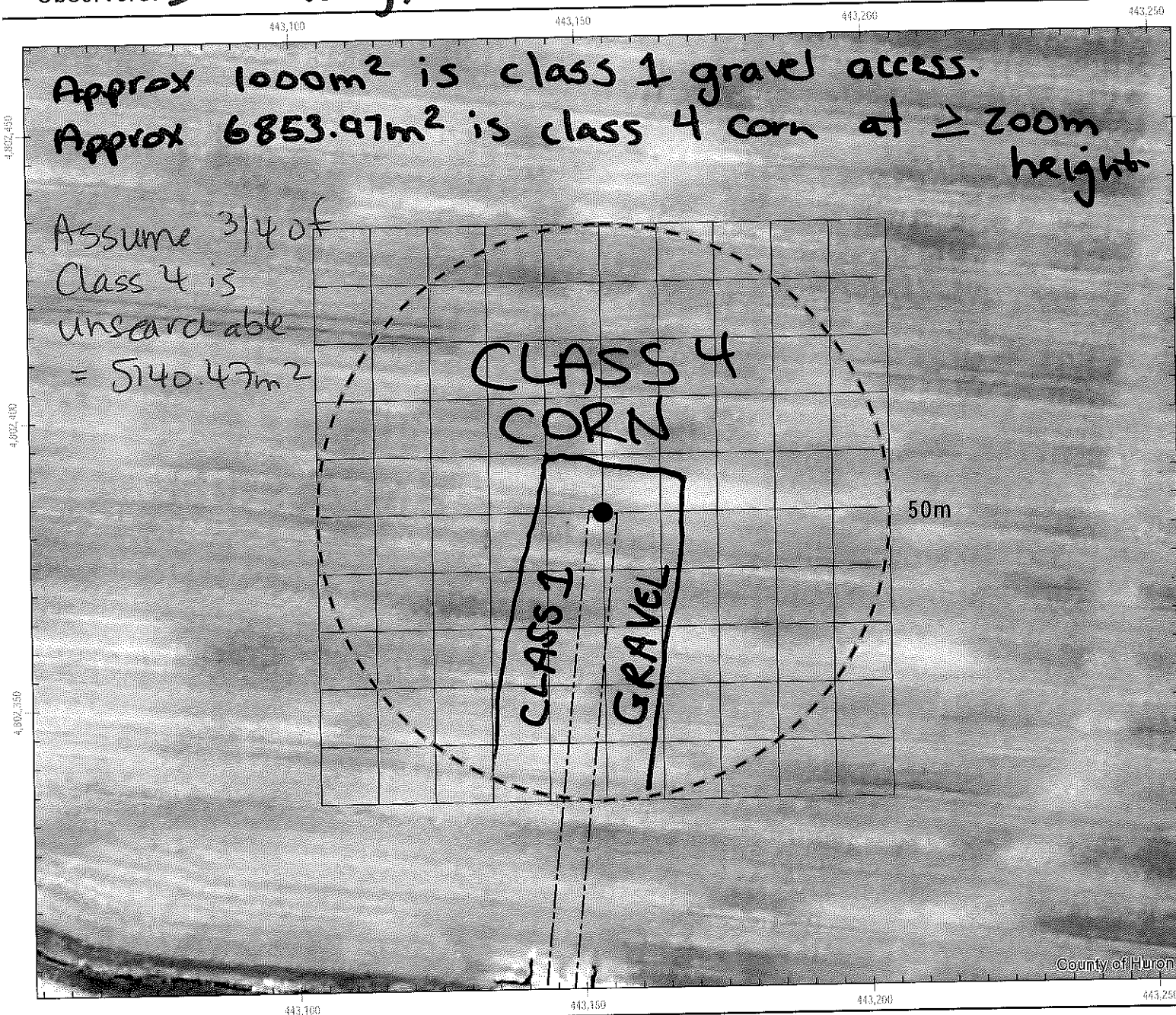
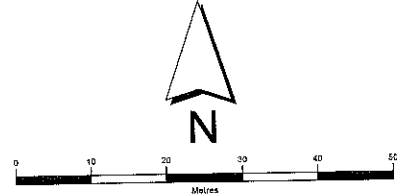
Site Number: T-29

Survey Date: Oct/23/19

Actual Searched Area (m²): 2713.50m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

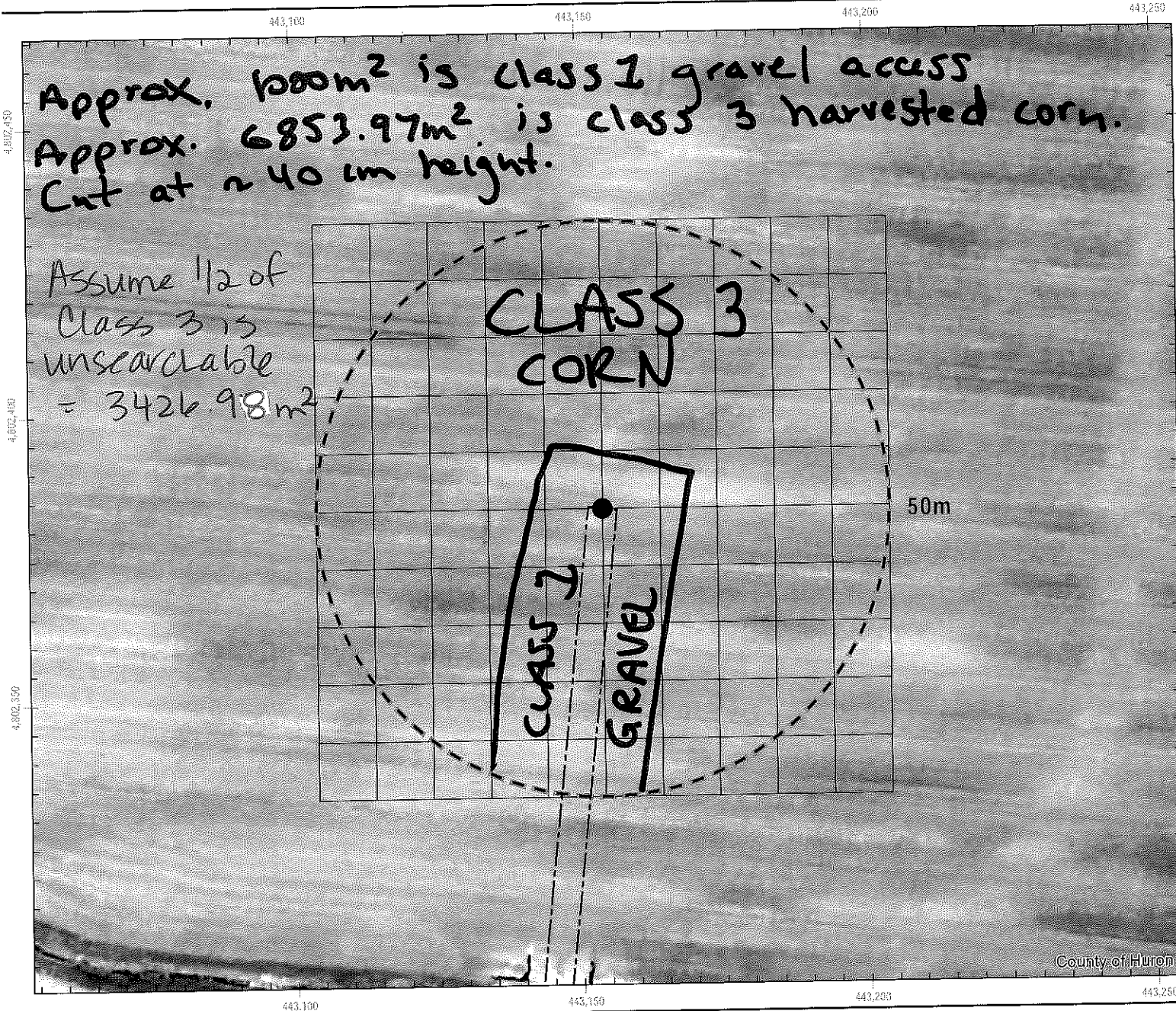
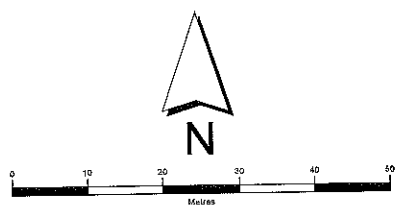
SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-29
 Survey Date: Nov 22/19
 Actual Searched Area (m²): 4426.99m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

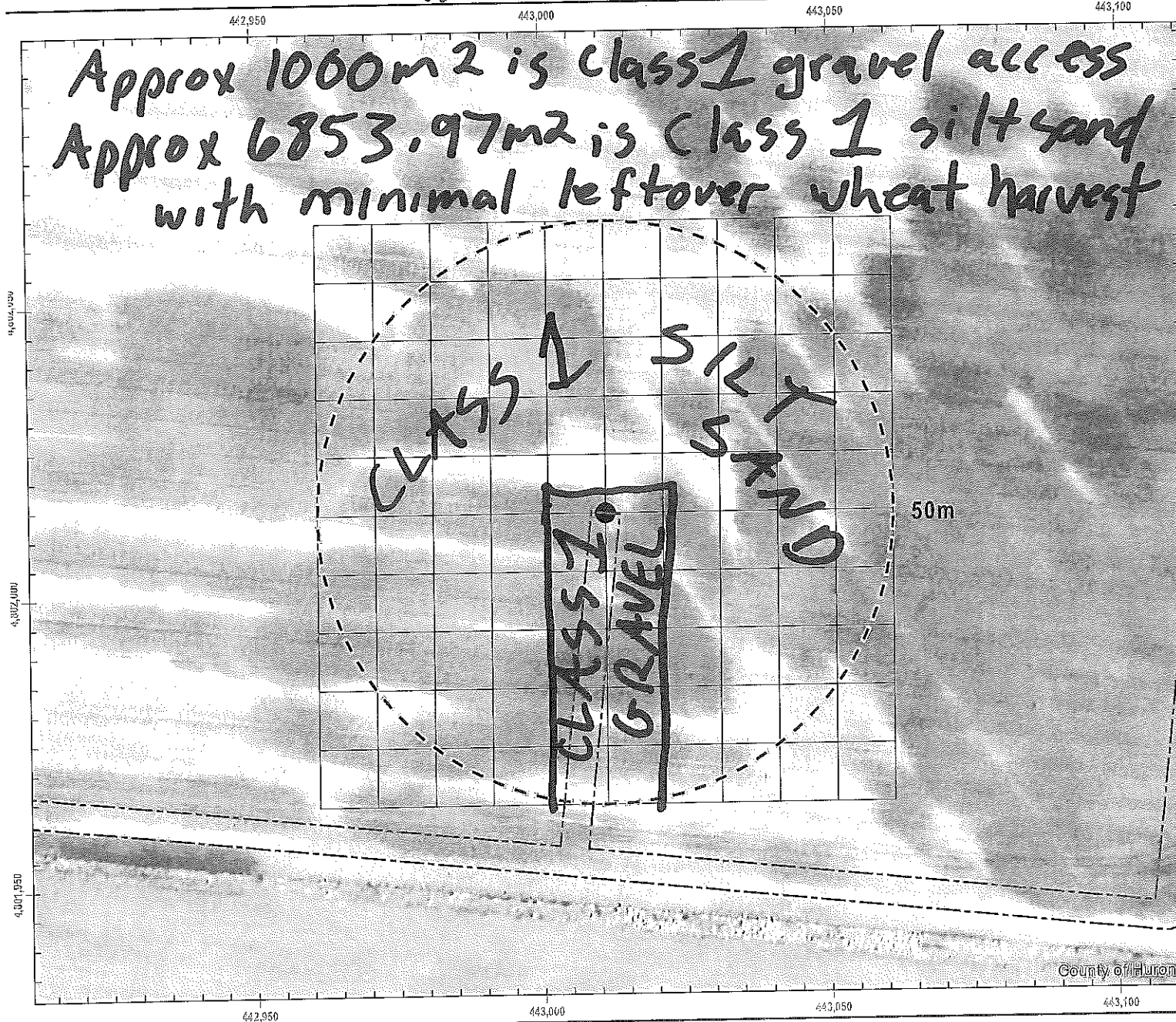
Site Number: T-30

Survey Date: May 3/19

Actual Searched Area (m²): No search done, for habitat pics

Observers: Sara Henry, Sarah Jackson

7853.97 m²
N



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-30

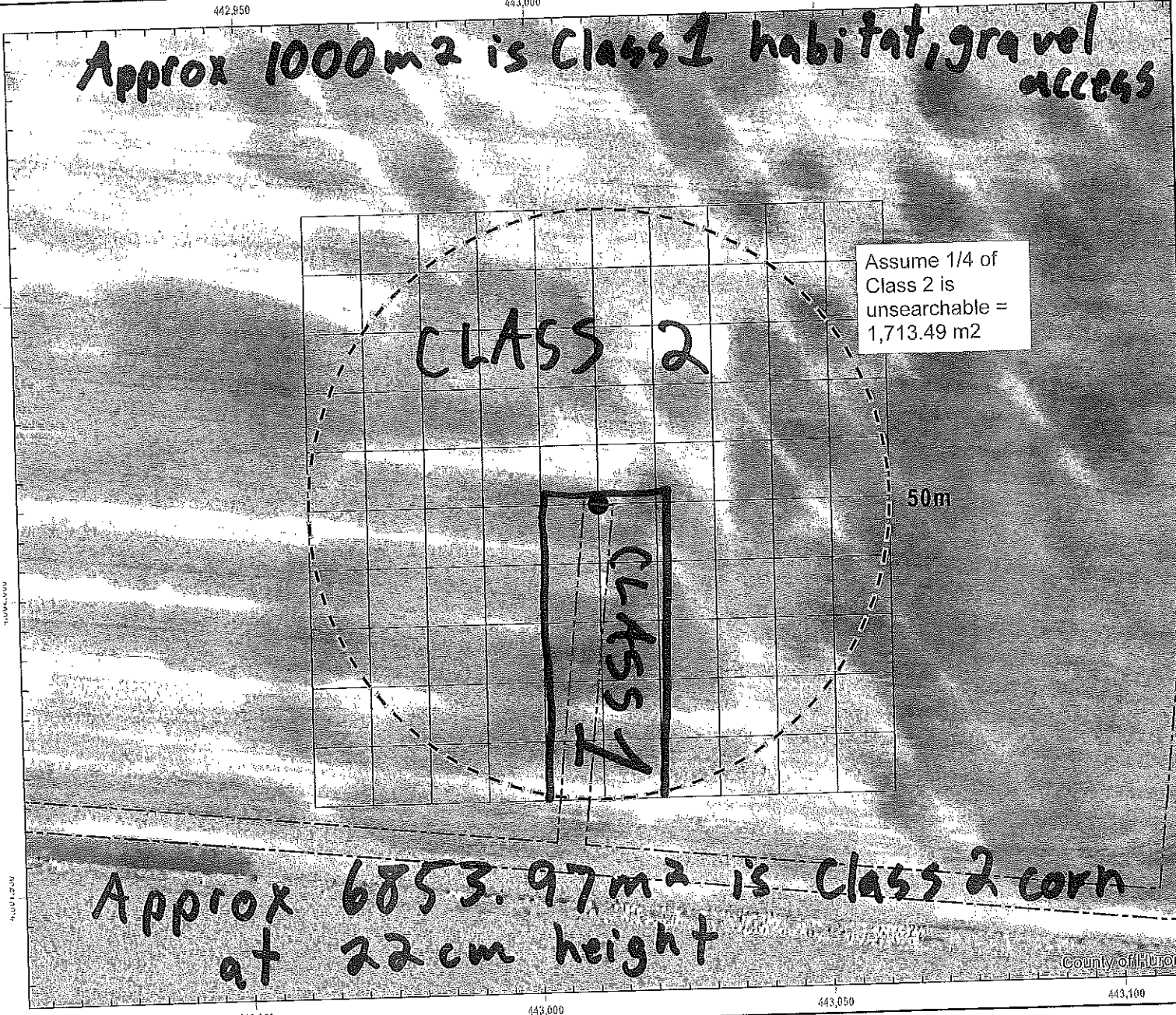
Survey Date: June 19/19

Actual Searched Area (m²): _____
(subtract from total search area - 7853.97m²)

6,140.48 m²



Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

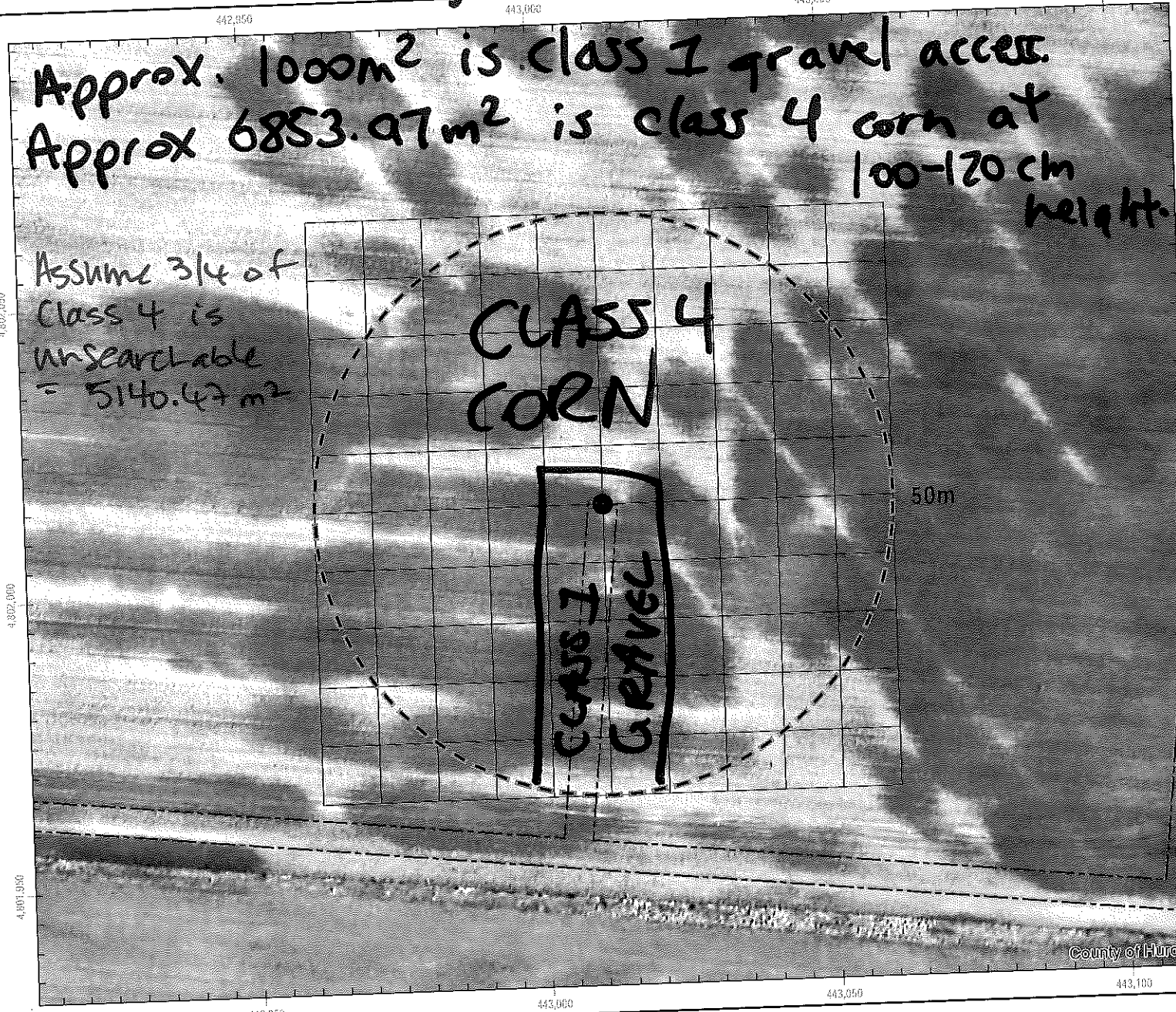
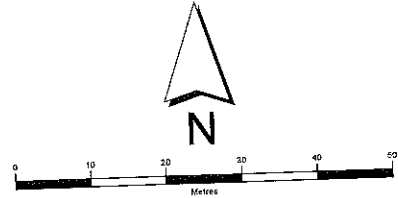


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-30
 Survey Date: July 17/19
 Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97 m²)
 Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

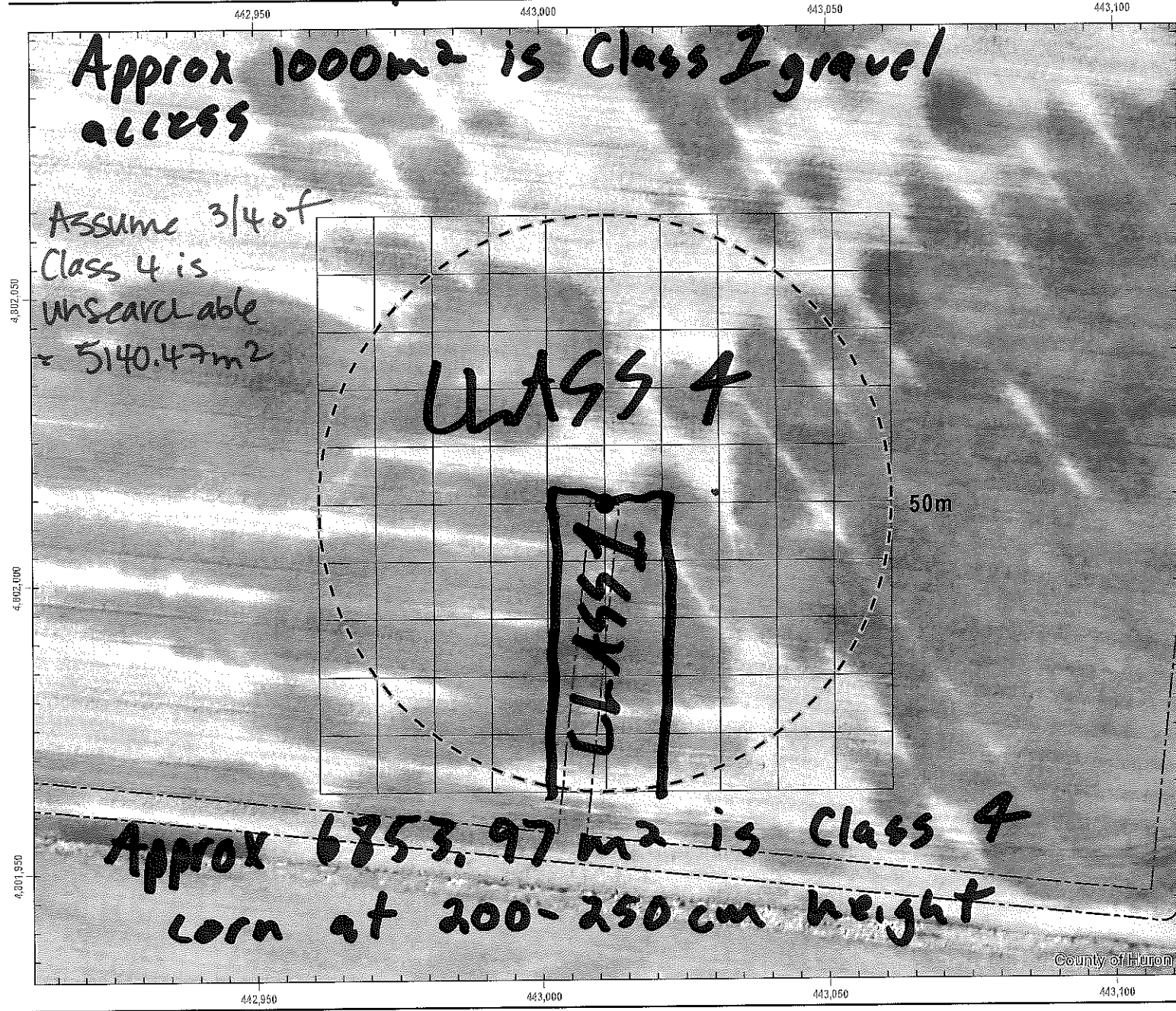
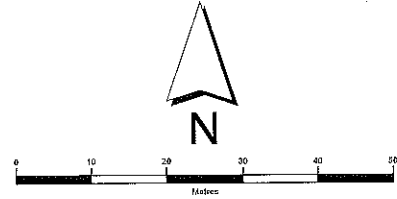
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-30

Survey Date: Aug 21 / 19

Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97 m²)

Observers: Sarah Henry, Sam Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

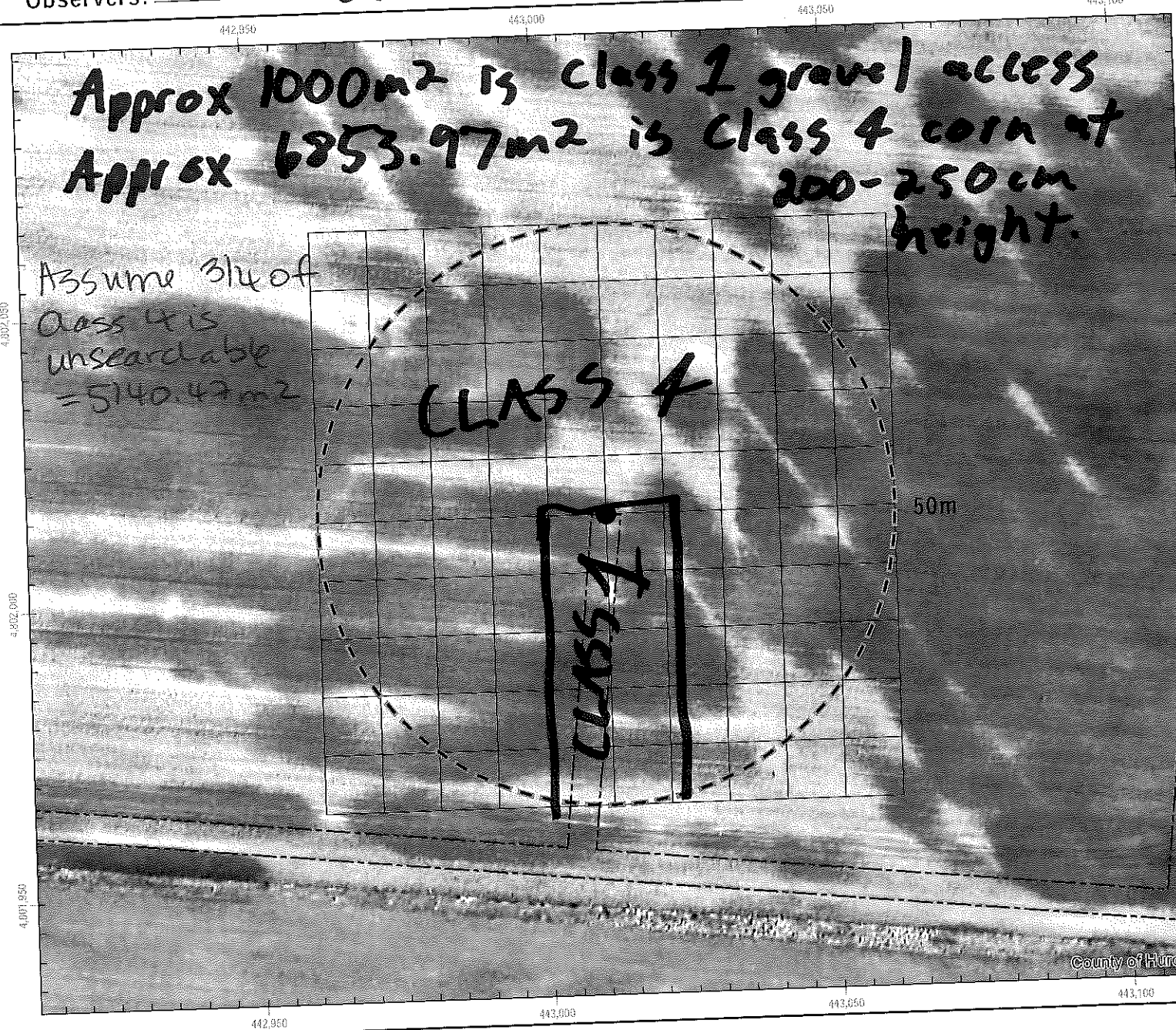
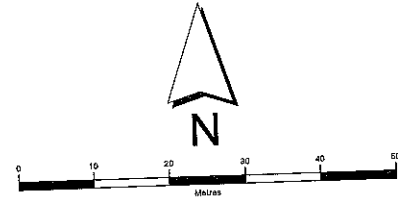


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-30
 Survey Date: Sept 18/19
 Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

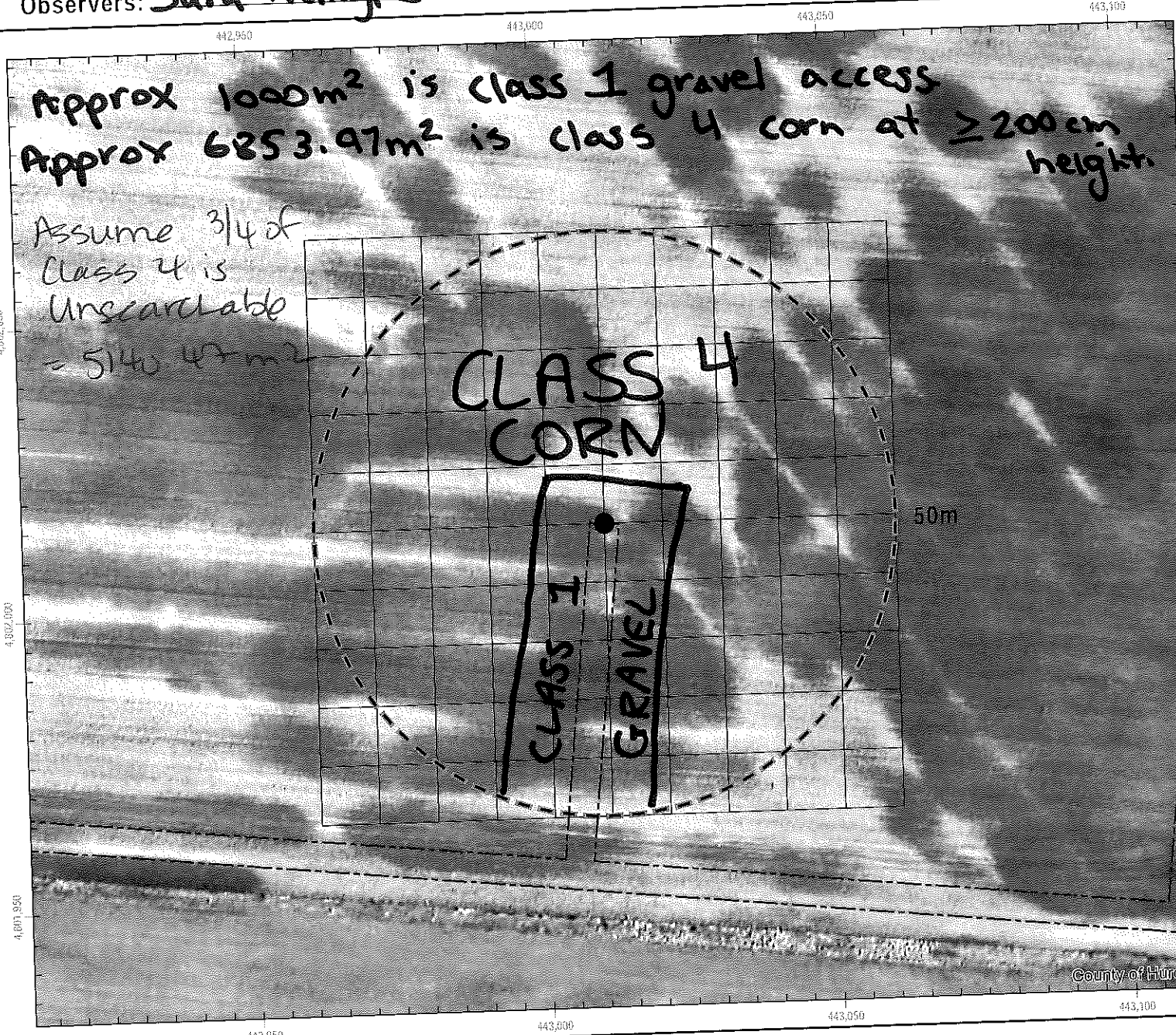
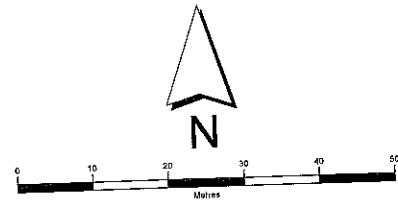
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-30

Survey Date: Oct/23/19

Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

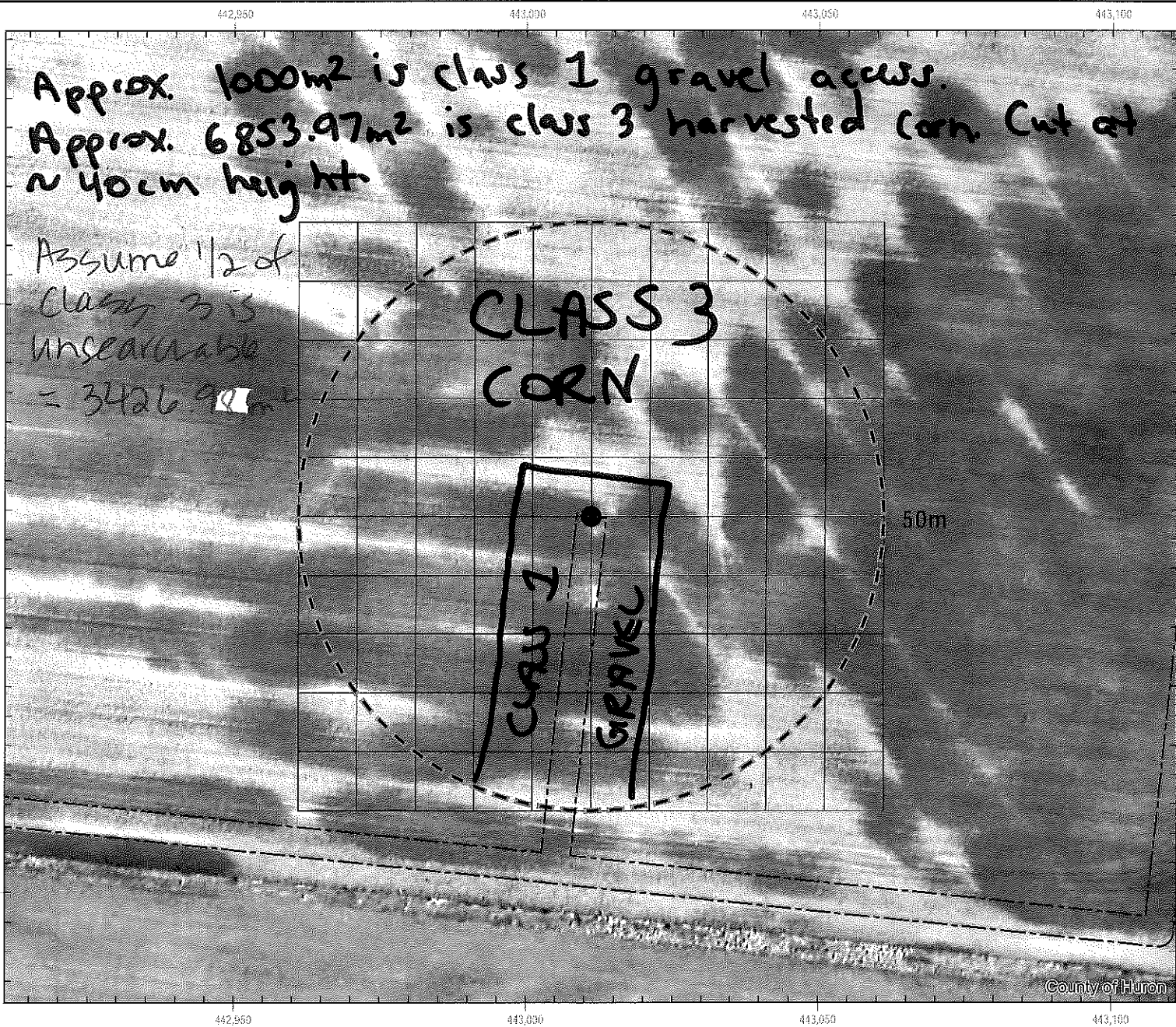
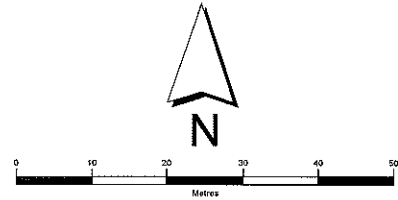
Site Number: T-30

Survey Date: Nov 22/19

Actual Searched Area (m²): 4426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

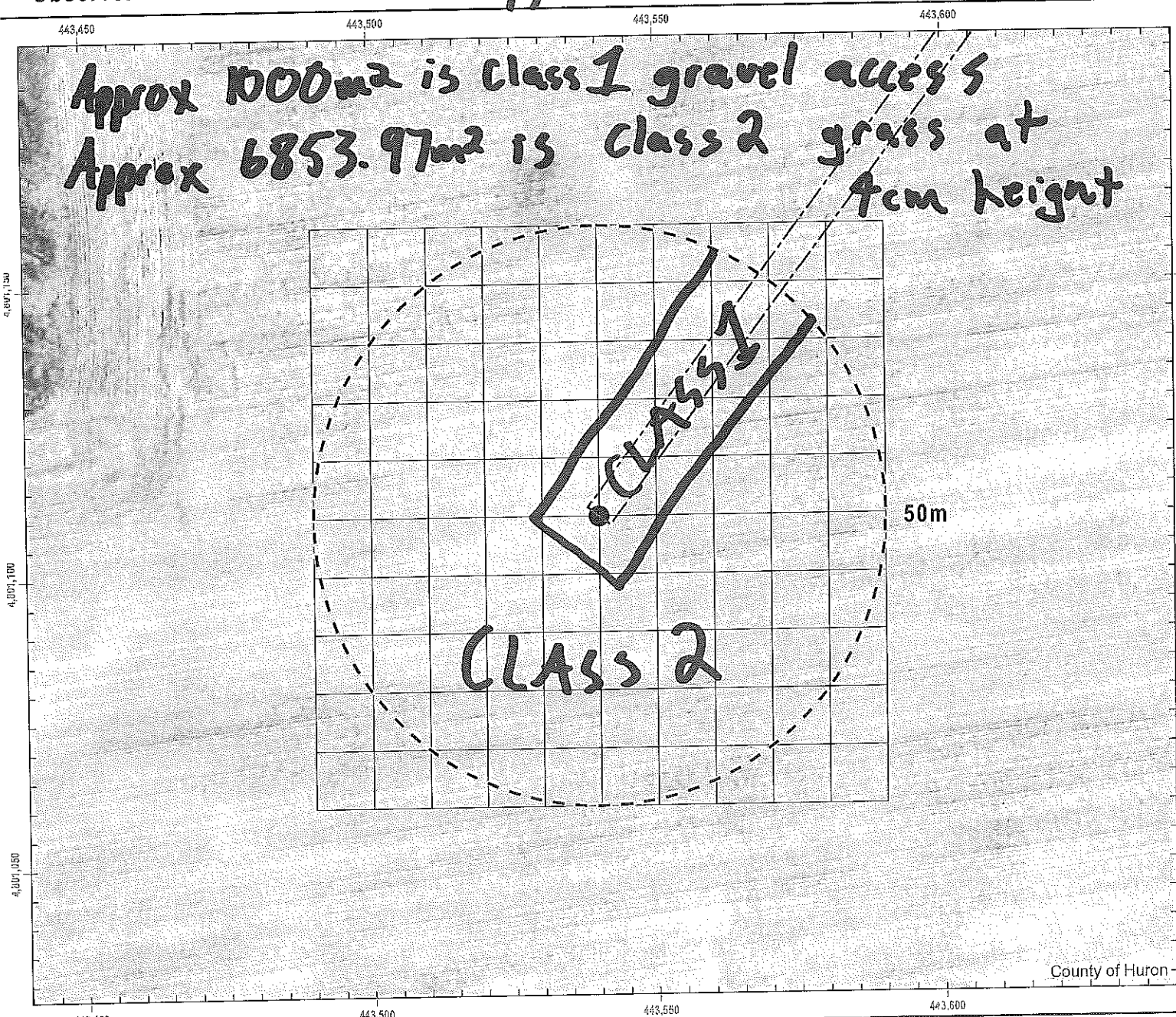
Site Number: T-31

Survey Date: May 3/19

Actual Searched Area (m²): 7853.97 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-31

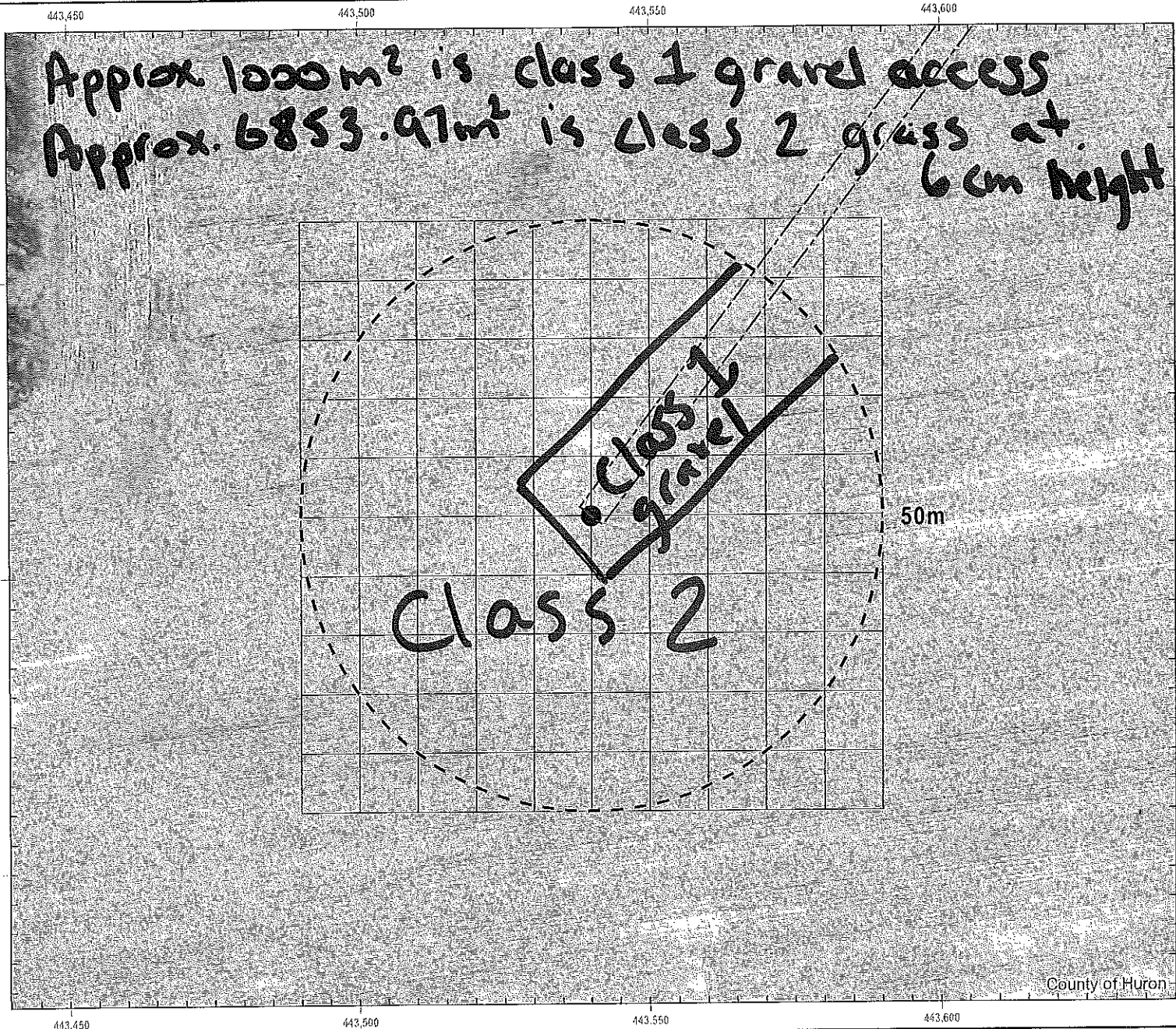
Survey Date: June 7/19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

7853.97 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

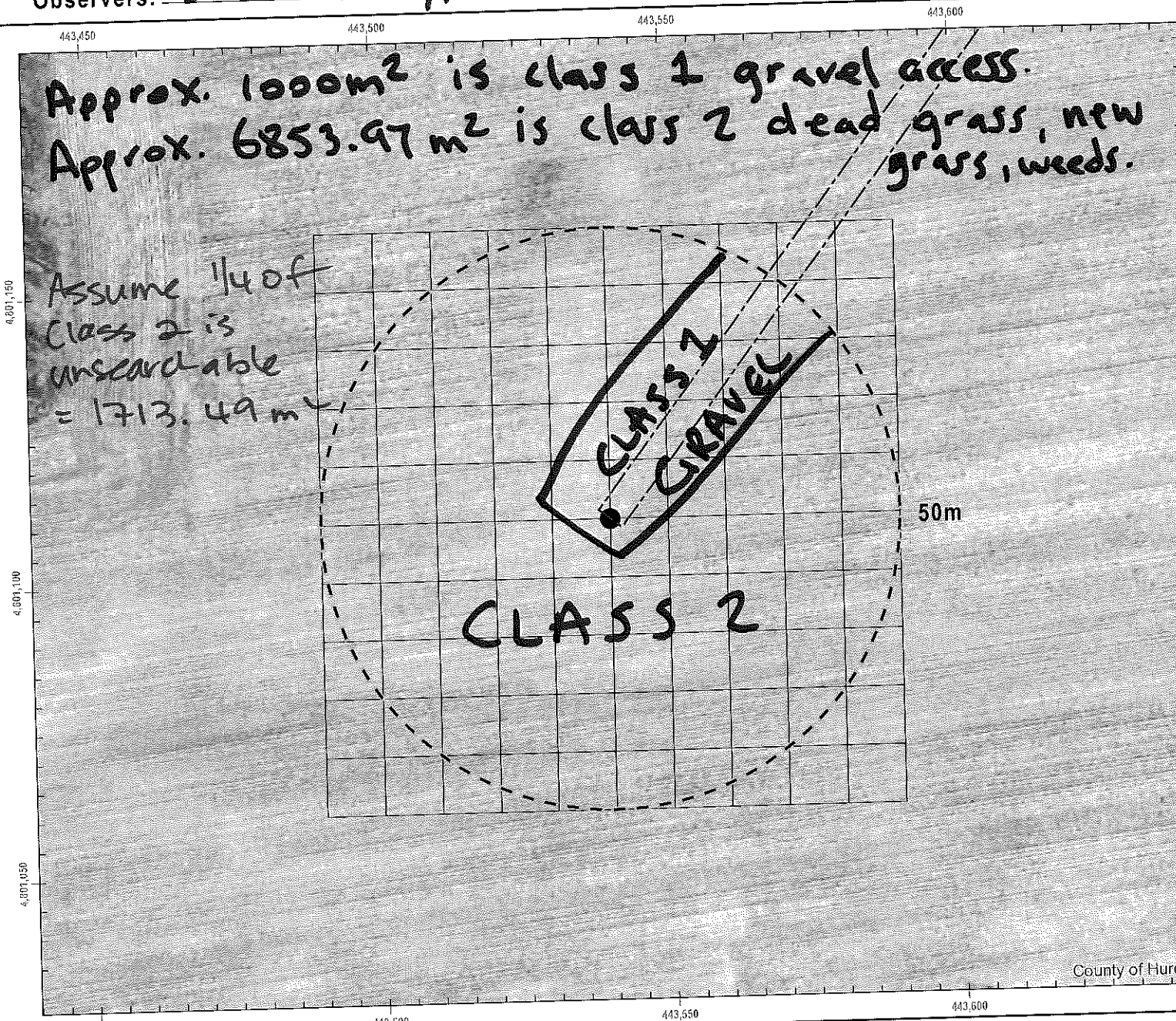
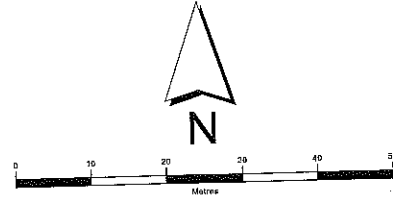
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-31

Survey Date: July 16/19

Actual Searched Area (m²): 6140.48 m²
(subtract from total search area - 7853.97 m²)

Observers: Sara Henny, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

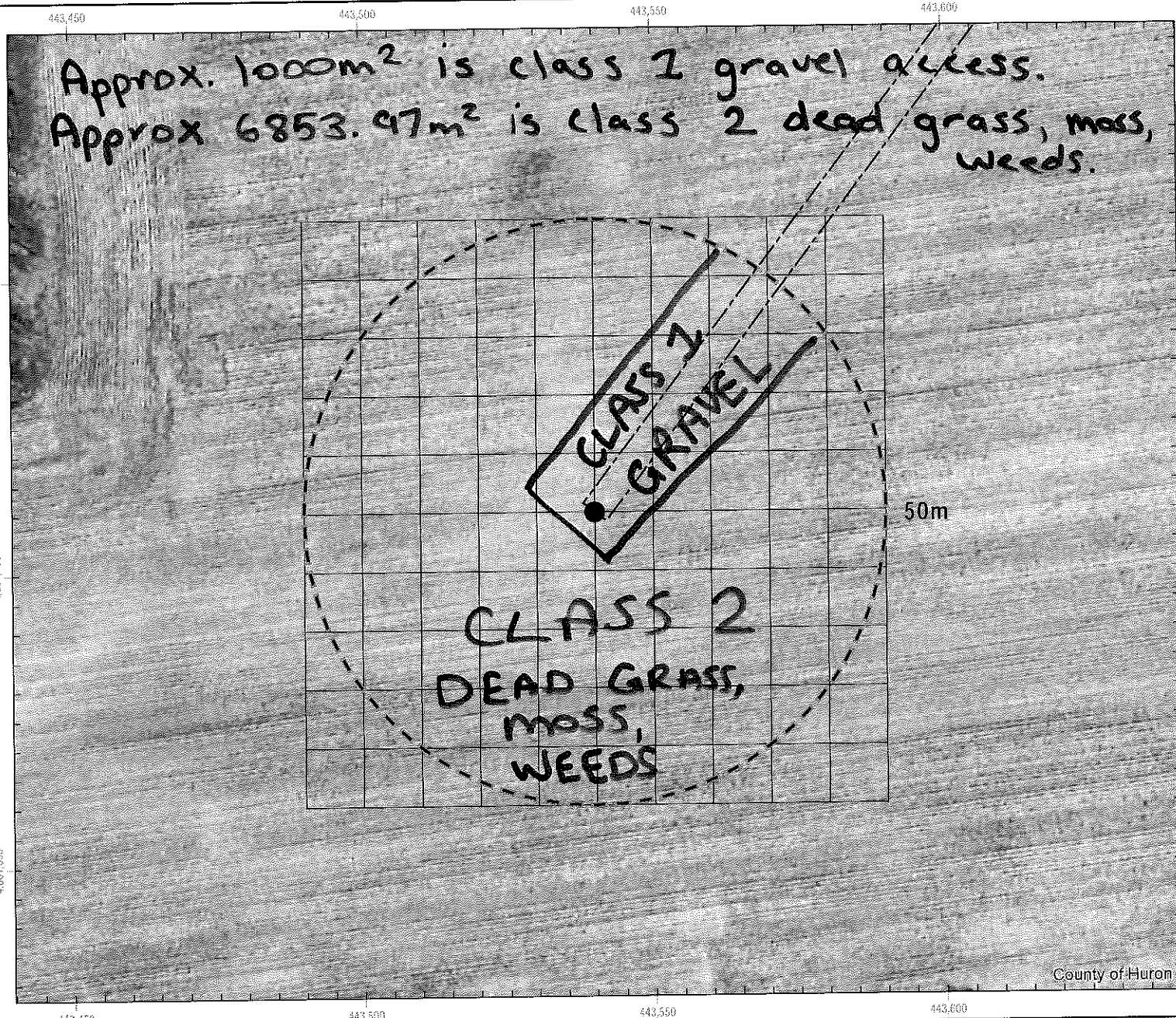
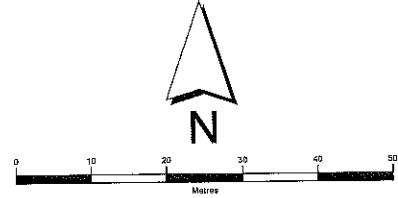
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-31

Survey Date: Aug 20/19

Actual Searched Area (m²): 7853.97m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

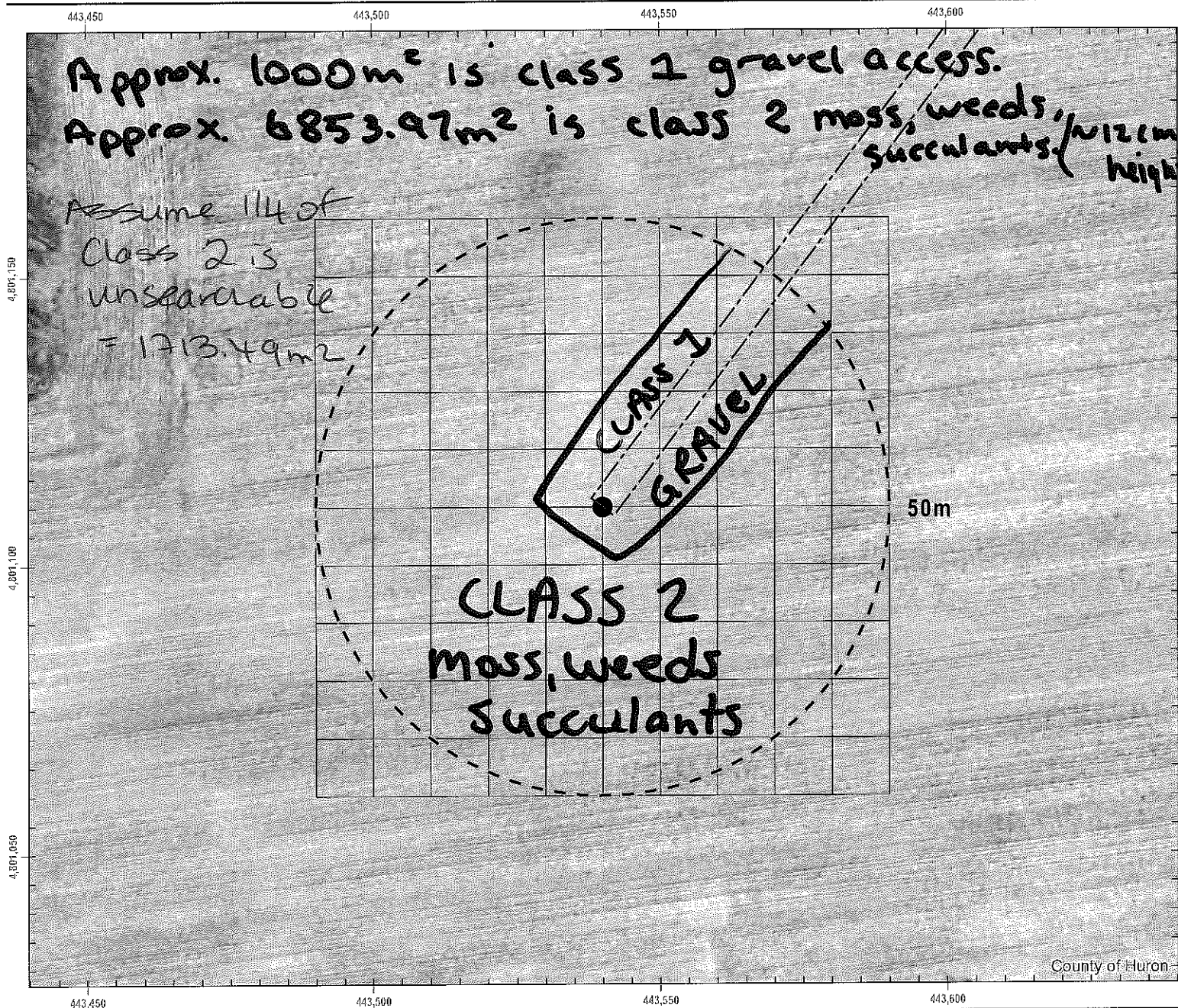
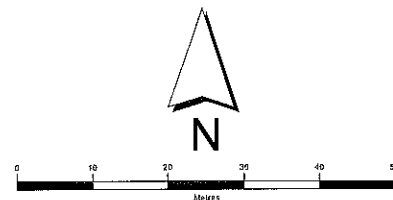
Site Number: T-31

Survey Date: Sept. 17/19

Actual Searched Area (m²): 6140.48m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

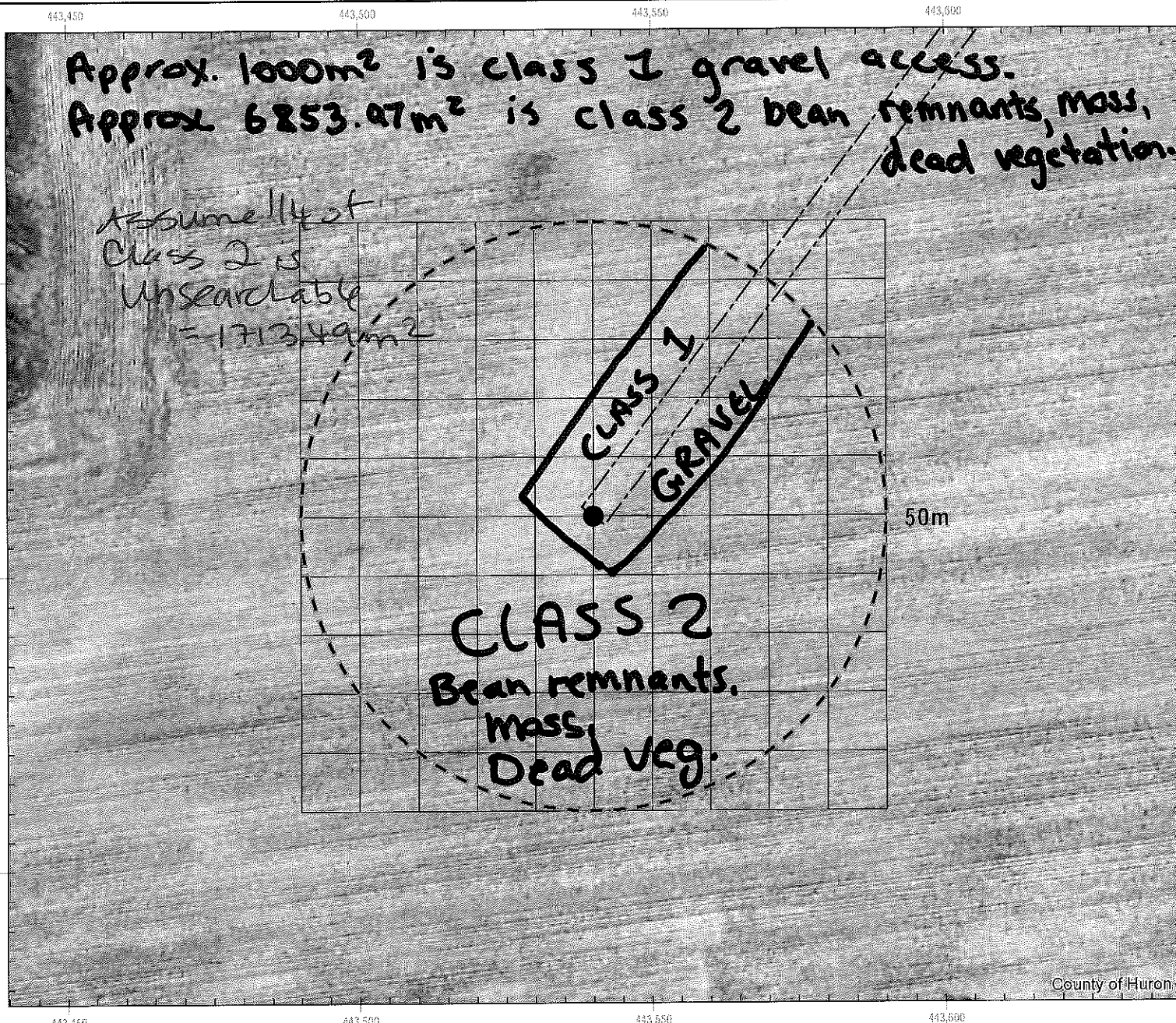
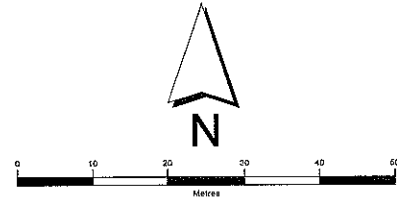
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-31

Survey Date: Oct/25/19

Actual Searched Area (m²): 6140.48 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

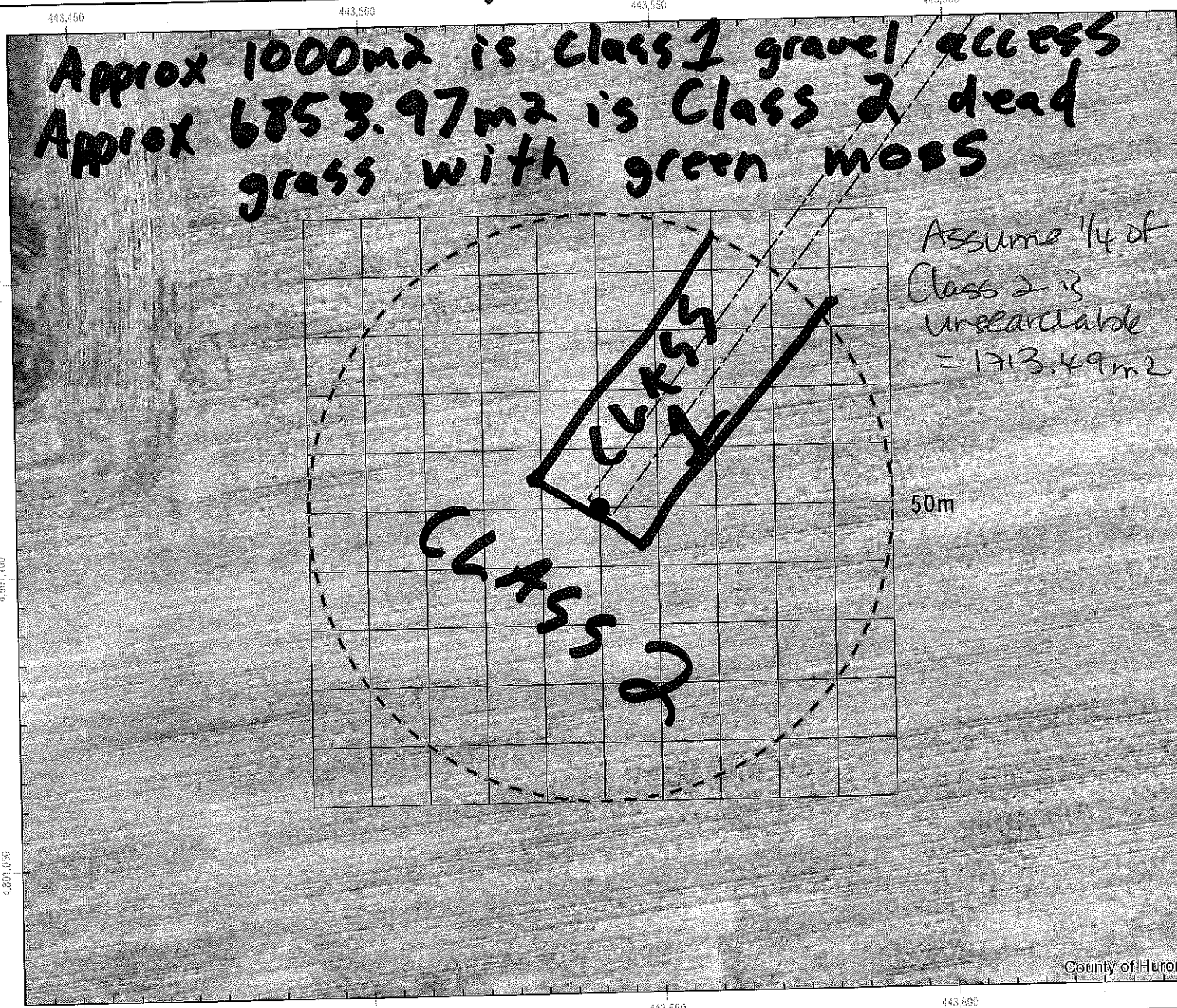
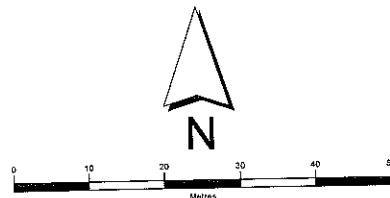
Site Number: T-31

Survey Date: Nov 19/19

Actual Searched Area (m²): 6740.48 m²

(subtract from total search area = 7853.97m²)

Observers: Sara Henry



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

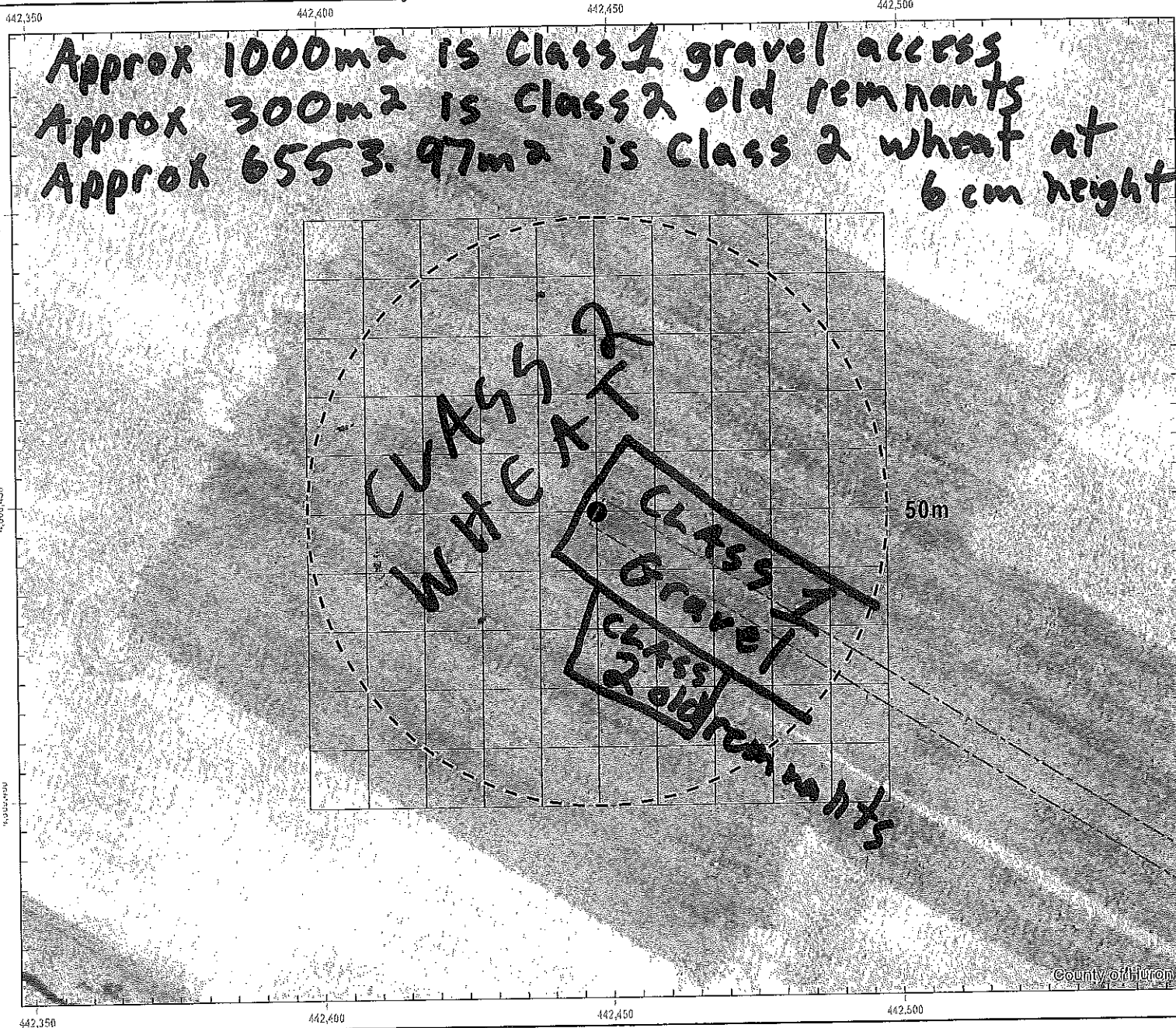
Site Number: T-32

Survey Date: April 30 / 19

Actual Searched Area (m²): No search, pres only
(subtract from total search area: 7853.97m²)

Observers: Sara Henry, Sarah Jackson

7853.97 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-32

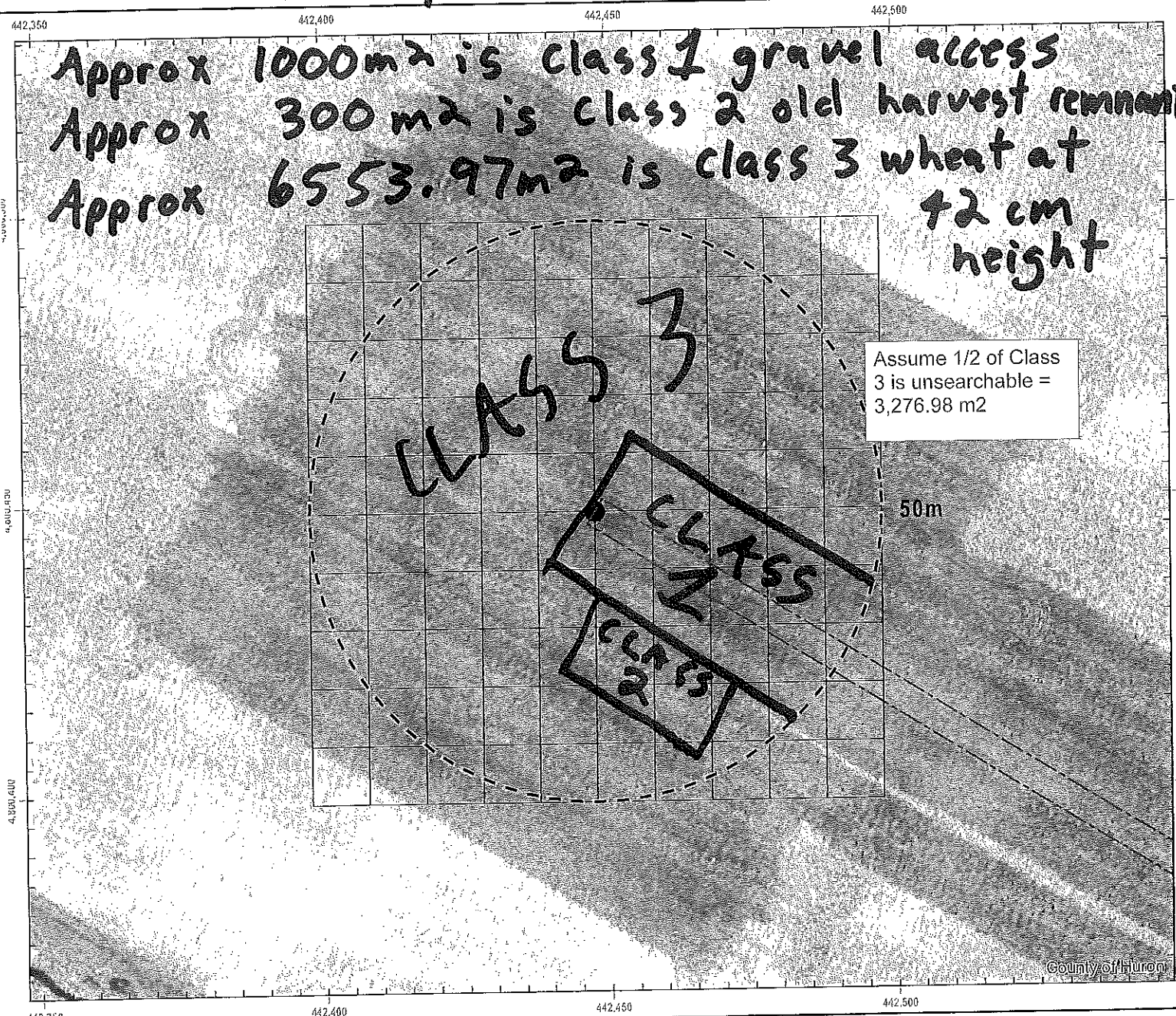
Survey Date: June 12 / 19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

4,576.99 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

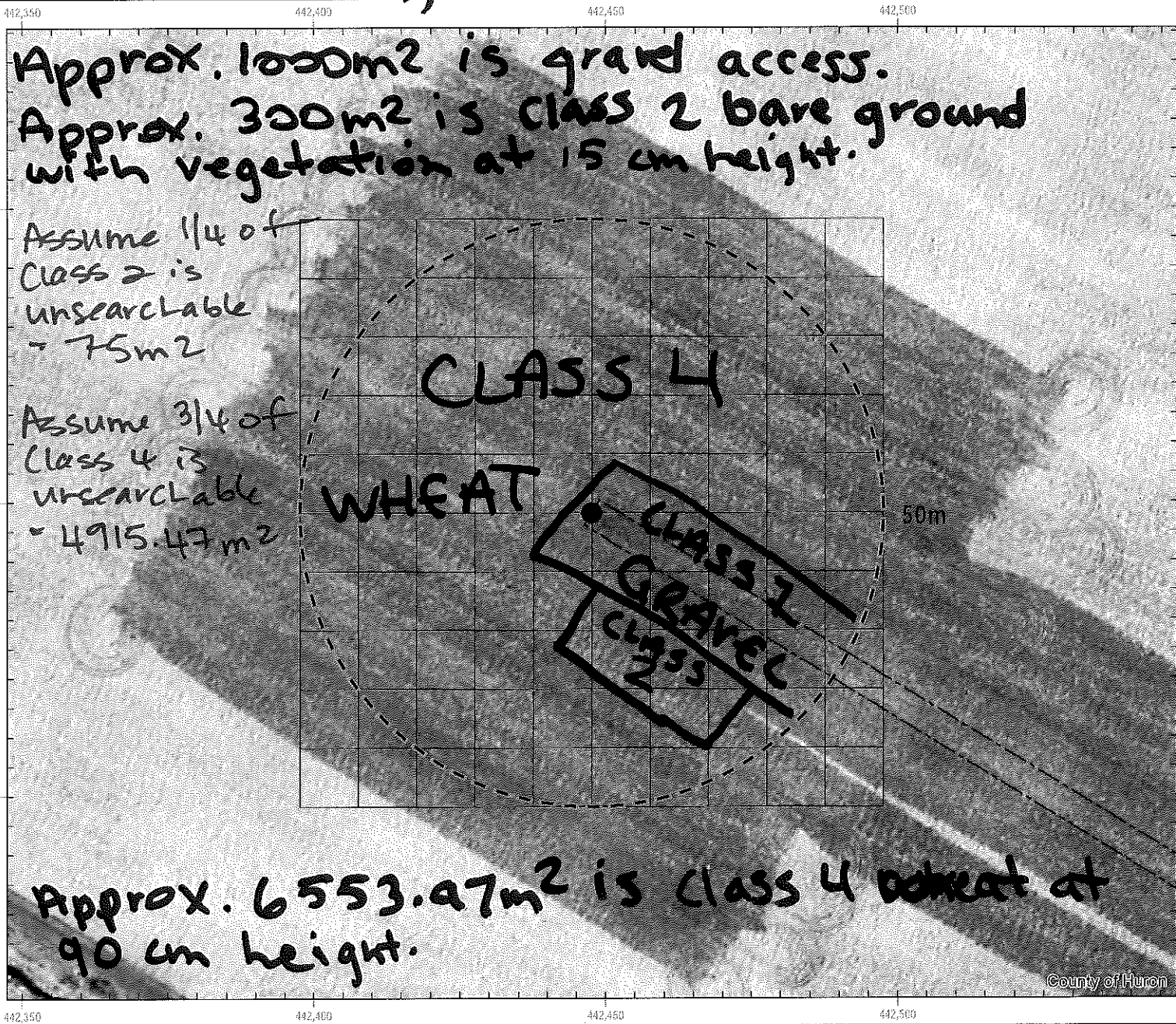
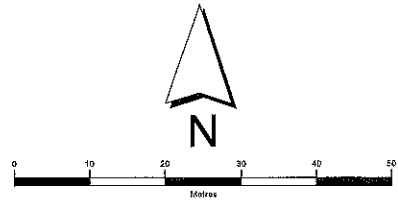
Site Number: T-32

Survey Date: July 10/19

Actual Searched Area (m²): 2863.50 m²

(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

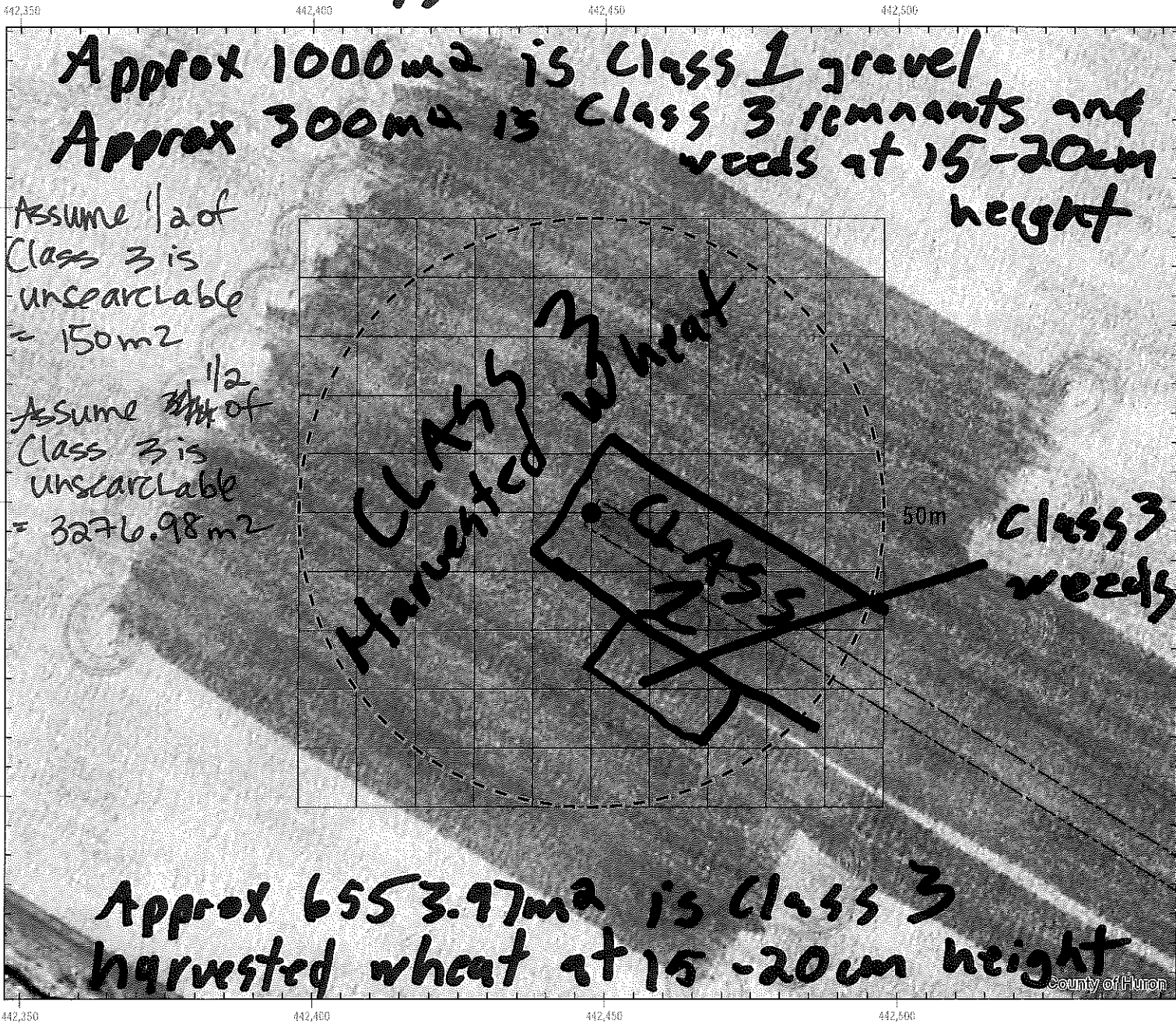
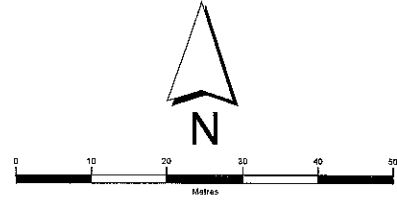
Site Number: T-32

Survey Date: Aug 14 / 19

Actual Searched Area (m²): 4426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Heary, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

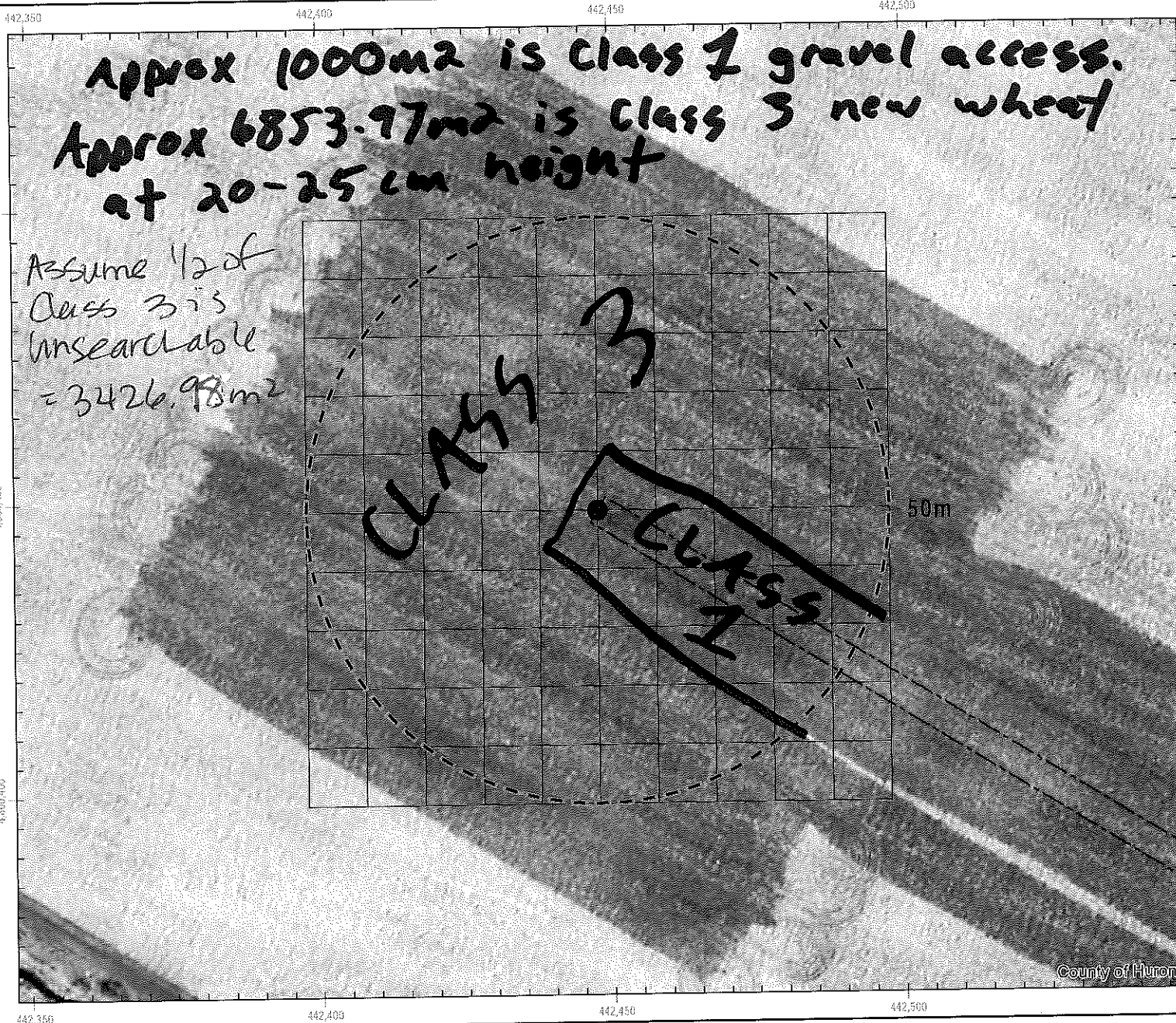
Site Number: T-32

Survey Date: Sept 25 / 19

Actual Searched Area (m²): 4426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

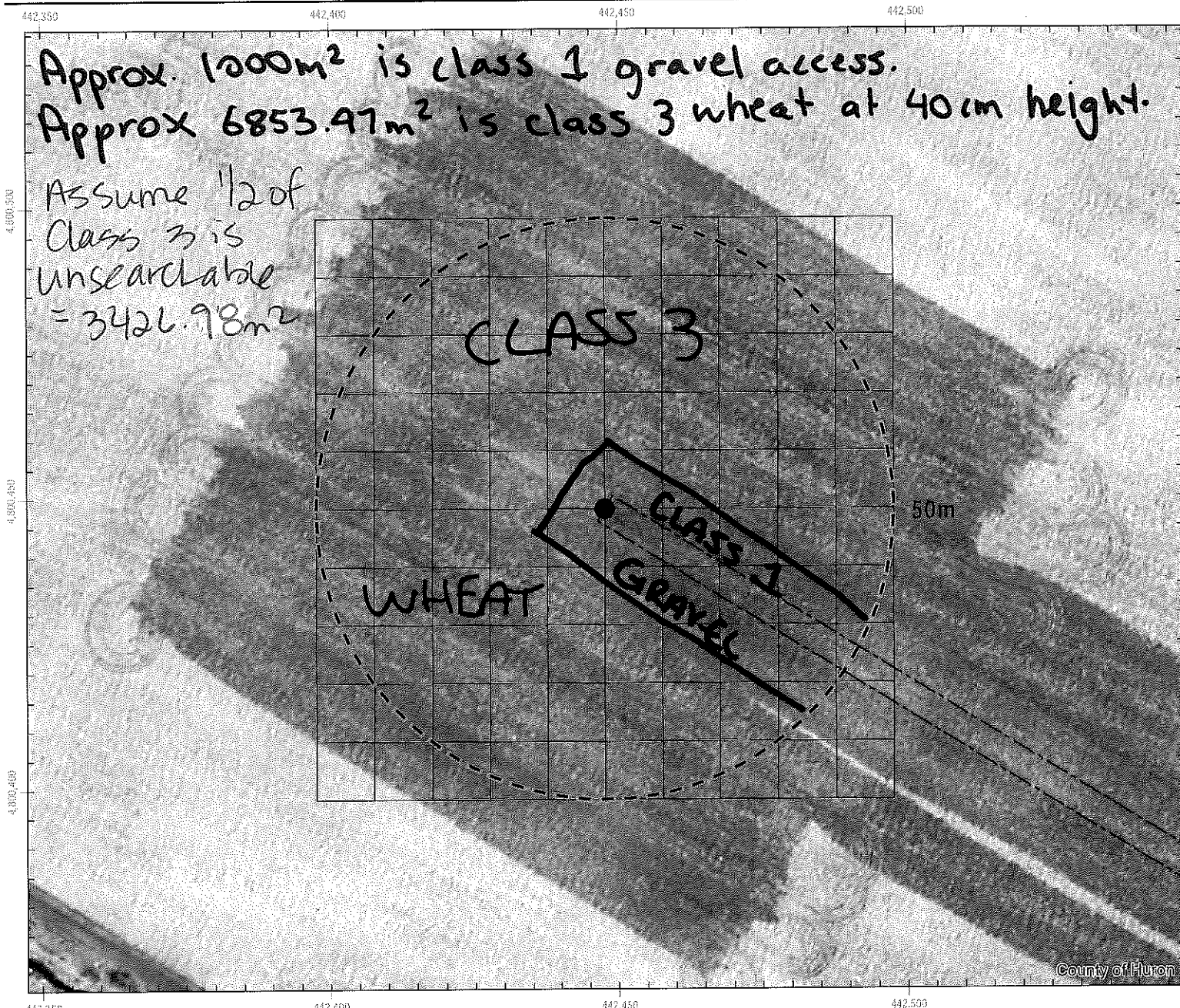
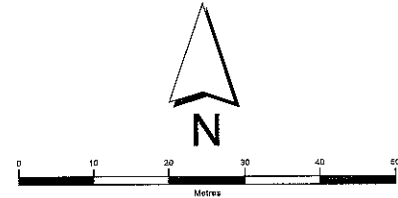
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-32

Survey Date: Oct/23/19

Actual Searched Area (m²): 4426.99 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

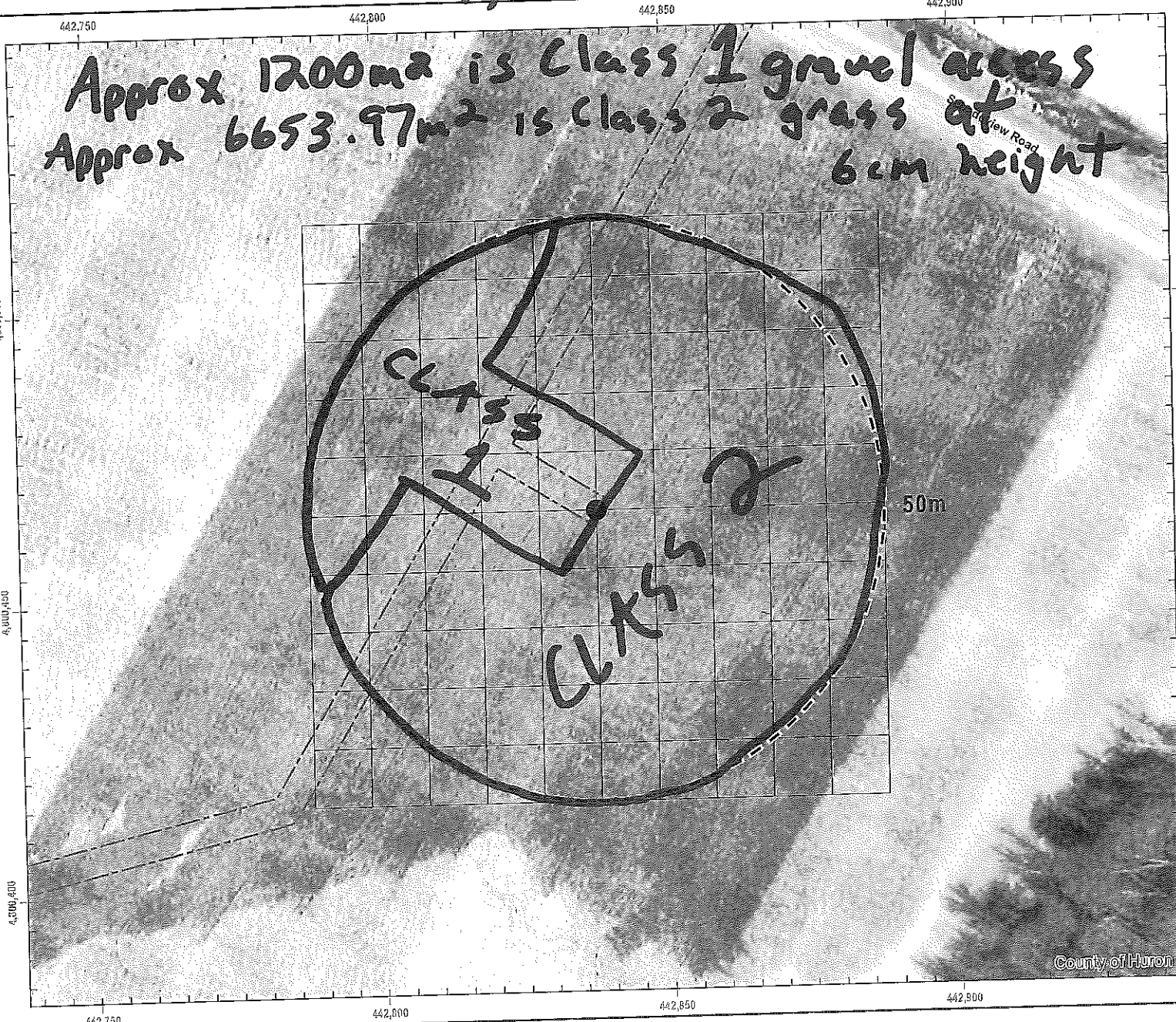
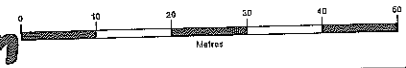
SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-33
 Survey Date: May 3 / 19
 Actual Searched Area (m²): 7853.97m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-33

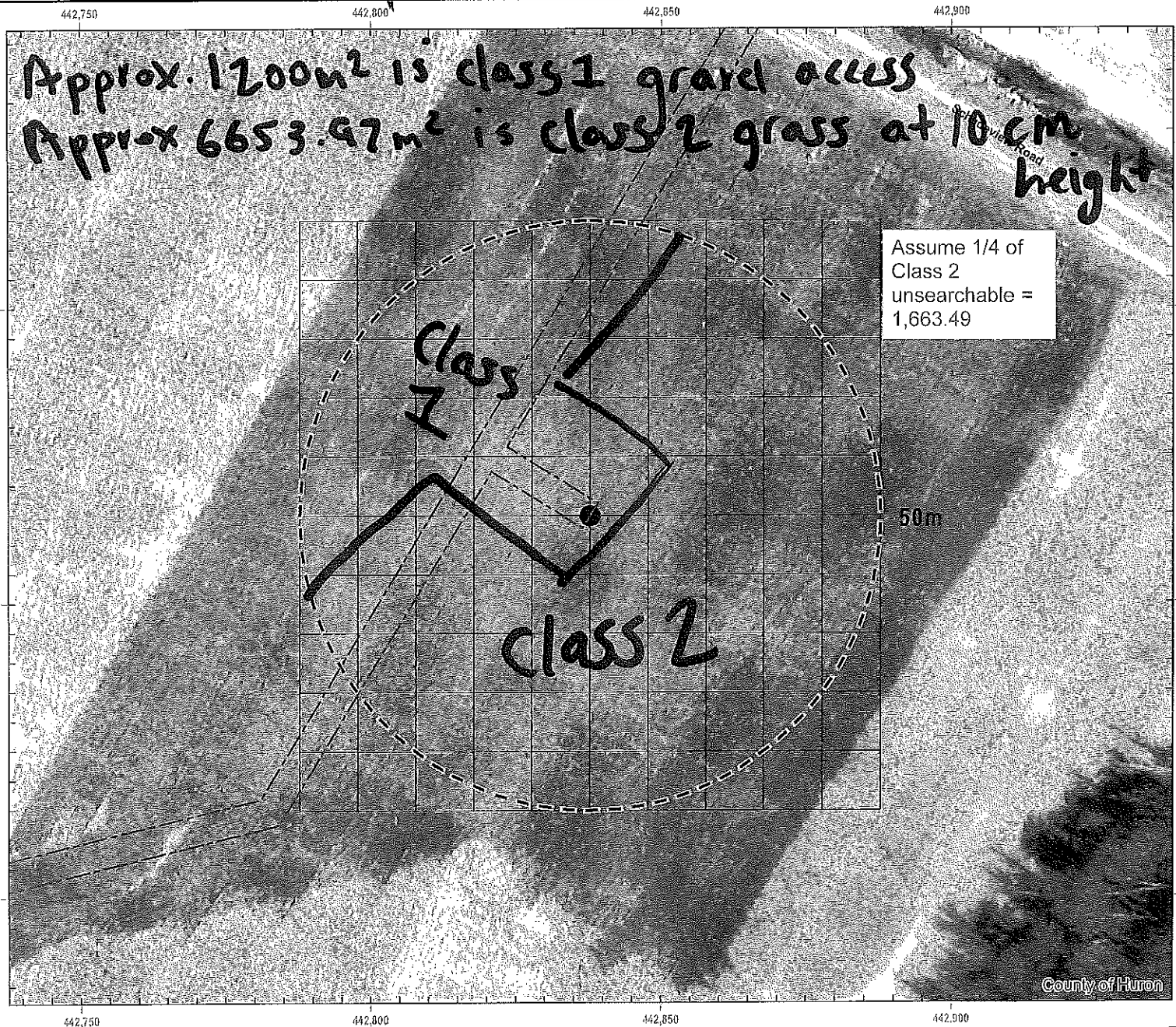
Survey Date: June 7/19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

6,190.48 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

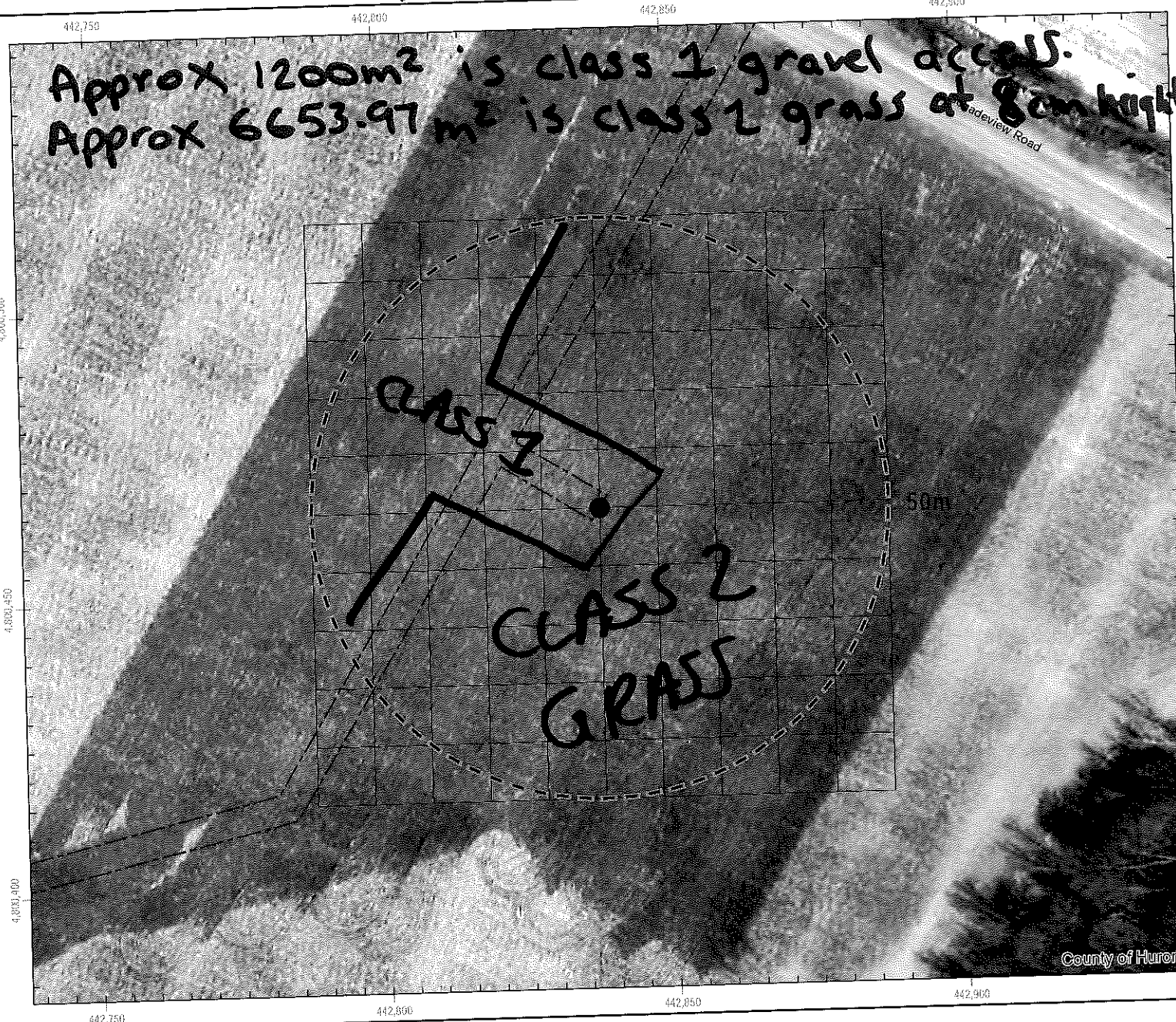
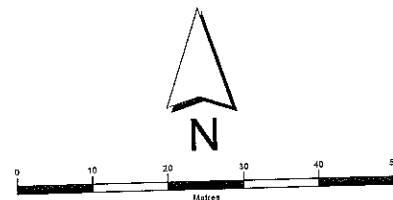
Site Number: T-33

Survey Date: July 23/19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

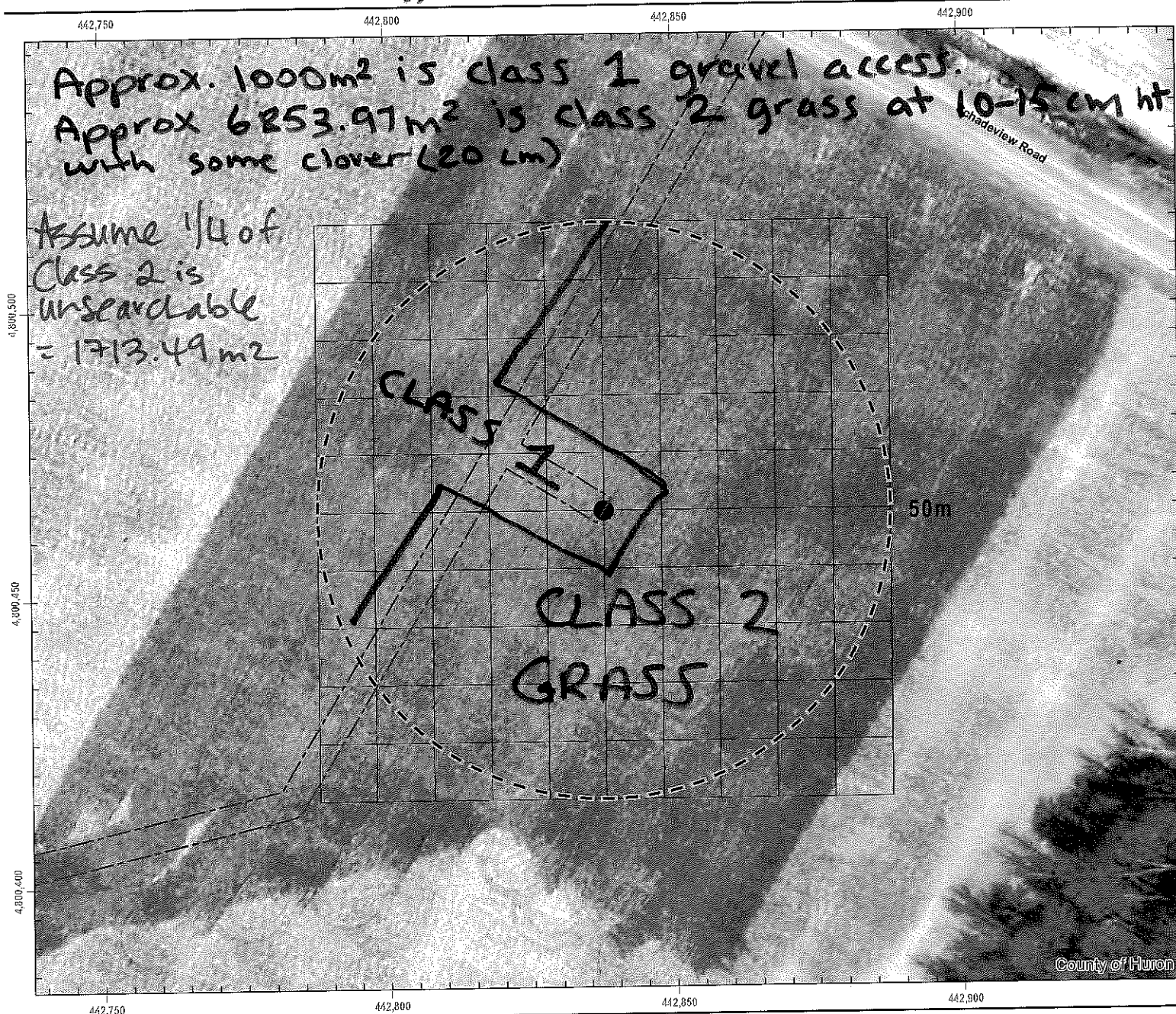
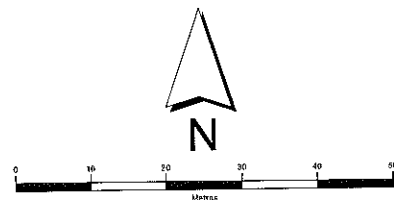
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-33

Survey Date: Aug 20/19

Actual Searched Area (m²): 6140.48 m²
(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

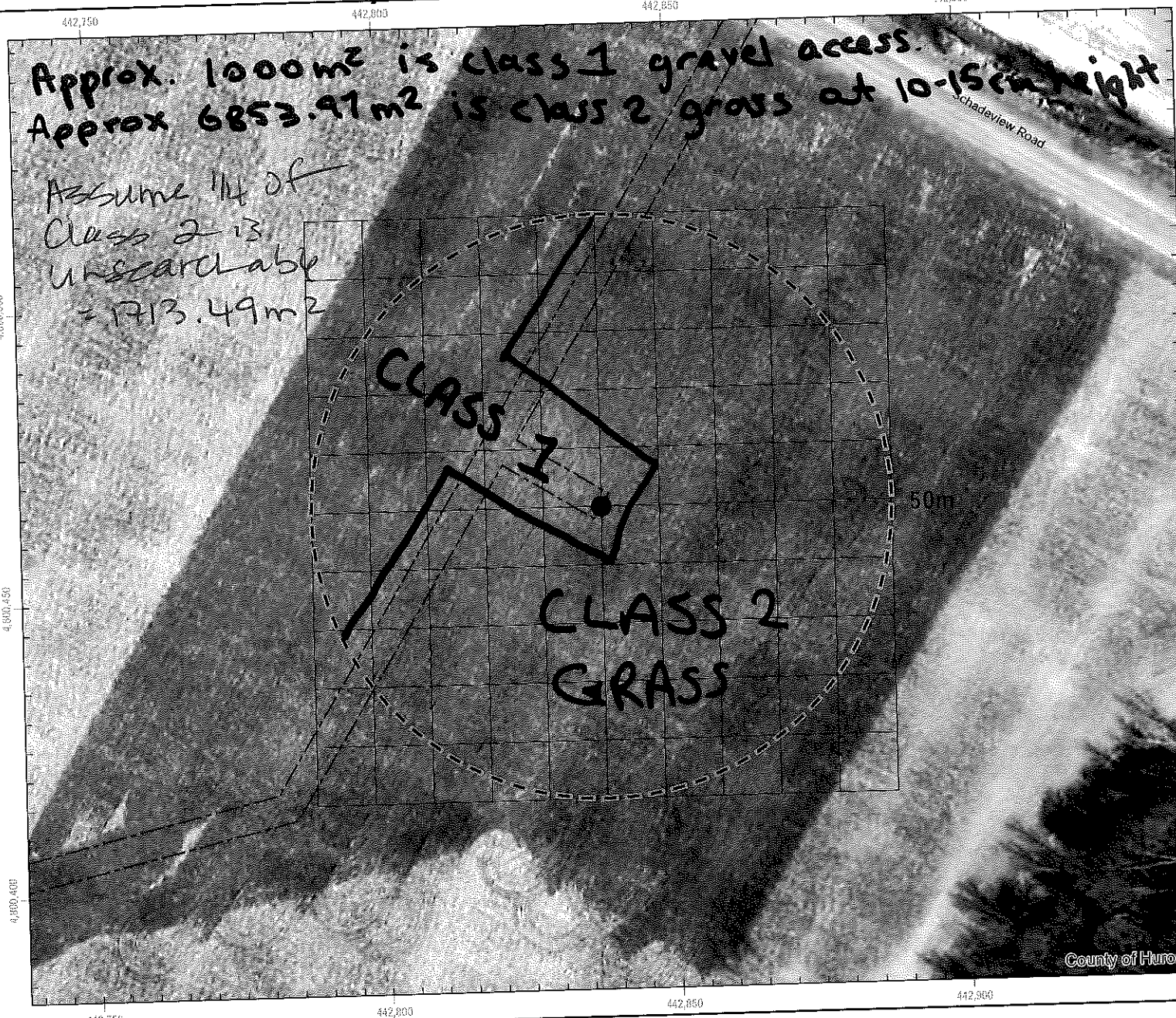
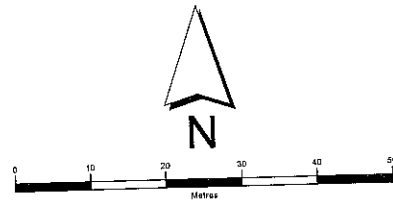
Site Number: T-33

Survey Date: Sept 17/19

Actual Searched Area (m²): 6140.48 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



County of Huron

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

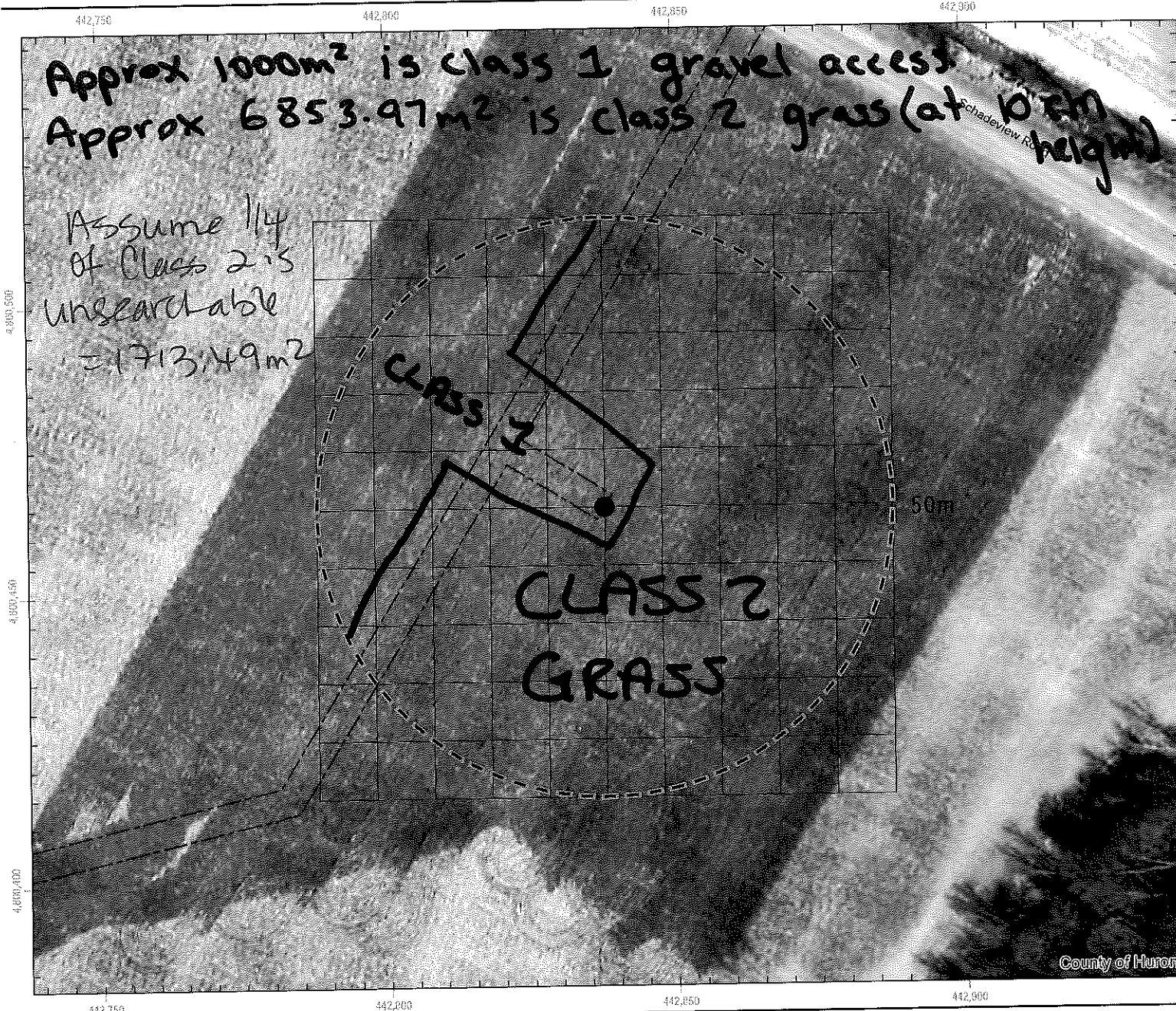
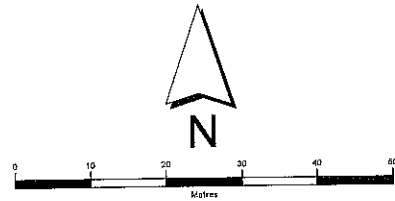
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-33

Survey Date: Oct 25/19

Actual Searched Area (m²): 6140.48m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

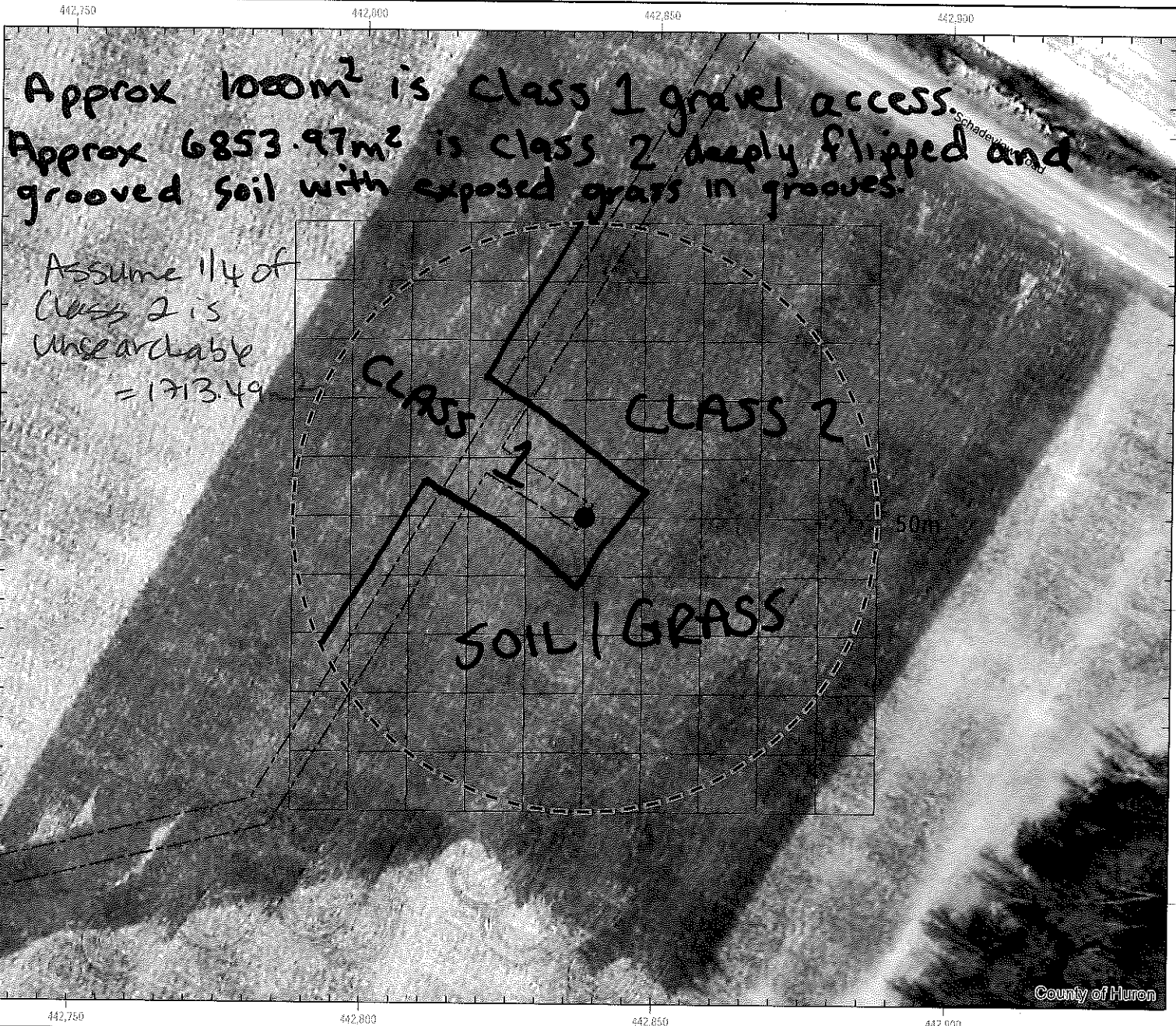
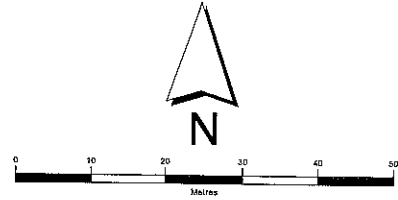


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-33
 Survey Date: Nov. 20/19
 Actual Searched Area (m²): 6140.48m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

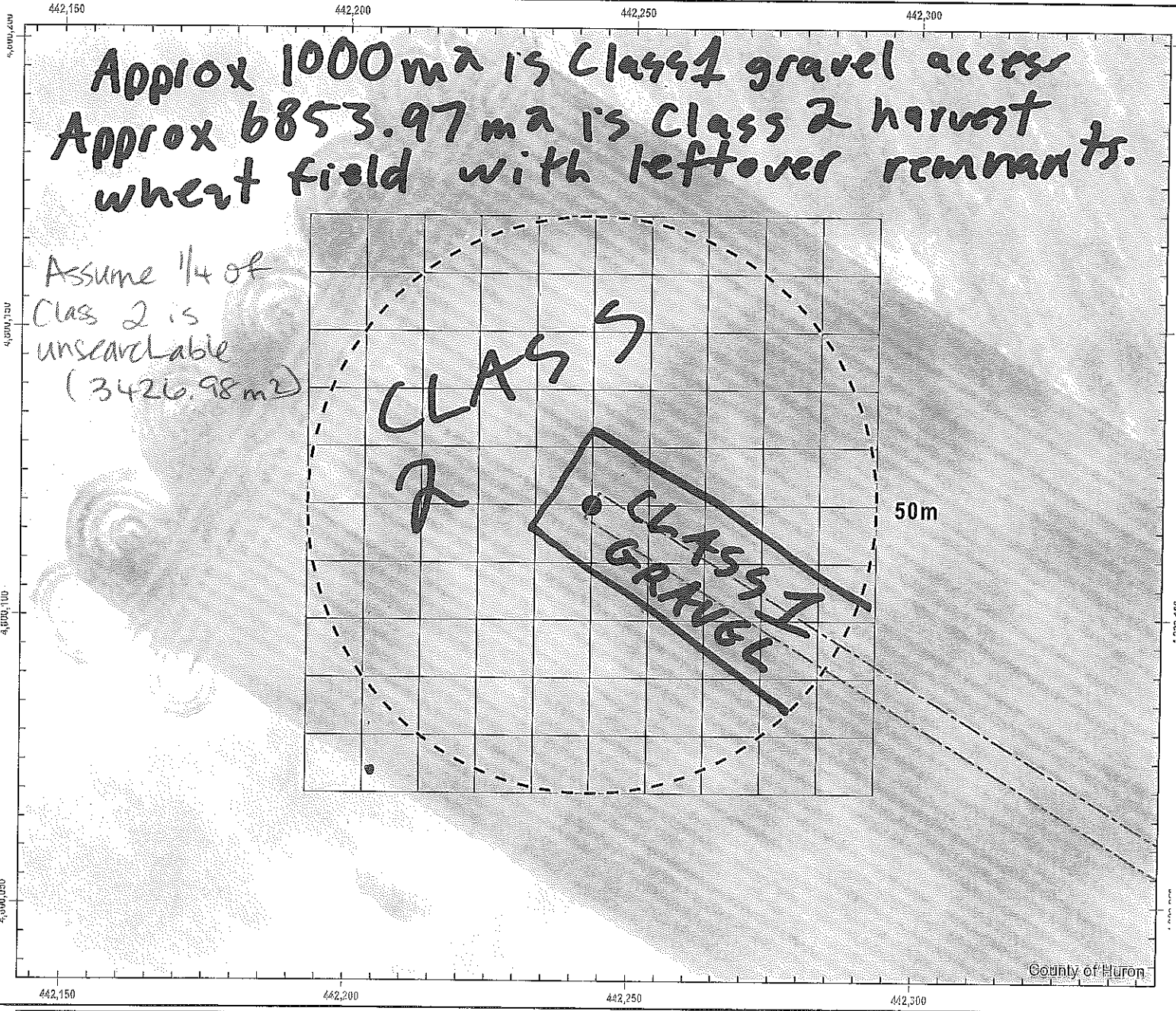
Site Number: T-34

Survey Date: April 30 / 19

Actual Searched Area (m²): No search done, for pics only 442699m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

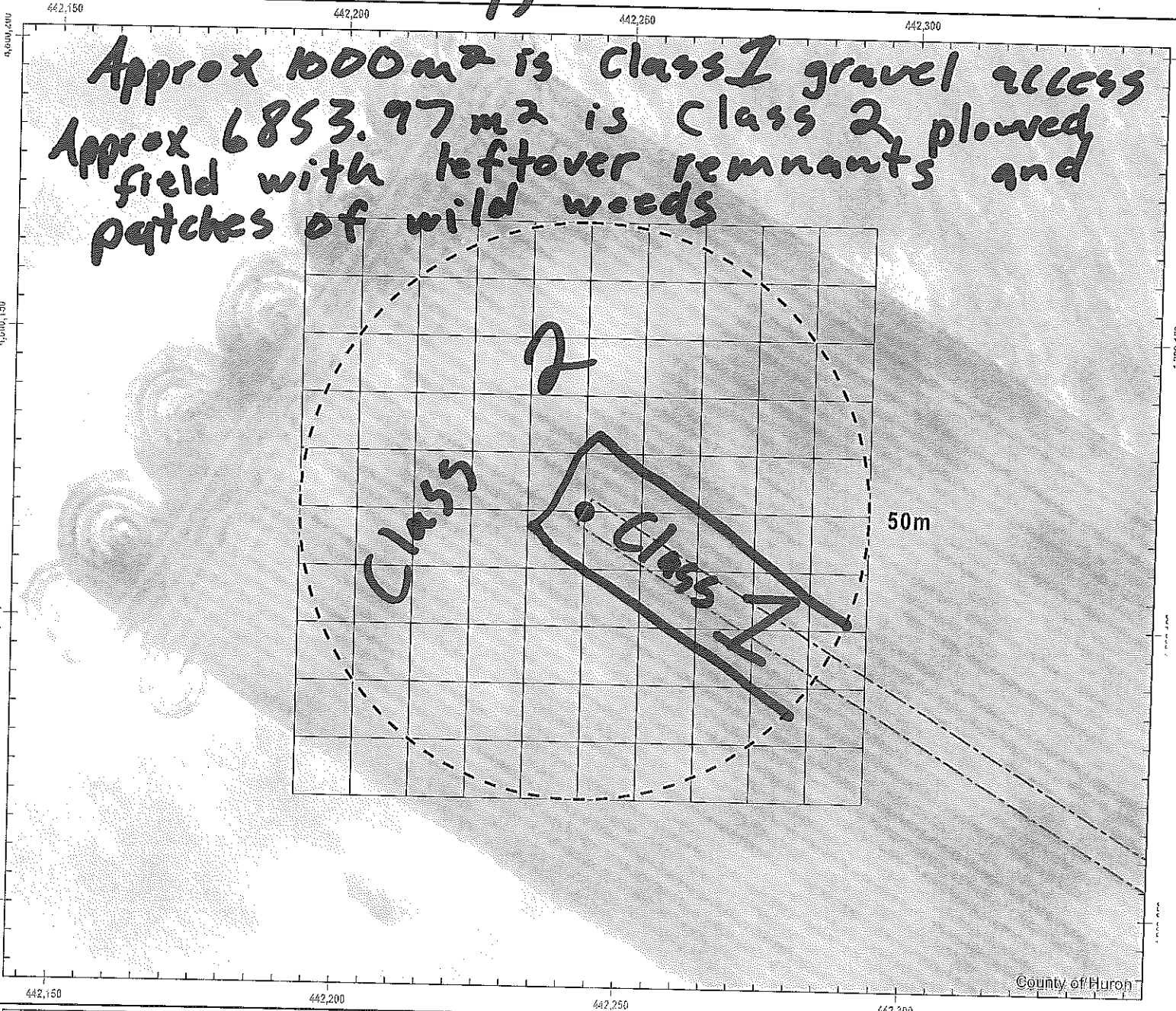
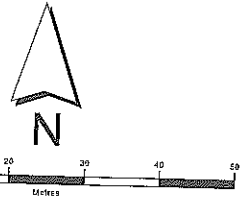
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-34

Survey Date: May 29 / 19

Actual Searched Area (m²): 7853.97 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

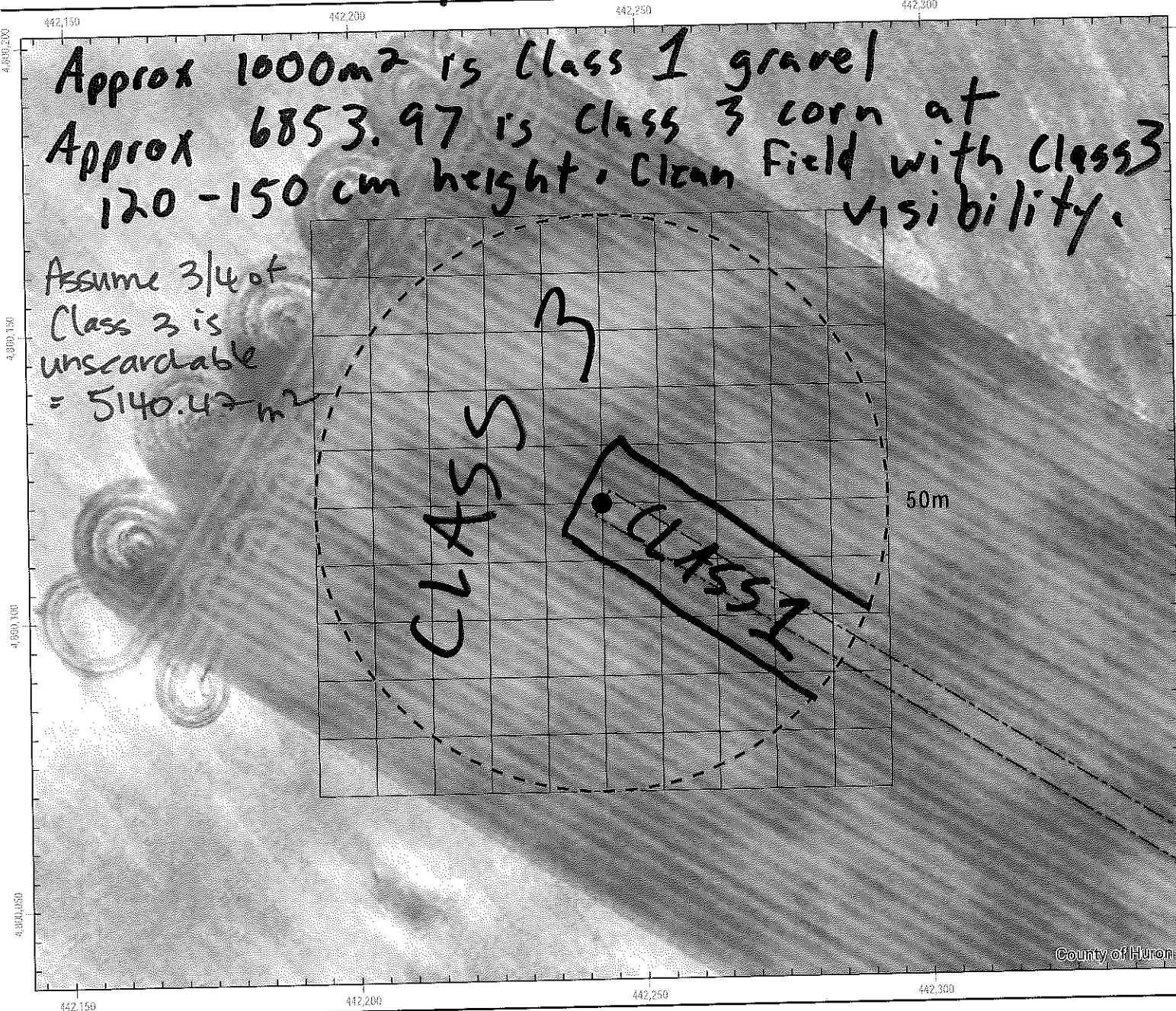
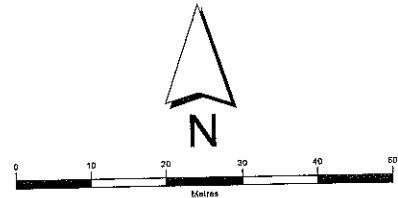
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-34

Survey Date: July 24/19

Actual Searched Area (m²): 2913.50 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

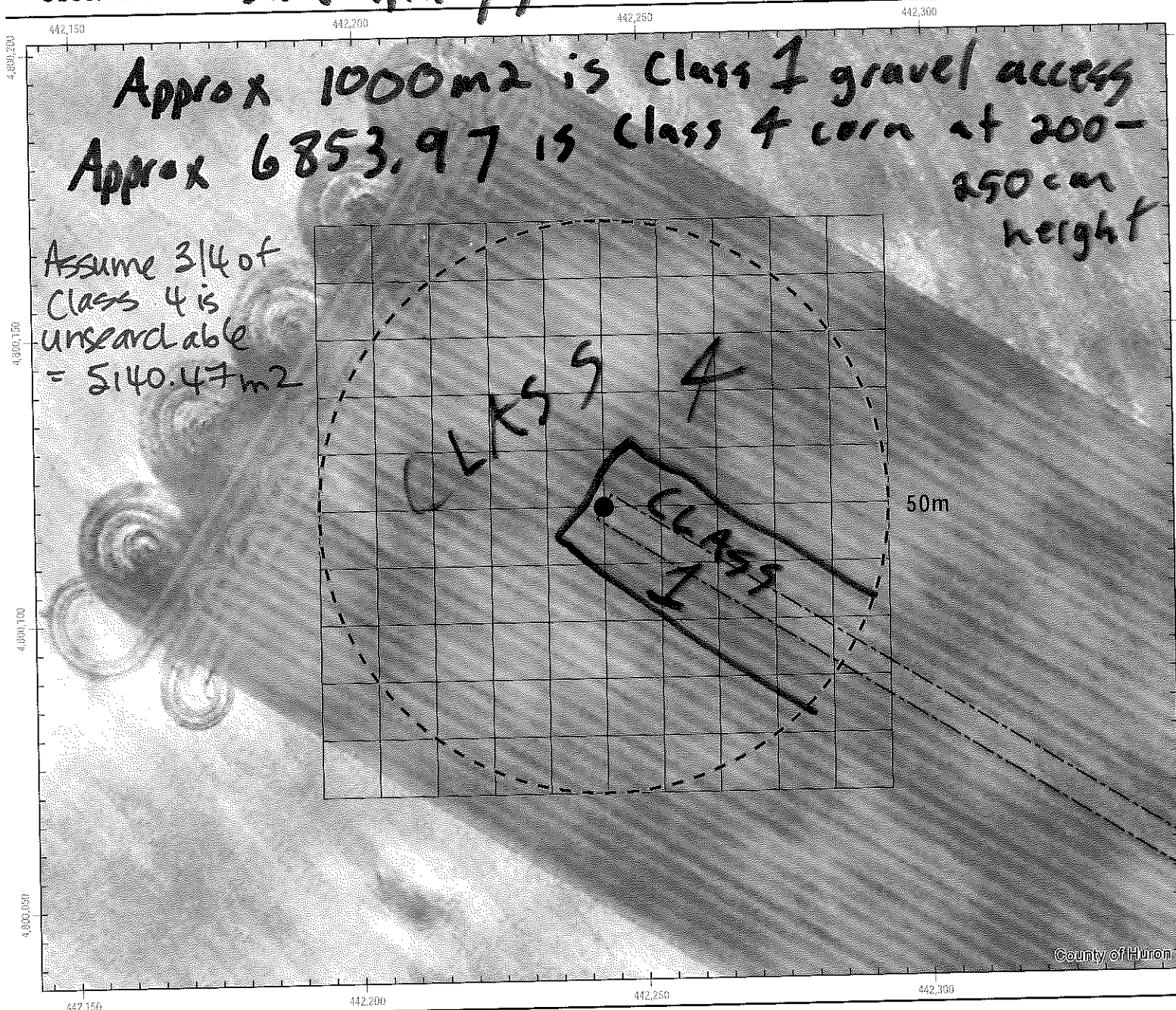
Site Number: T-34

Survey Date: Pics only on Aug 21/19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

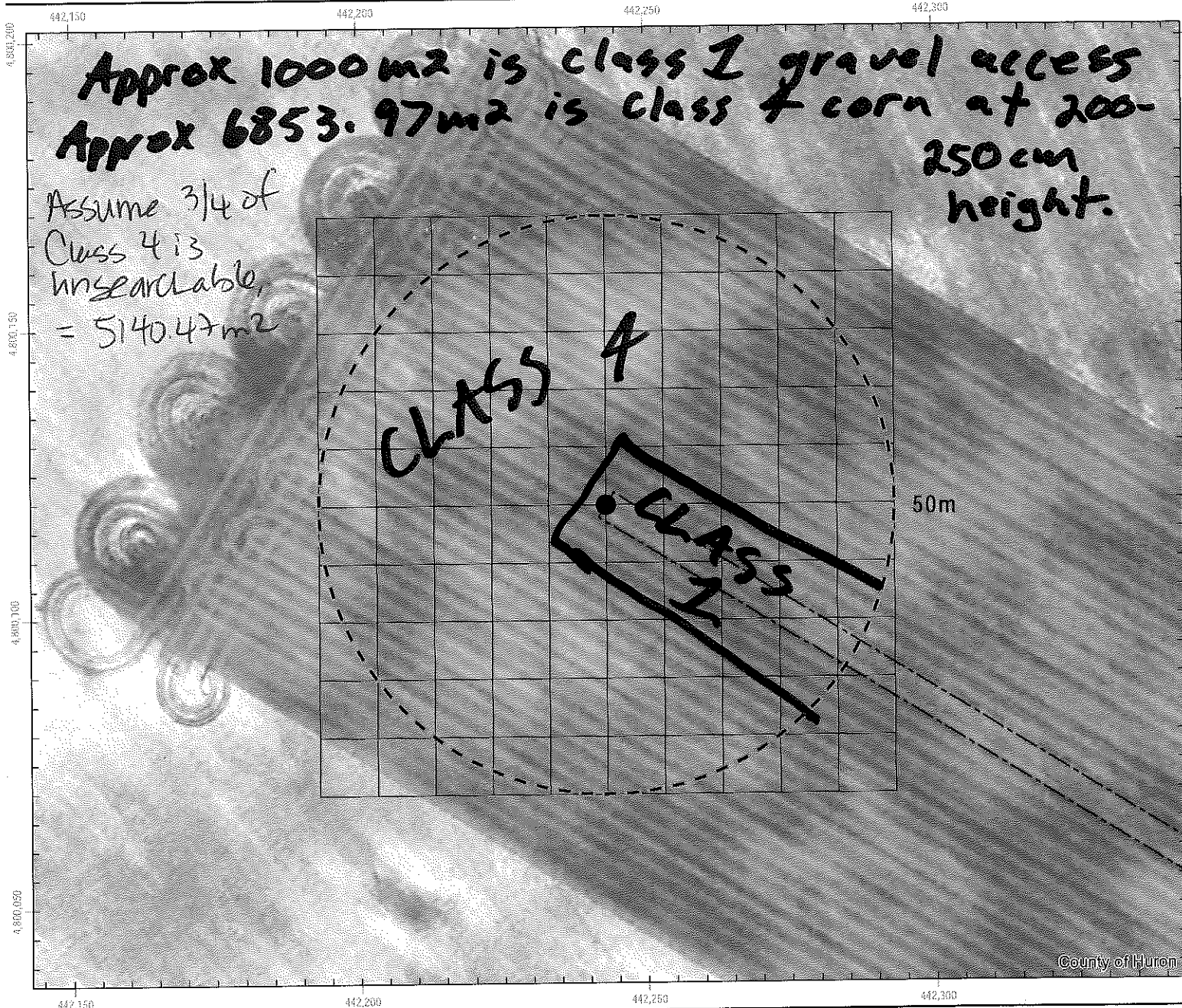
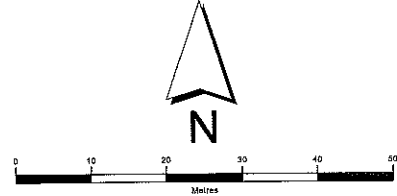
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-34

Survey Date: Sept 25 / 19

Actual Searched Area (m²): 2713.50m²
(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

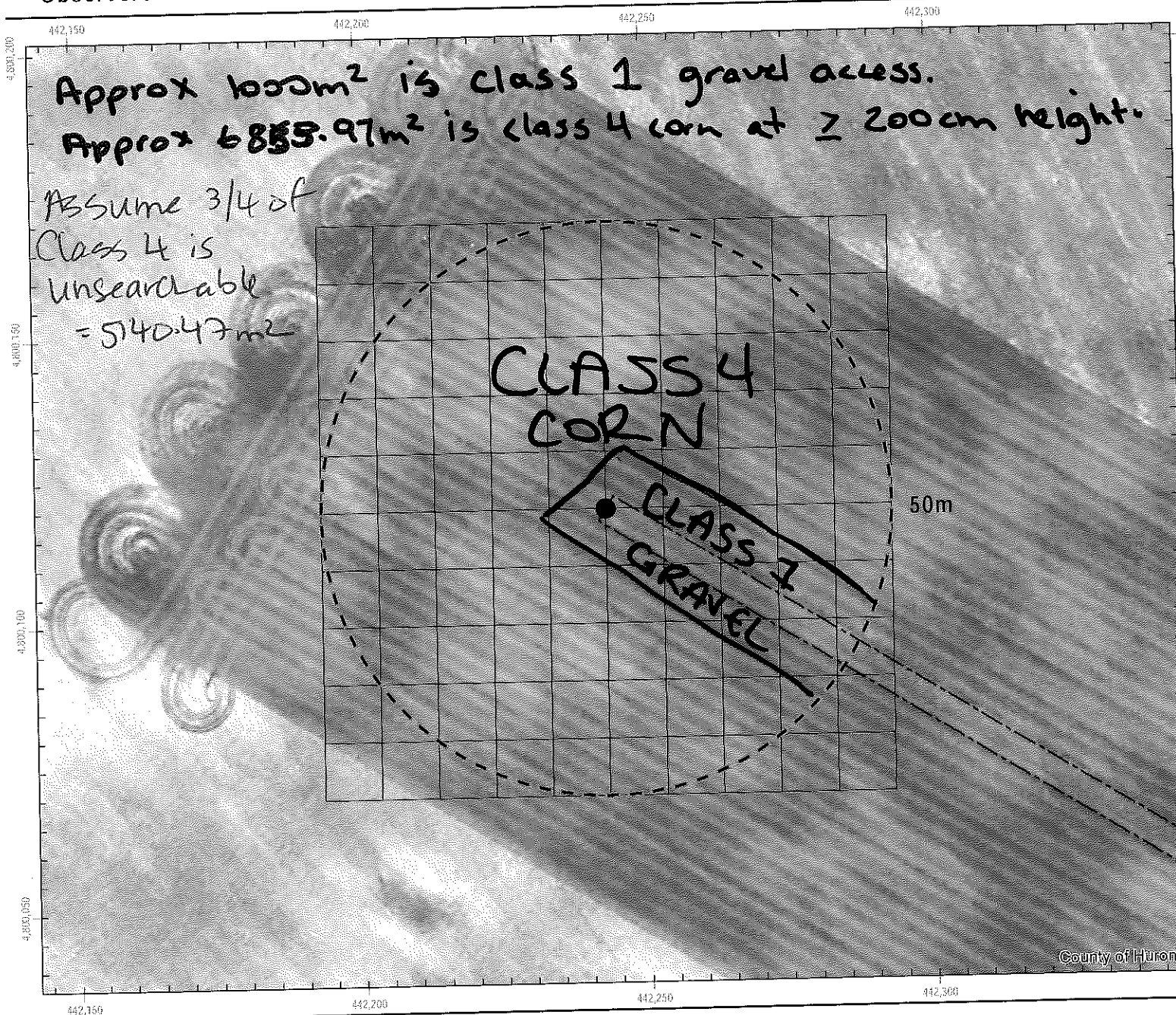
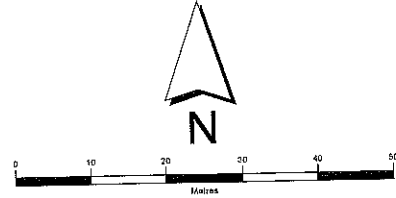
SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-34
 Survey Date: Oct/30/19
 Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

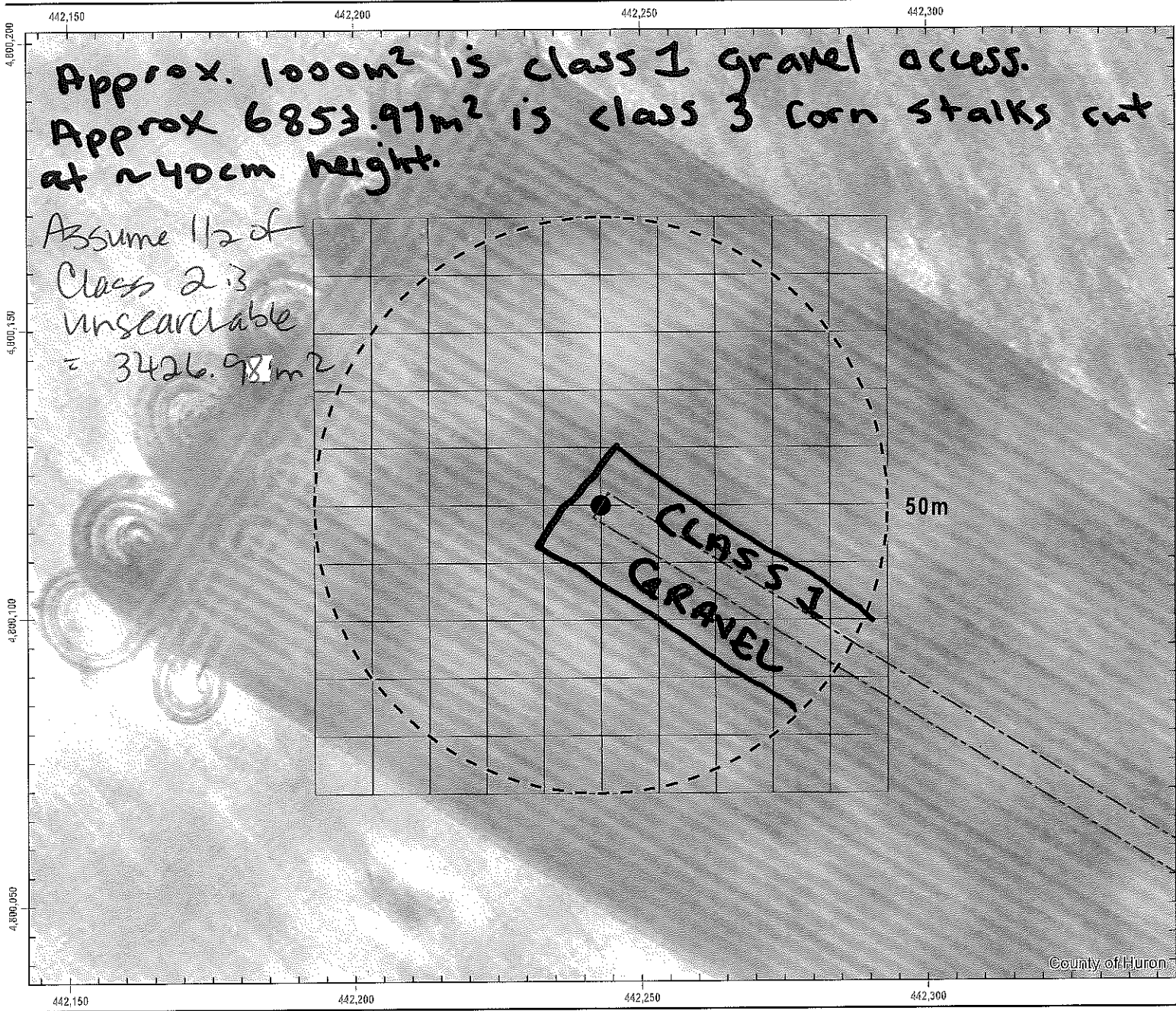
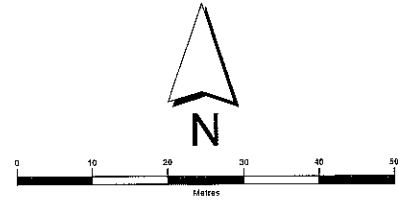
SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-34
 Survey Date: NOV 27/19
 Actual Searched Area (m²): 4426.99 m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

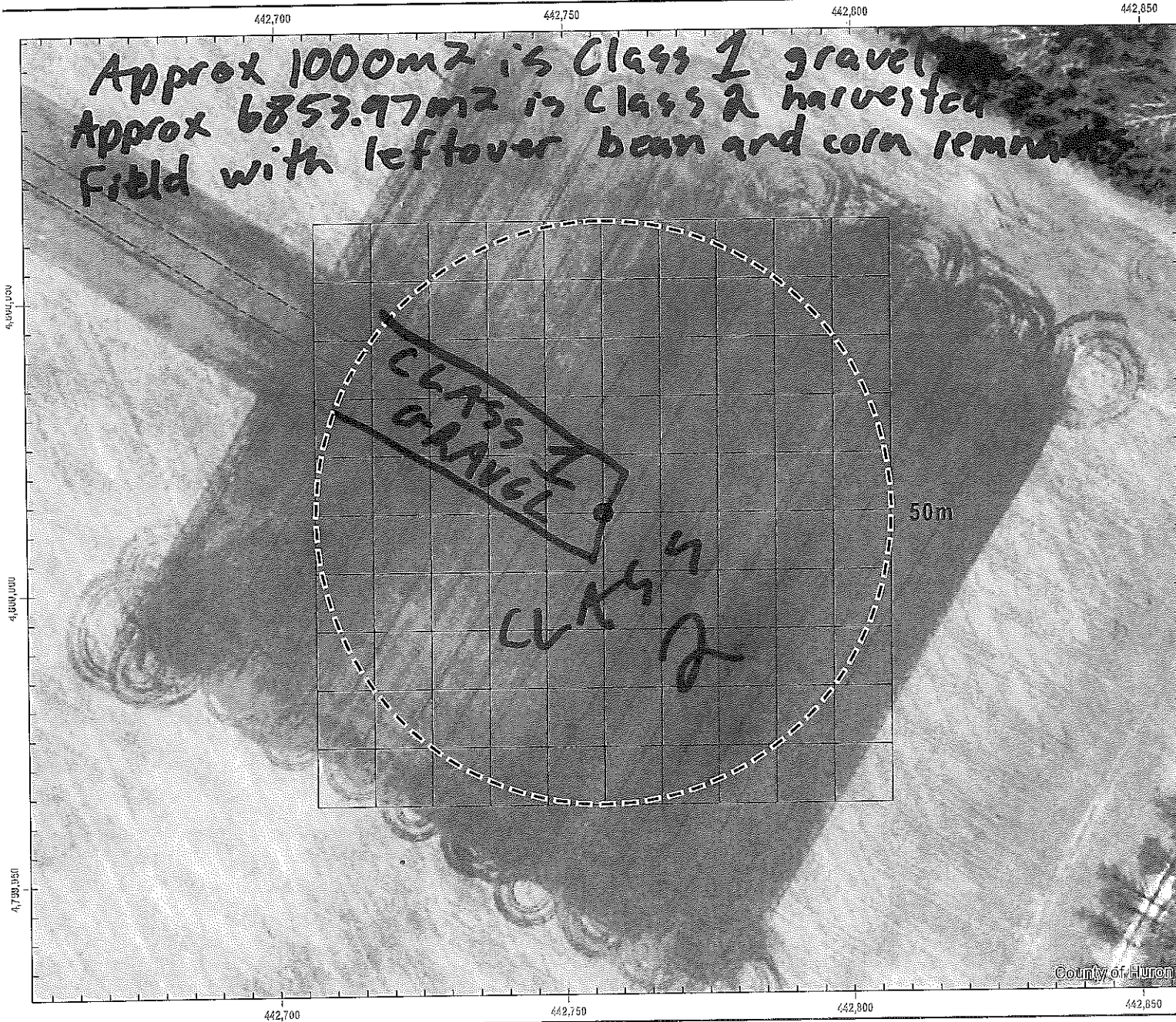
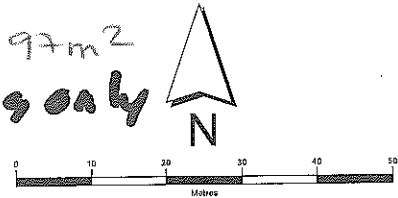
Site Number: T-35

Survey Date: April 30/19

Actual Searched Area (m²): 7853.97m² No searches done, for pics only

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
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WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

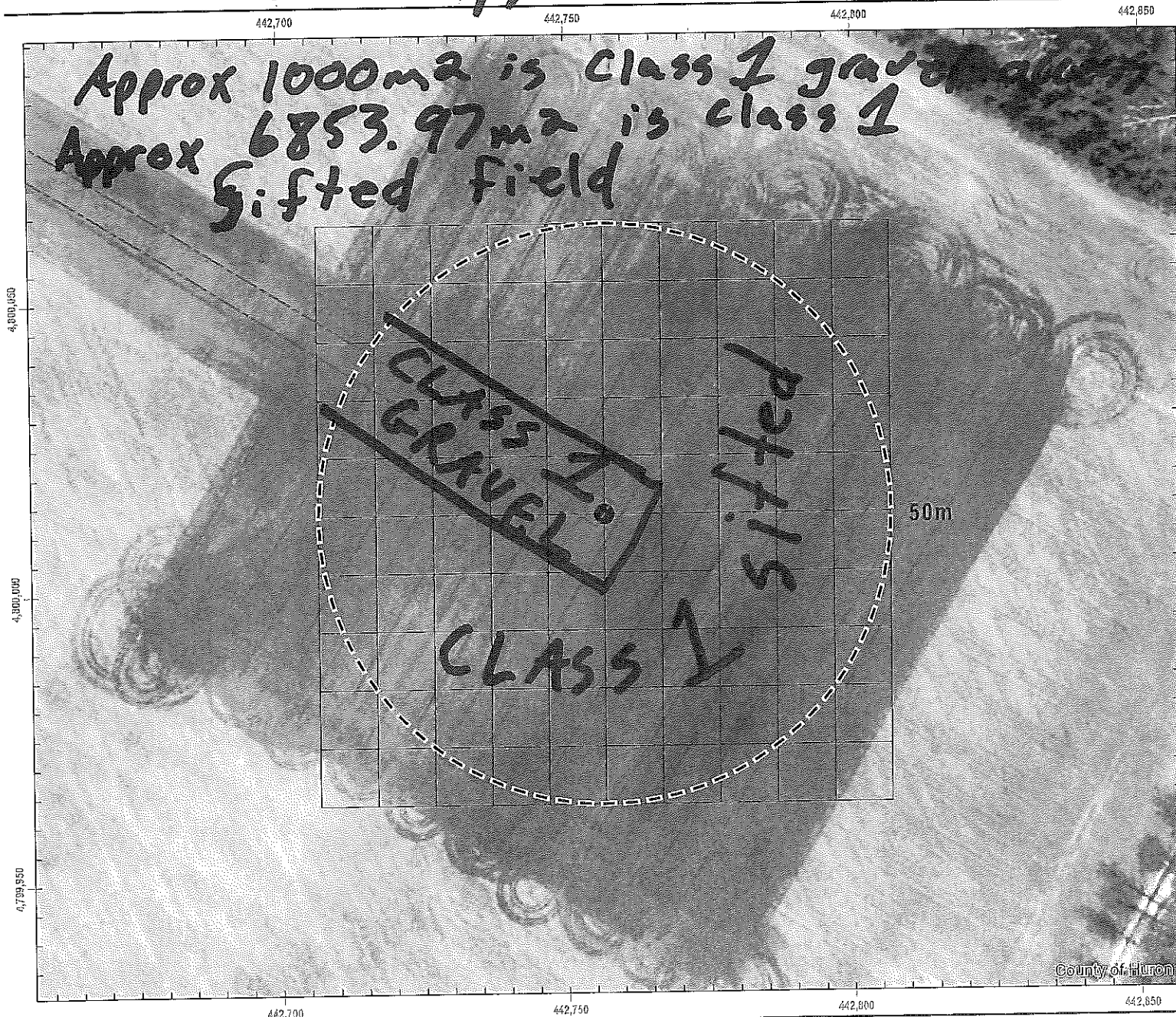
Site Number: T-35

Survey Date: May 29/19

Actual Searched Area (m²): 7853.97m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
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≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
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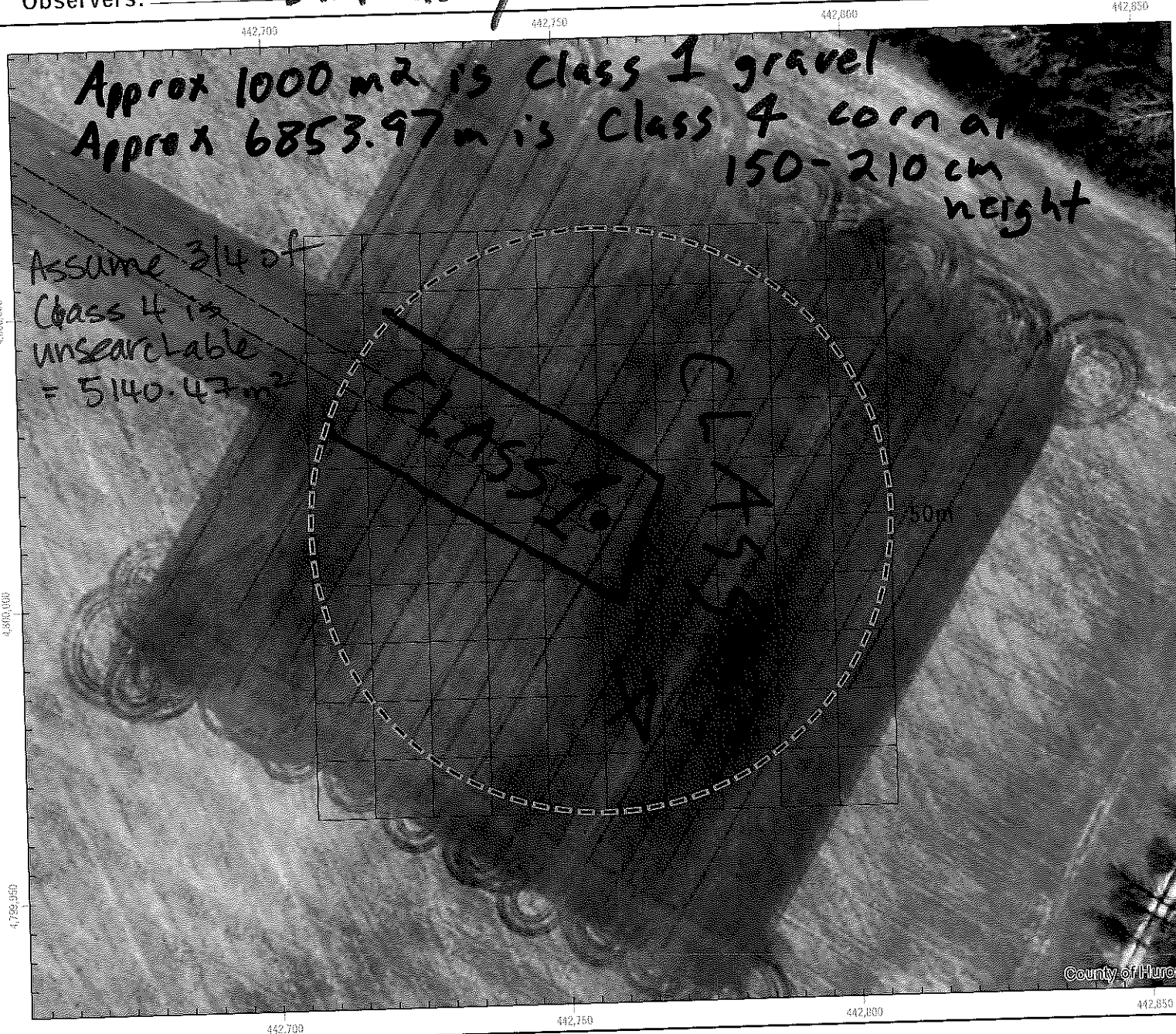
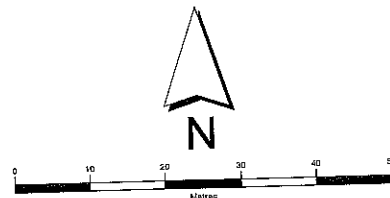
SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-35
 Survey Date: July 24 / 19
 Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



County of Huron

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

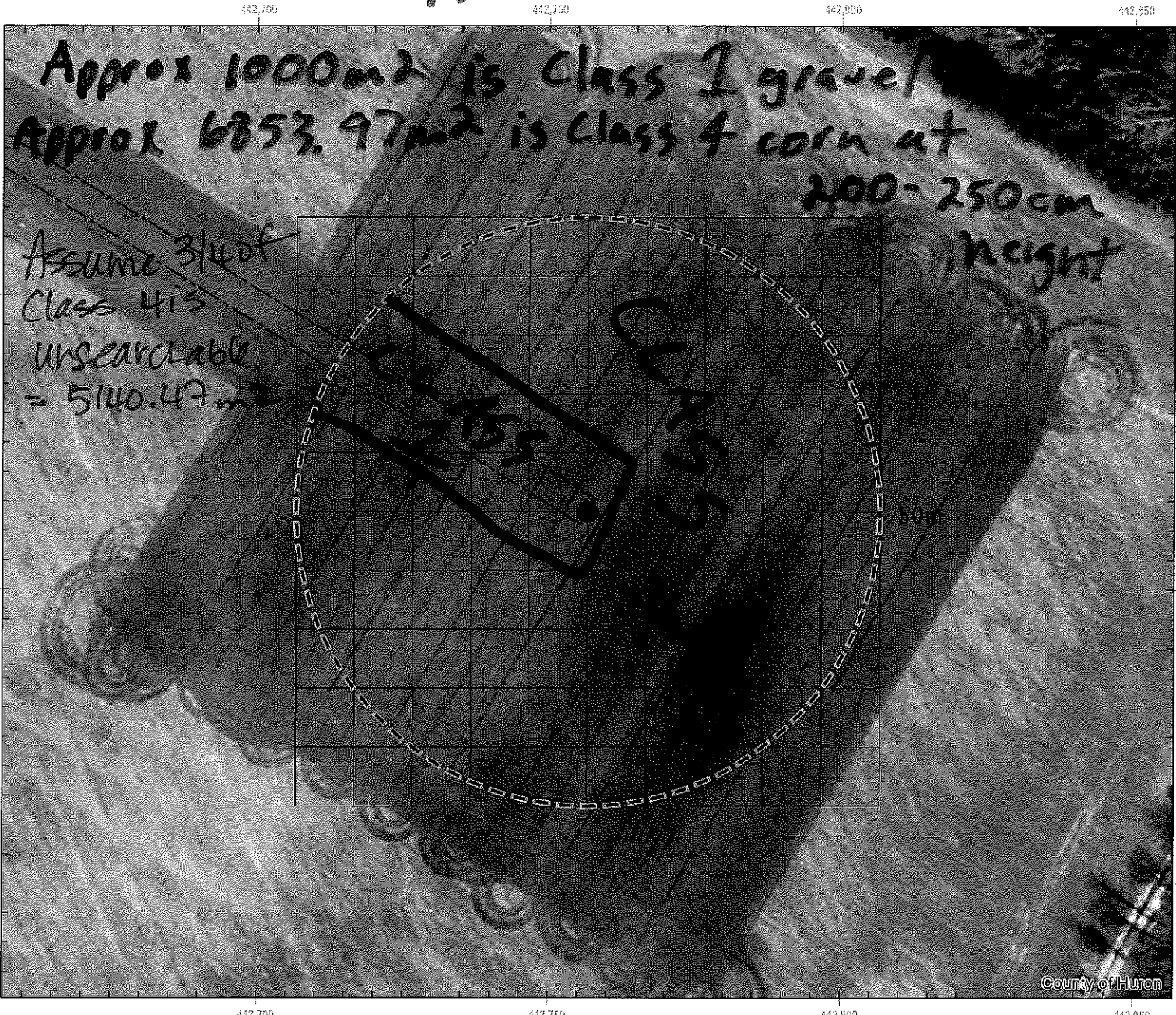
Site Number: T-35

Survey Date: pics only on Aug 21/19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

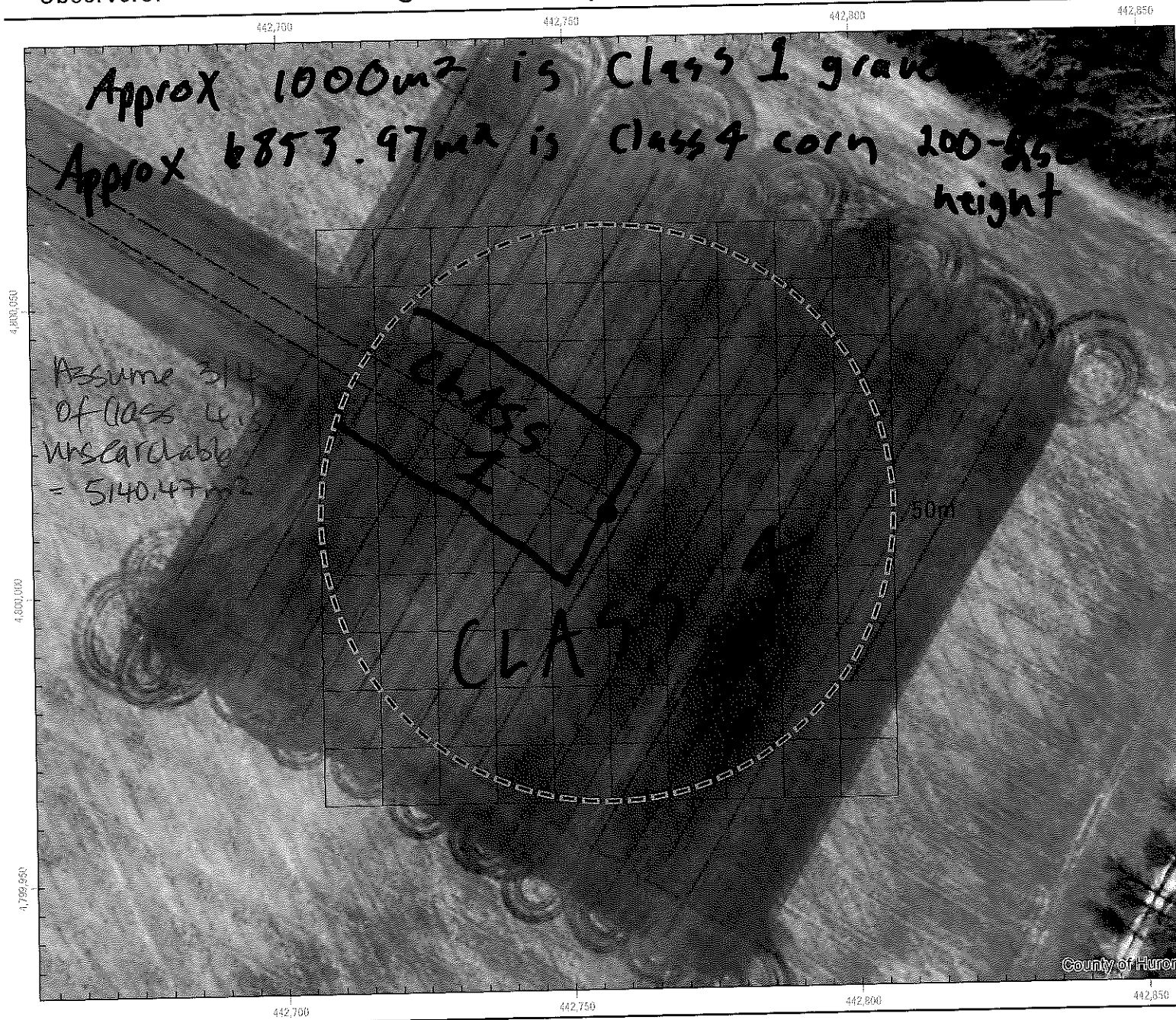
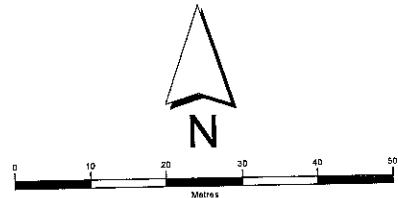
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-35

Survey Date: ~~Sept 26/19~~ Sept 25/19

Actual Searched Area (m²): 2413.50 m²
(subtract from total search area - 7853.97 m²)

Observers: Sarah Jackson, Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

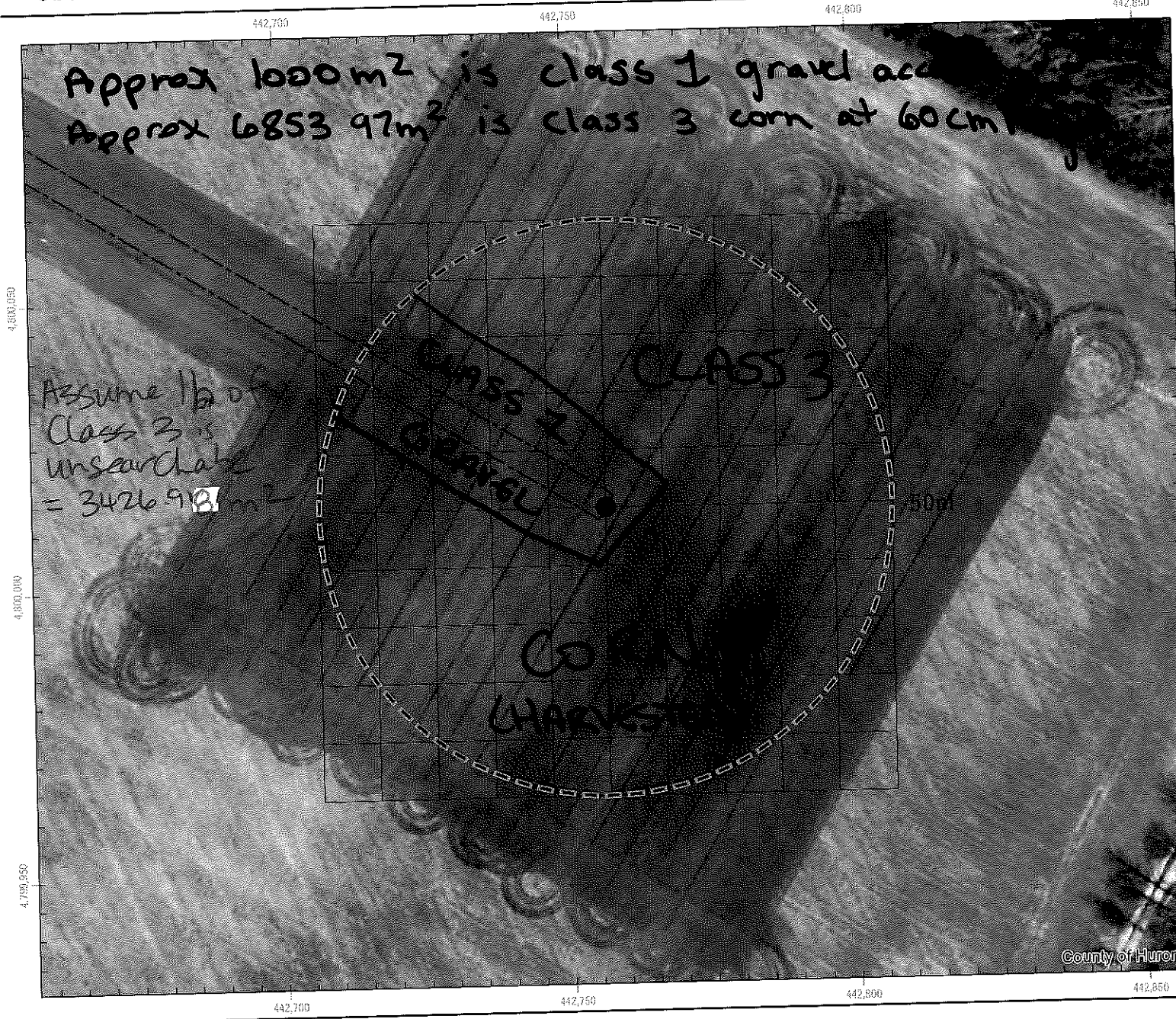
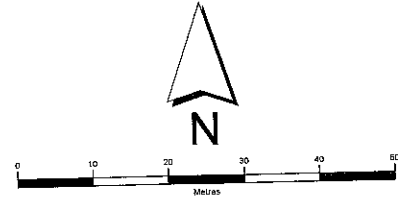


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-35
 Survey Date: Oct 30/19
 Actual Searched Area (m²): 44 26 99 m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

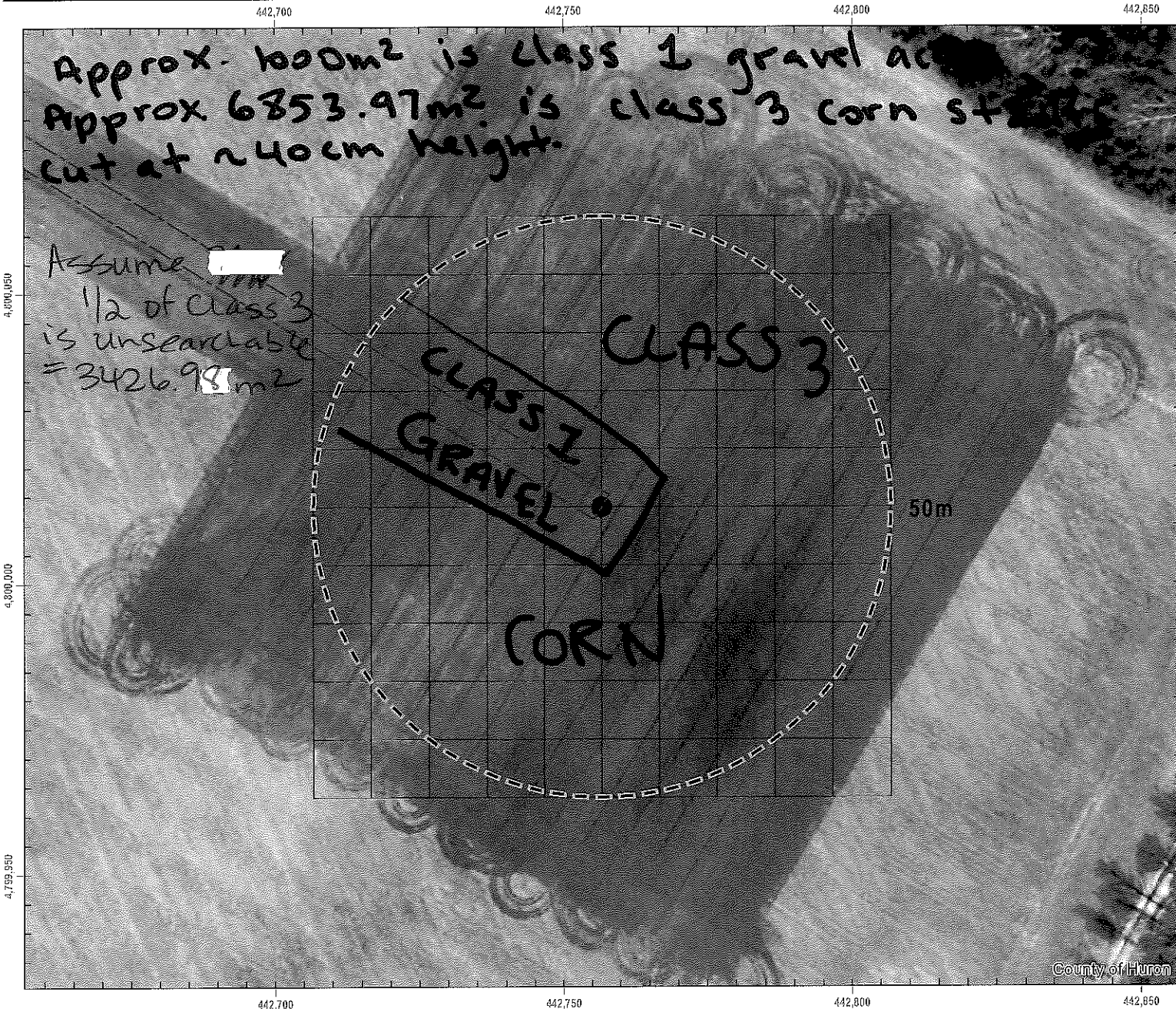
Site Number: T-35

Survey Date: Nov 27/19

Actual Searched Area (m²): 4426.99m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-37

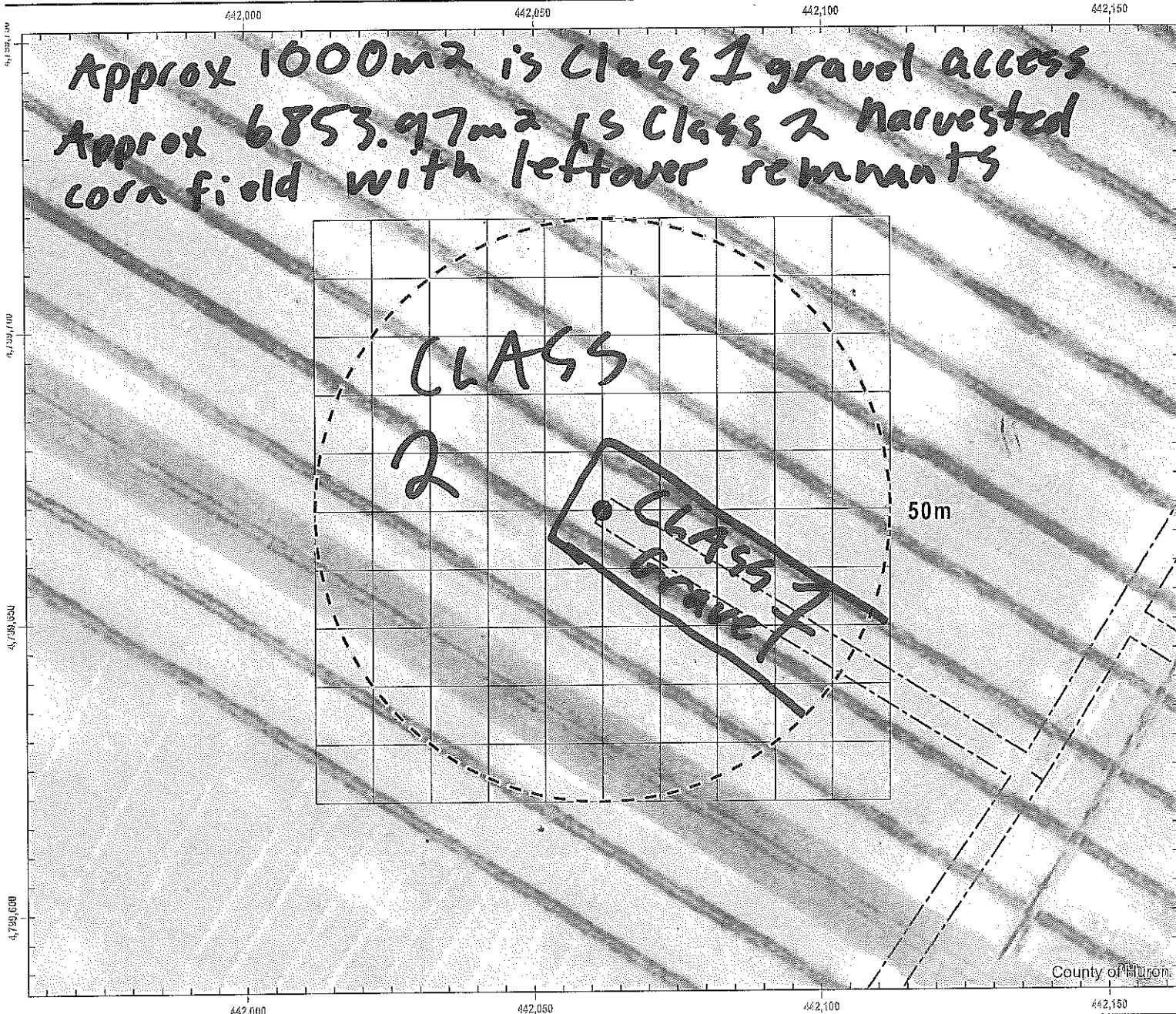
Survey Date: April 30/19

Actual Searched Area (m²): NO search done, for pres only

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

7853.97m²



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

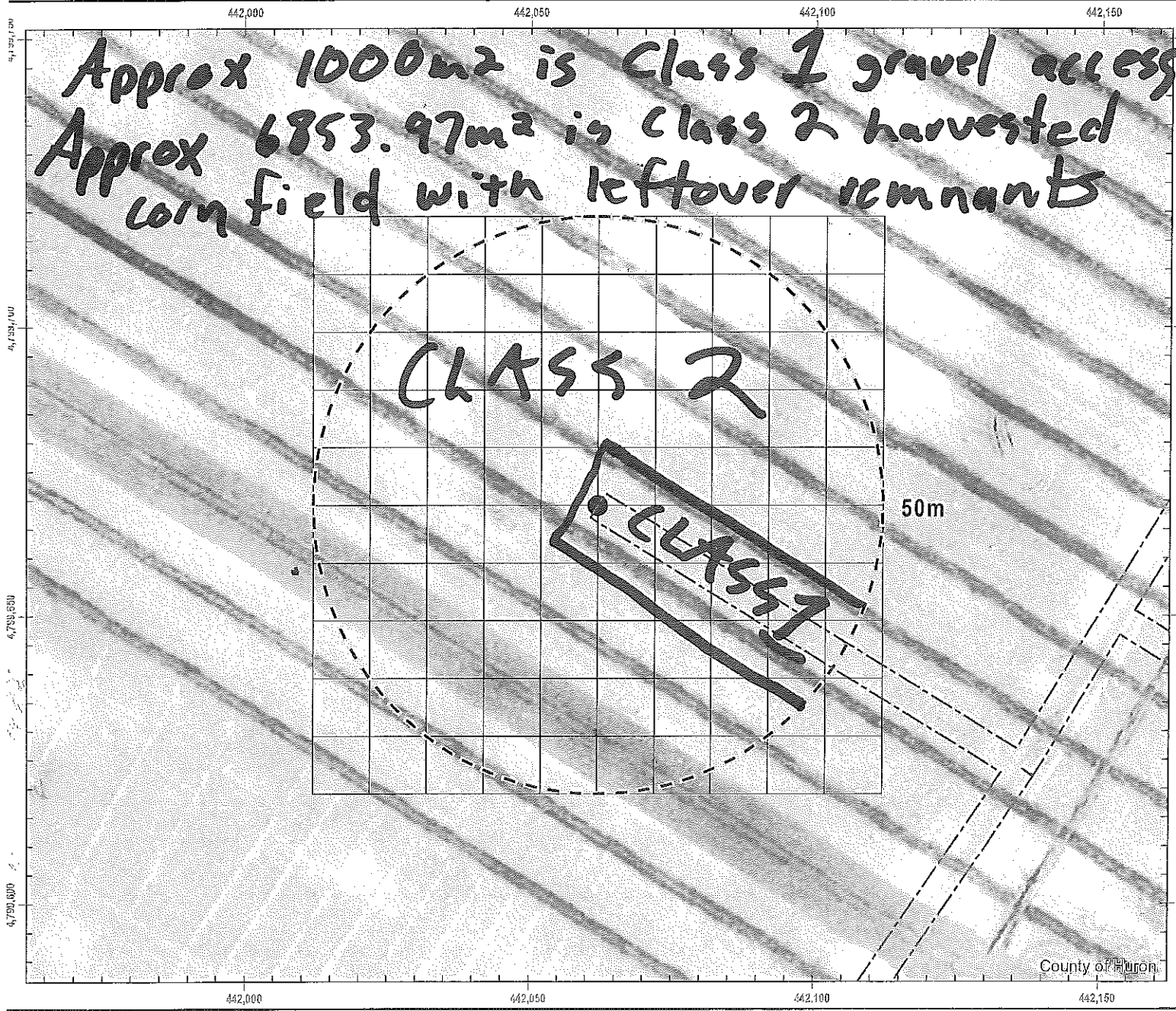
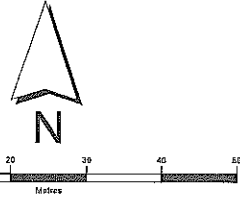
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-37

Survey Date: May 29/19

Actual Searched Area (m²): 7853.97m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

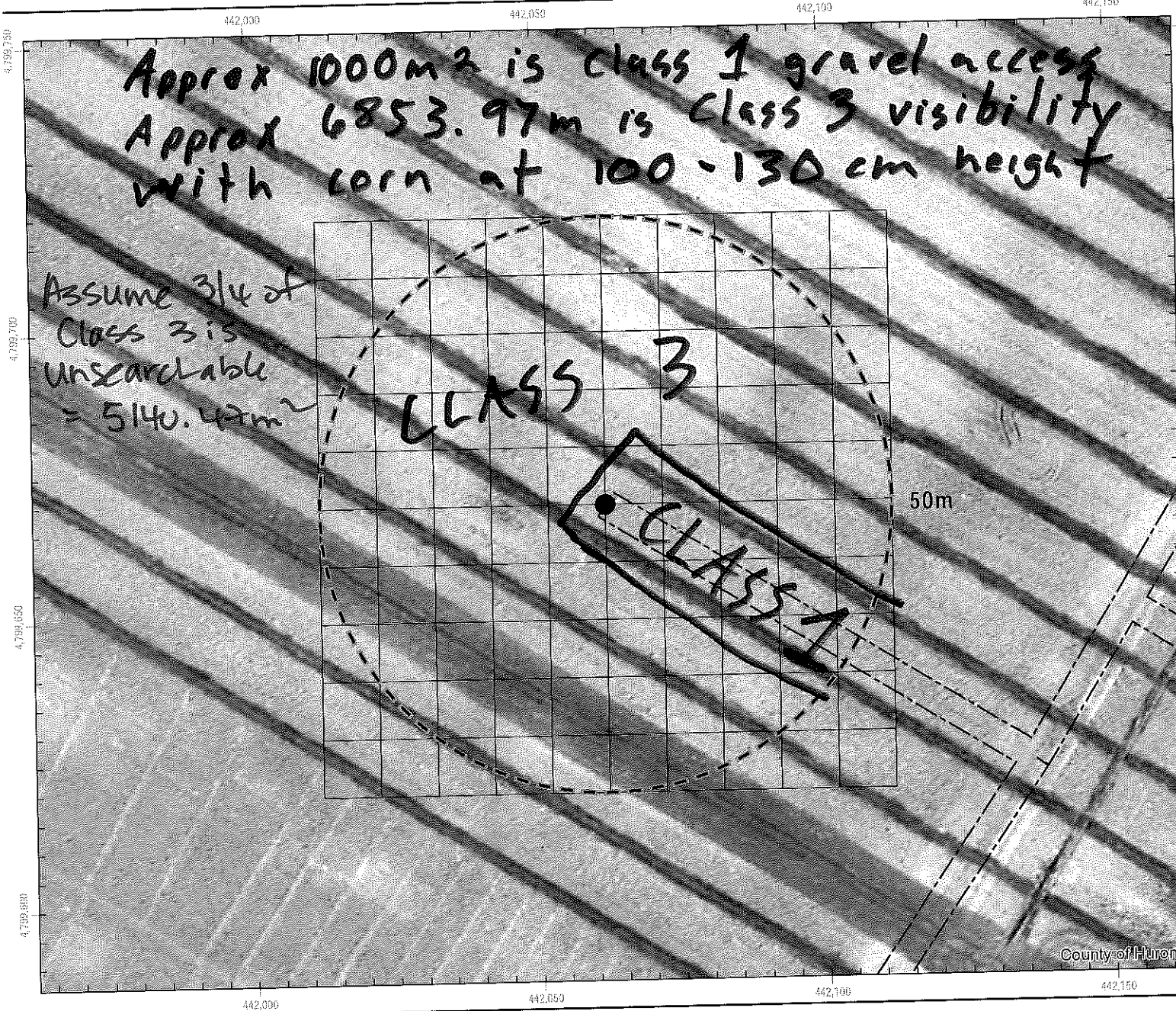
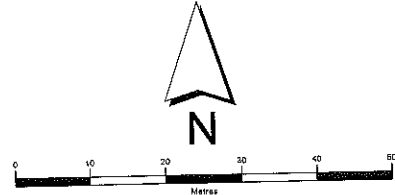
SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-37
 Survey Date: July 29 / 19
 Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97m²)
 Observers: Sam Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

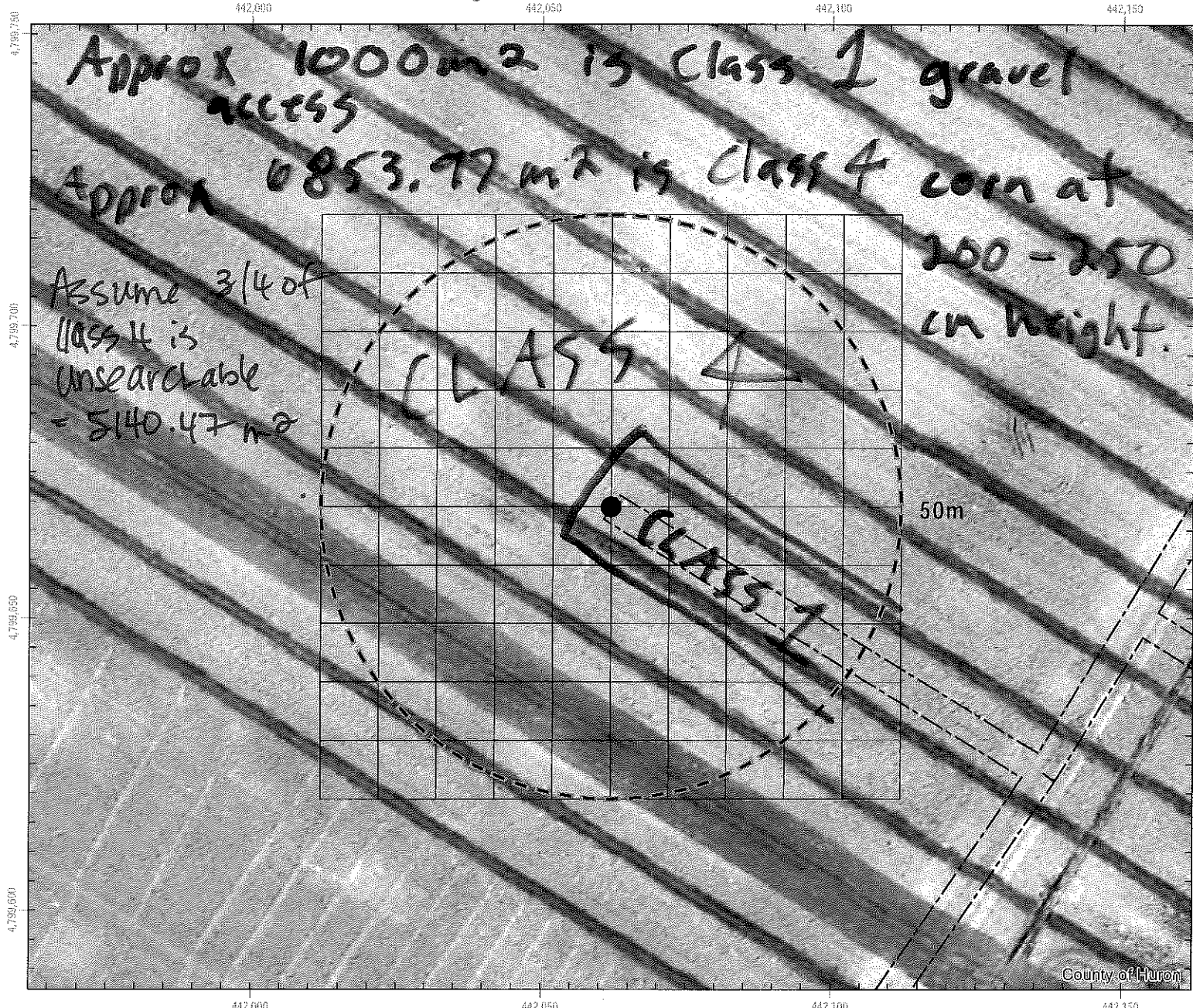
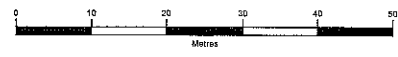
Site Number: T-37

Survey Date: Pics only on Aug 21/19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

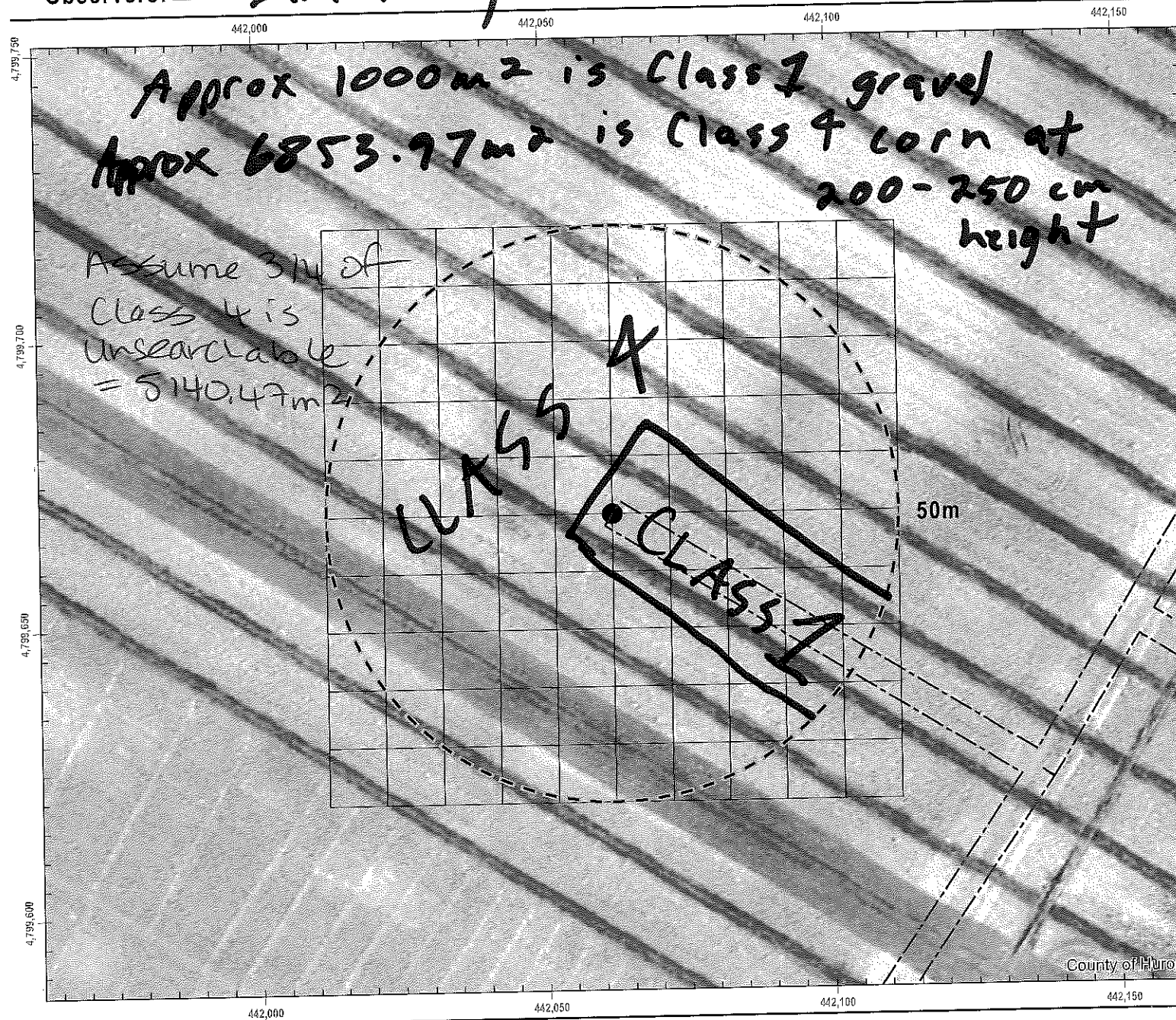
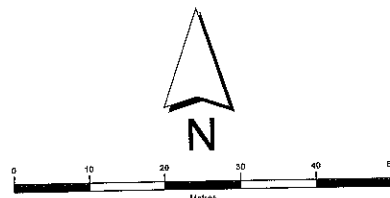
Site Number: T-37

Survey Date: Sept 25 / 19

Actual Searched Area (m²): 2713.50m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

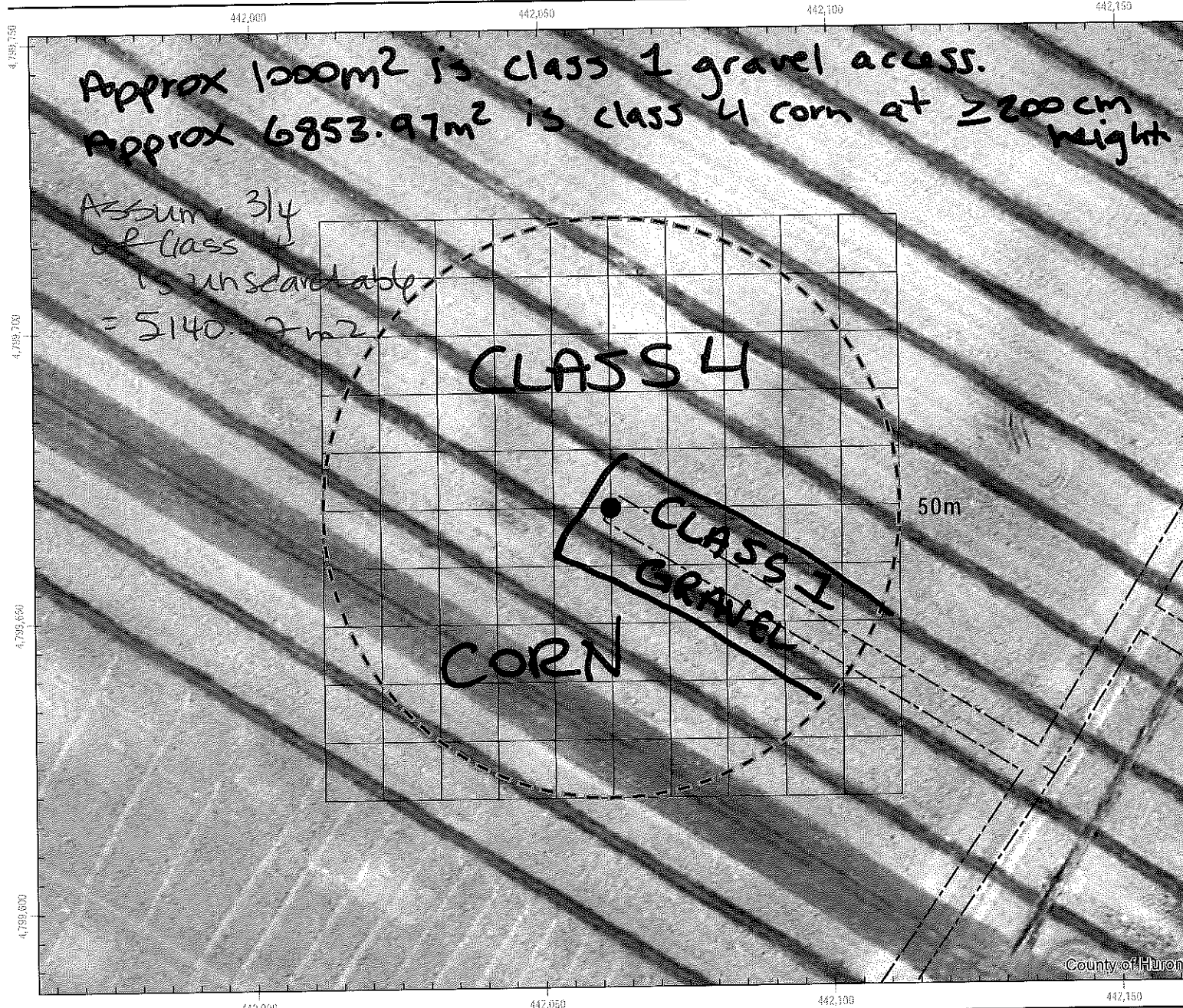
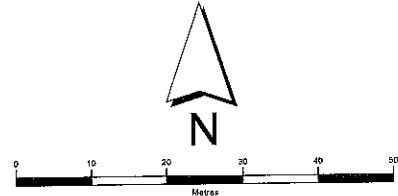


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-37
 Survey Date: Oct 30/19
 Actual Searched Area (m²): 2713.50m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

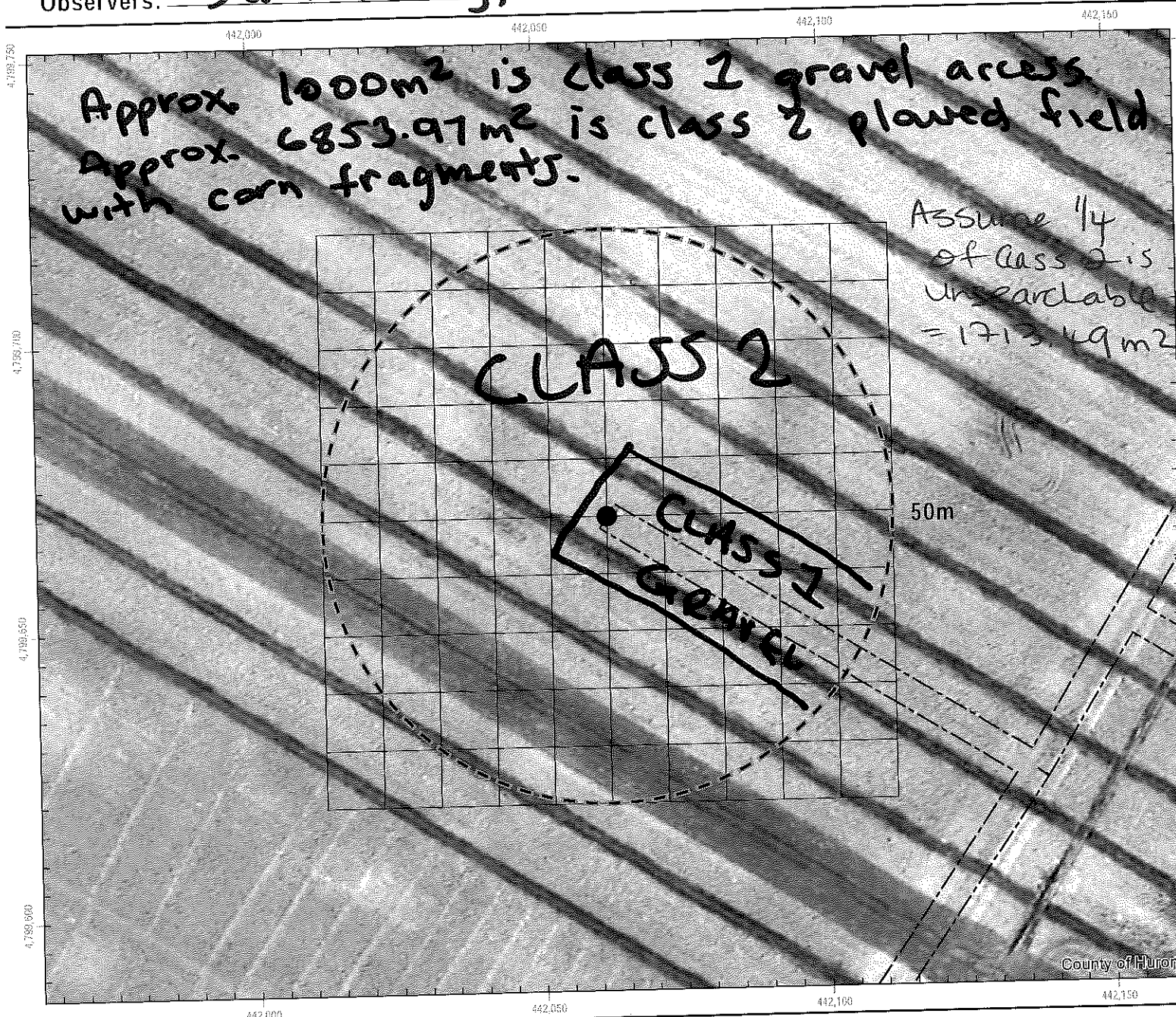
Site Number: T-37

Survey Date: Nov 27/19

Actual Searched Area (m²): 6140.48m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



County of Huron

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

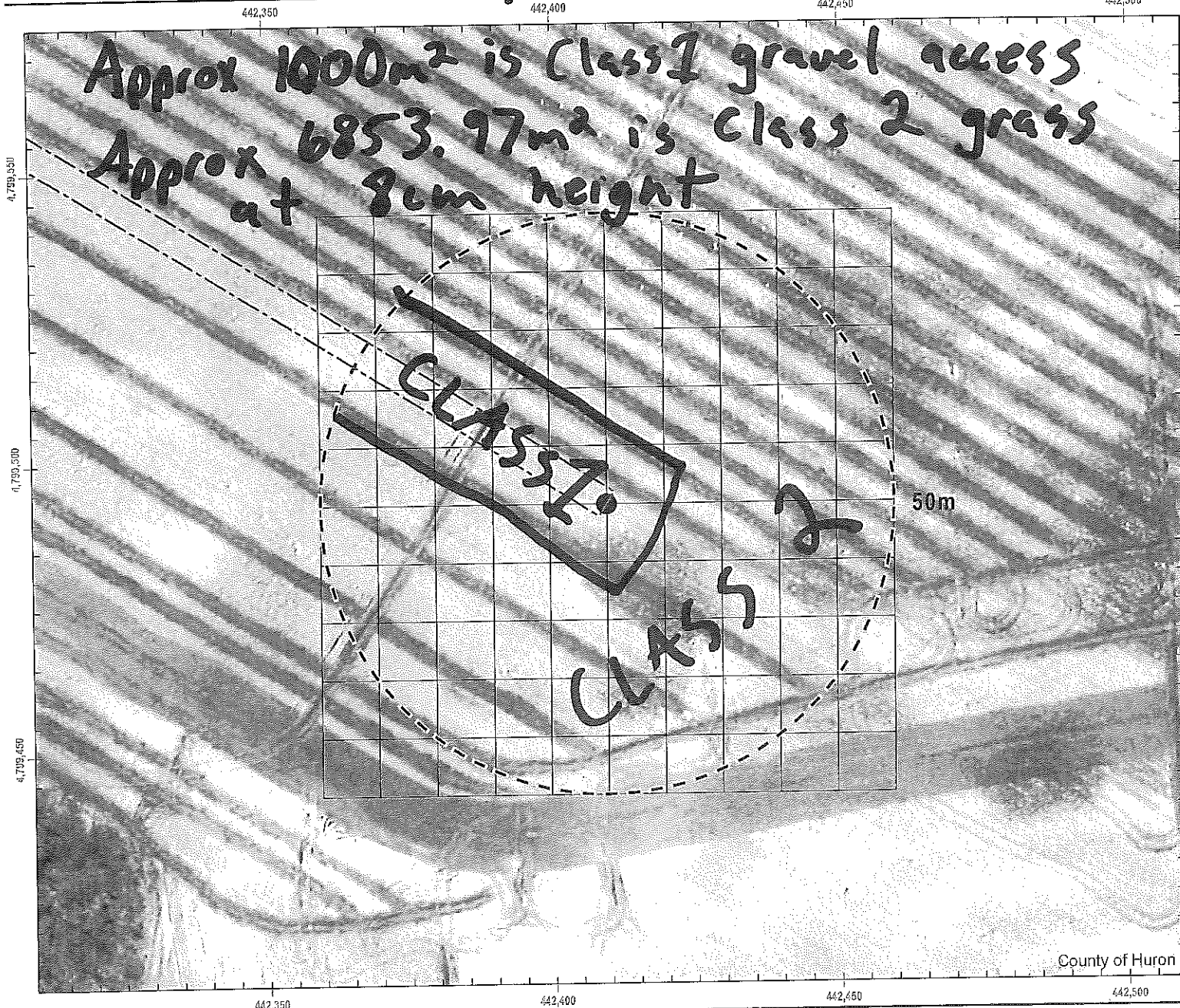
Site Number: T-38

Survey Date: May 2 / 19

Actual Searched Area (m²): 7853.97 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-38

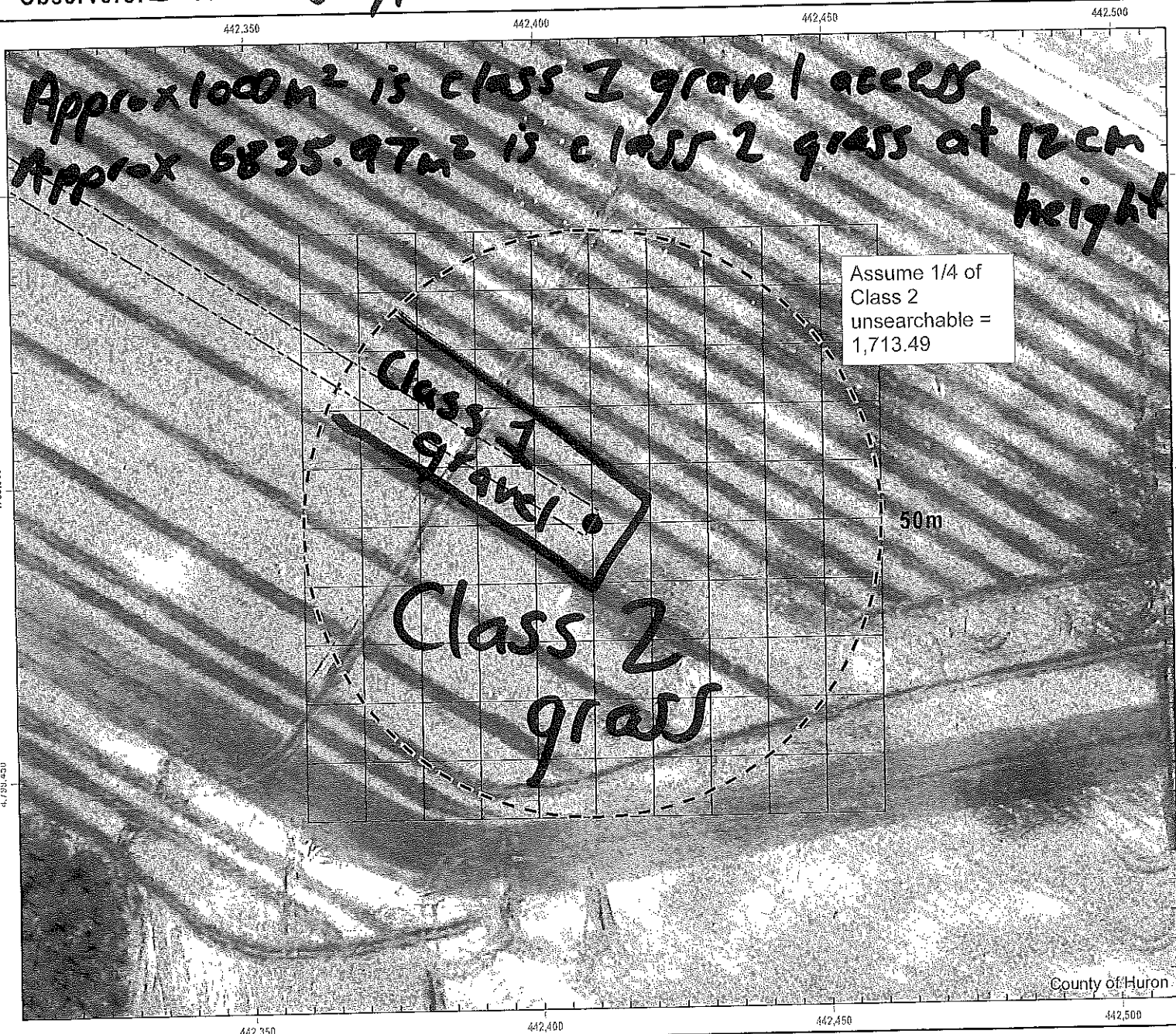
Survey Date: June 17/19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sam Henry, Sarah Jackson

6,140.48 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

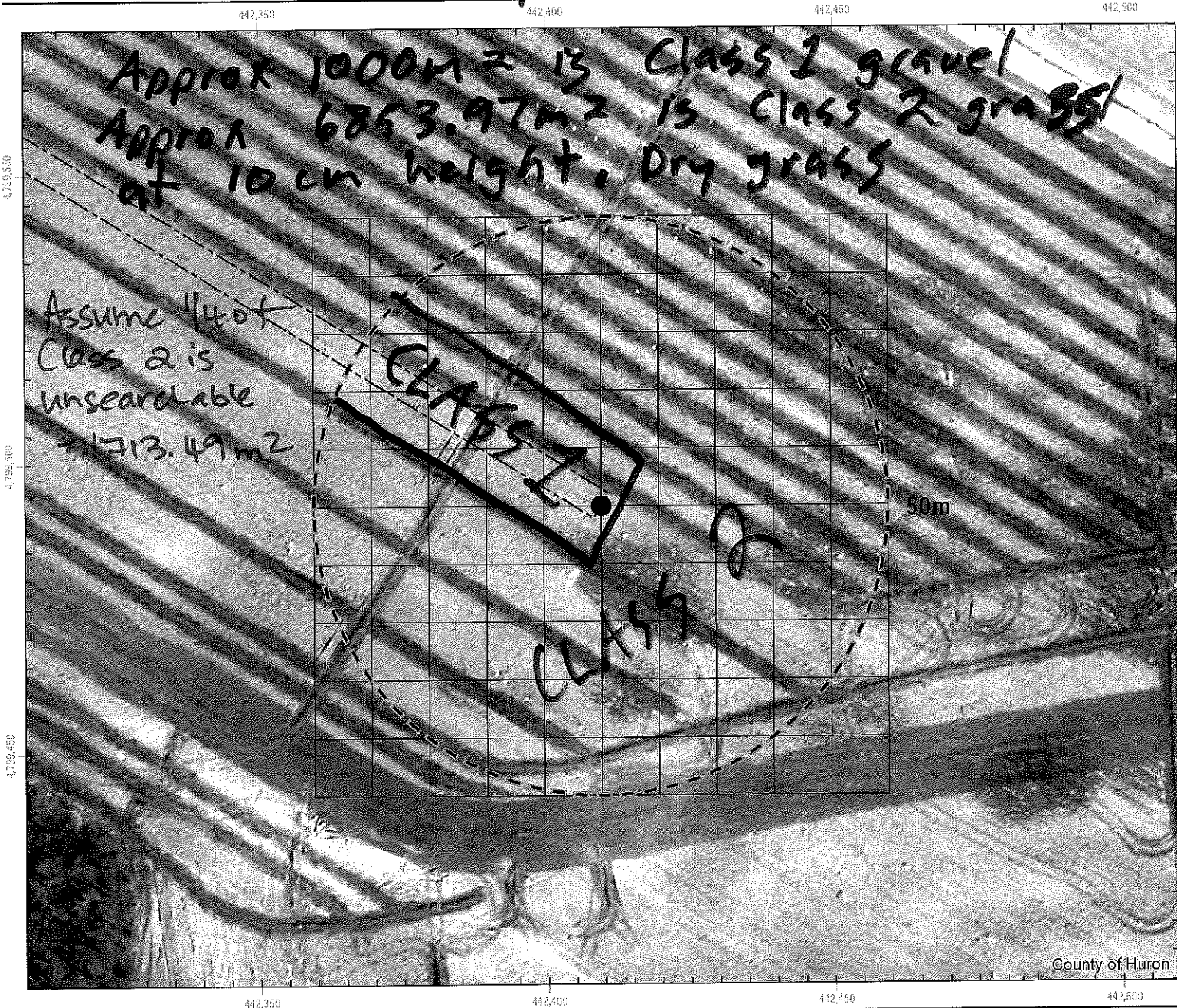
Site Number: T-38

Survey Date: July 18 / 19

Actual Searched Area (m²): 6140.48 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

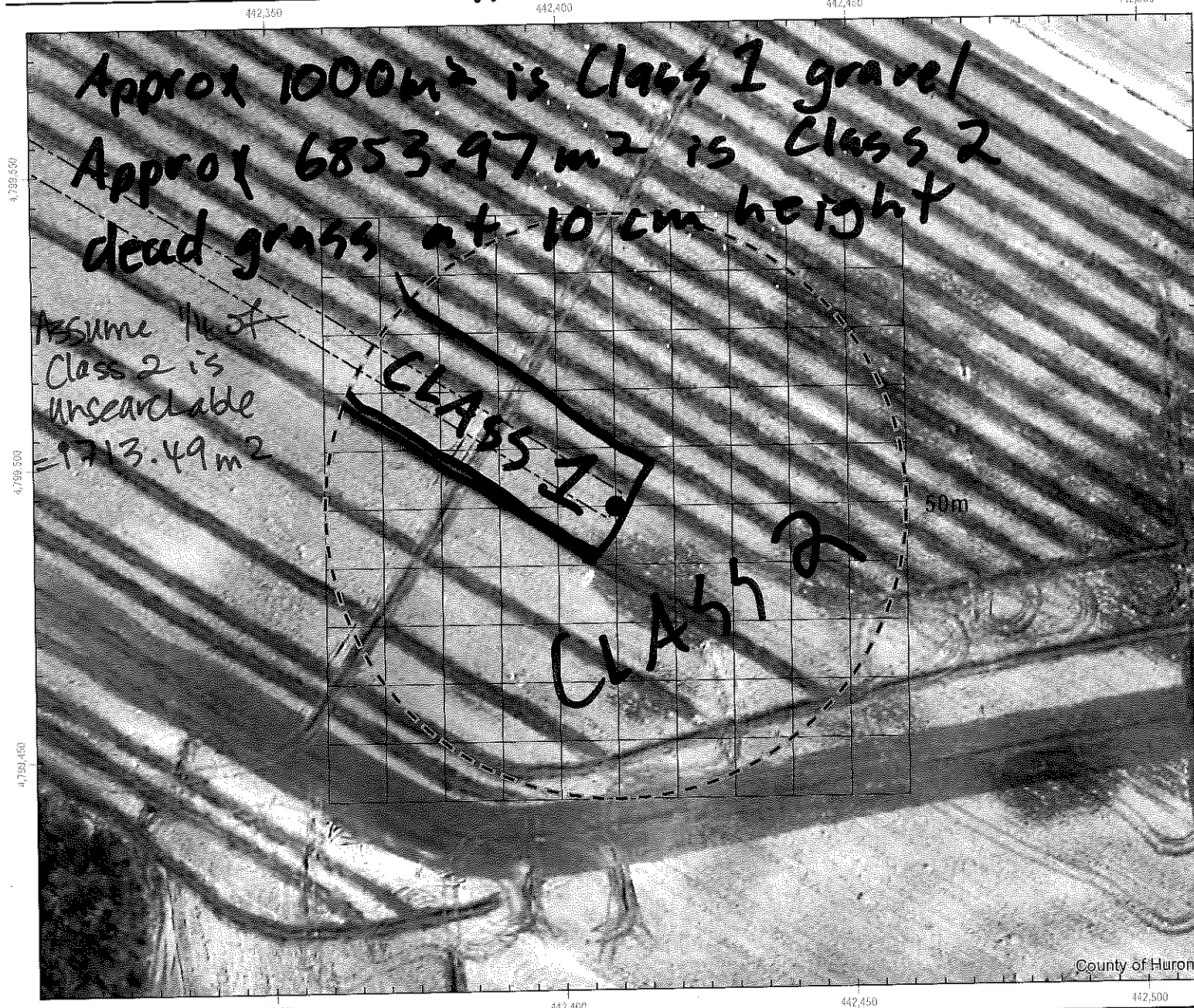
Site Number: T-38

Survey Date: Aug 15 / 19

Actual Searched Area (m²): 6140.48 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

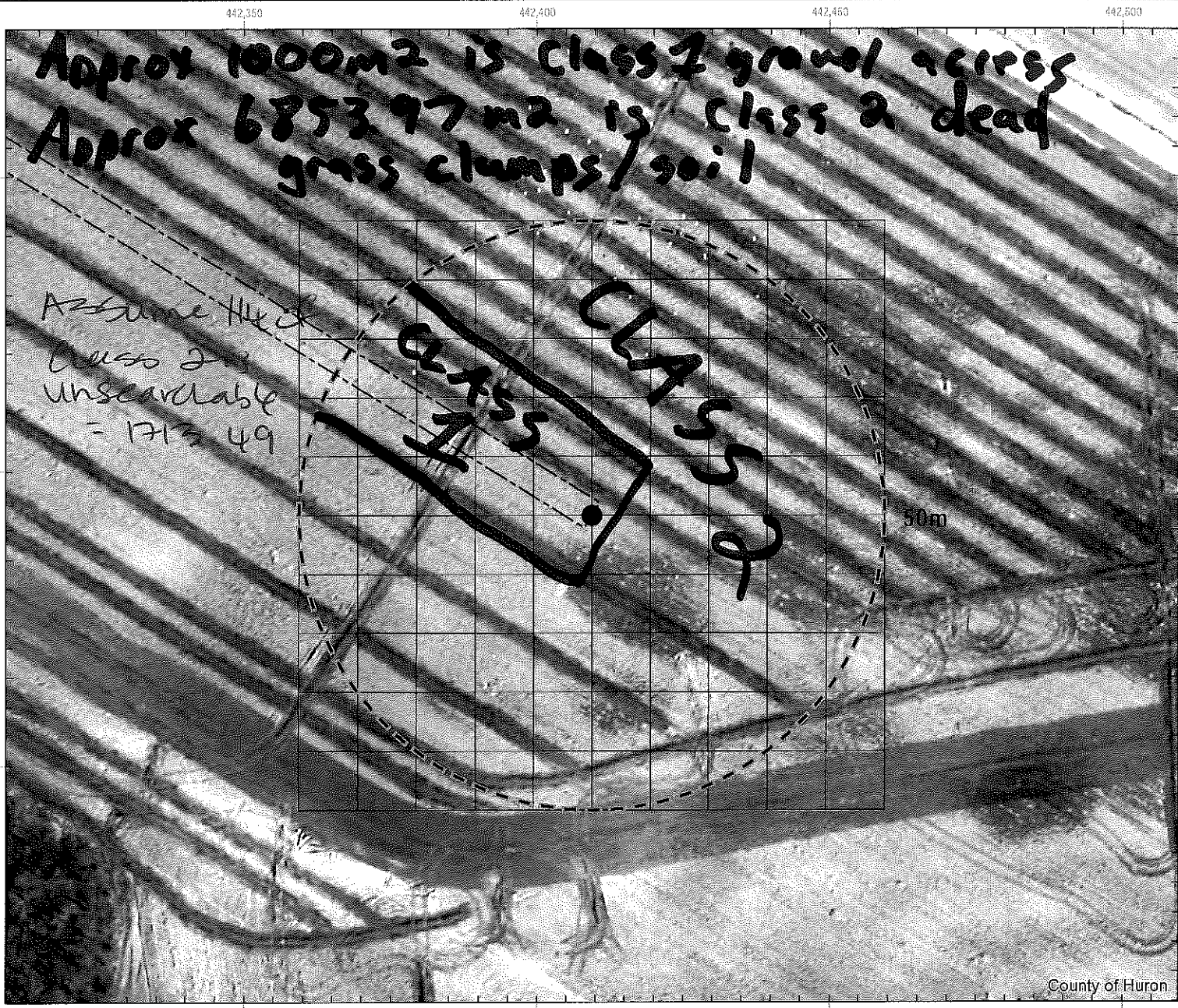
Site Number: T-38

Survey Date: Sept 9 / 19

Actual Searched Area (m²): 6140.48m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

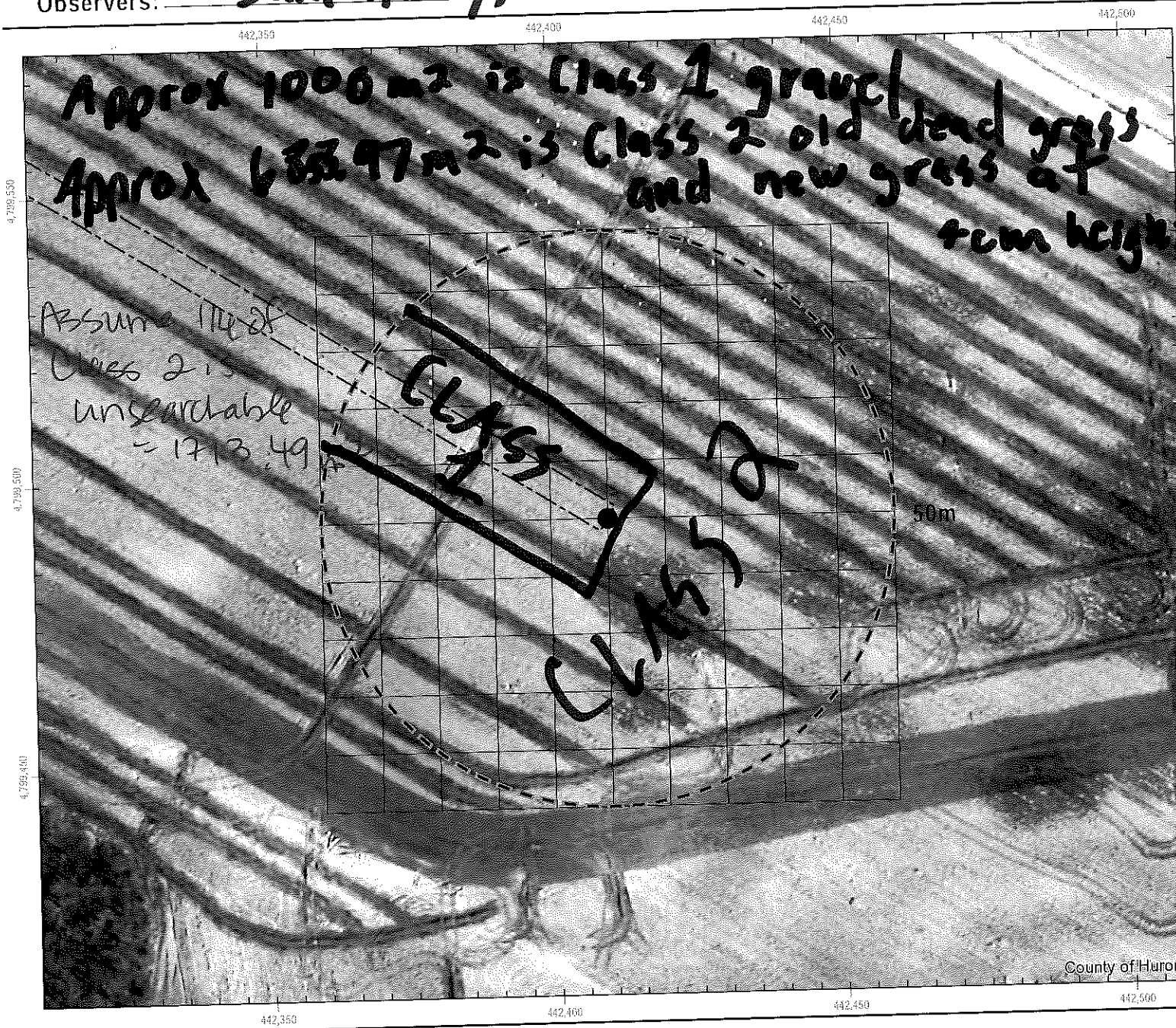
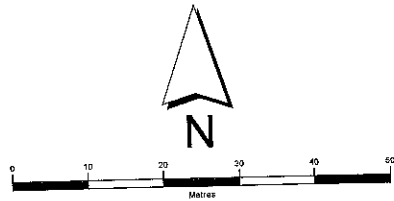
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-38

Survey Date: Oct 14/19

Actual Searched Area (m²): 6140.48m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

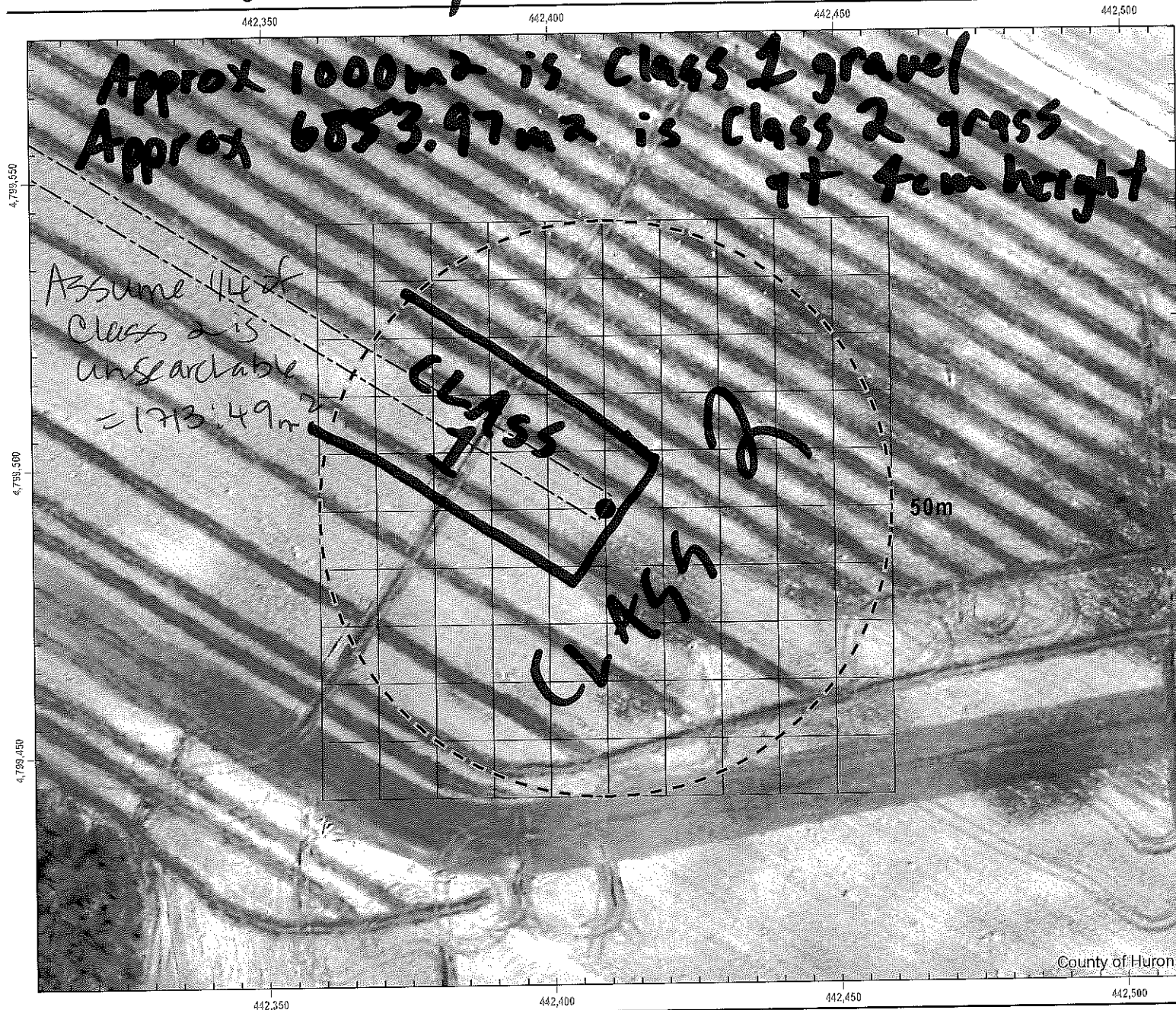
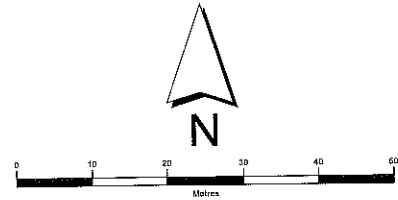


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-38
 Survey Date: Nov 19 / 19
 Actual Searched Area (m²): 6140.48 m²
(subtract from total search area - 7853.97 m²)
 Observers: Sean Henry



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

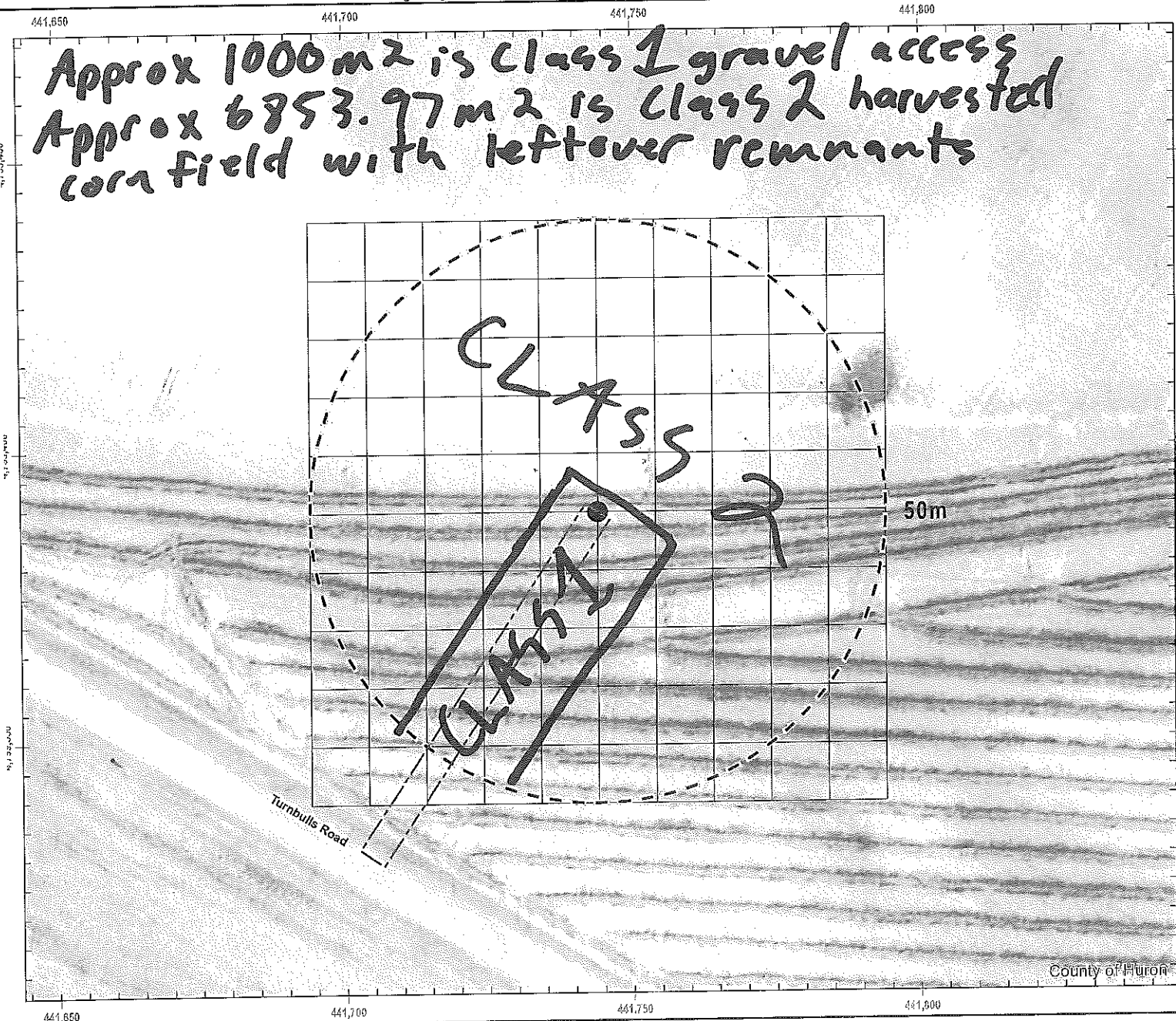
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-39

Survey Date: April 30/19

Actual Searched Area (m²): 7853.97m²
No search done, for pres only

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-39

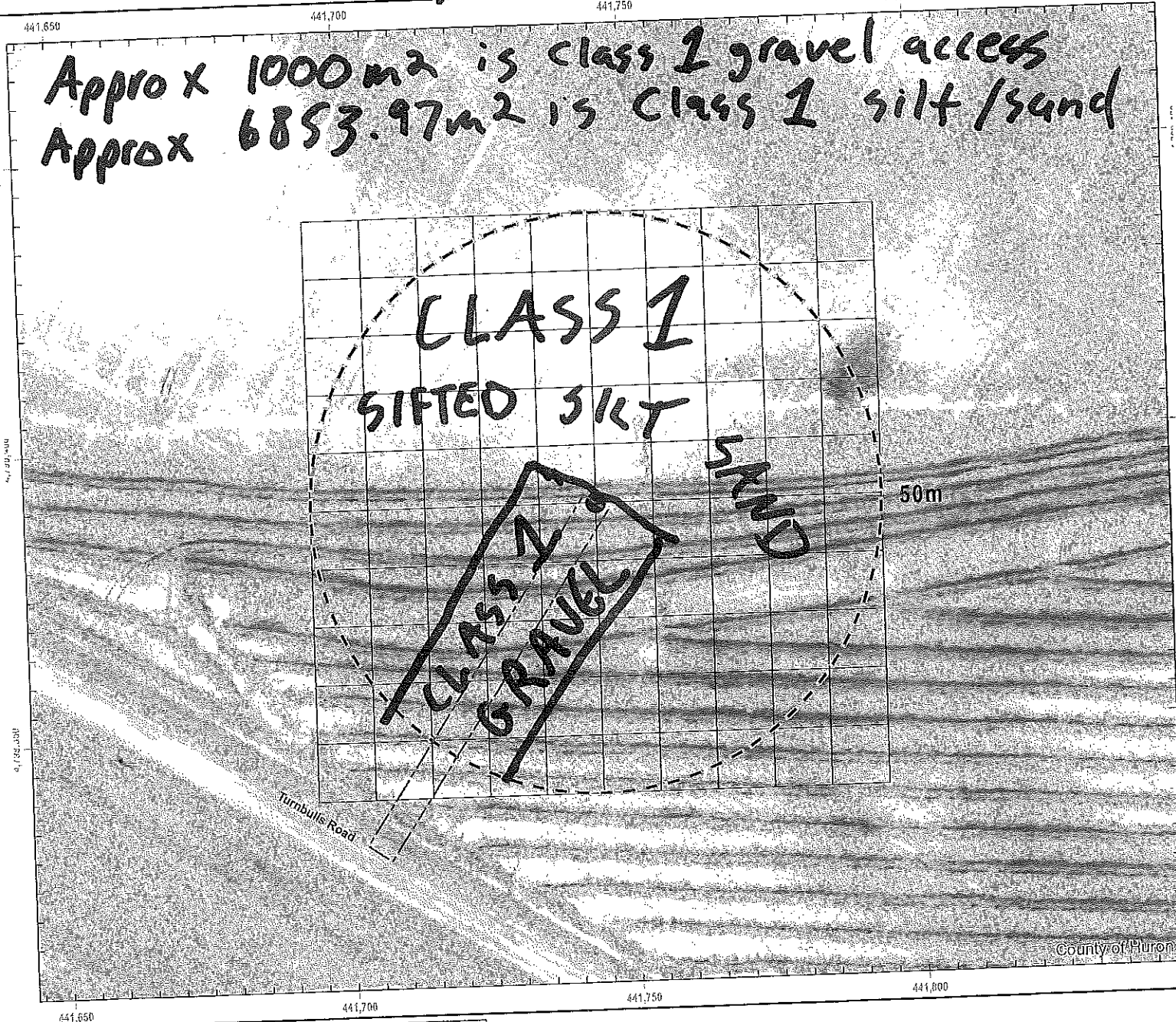
Survey Date: June 12 / 19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

7853.97 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION)

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

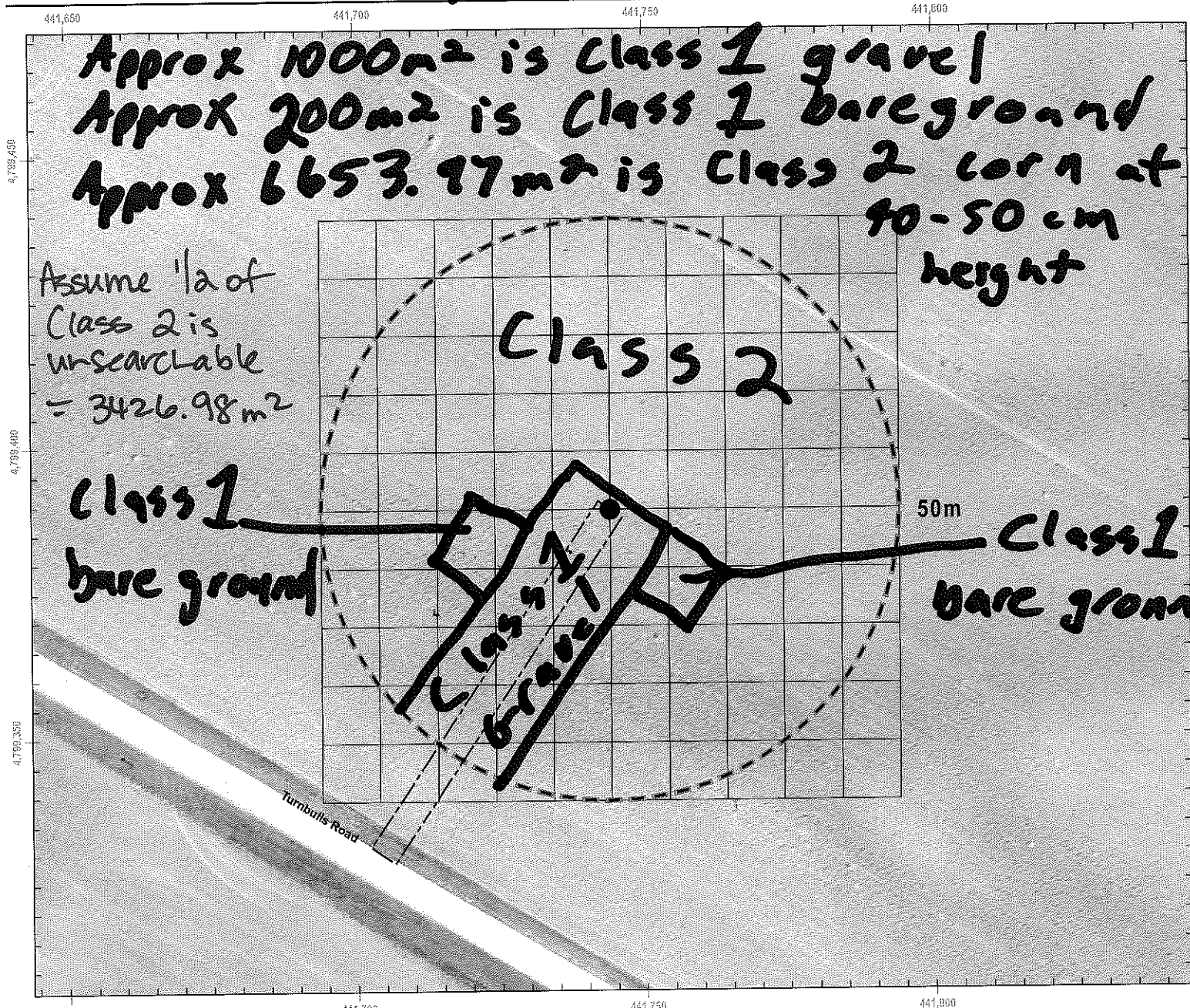
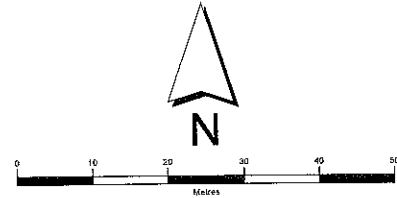
Project Name: PIA019991.0005 Grand Bend Wind Farm

Site Number: T-39

Survey Date: July 10/19

Actual Searched Area (m²): 4426.99m²
(subtract from total search area - 7853.97m²)

Observers: Sean Henry, Sara Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

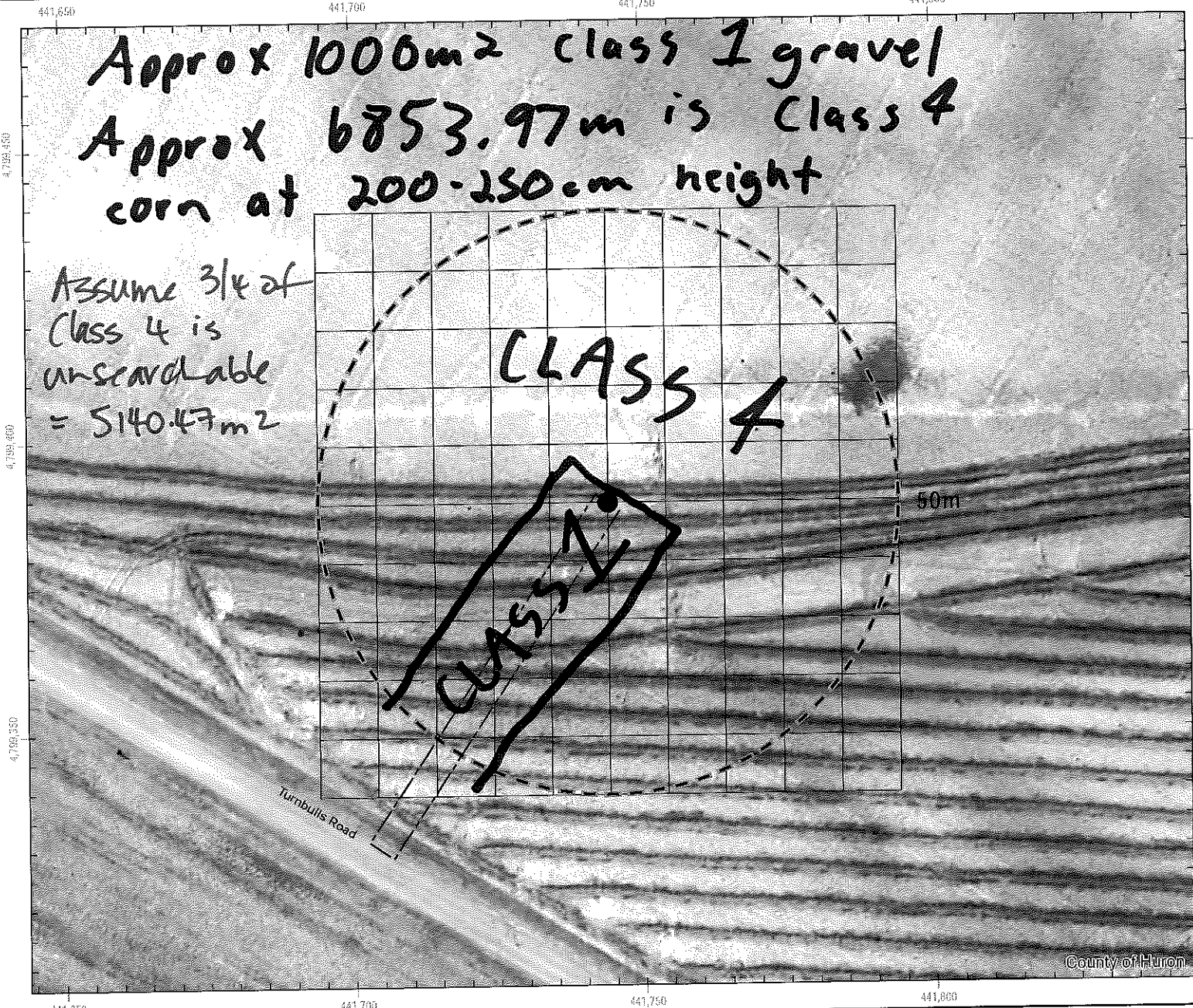
Site Number: T-39

Survey Date: Aug 14/19

Actual Searched Area (m²): 2713.50m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

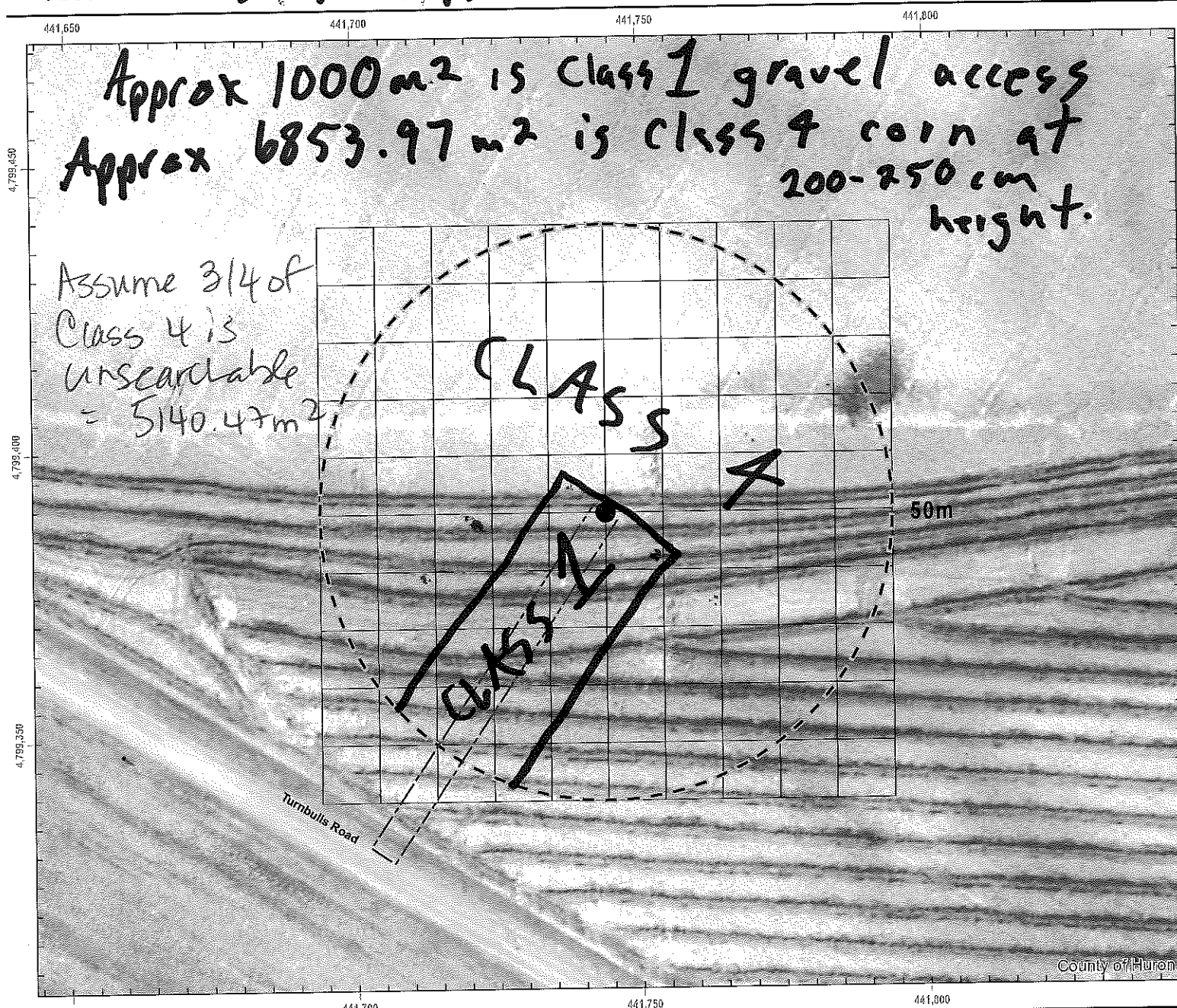
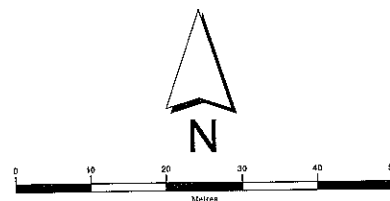
Site Number: T-39

Survey Date: Sept 11/19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

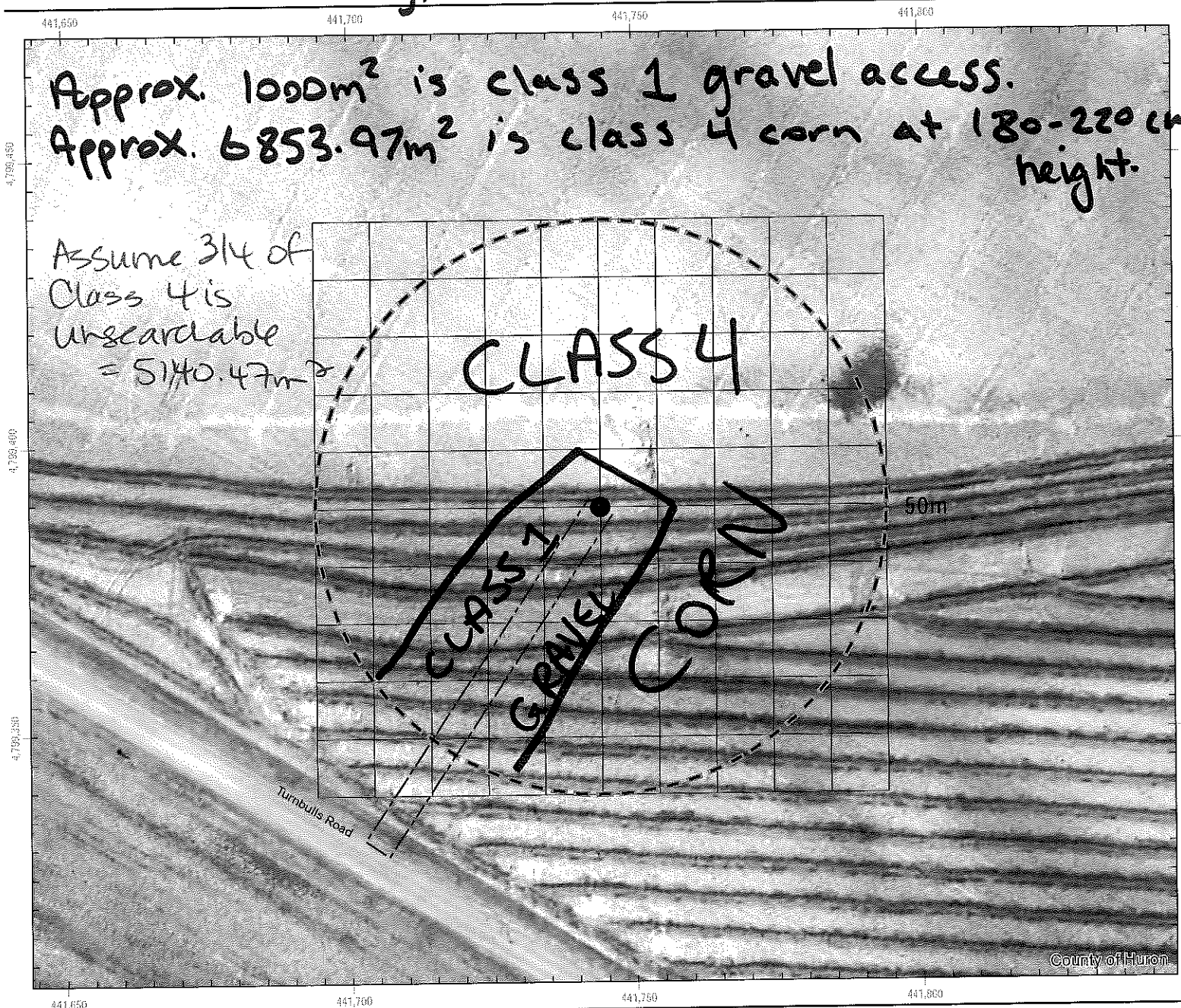
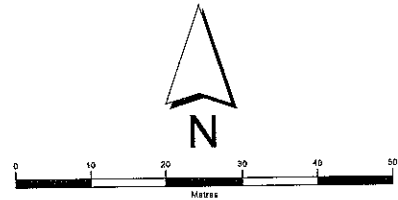


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-39
 Survey Date: Oct 9/19
 Actual Searched Area (m²): 2713.50 m²
 (subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

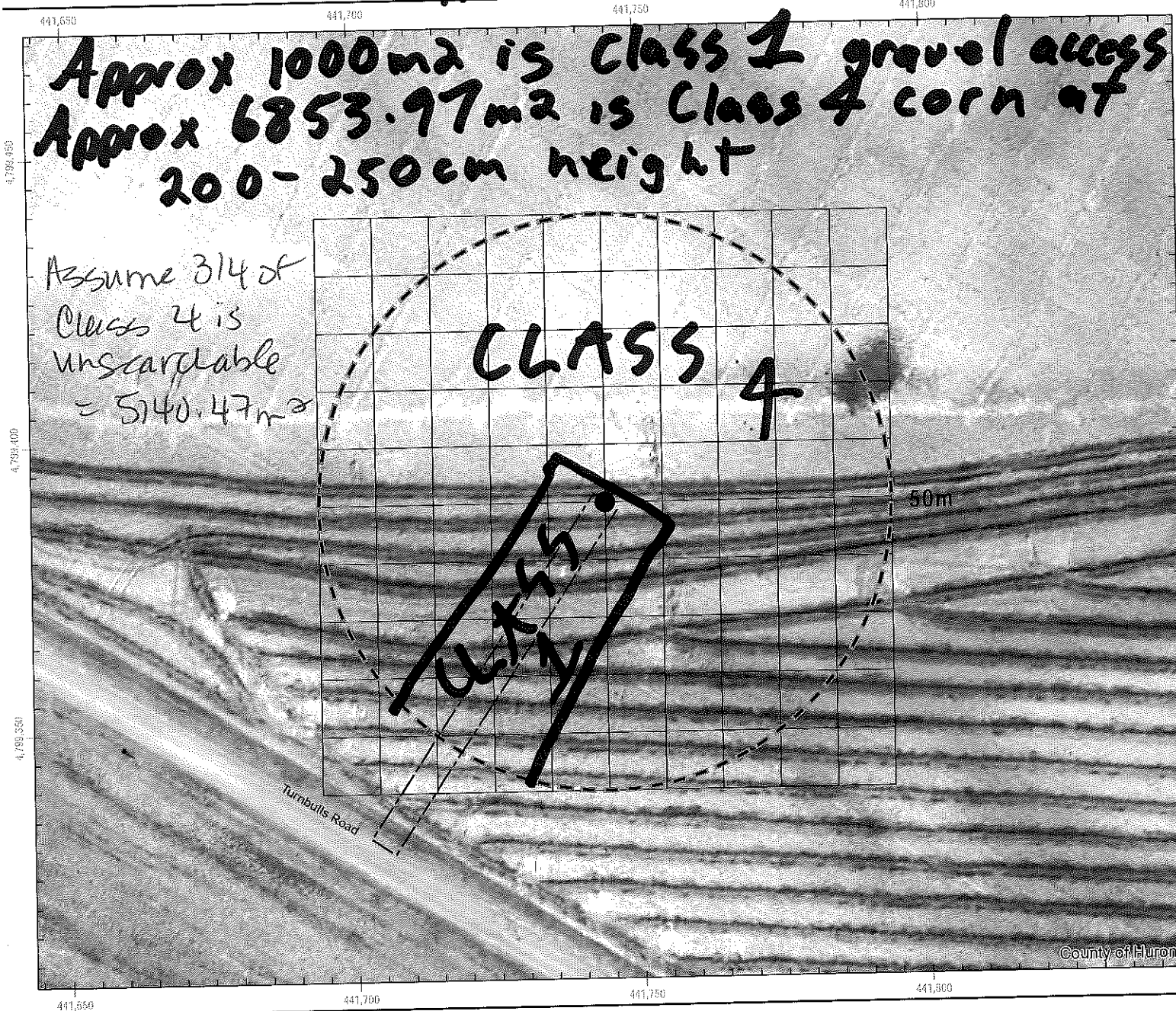
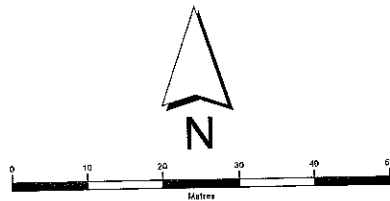
Site Number: T-39

Survey Date: Nov 13 / 19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sam Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

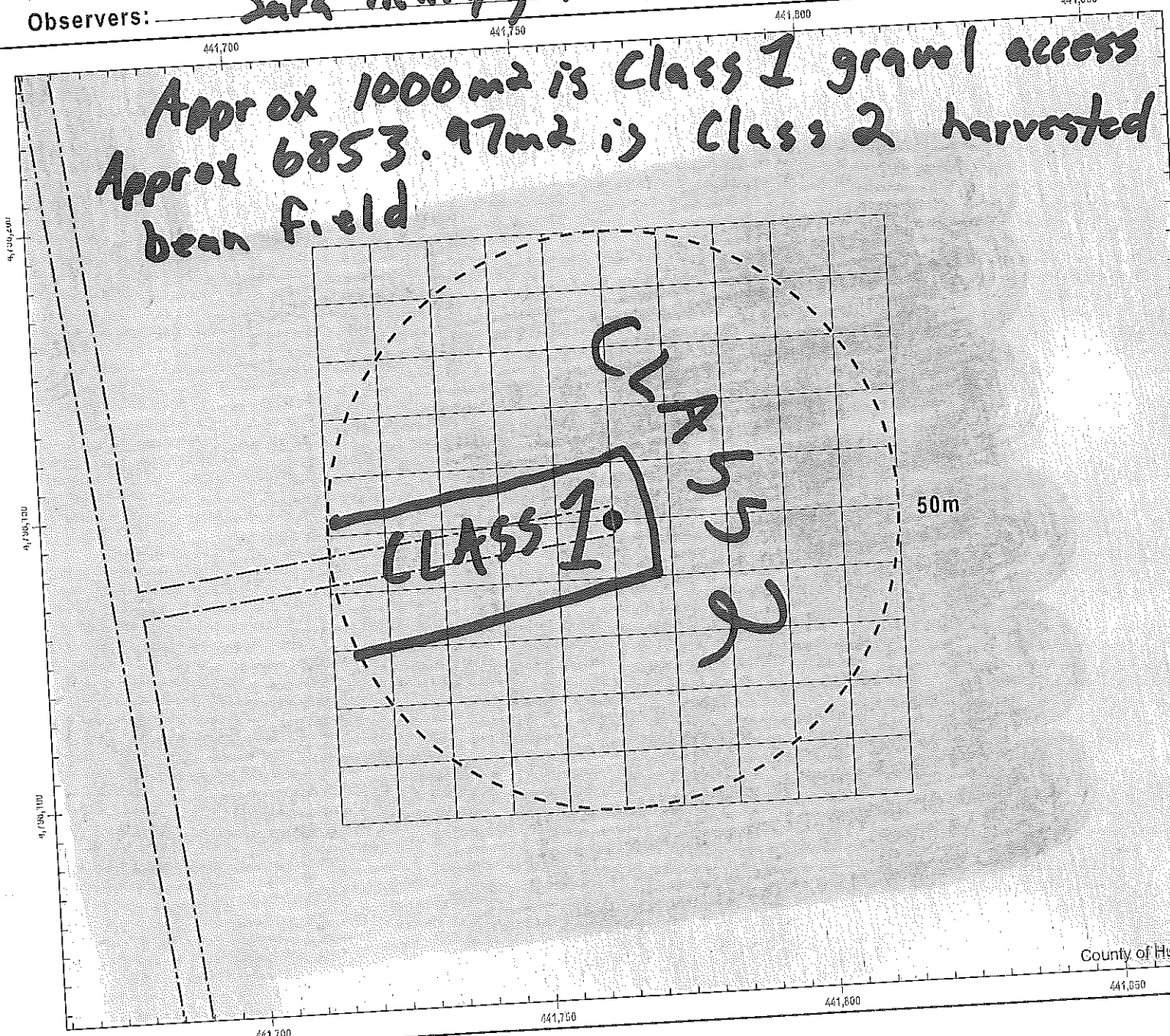
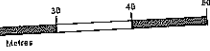


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-41
 Survey Date: May 2 / 19
 Actual Searched Area (m²): 7853.97m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

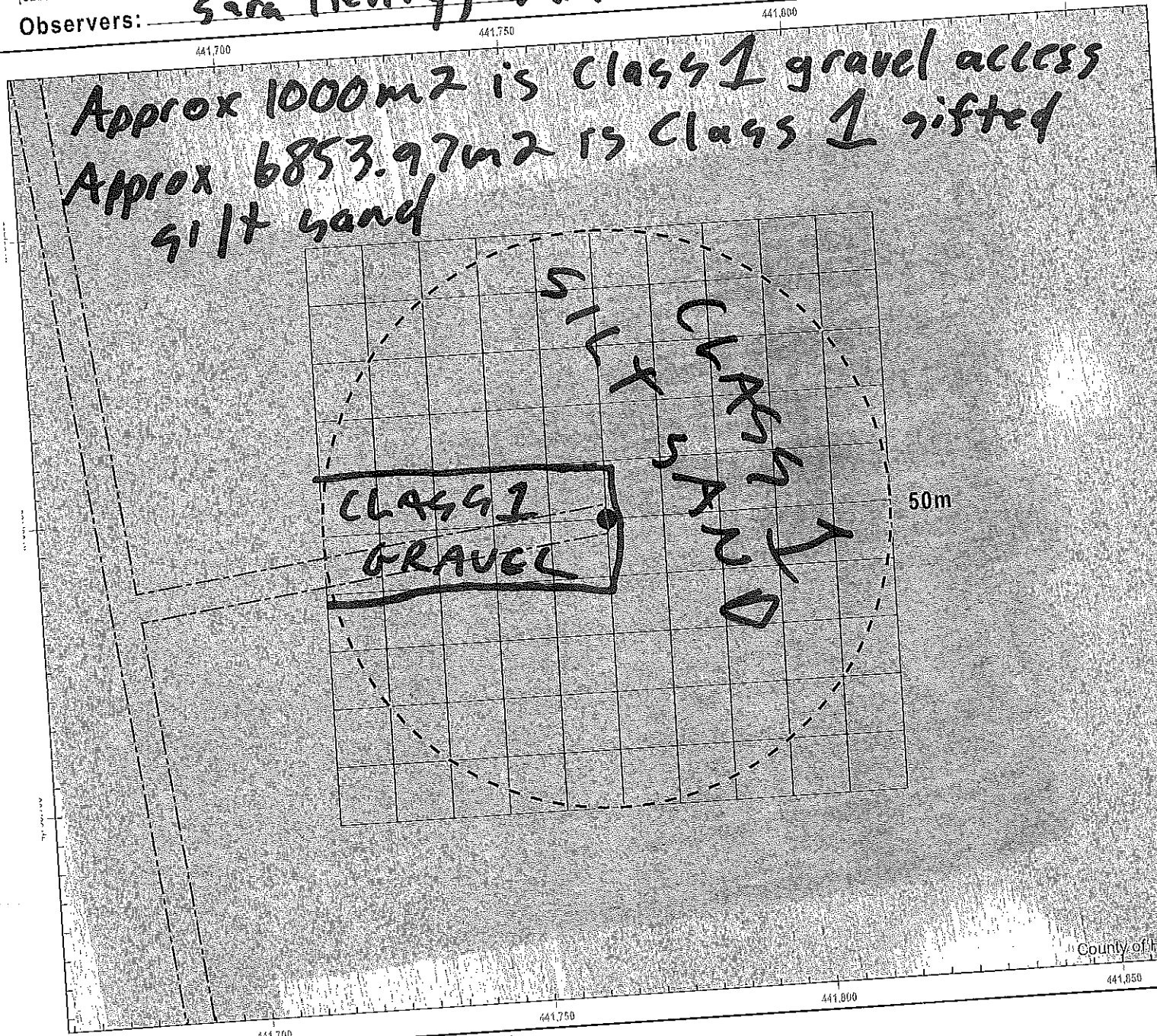
Site Number: T-41

Survey Date: June 10/19

Actual Searched Area (m²):
(subtract from total search area - 7853.97m²)

Observers: Sam Henry, Sarah Jackson

7853.97 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

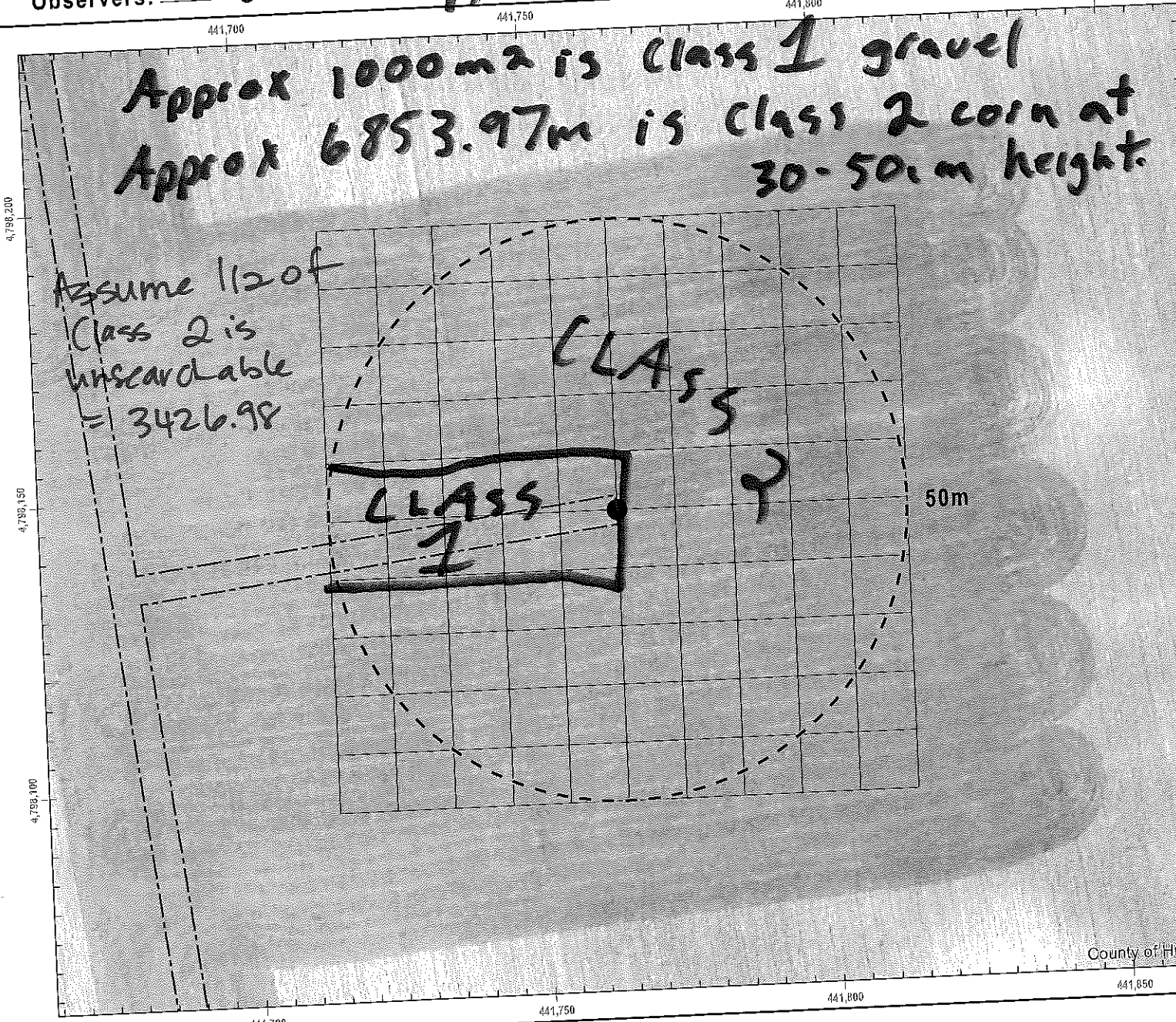
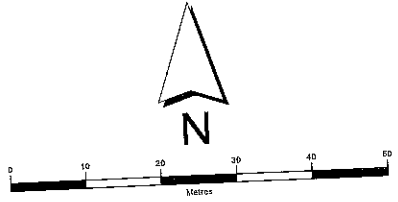


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-41
 Survey Date: July 11 / 19
 Actual Searched Area (m²): 4426.99 m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sara Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

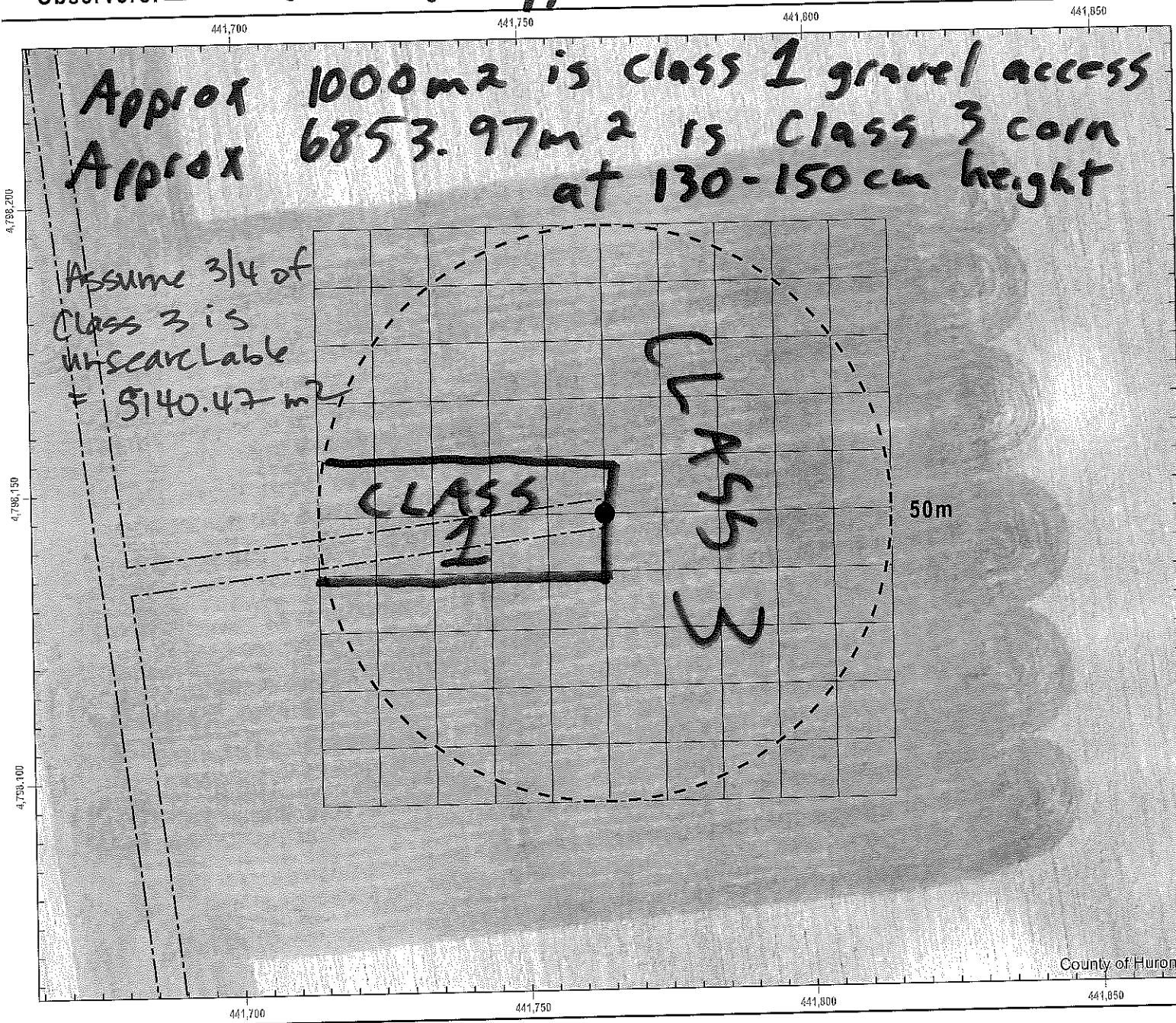


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-41
 Survey Date: July 25/19
 Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sara Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

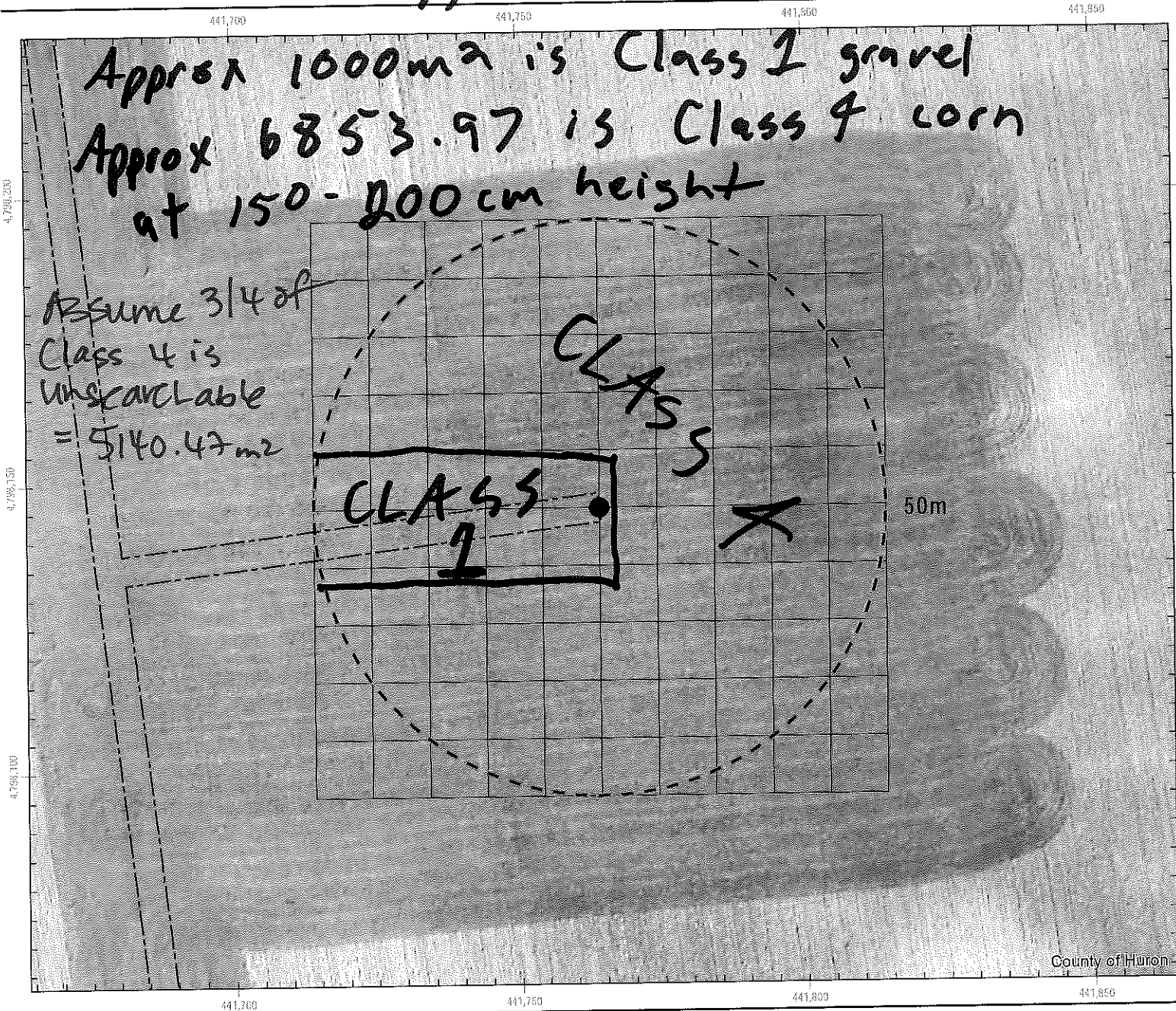
Site Number: T-41

Survey Date: Aug 8 / 19

Actual Searched Area (m²): 2713.50m²

(subtract from total search area - 7853.97m²)

Observers: Sarah Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

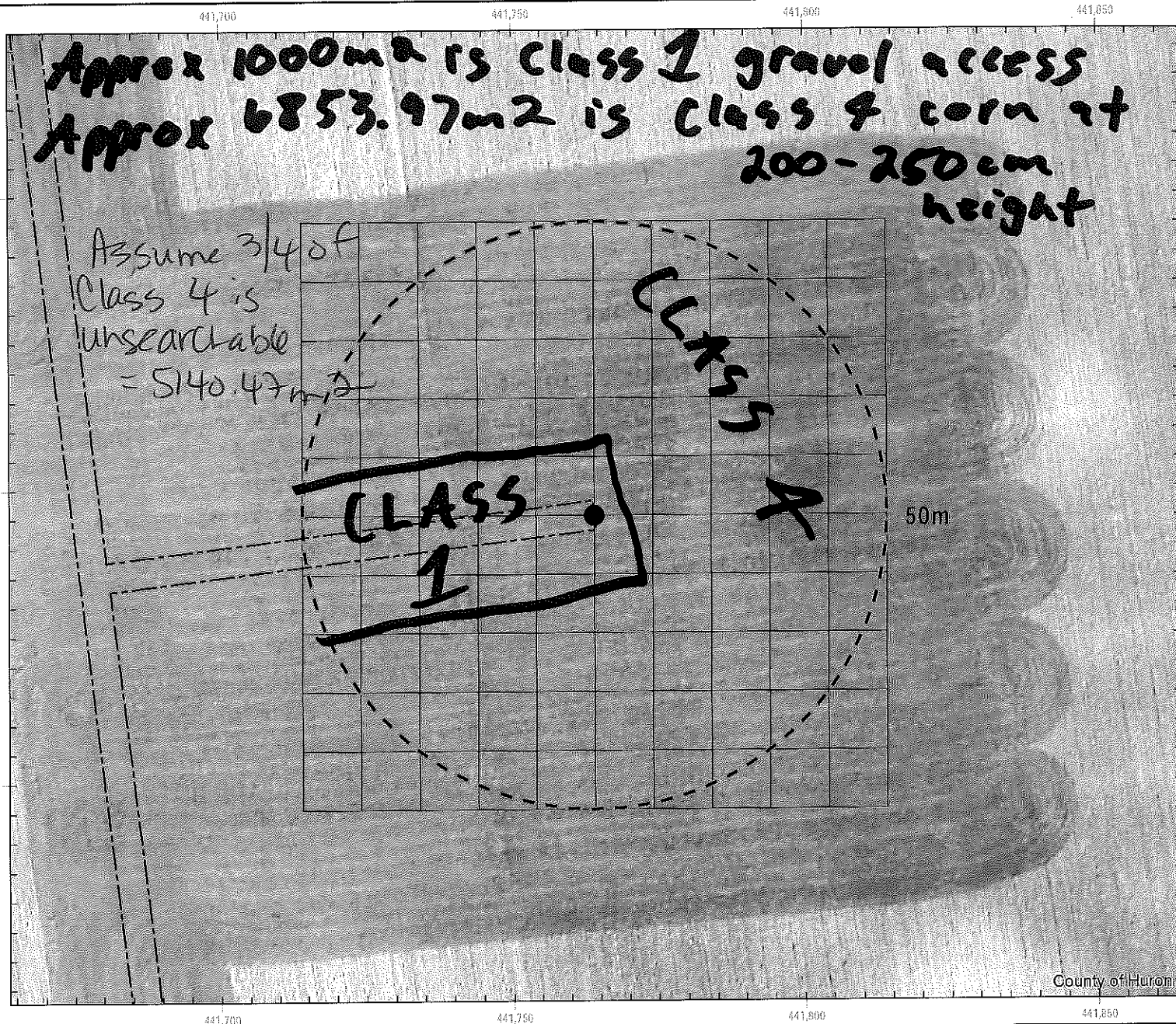
Site Number: T-41

Survey Date: Sept 26/19

Actual Searched Area (m²): 2713.50m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

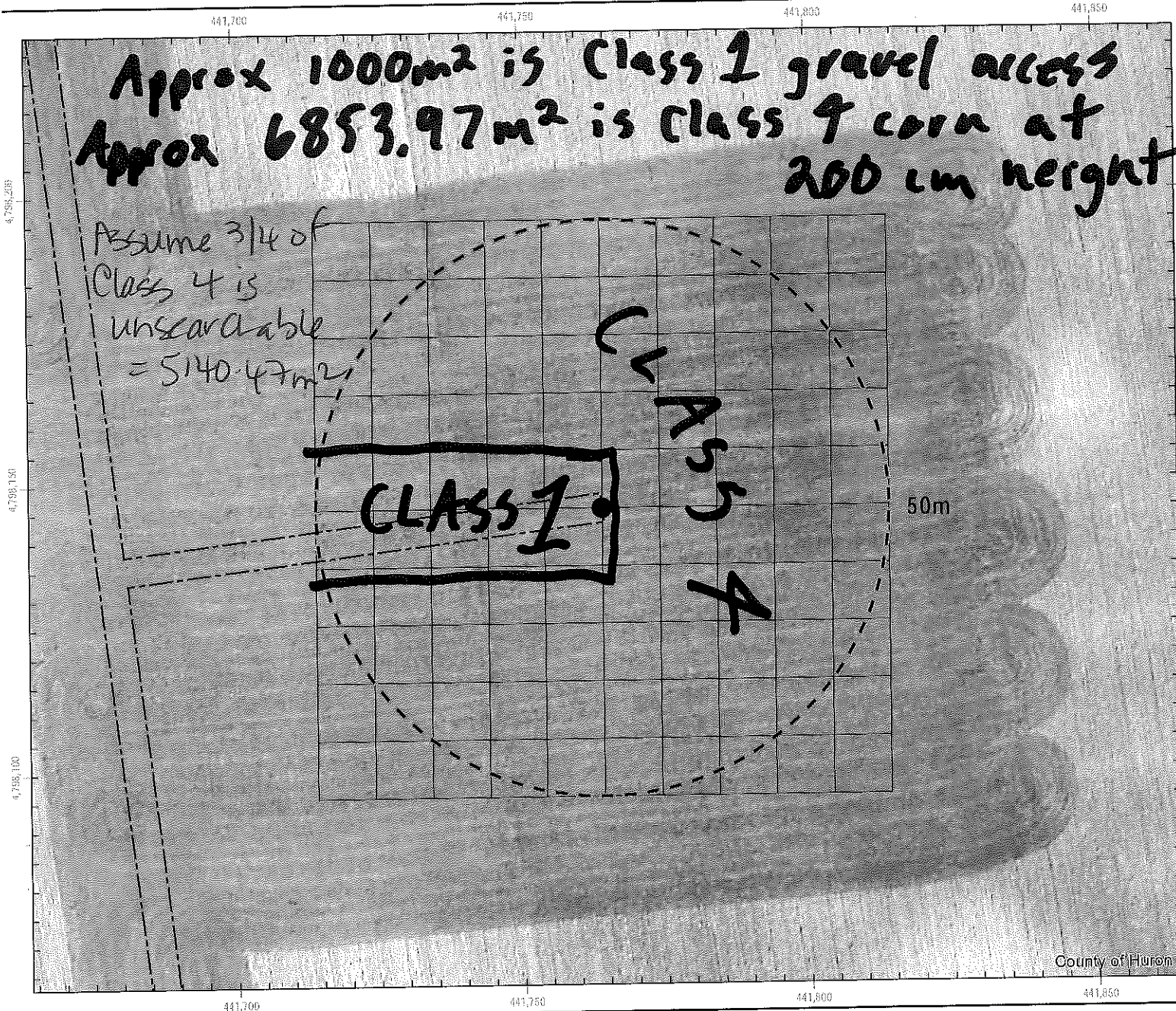
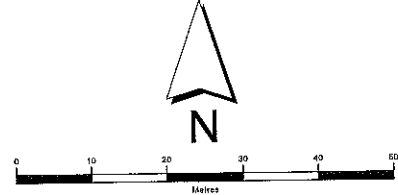
SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-41
 Survey Date: Oct 24 19
 Actual Searched Area (m²): 2713.50m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

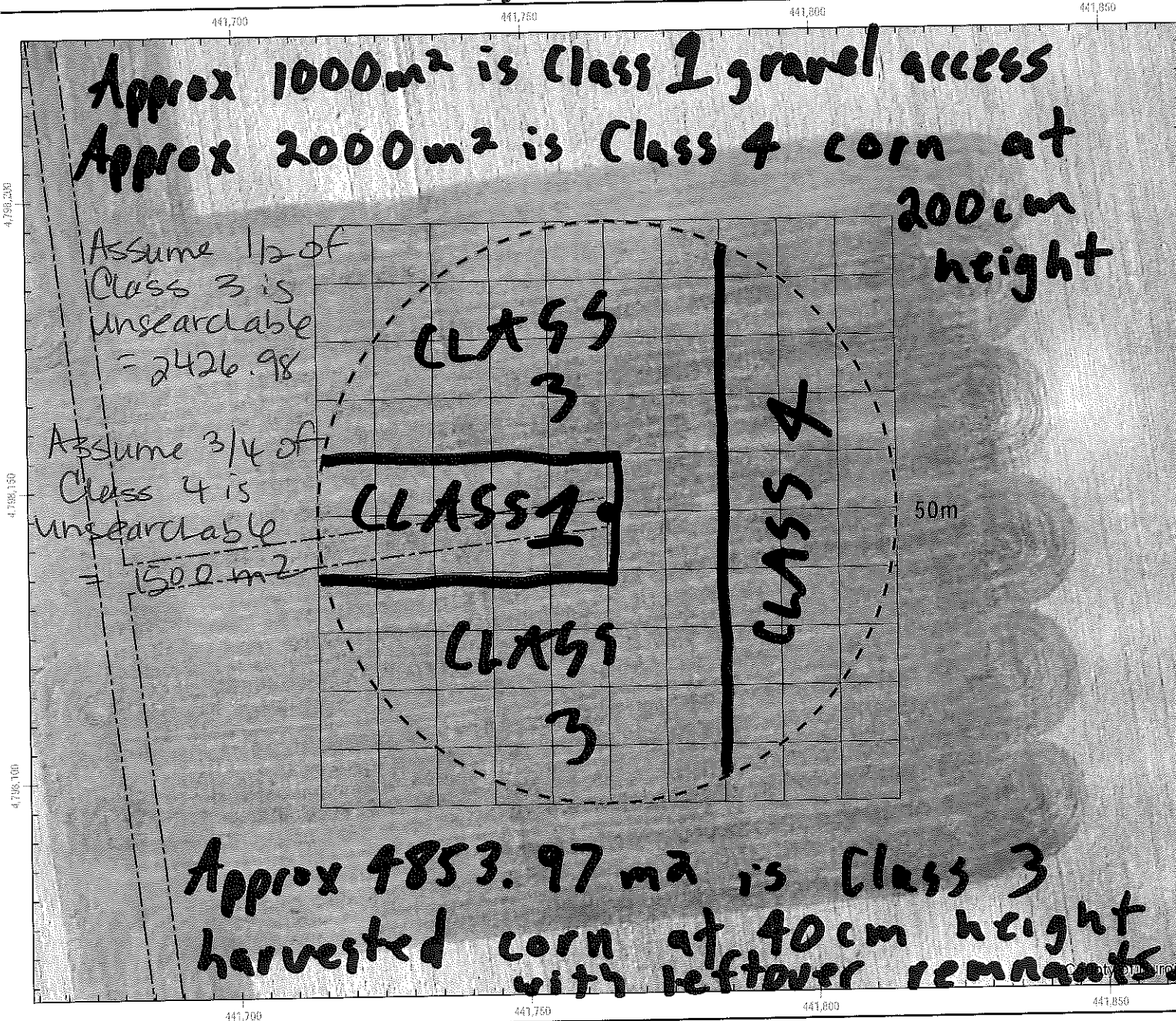
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-41

Survey Date: Nov 13/19

Actual Searched Area (m²): 3926.99 m²
(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

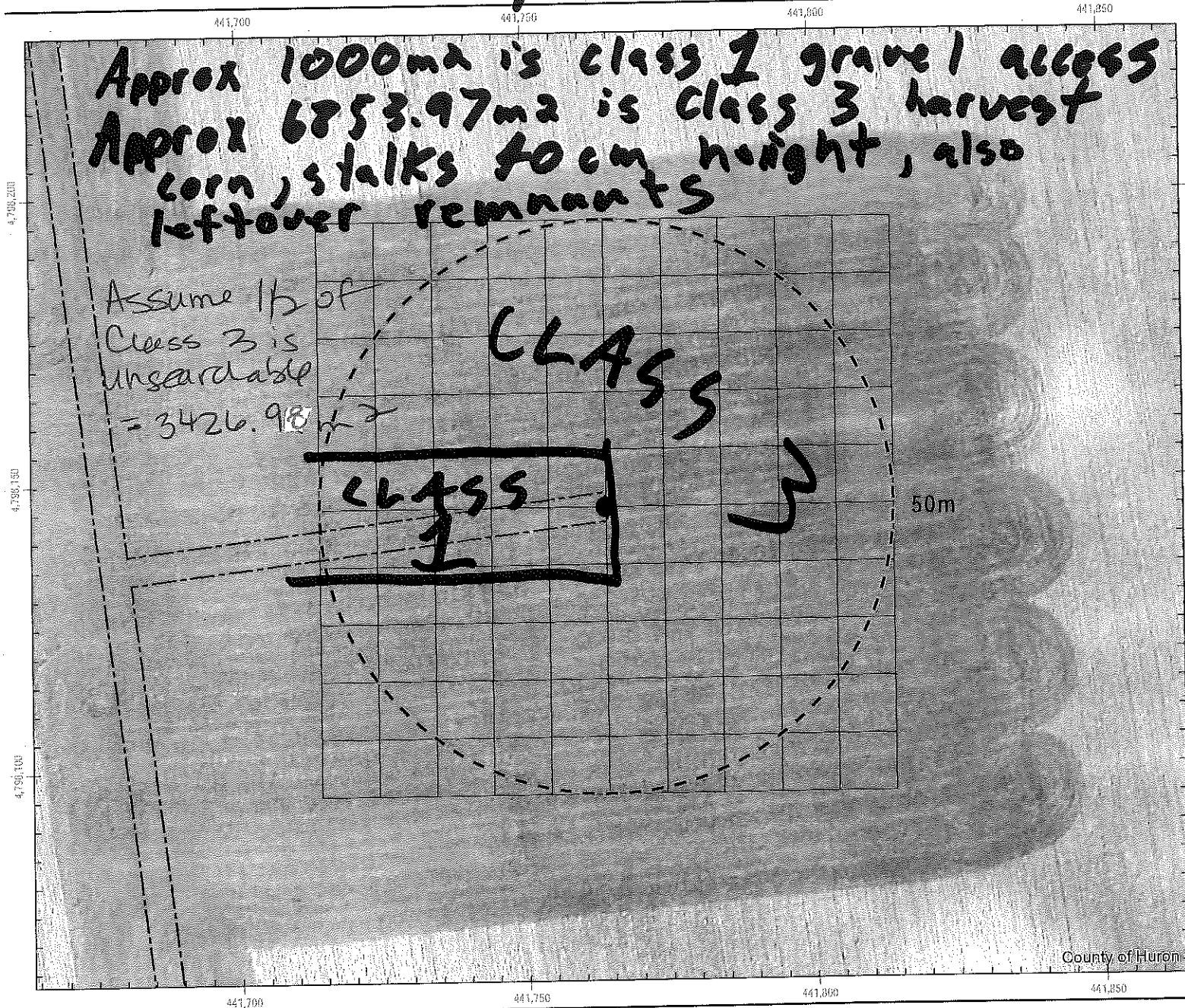
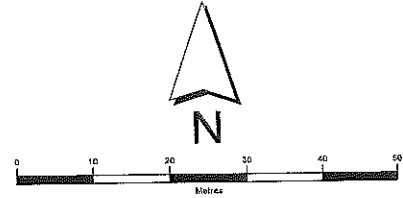


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-41
 Survey Date: Nov 19/19
 Actual Searched Area (m²): 4426.99 m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

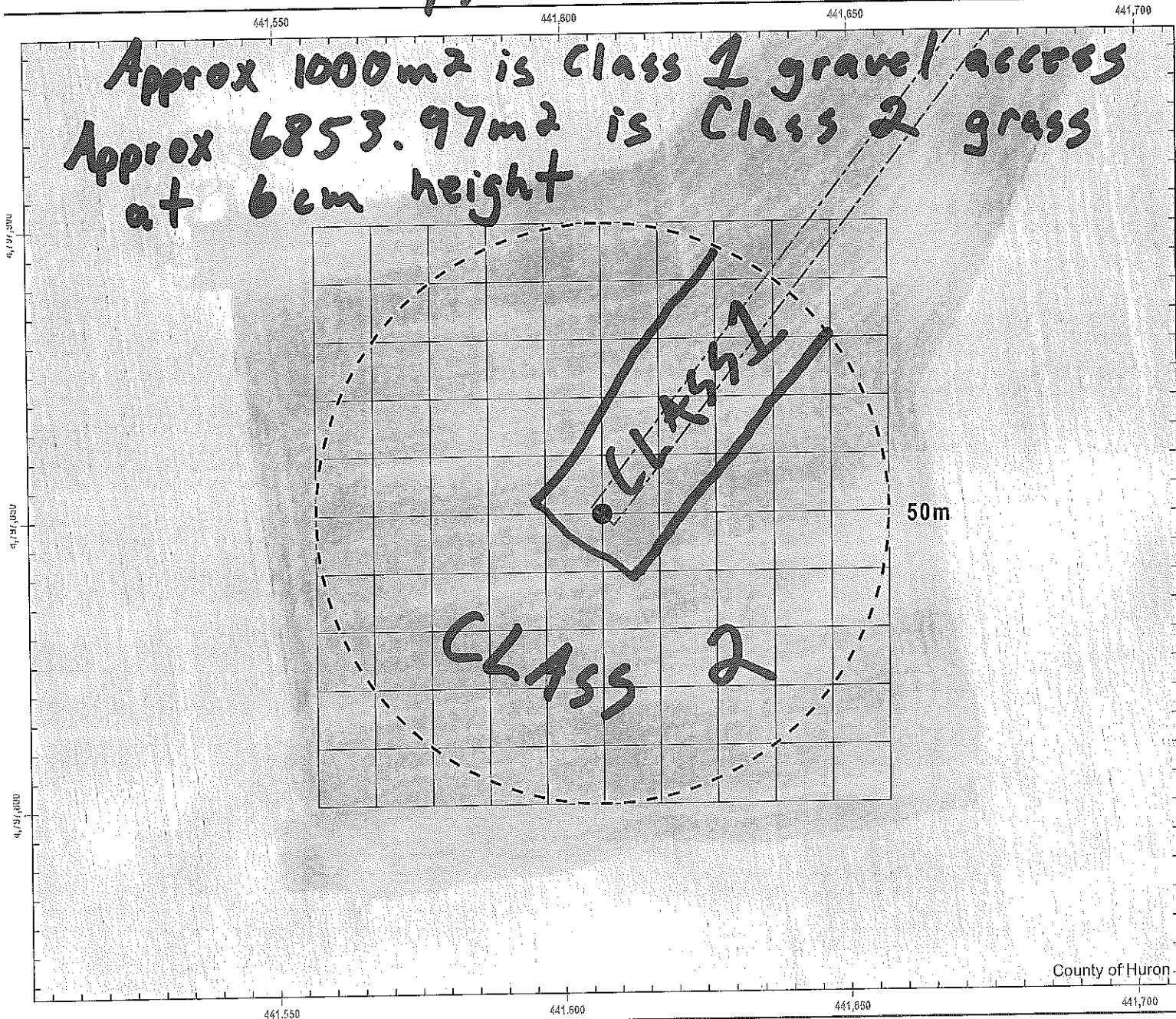
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-42

Survey Date: May 2 / 19

Actual Searched Area (m²): 7853.97m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-42

Survey Date: June 17/19

Actual Searched Area (m²): _____

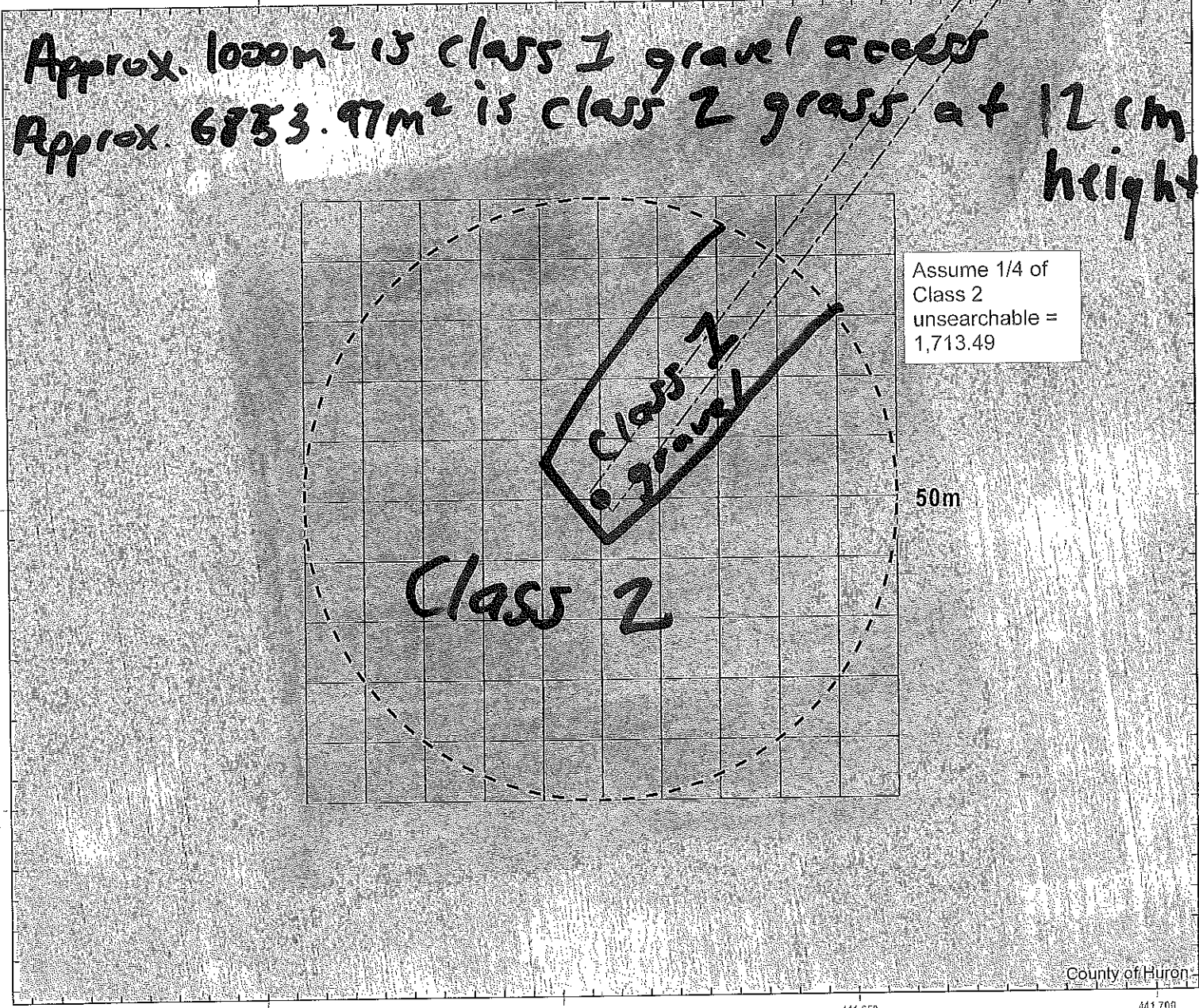
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

6,140.48 m²



441,550 441,600 441,650 441,700



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

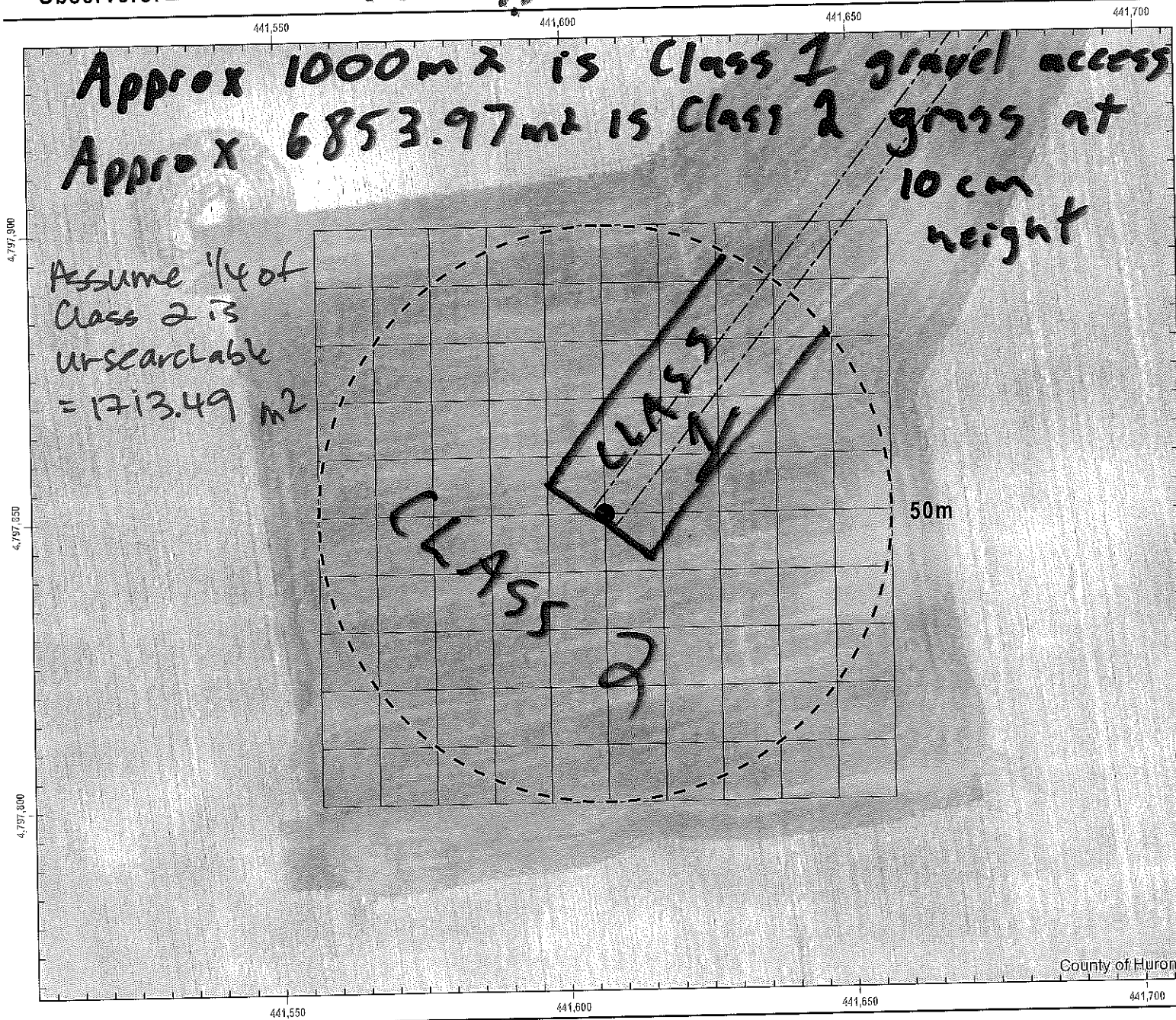
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-42

Survey Date: July 25/19

Actual Searched Area (m²): 6140.18 m²
(subtract from total search area - 7853.97m²)

Observers: Sam Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

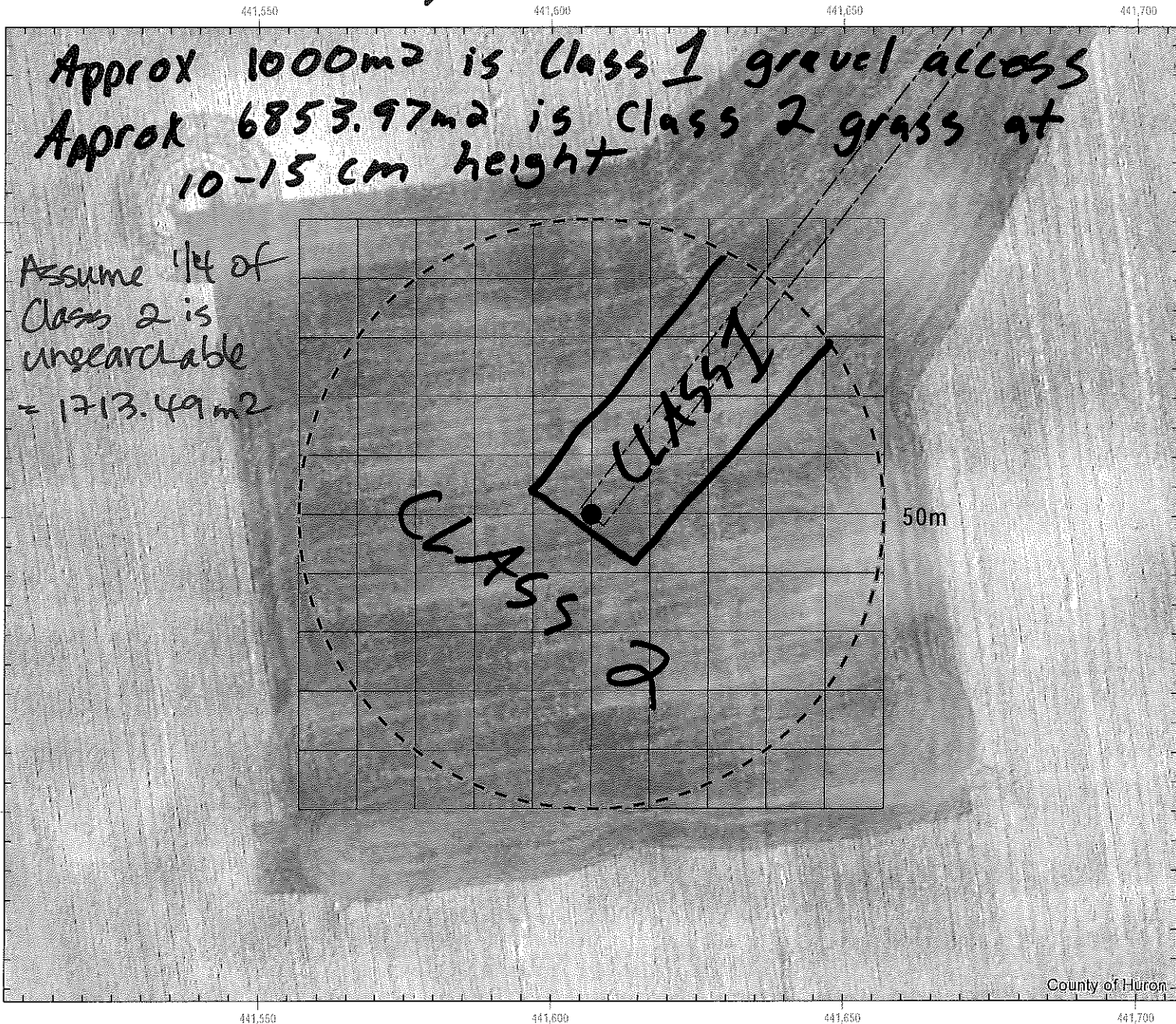
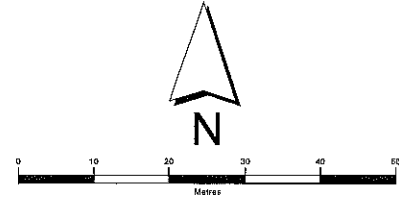
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-42

Survey Date: Aug 22/19

Actual Searched Area (m²): 6140.48m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

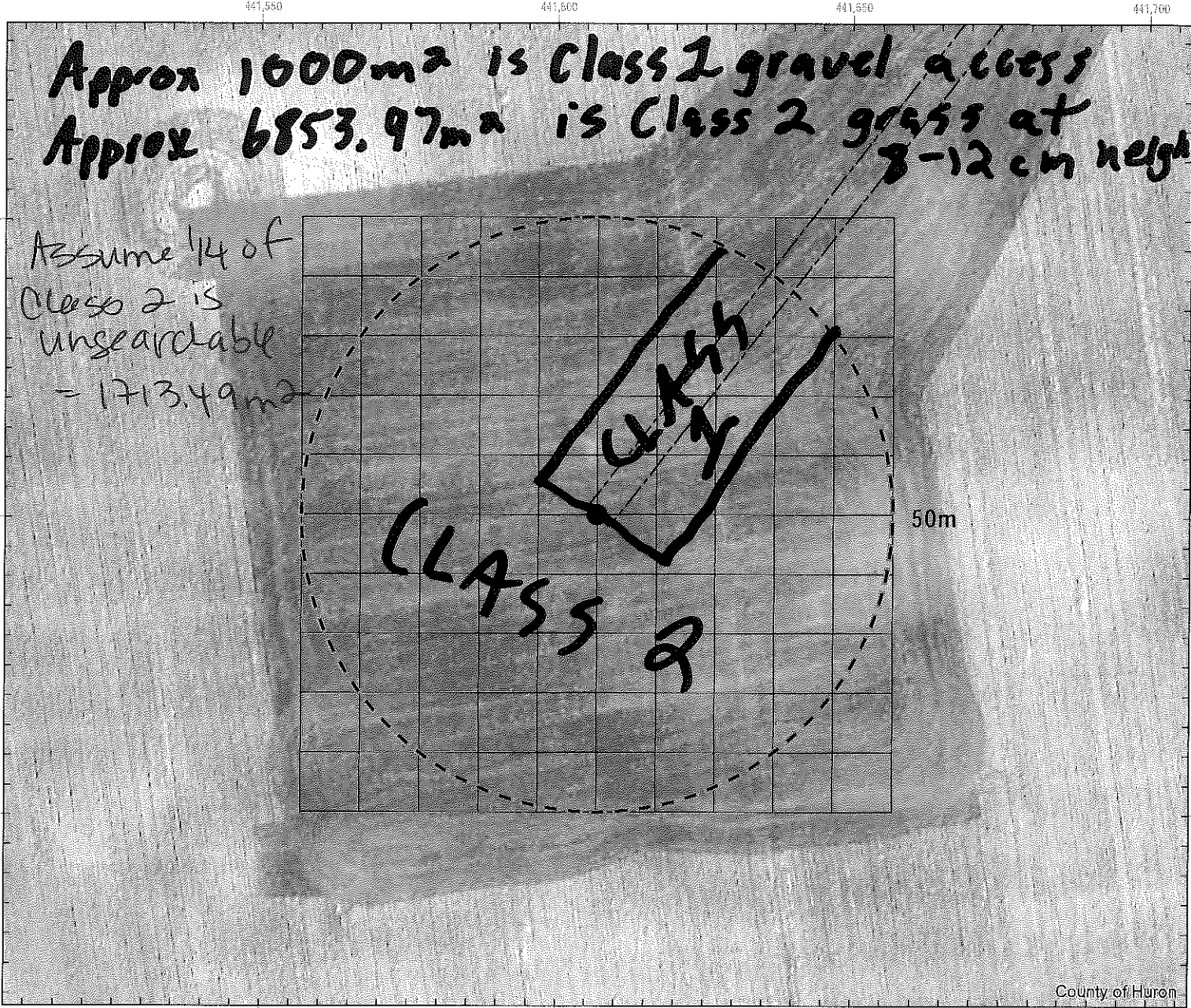
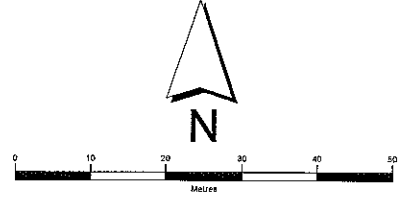
Site Number: T-42

Survey Date: Oct 14/19

Actual Searched Area (m²): 6140.48 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

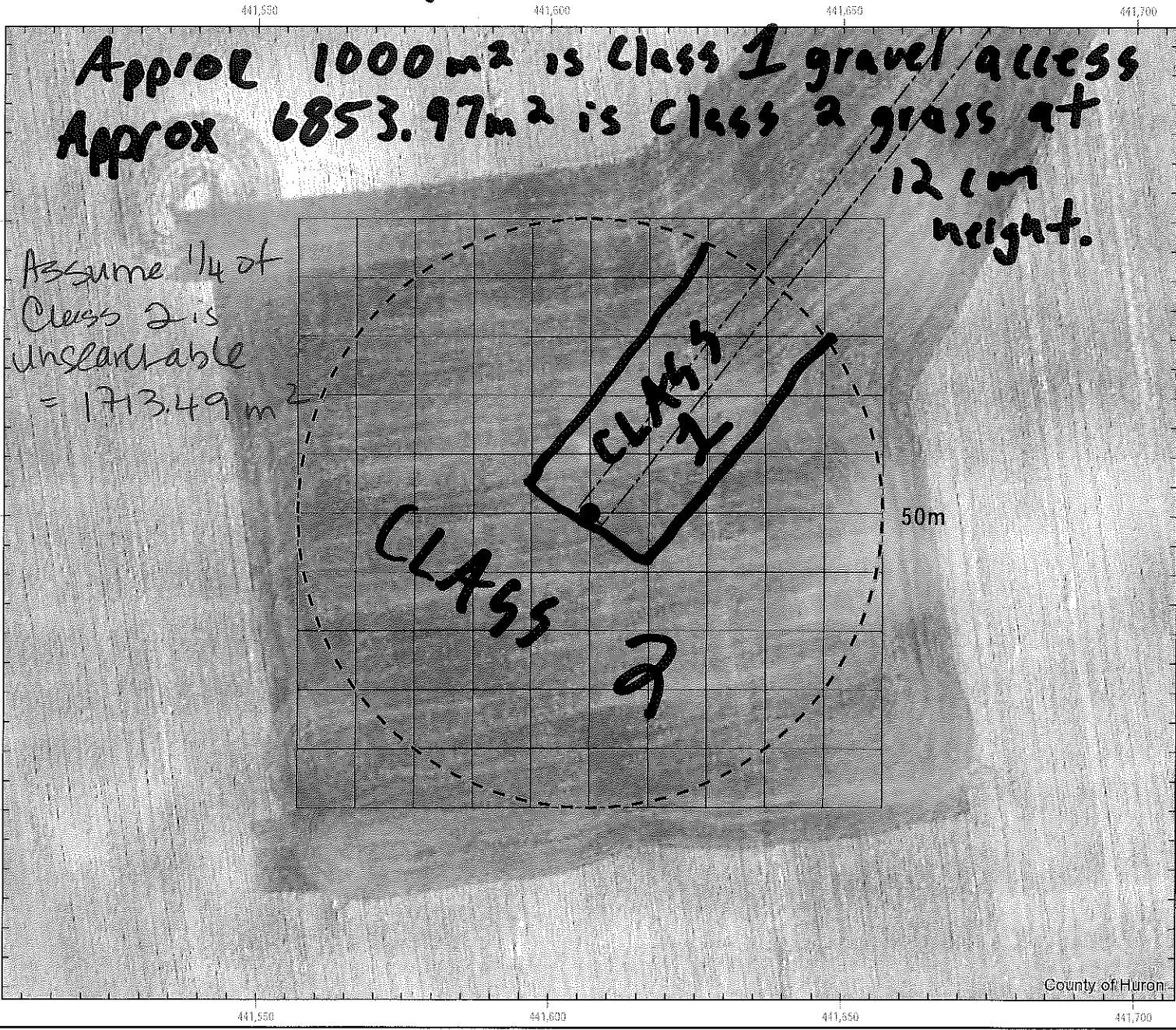
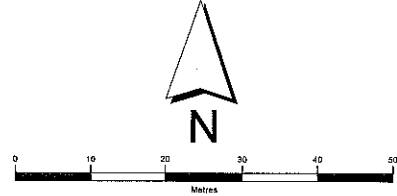
Site Number: T-42

Survey Date: Nov 19/19

Actual Searched Area (m²): 6140.48 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

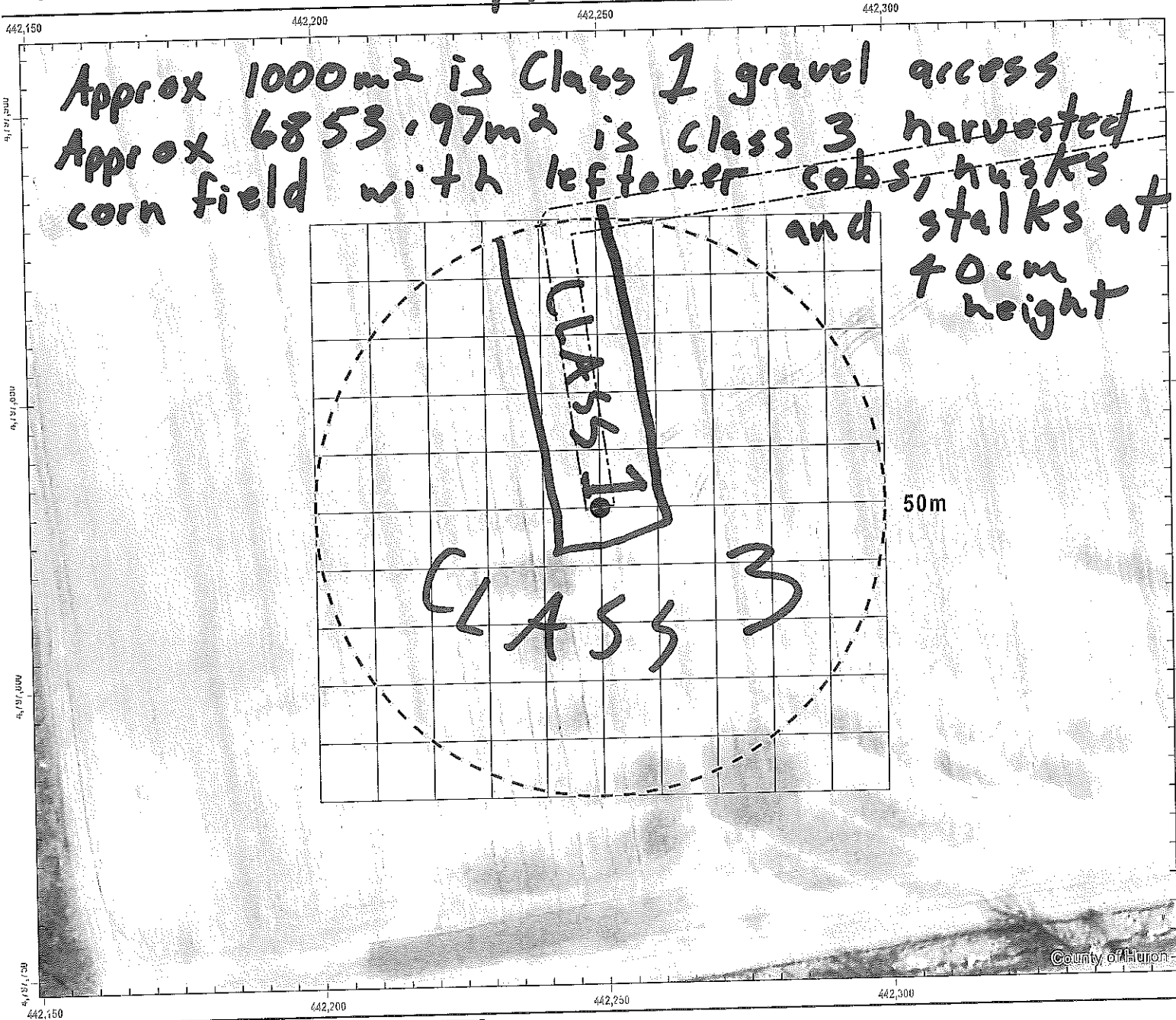
Site Number: T-43

Survey Date: May 2 / 19

Actual Searched Area (m²): 7853.97 m²

(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-43

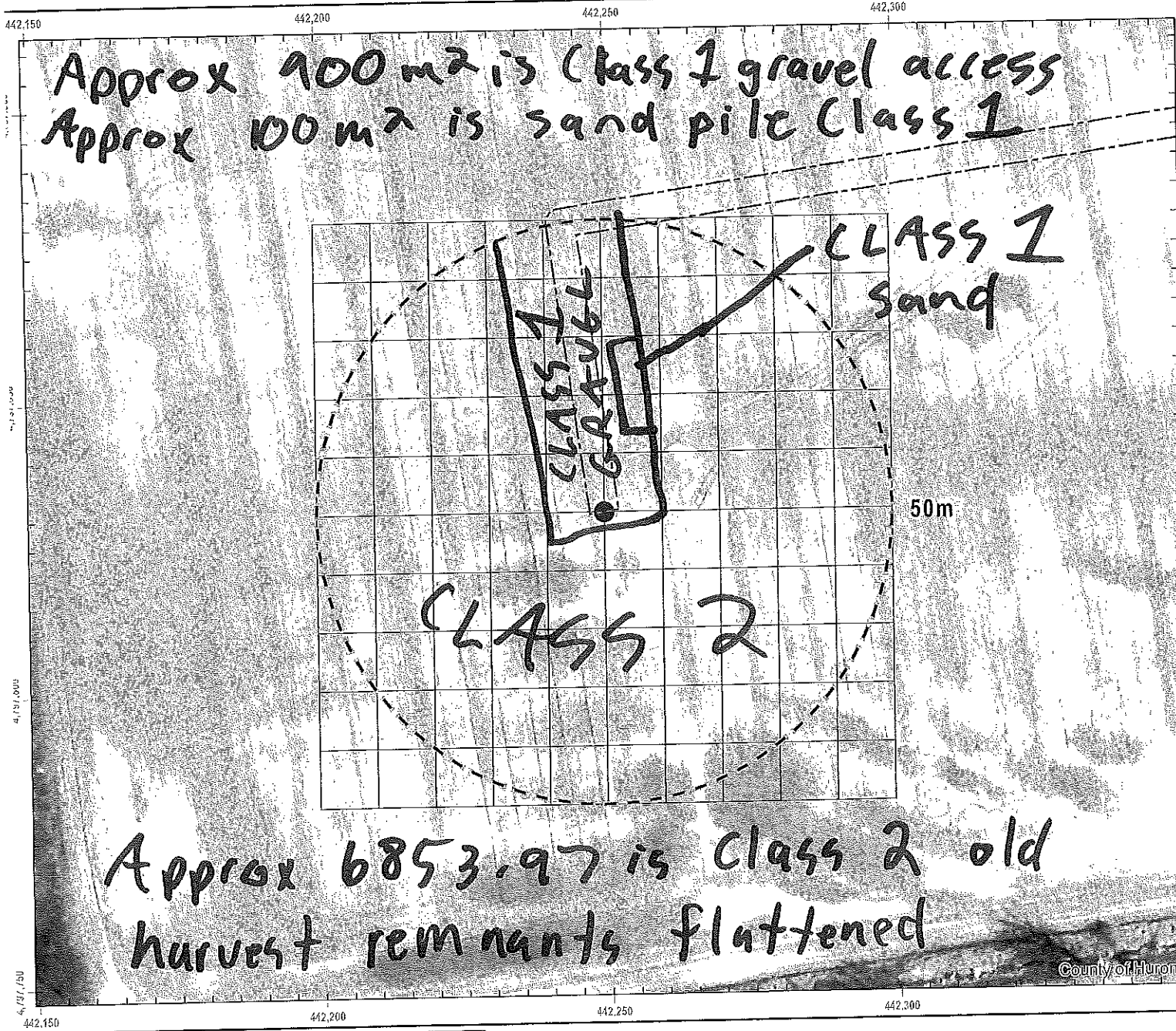
Survey Date: June 20 19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson

7853.97 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

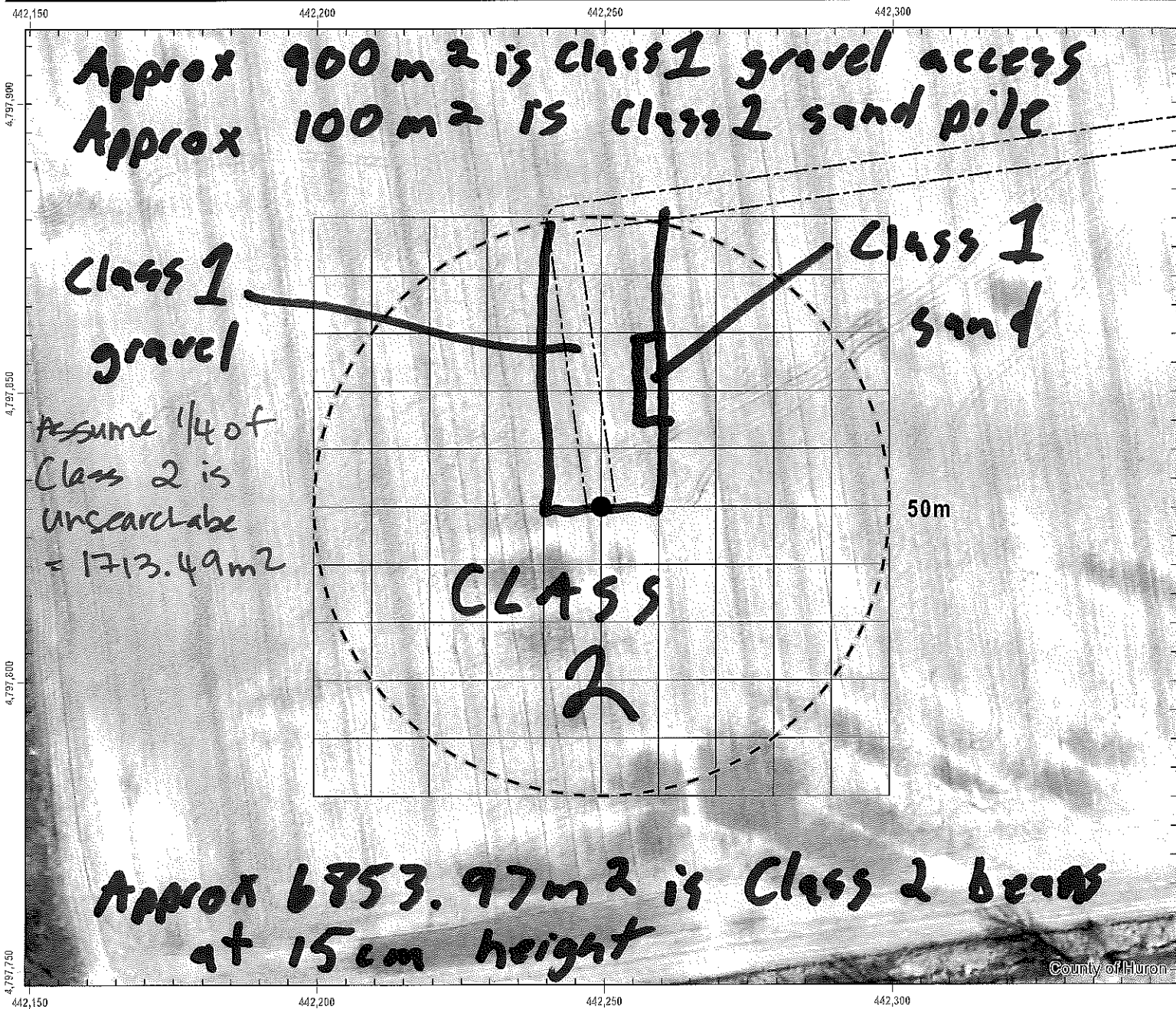
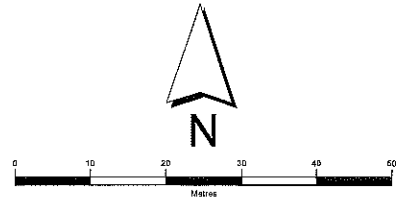
SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-43
 Survey Date: July 11/19
 Actual Searched Area (m²): 6140.48m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



County of Huron

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

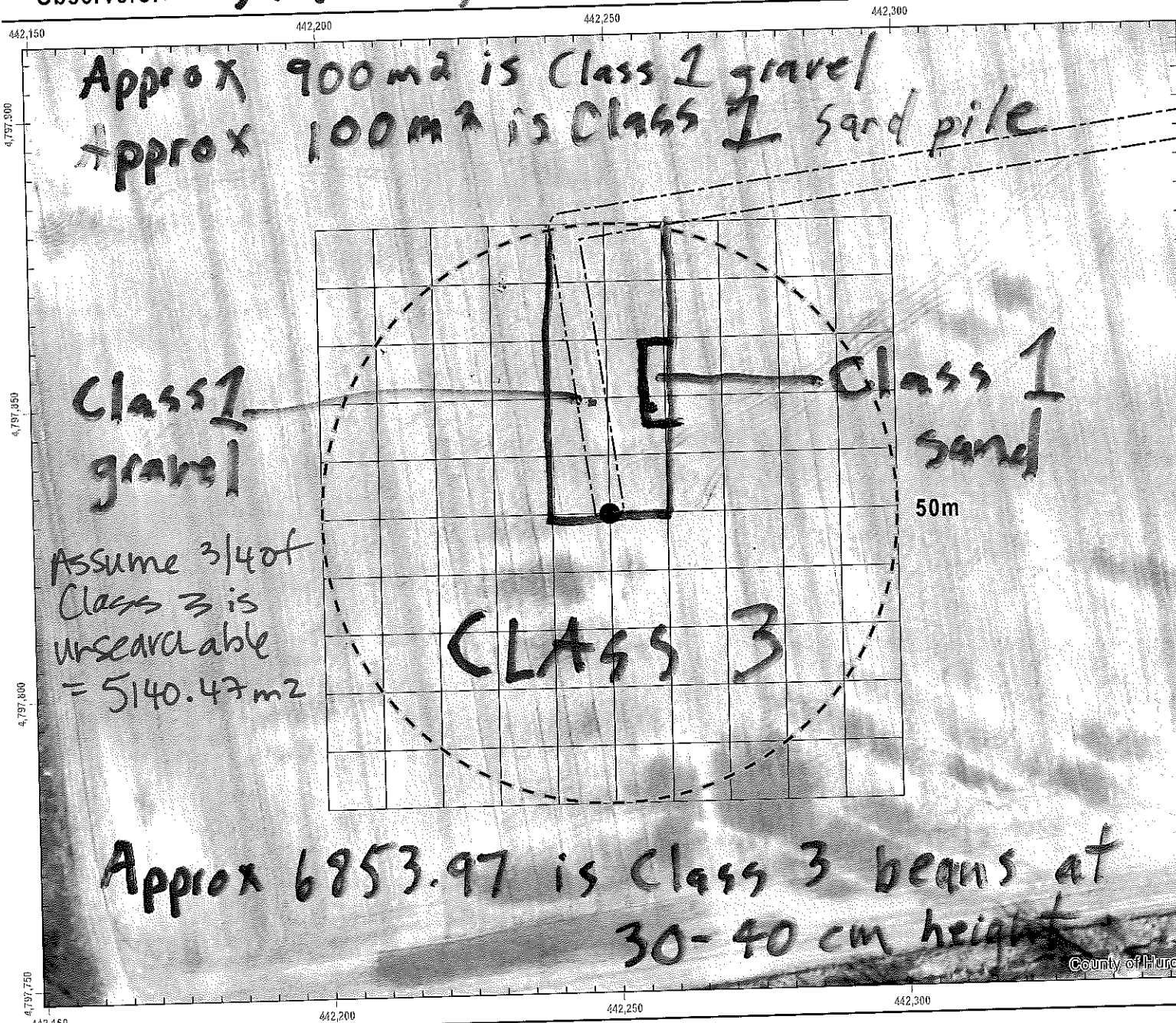
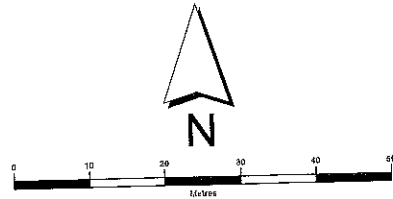
Site Number: T-43

Survey Date: Aug 1/19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

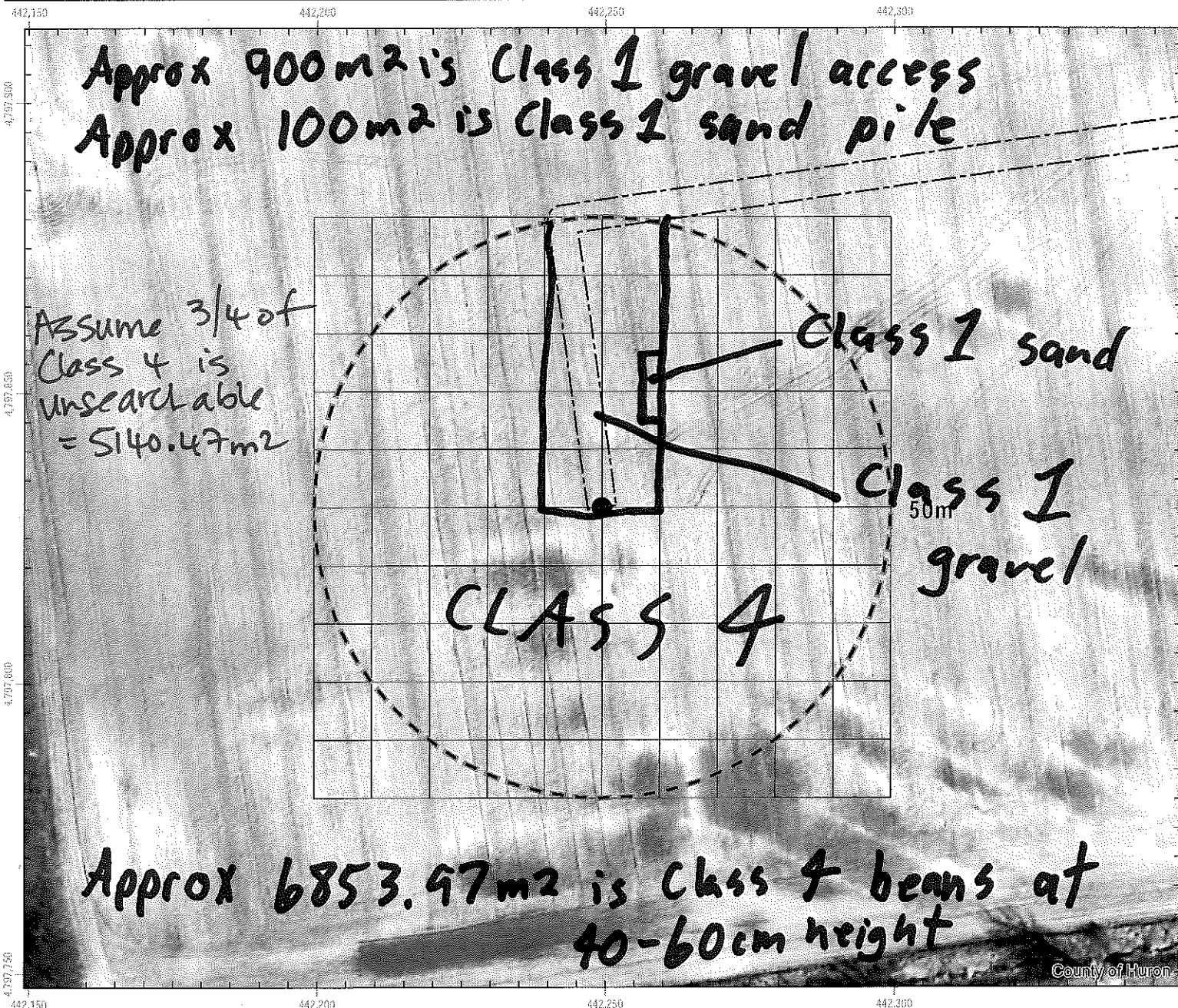
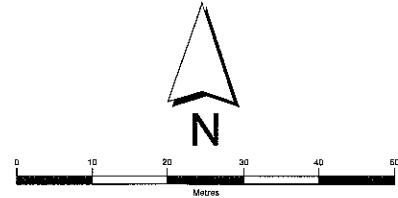
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-43

Survey Date: Aug 22/19

Actual Searched Area (m²): 2713.50m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

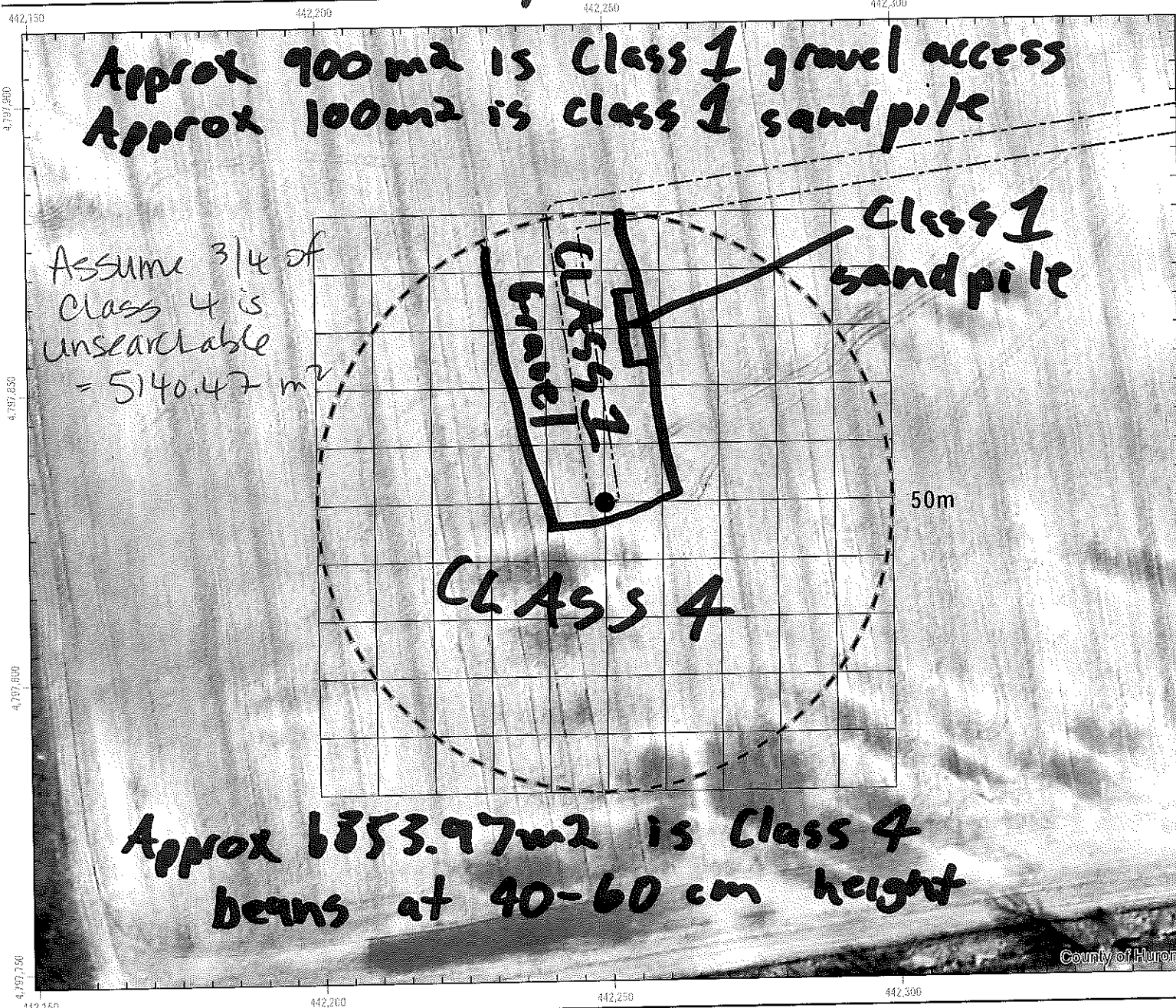
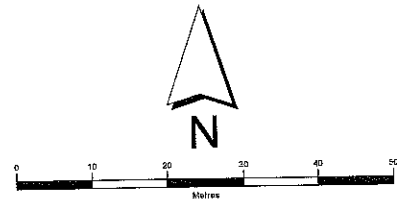
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-43

Survey Date: Sept 16/19

Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97 m²)

Observers: Sara Henry



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

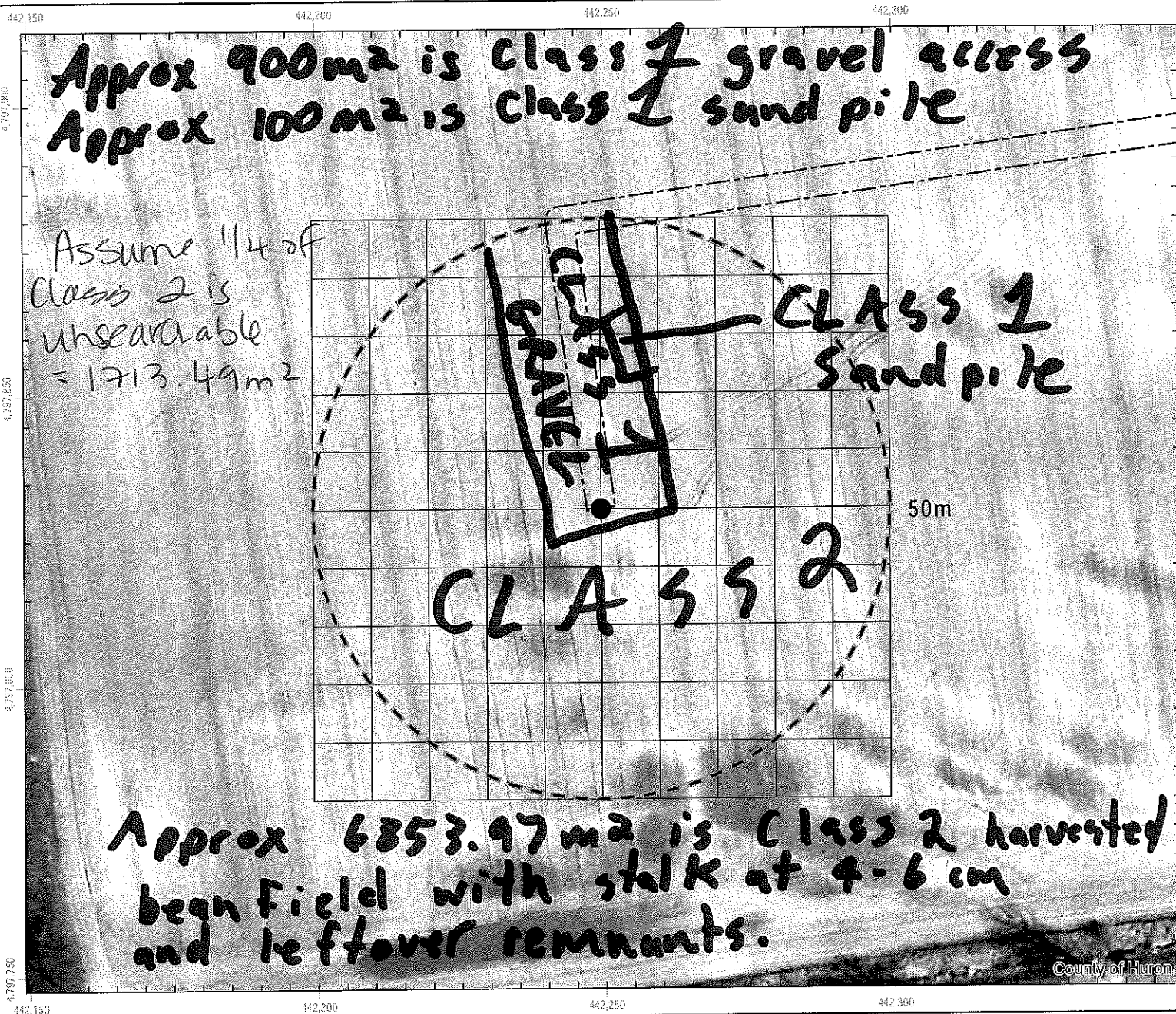
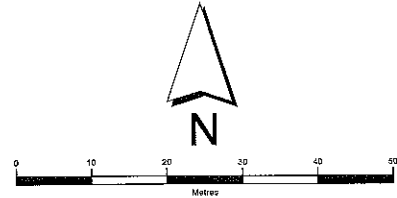


WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-43
 Survey Date: Oct 14/19
 Actual Searched Area (m²): 6140.48 m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

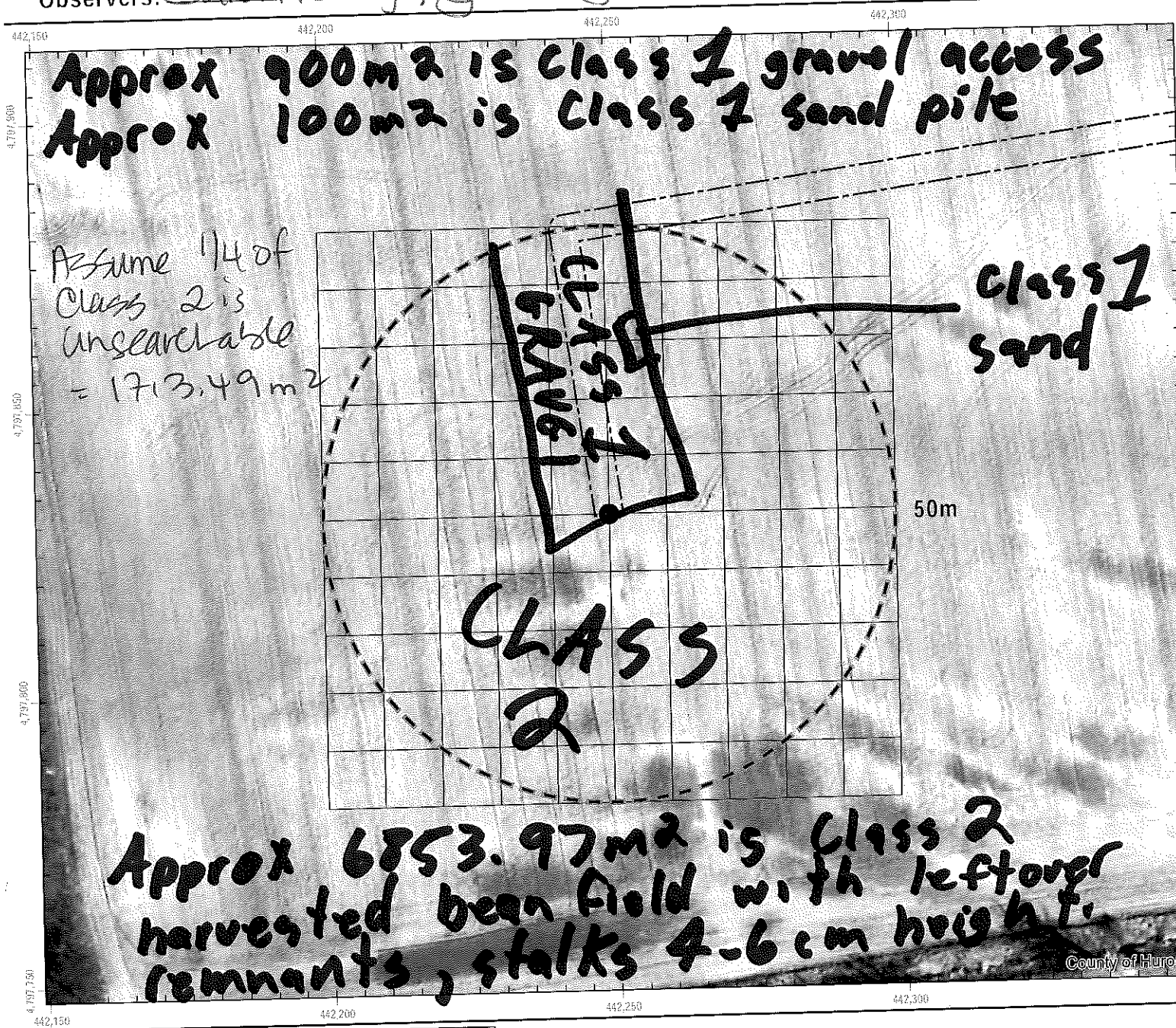
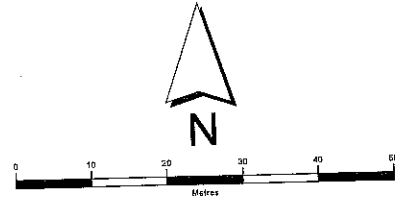
Site Number: T-43

Survey Date: Nov 18/19

Actual Searched Area (m²): 6140.48m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

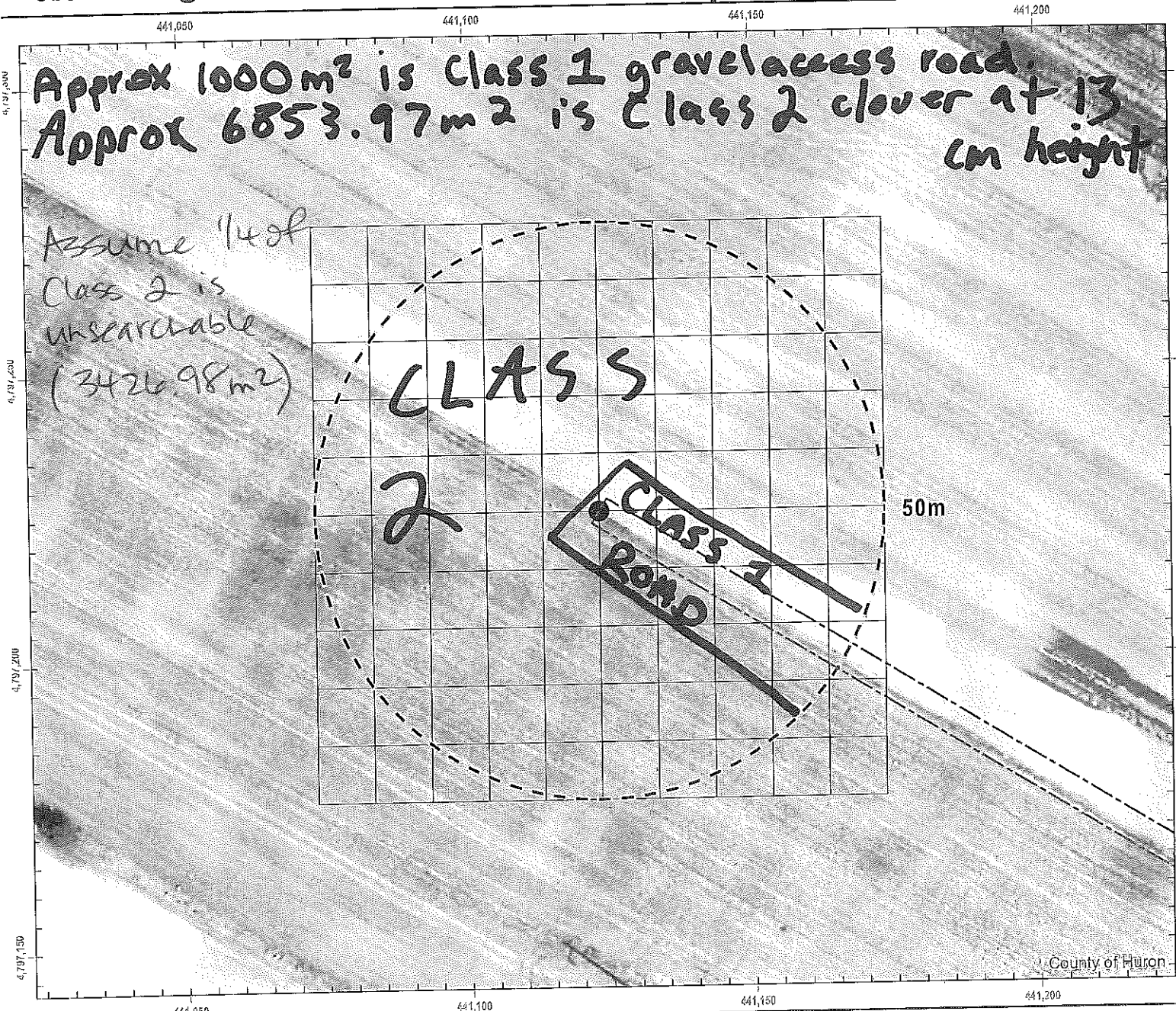
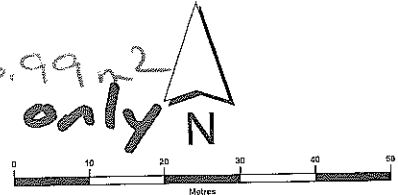
Site Number: T-44

Survey Date: ~~May 1 2019~~ April 30 4426.99m²

Actual Searched Area (m²): No search done, for pics only

(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson, Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

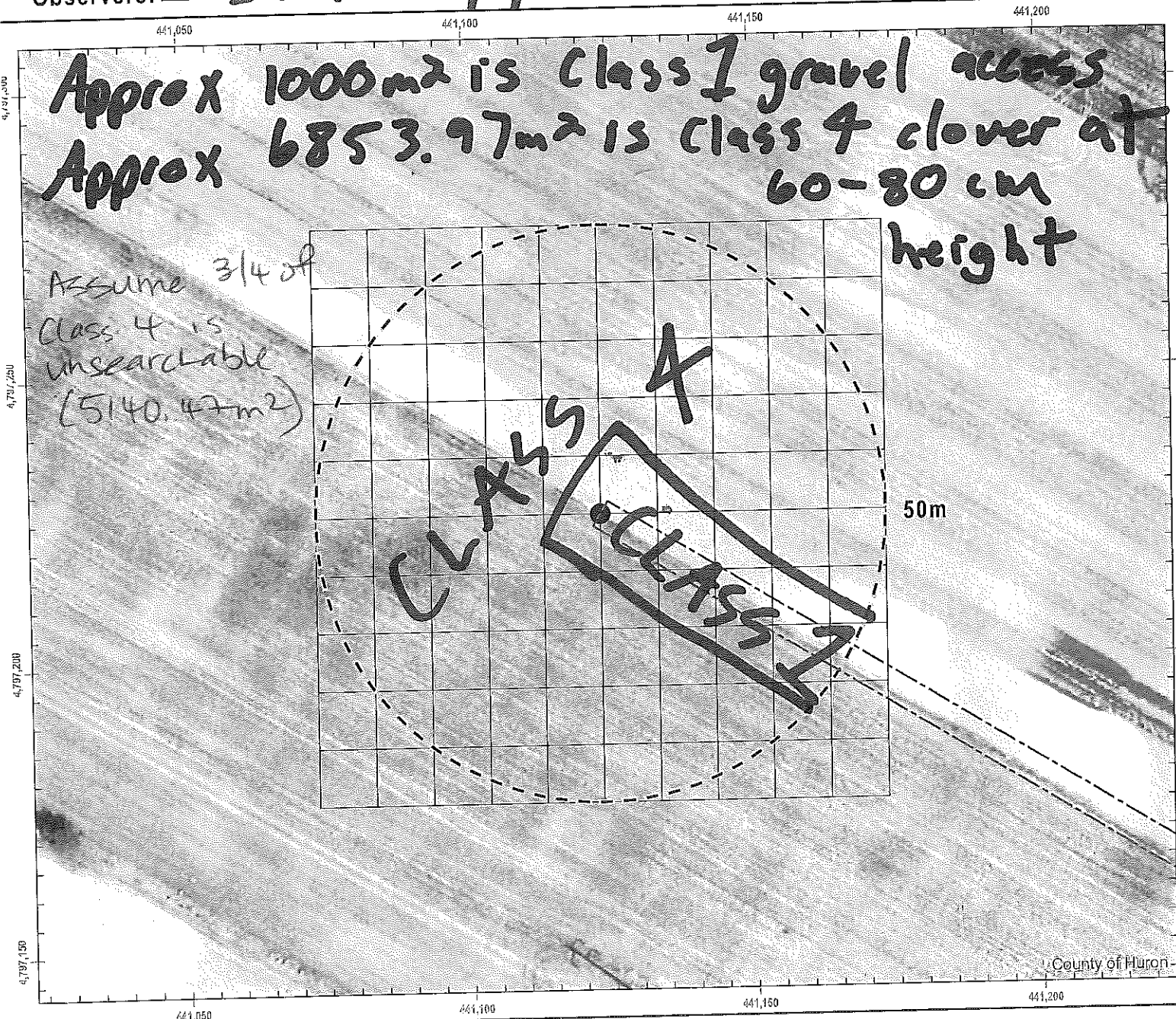
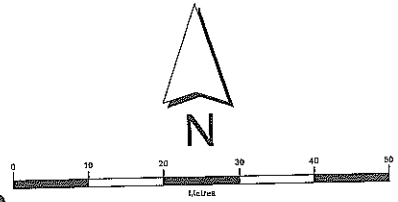
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-44

Survey Date: May 29 / 19

Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



BURNSIDE

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

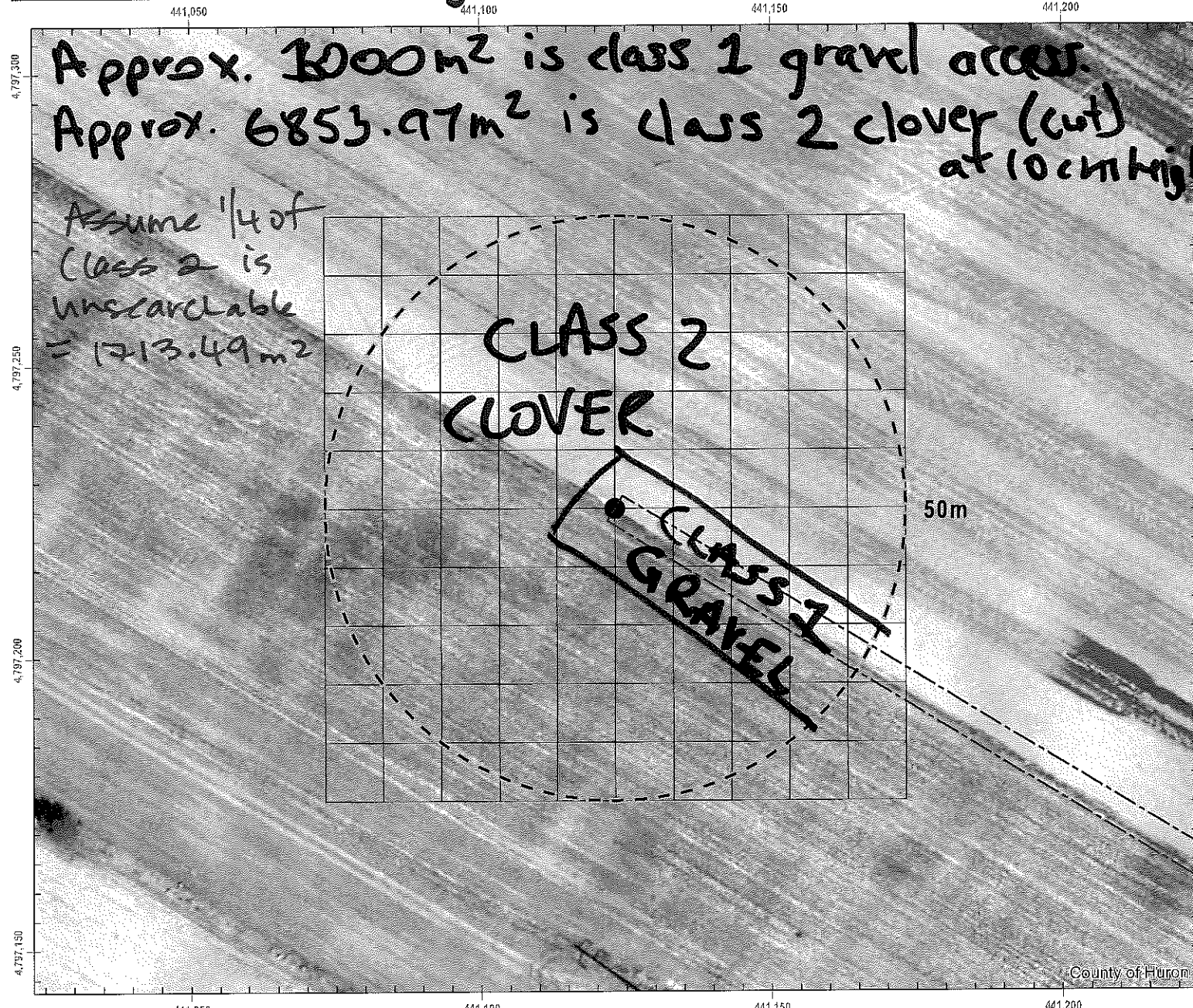
Site Number: T-44

Survey Date: July 24/19

Actual Searched Area (m²): 6140.48 m²

(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

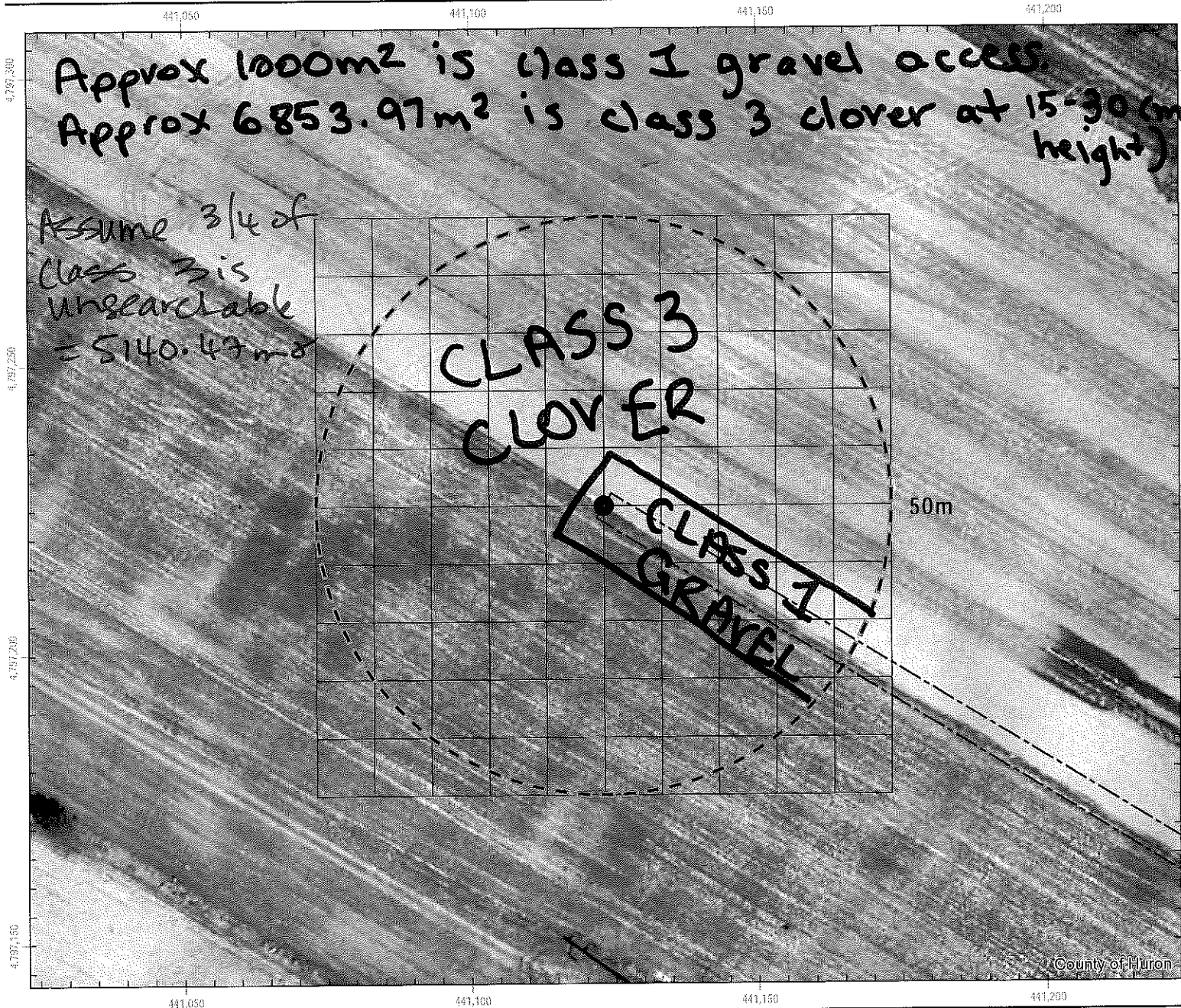
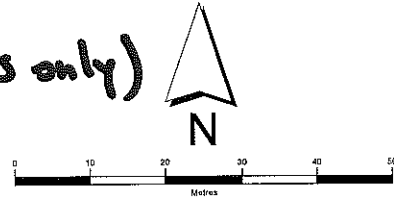
Site Number: T-44

Survey Date: Aug 20/19 (Did not search, pictures only)

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

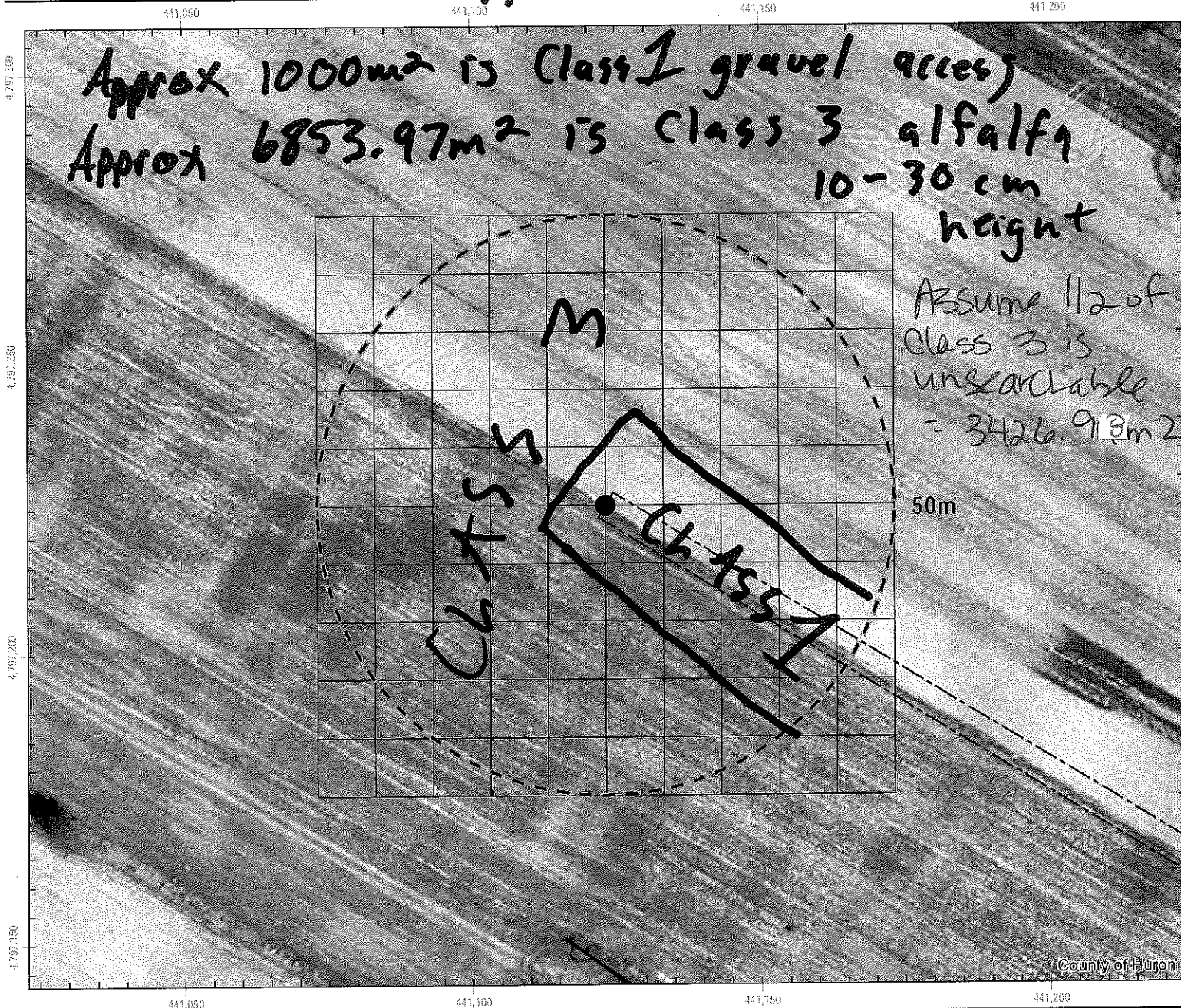
Site Number: T-44

Survey Date: Sept 25/19

Actual Searched Area (m²): 4426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

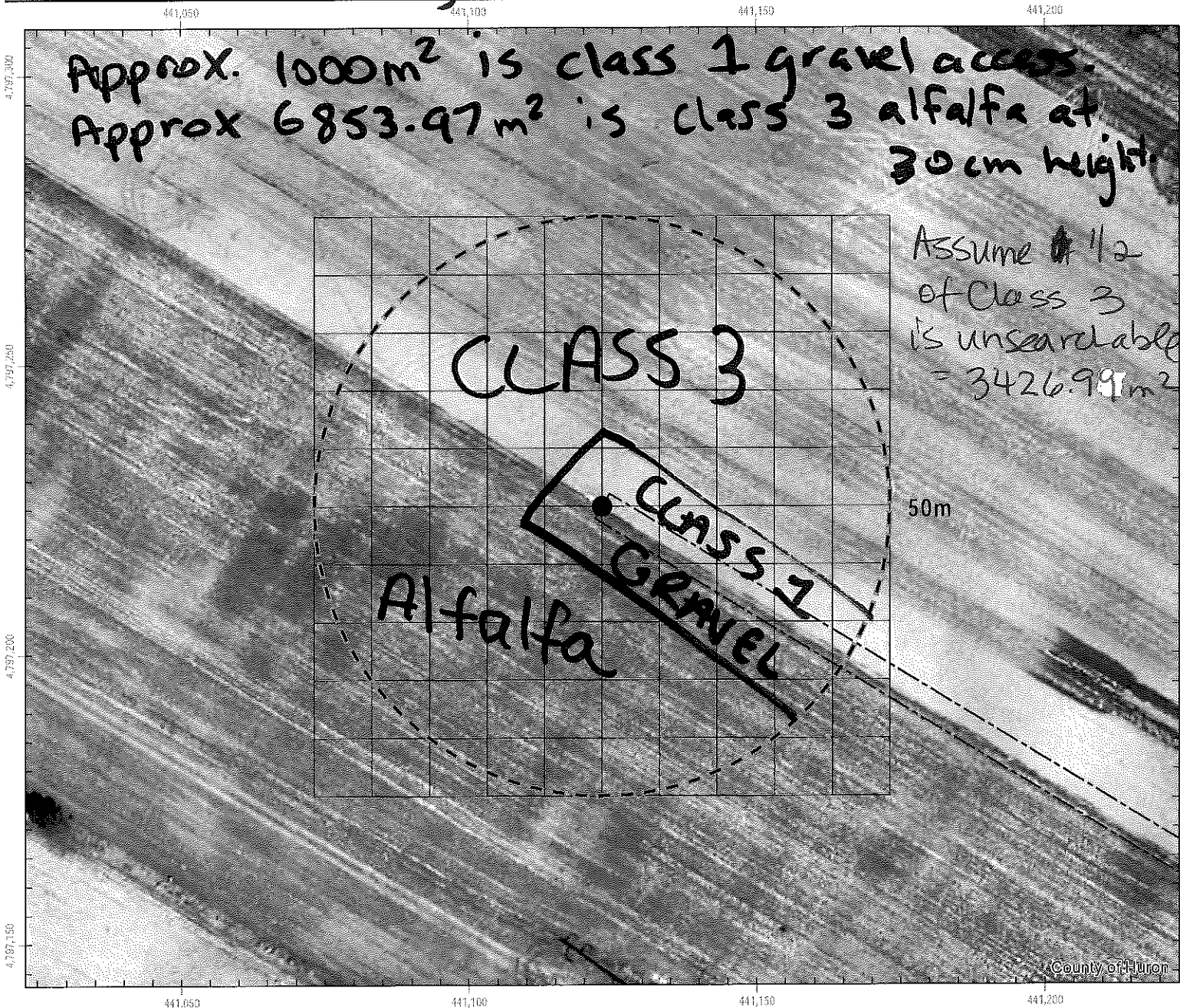
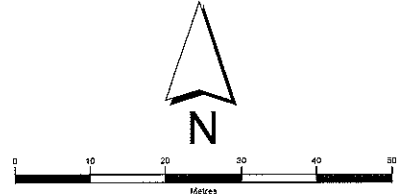
SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-44
 Survey Date: Oct 30/19
 Actual Searched Area (m²): 4426.99 m²
(subtract from total search area - 7853.97m²)
 Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

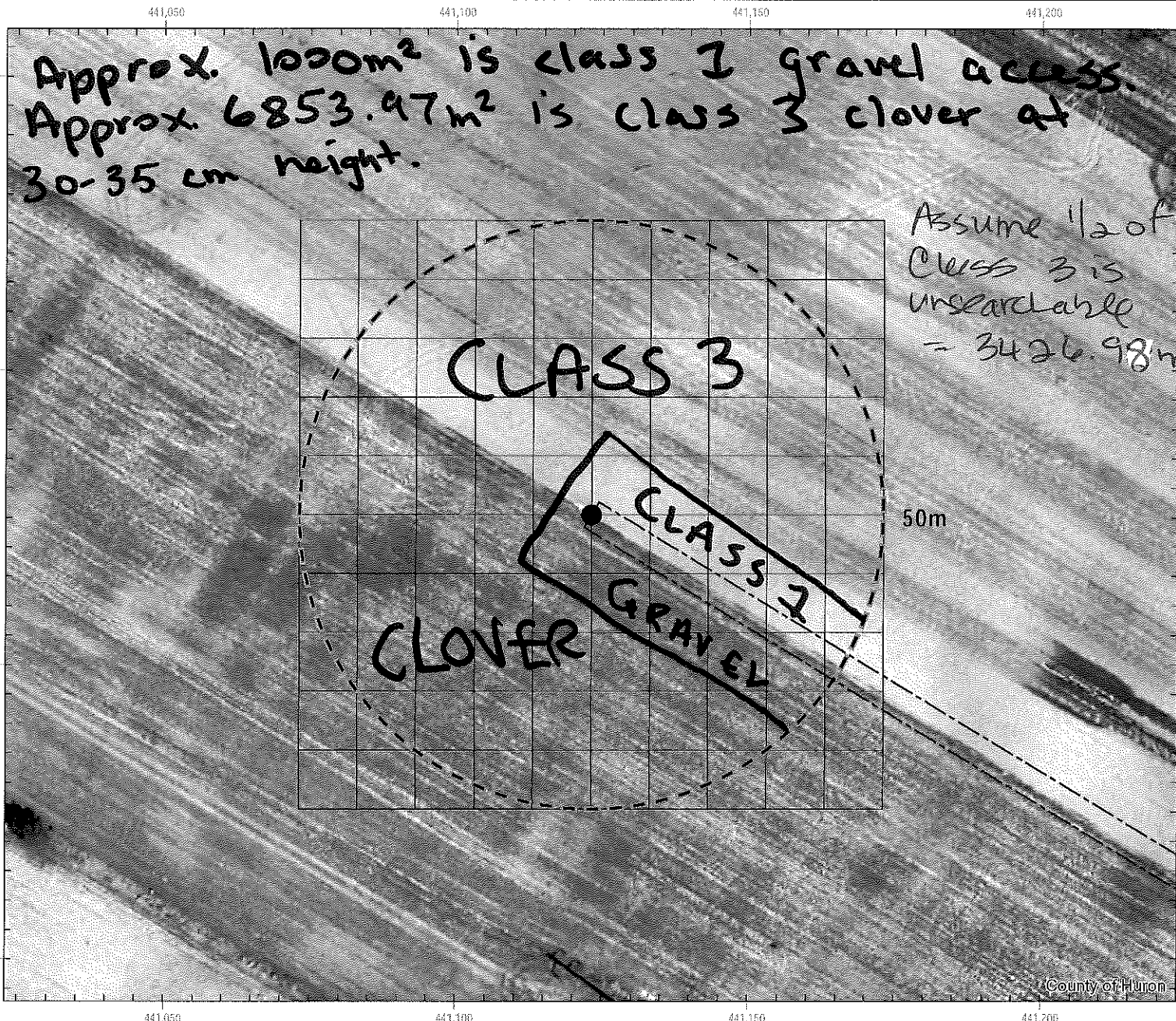
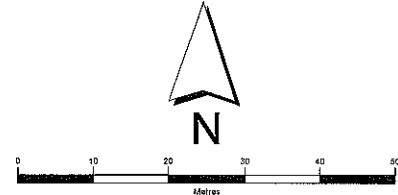
Site Number: T-44

Survey Date: Nov 27/19

Actual Searched Area (m²): 4426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-45

Survey Date: ~~April 2019~~ April 30

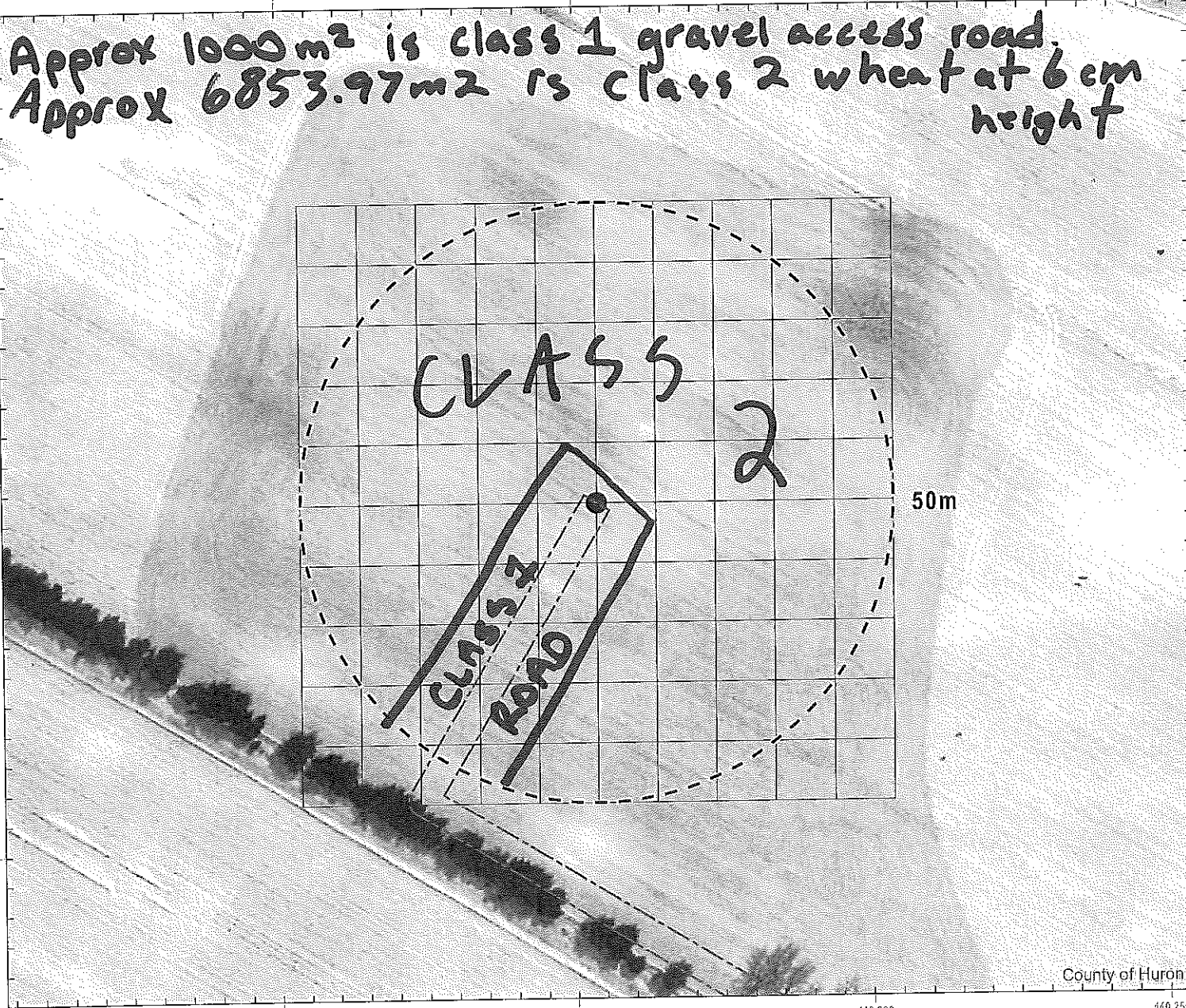
Actual Searched Area (m²): No search done, for pics only 7853.97 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



440,100 440,150 440,200 440,250



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

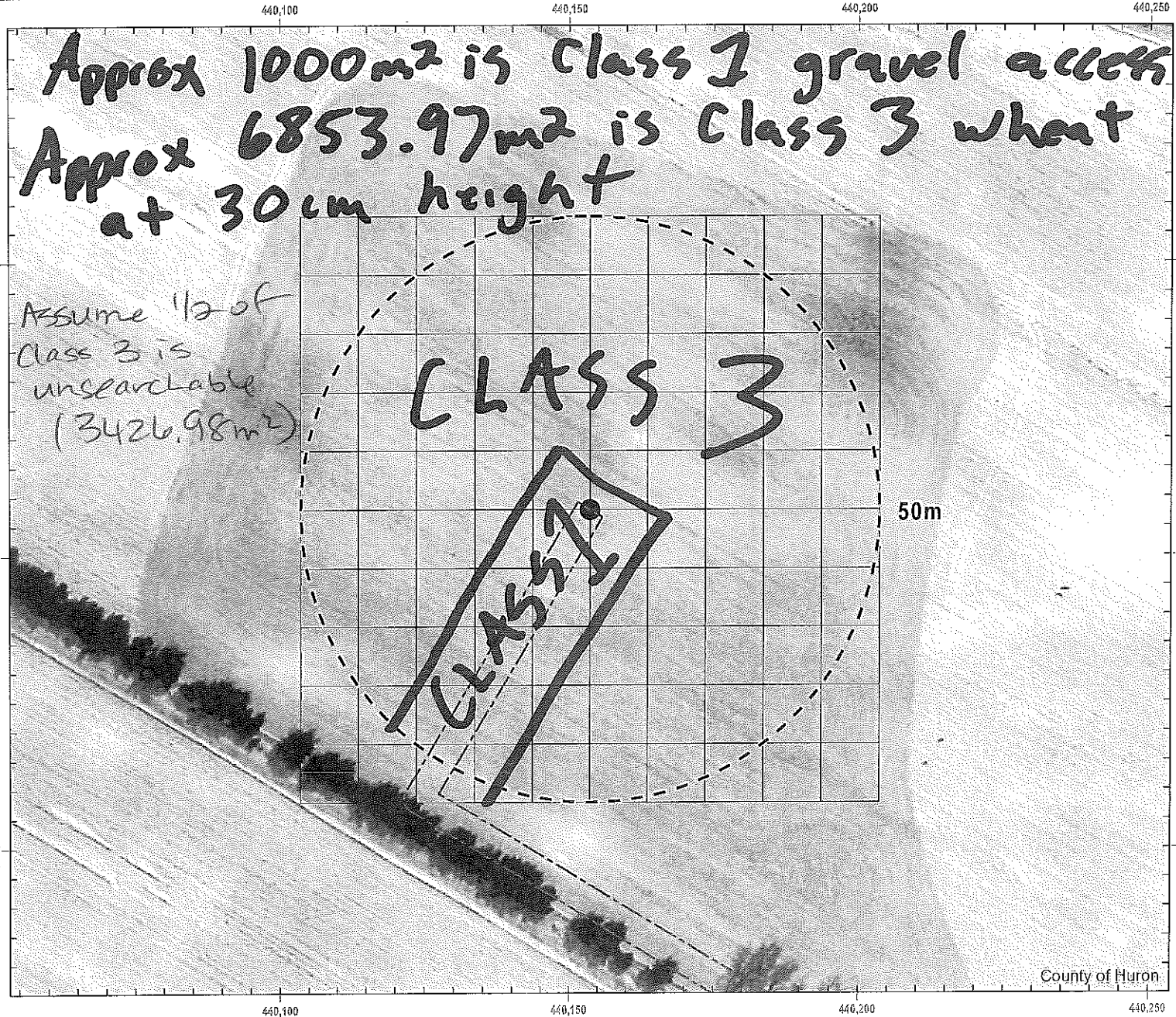
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-45

Survey Date: May 29 / 19

Actual Searched Area (m²): 4426.99 m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

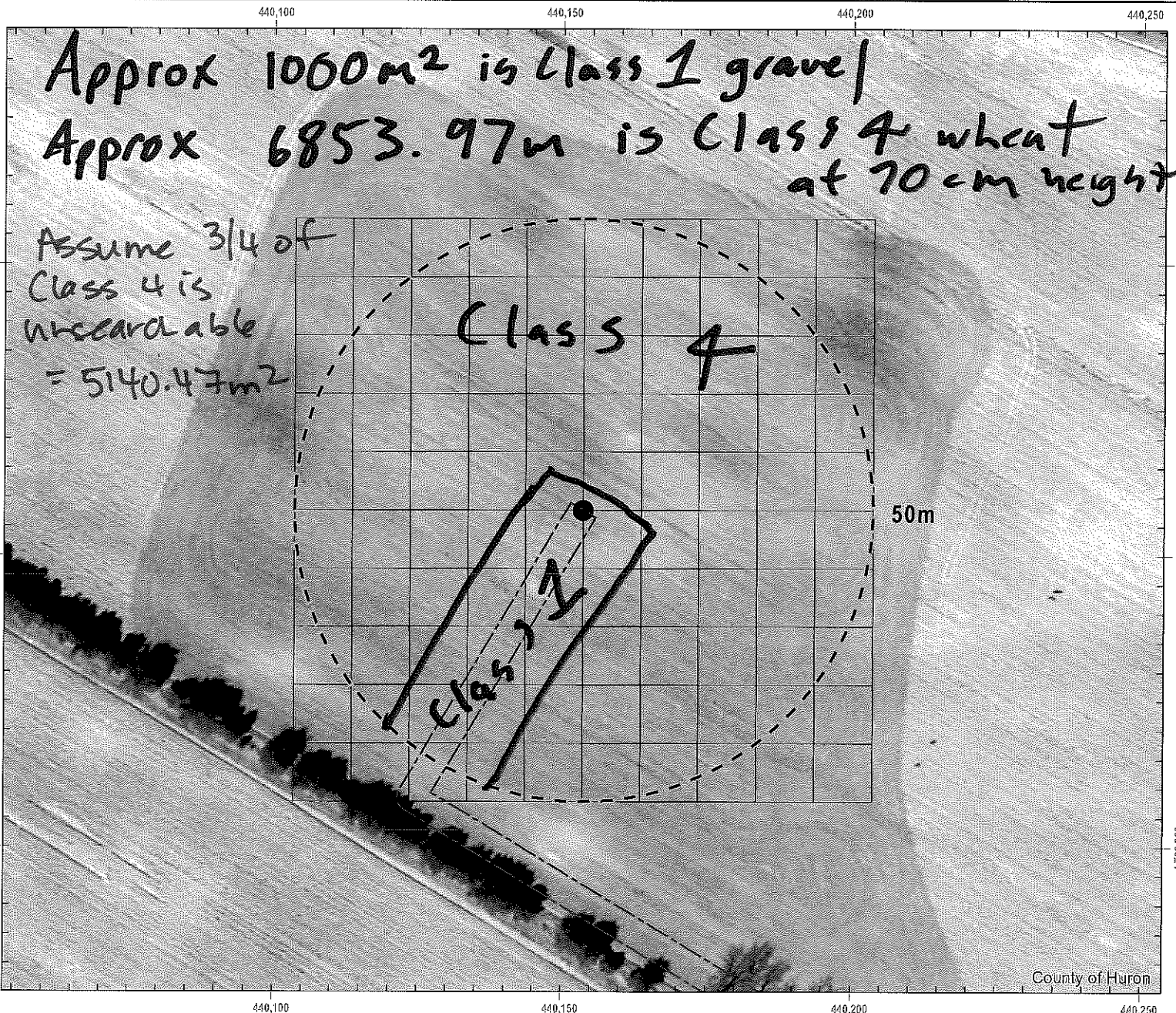
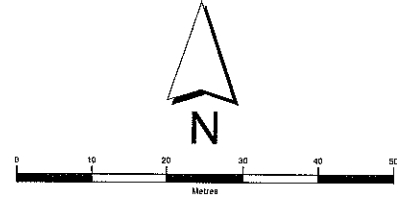
SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-45
 Survey Date: July 24 / 19
 Actual Searched Area (m²): 2713.50 m²
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

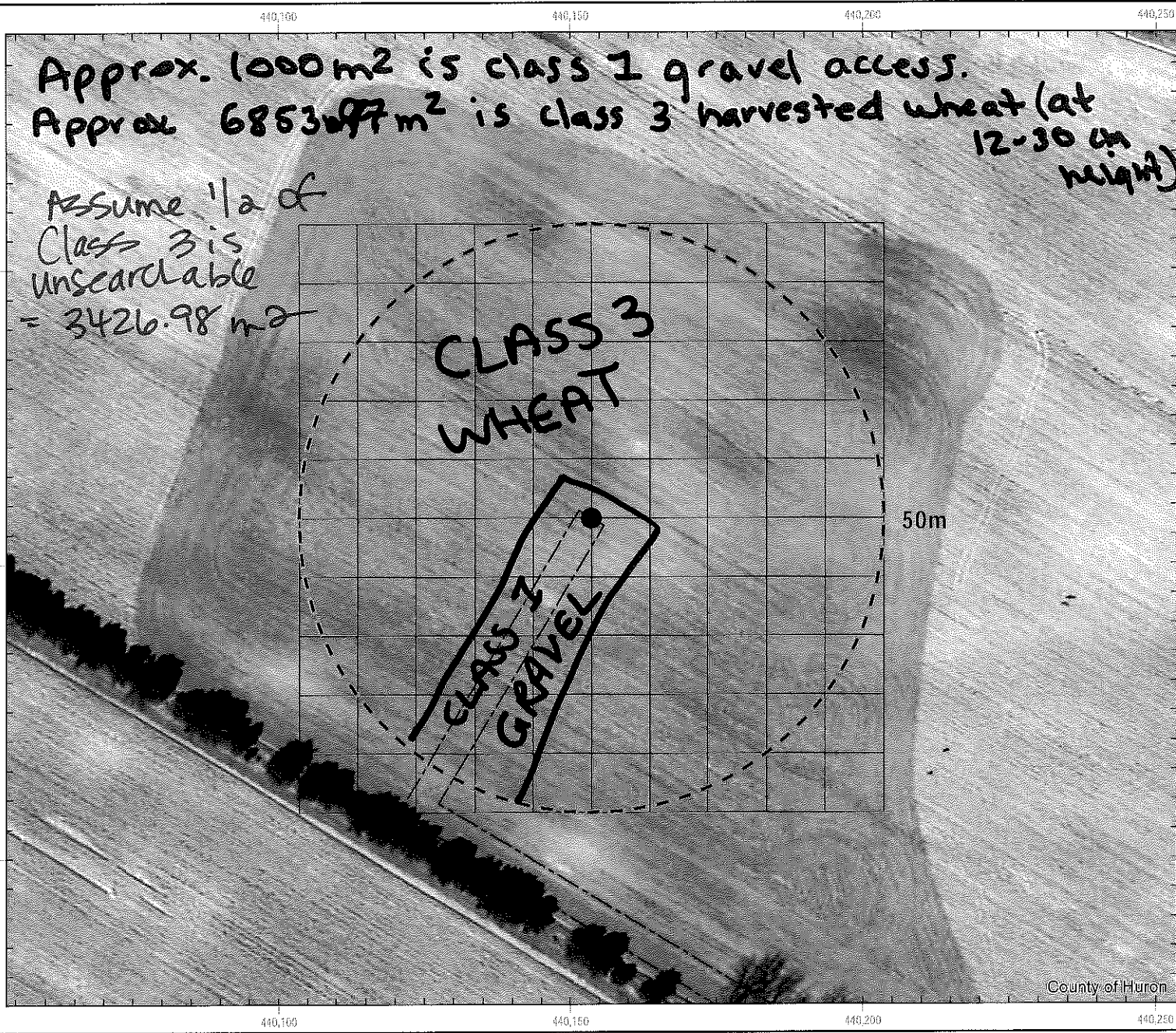
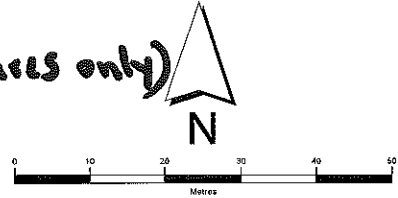
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-45

Survey Date: Aug 20/19 (Did not search, pictures only)

Actual Searched Area (m²): 4426.99m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

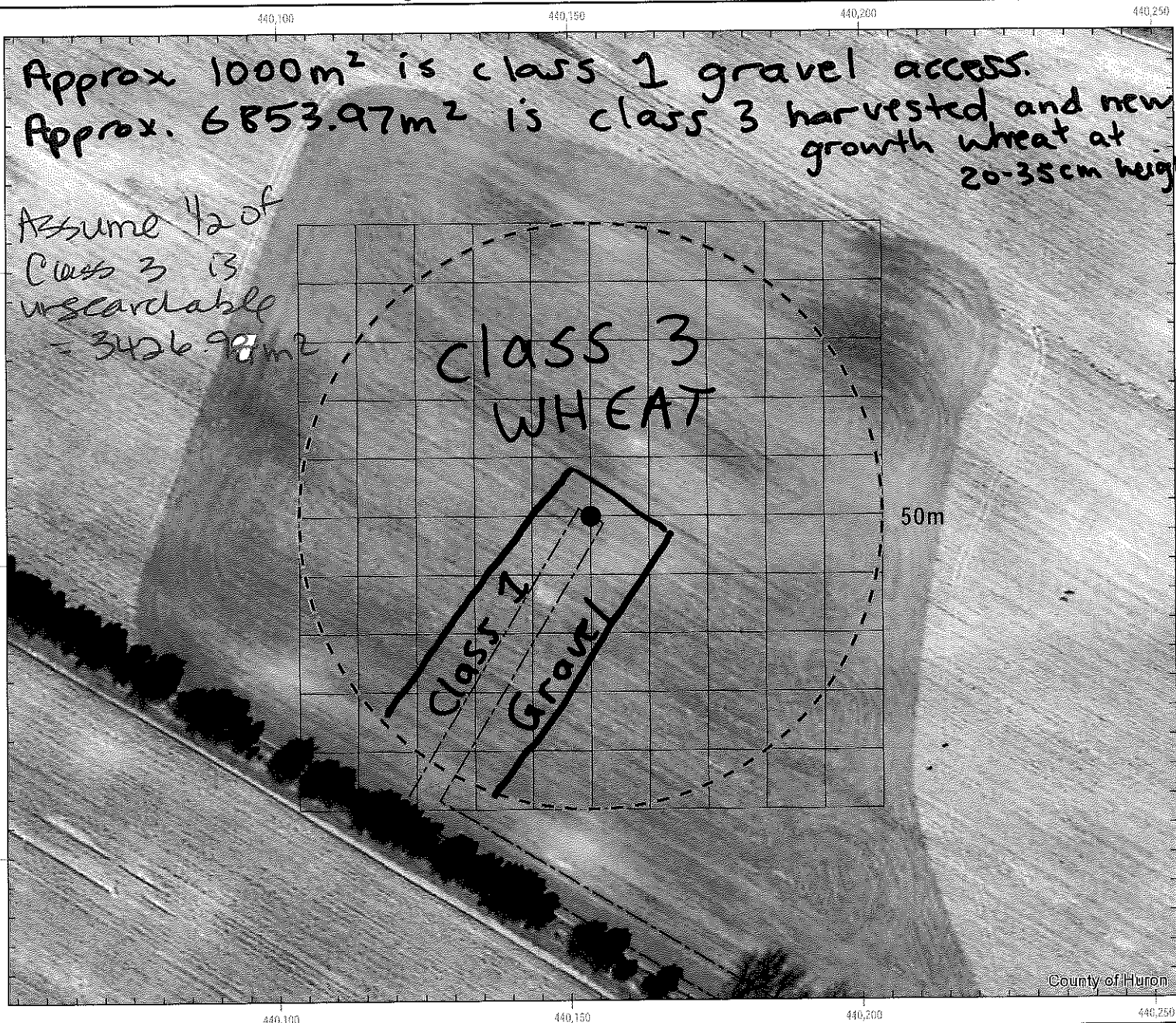
Site Number: T-45

Survey Date: Sept. 25/19

Actual Searched Area (m²): 4426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

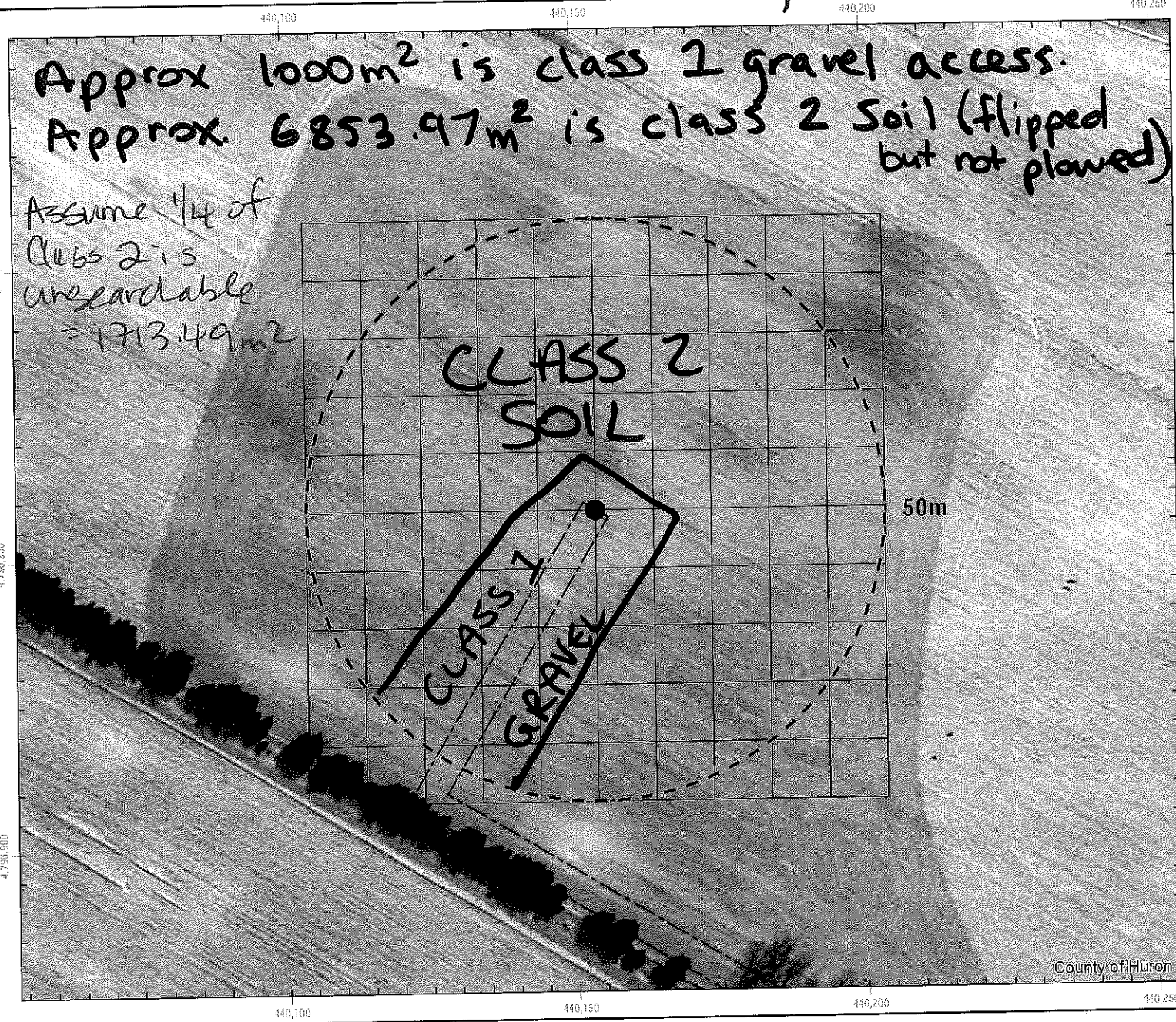
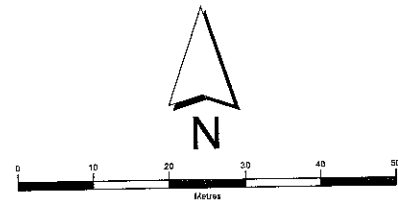
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-45

Survey Date: Oct 30/19

Actual Searched Area (m²): 6140.48 m²
(subtract from total search area - 7853.97m²)

Observers: Sarah Jackson, Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

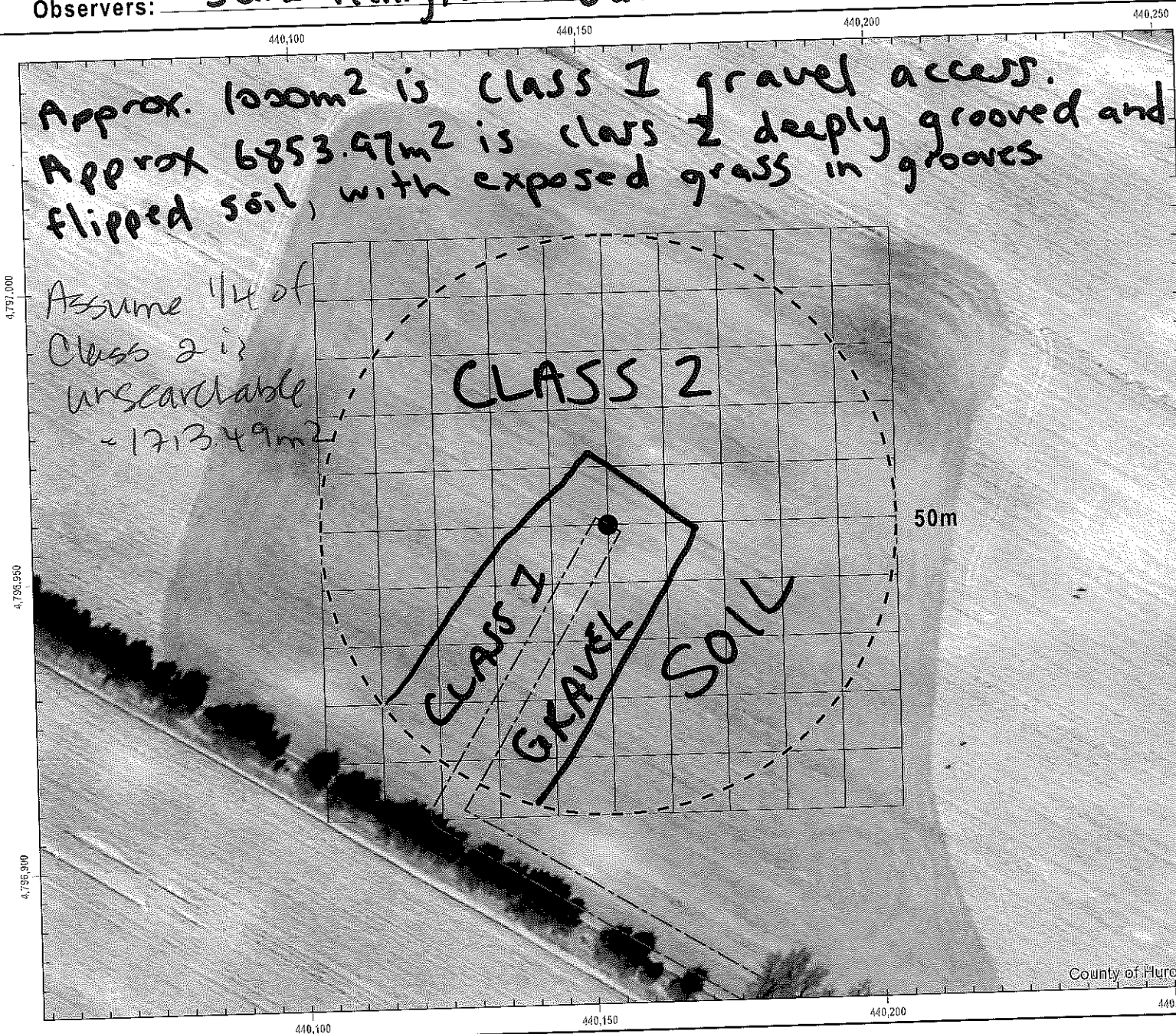
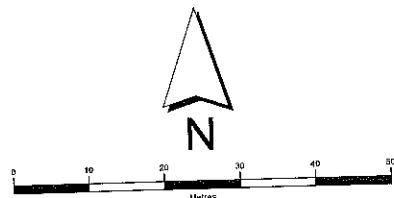
Site Number: T-45

Survey Date: Nov 27/19

Actual Searched Area (m²): 6140.48m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarel Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

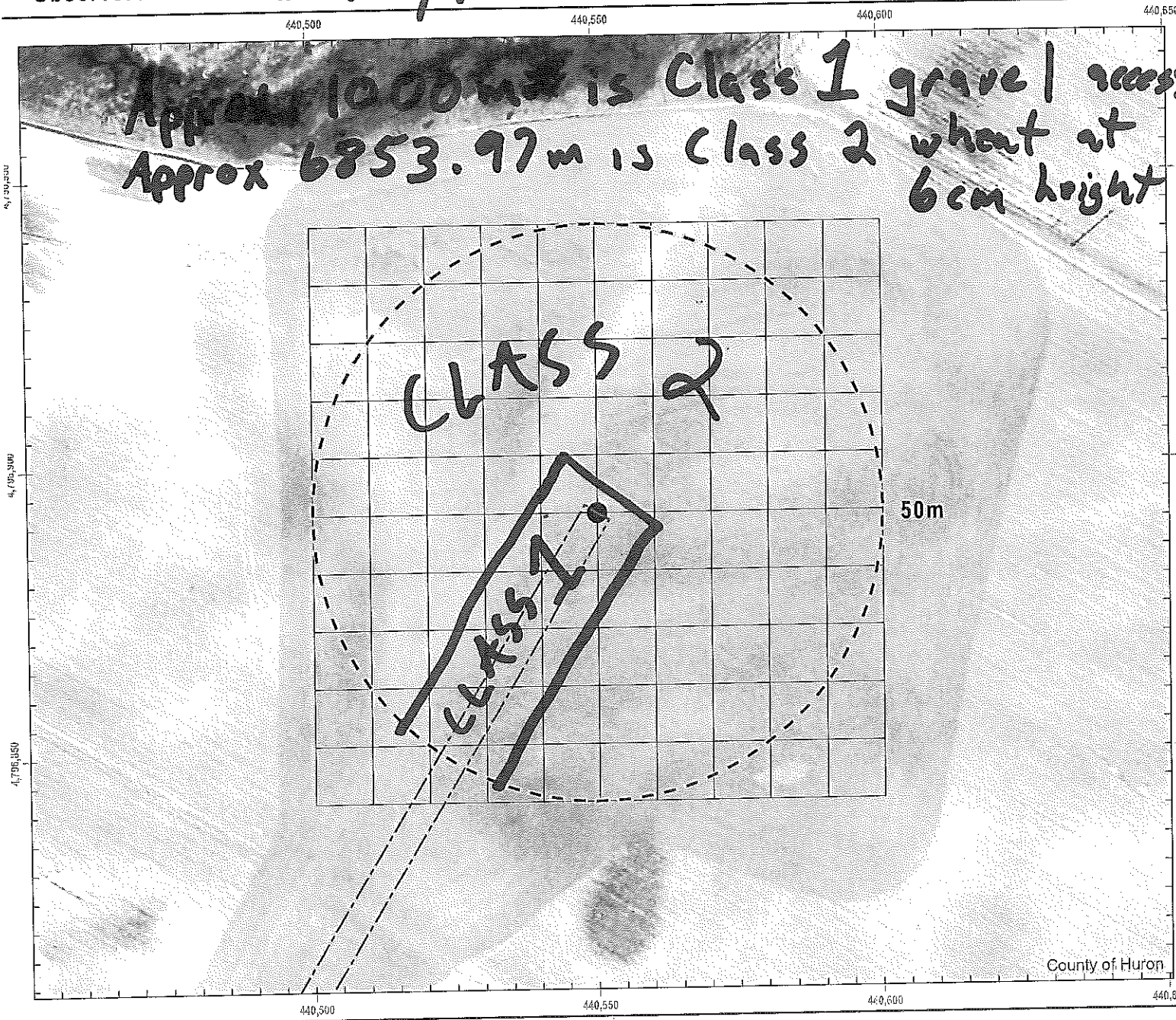
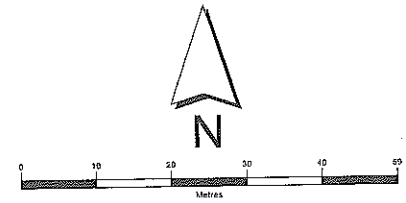
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-46

Survey Date: May 2 / 19

Actual Searched Area (m²): 6853.97m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

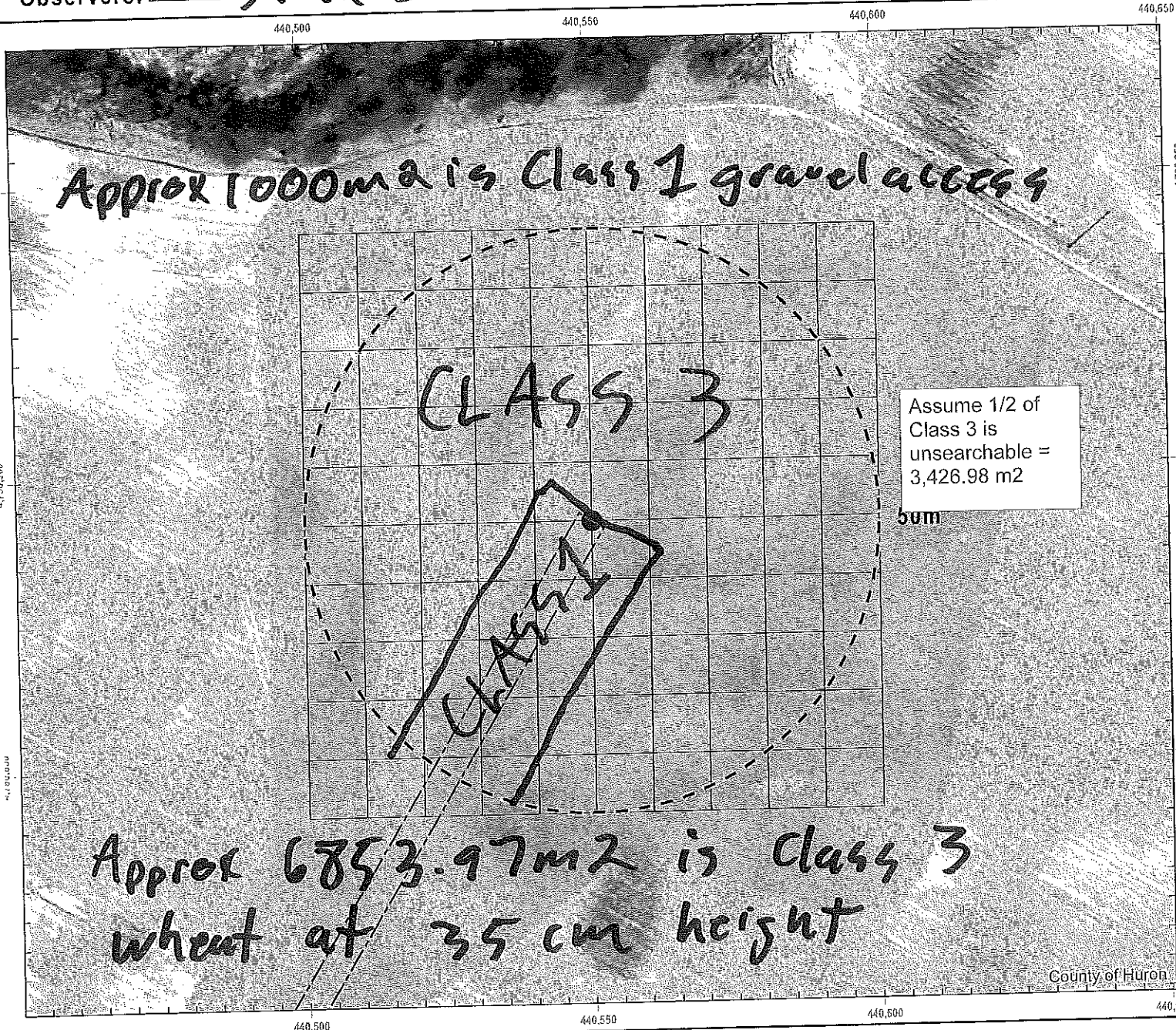
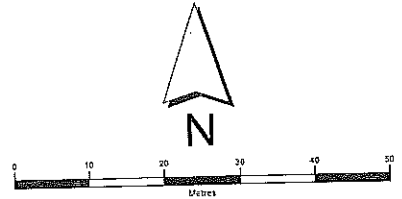
WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm
 Site Number: T-46
 Survey Date: May 30 / 19
 Actual Searched Area (m²): _____
(subtract from total search area - 7853.97m²)
 Observers: Sarah Jackson

4,426.99 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

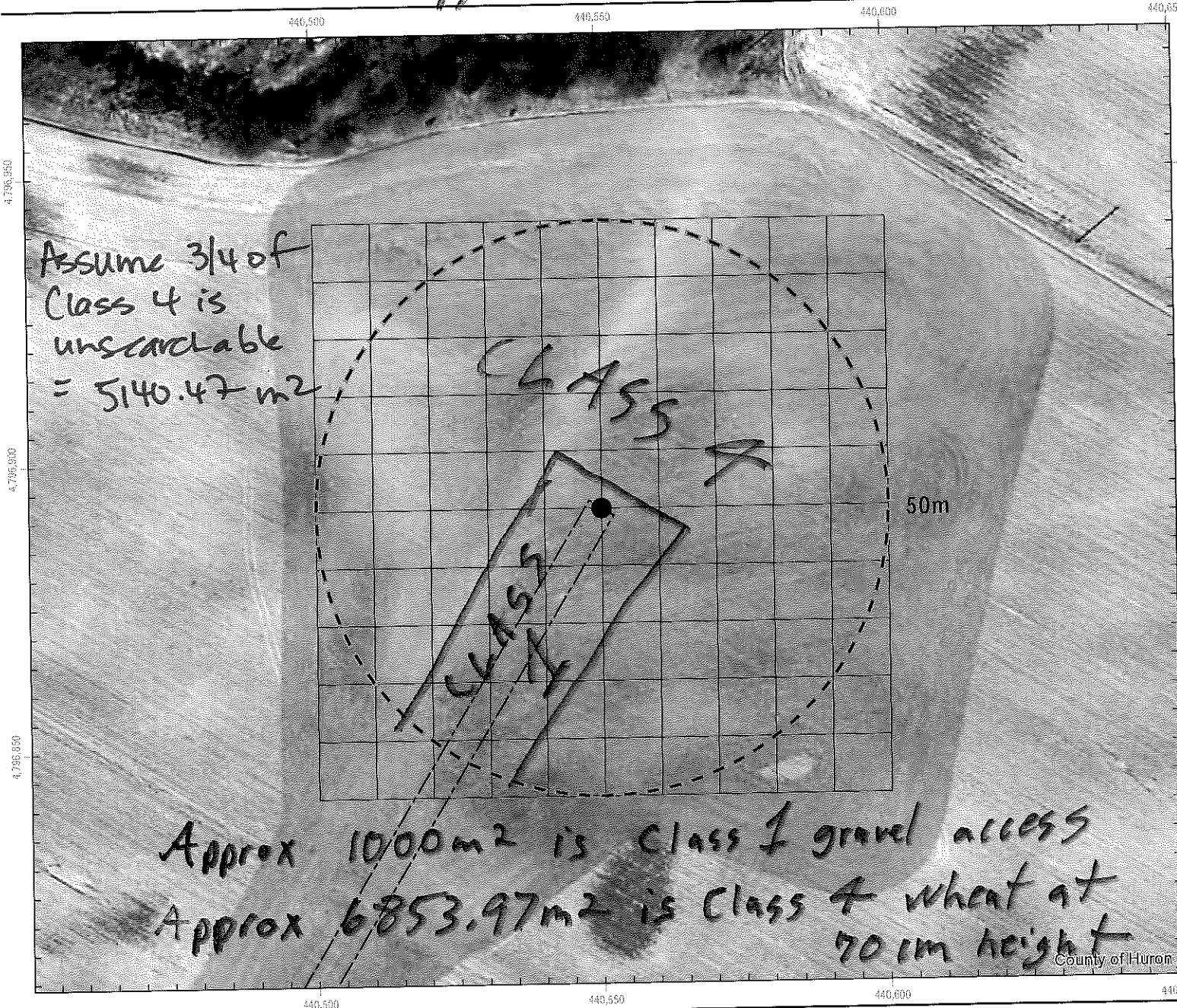
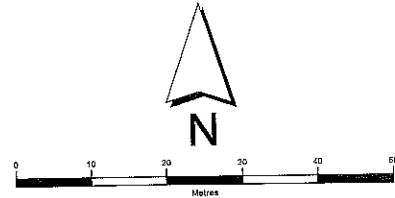
Site Number: T-46

Survey Date: Aug 11/19

Actual Searched Area (m²): 2713.50 m²

(subtract from total search area - 7853.97m²)

Observers: Sarah Henry, Garsh Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-46

Survey Date: Aug 5 / 19

Actual Searched Area (m²): 4426.99m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

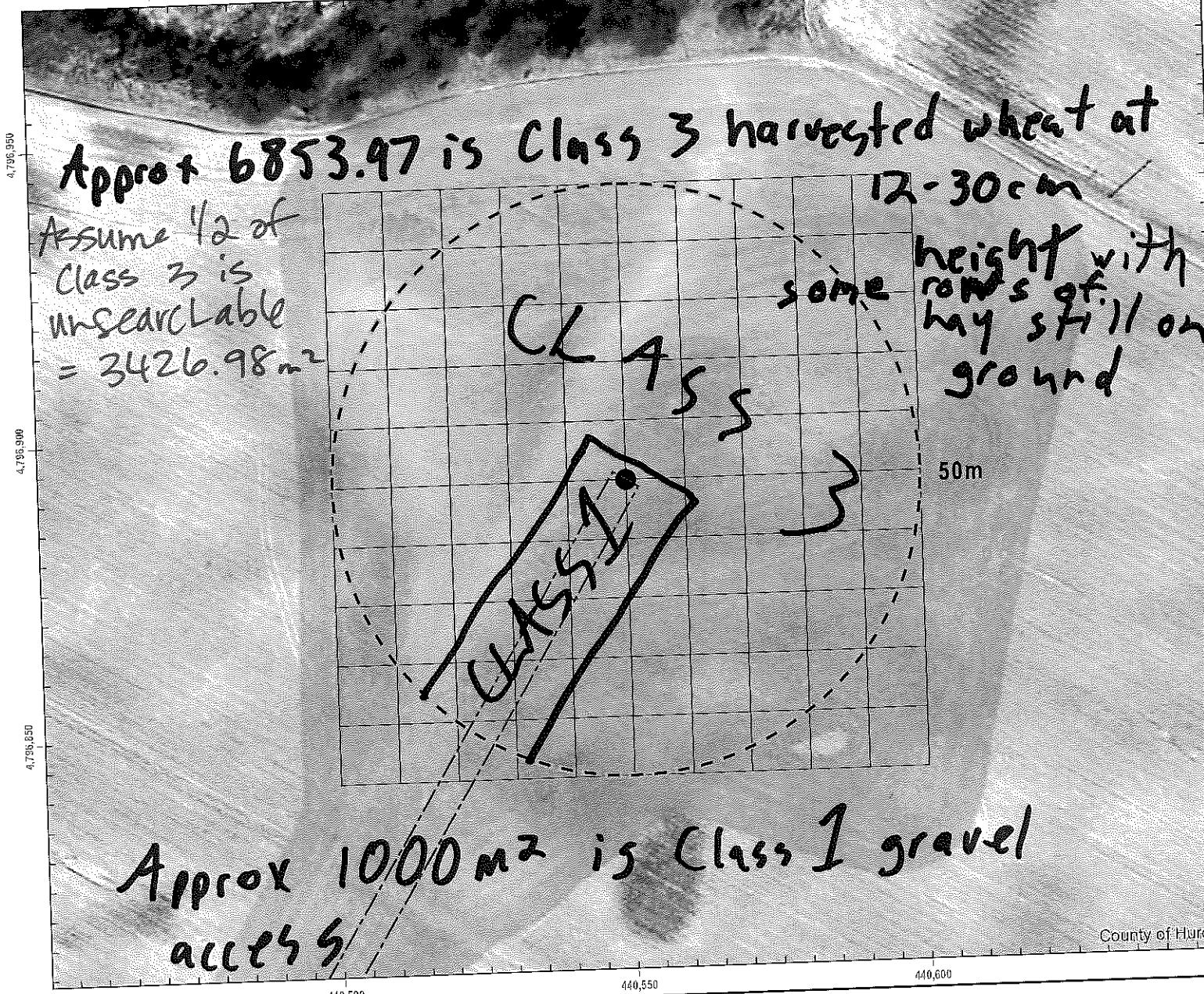


440,500

440,550

440,600

440,650



County of Huron

440,500

440,550

440,600

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

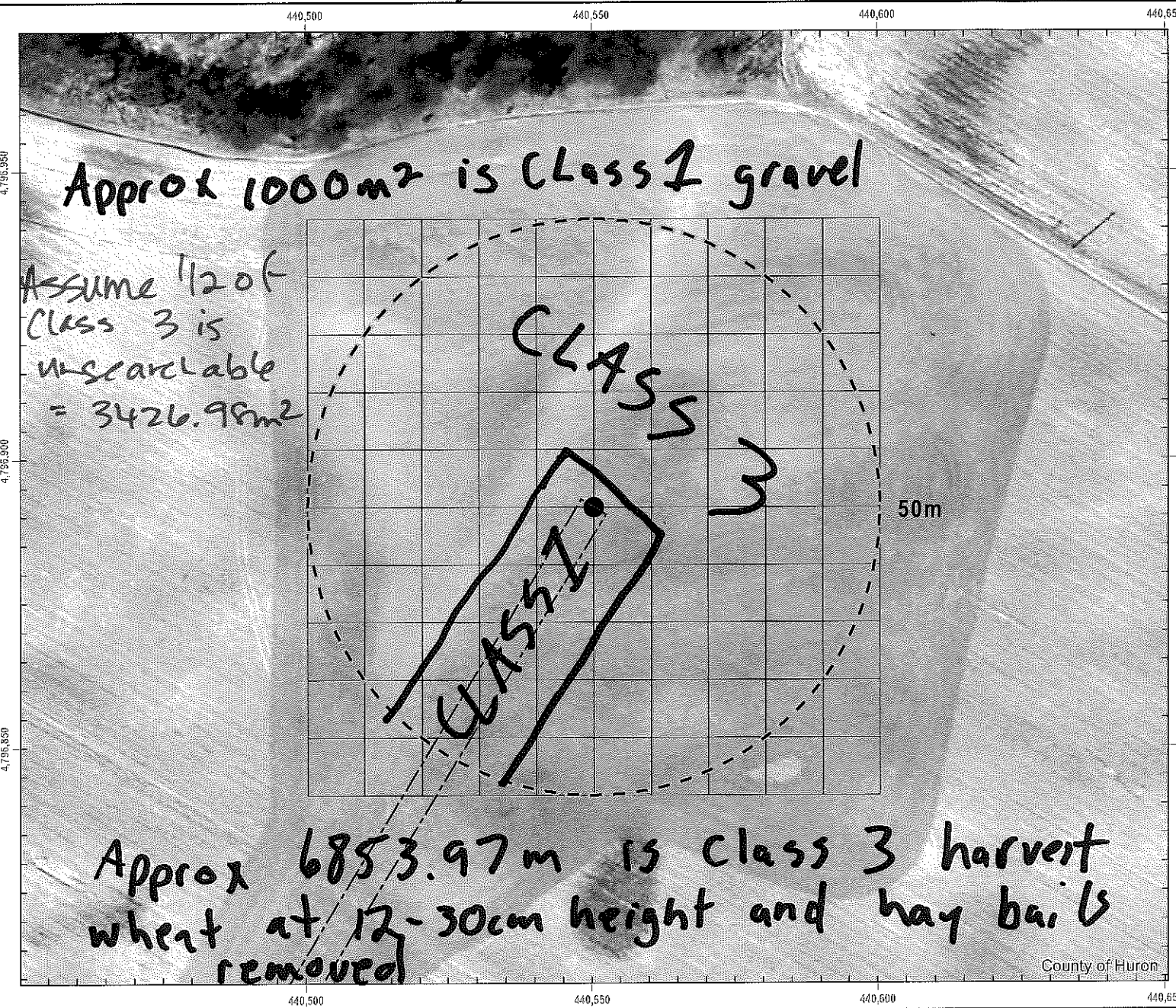
Site Number: T-46

Survey Date: Aug 19/19

Actual Searched Area (m²): 4426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Jara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

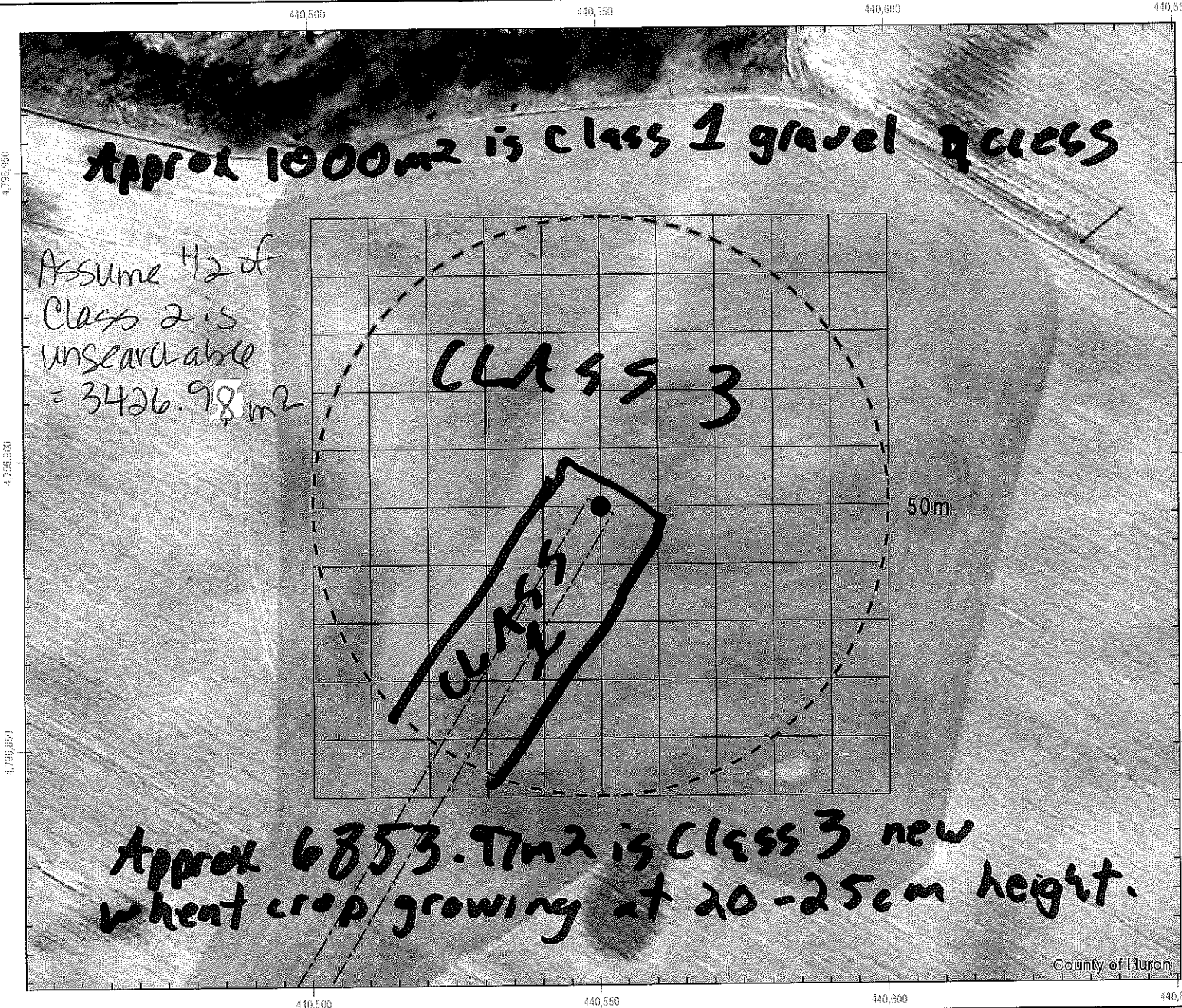
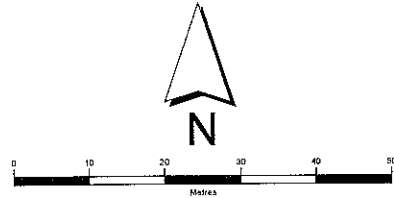
Site Number: T-46

Survey Date: Sept 23/19

Actual Searched Area (m²): 4426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

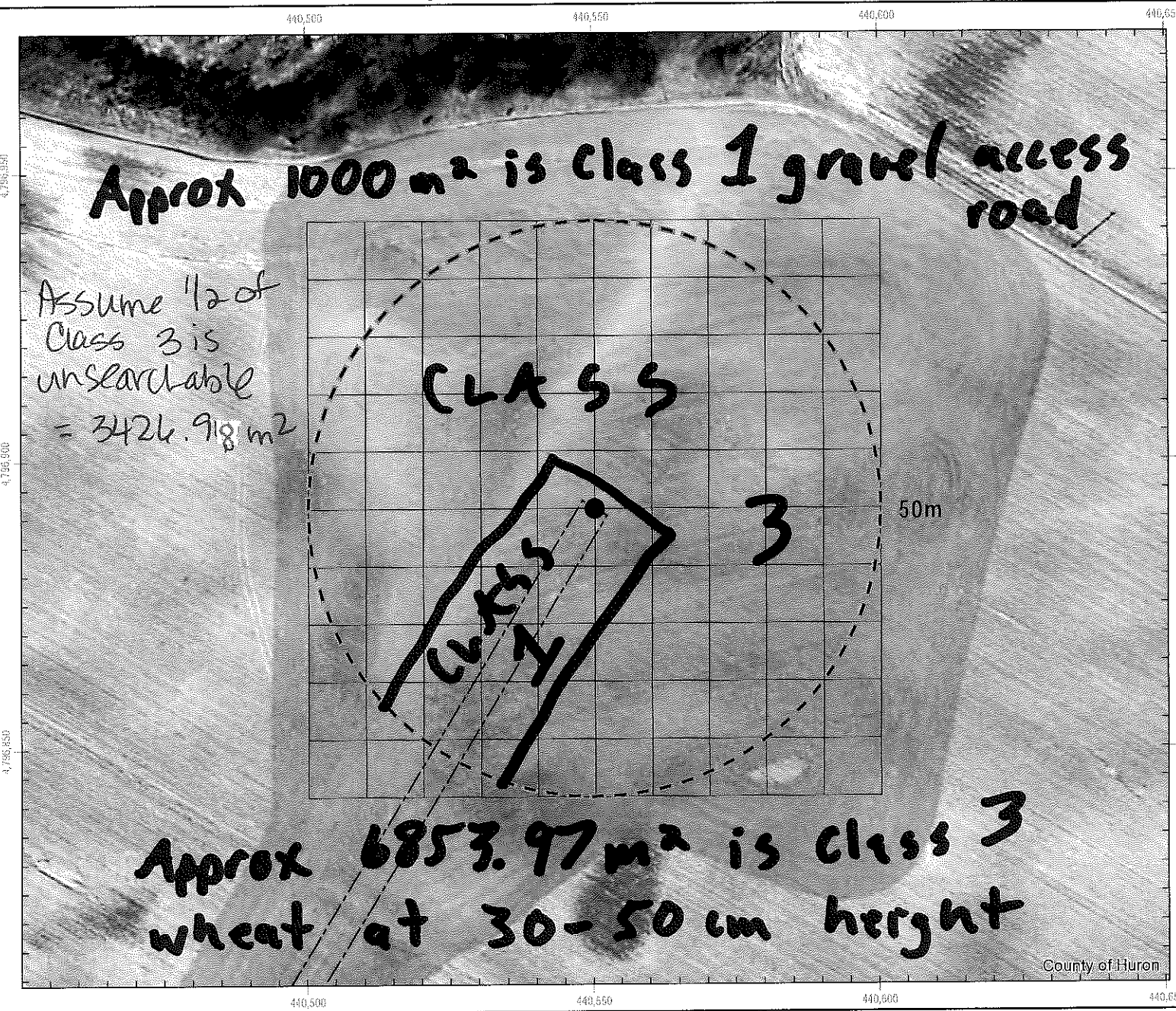
Site Number: T-46

Survey Date: Oct 27 / 19

Actual Searched Area (m²): 4426.99 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

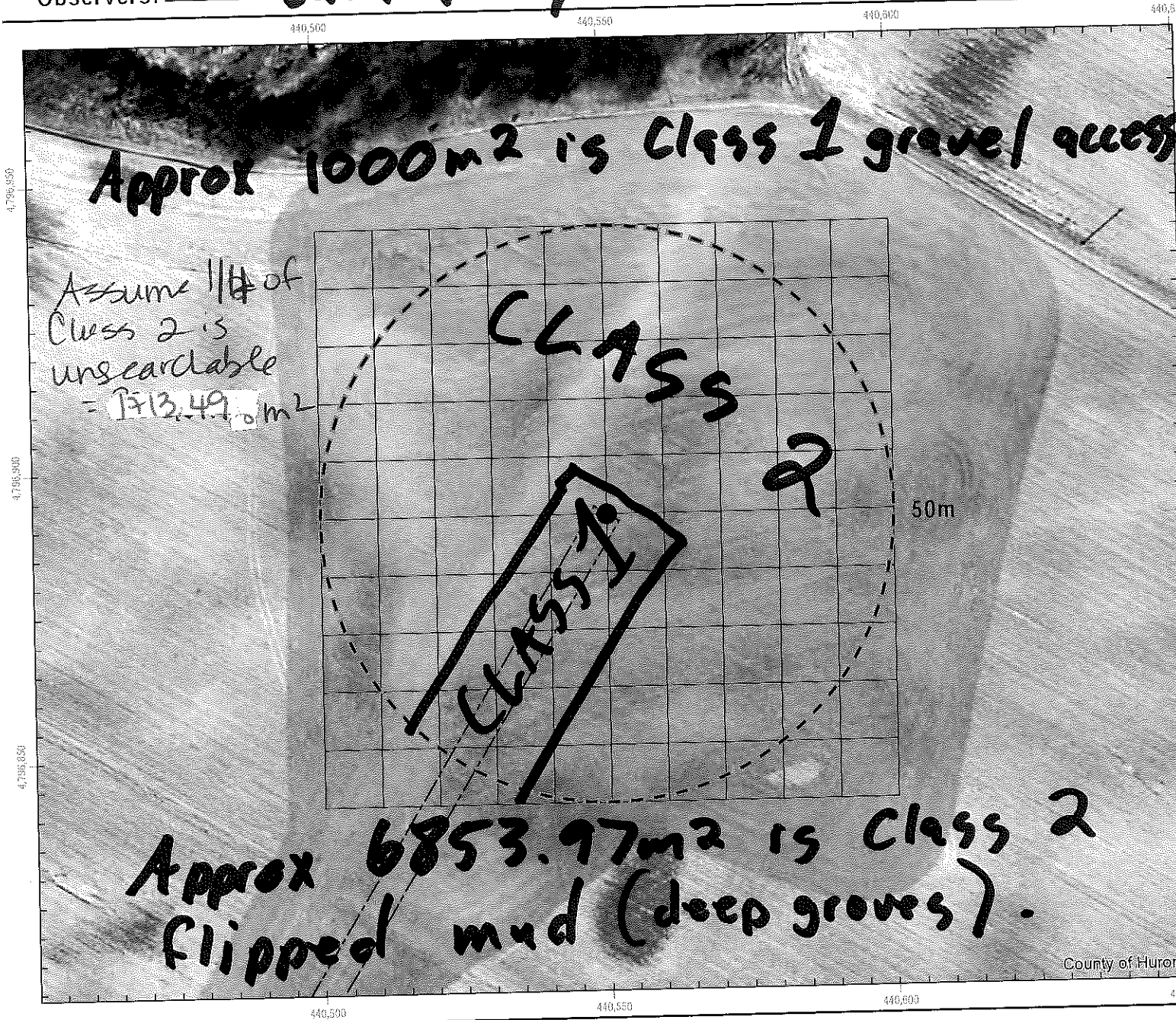
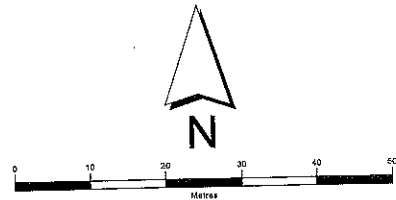
Site Number: T-46

Survey Date: Nov 13/19

Actual Searched Area (m²): 6,404.81 m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

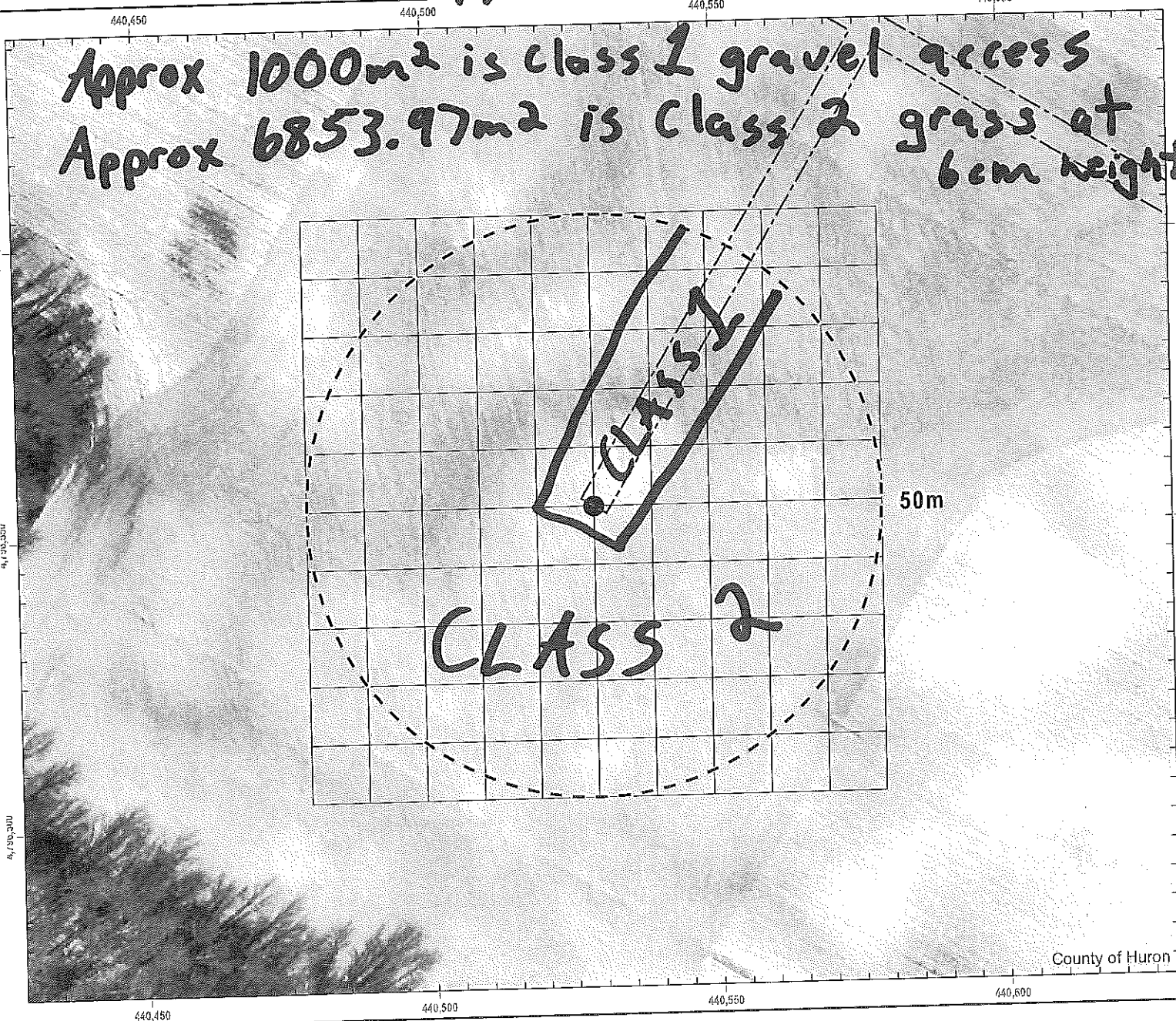
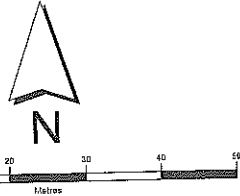
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-48

Survey Date: May 2/19

Actual Searched Area (m²): 7853.97m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-48

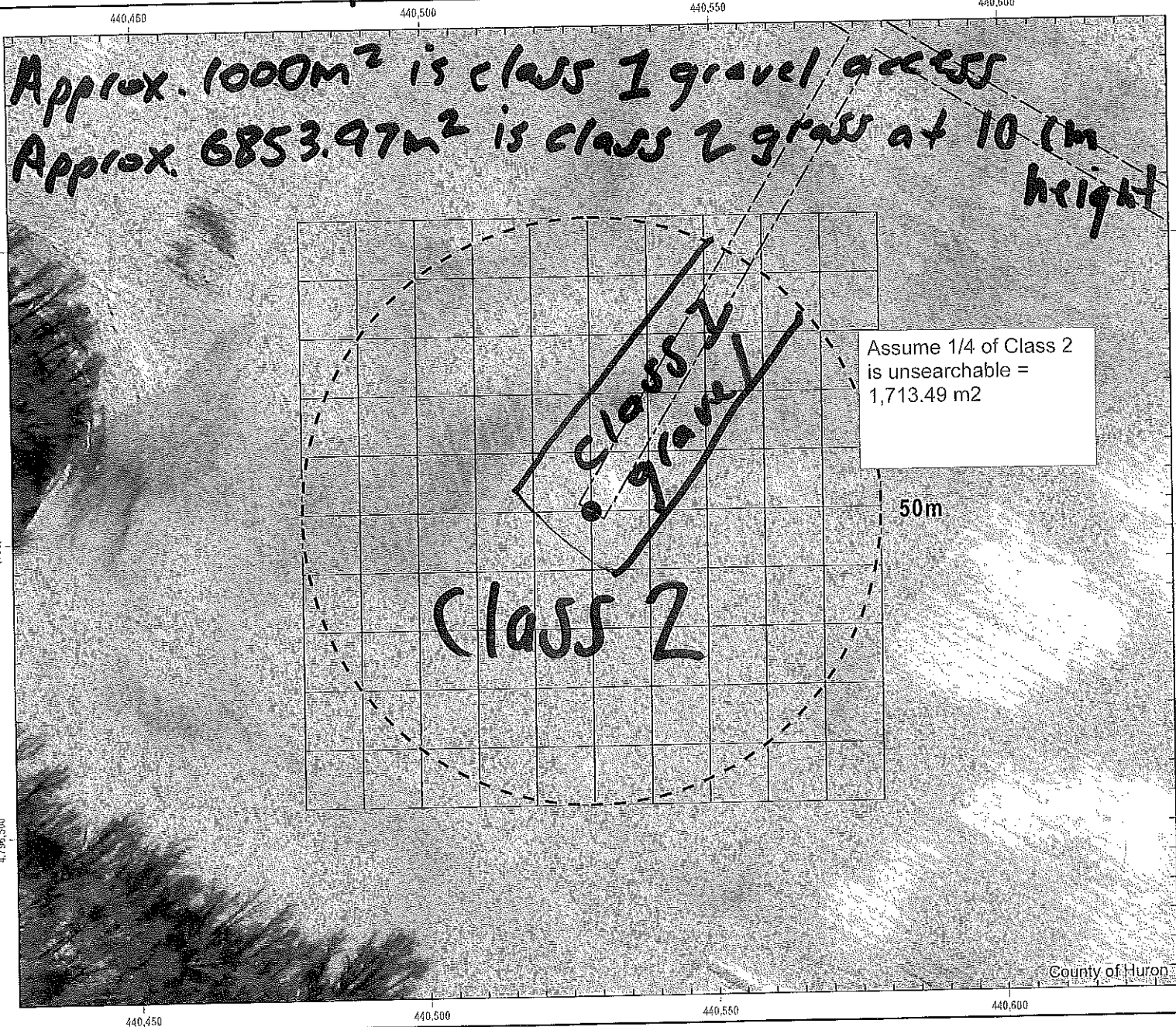
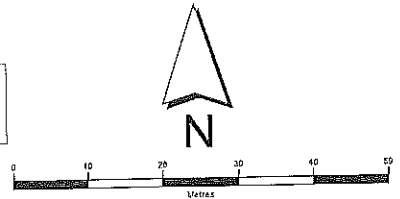
Survey Date: June 6/19

Actual Searched Area (m²): _____

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson

6,140.48 m²



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

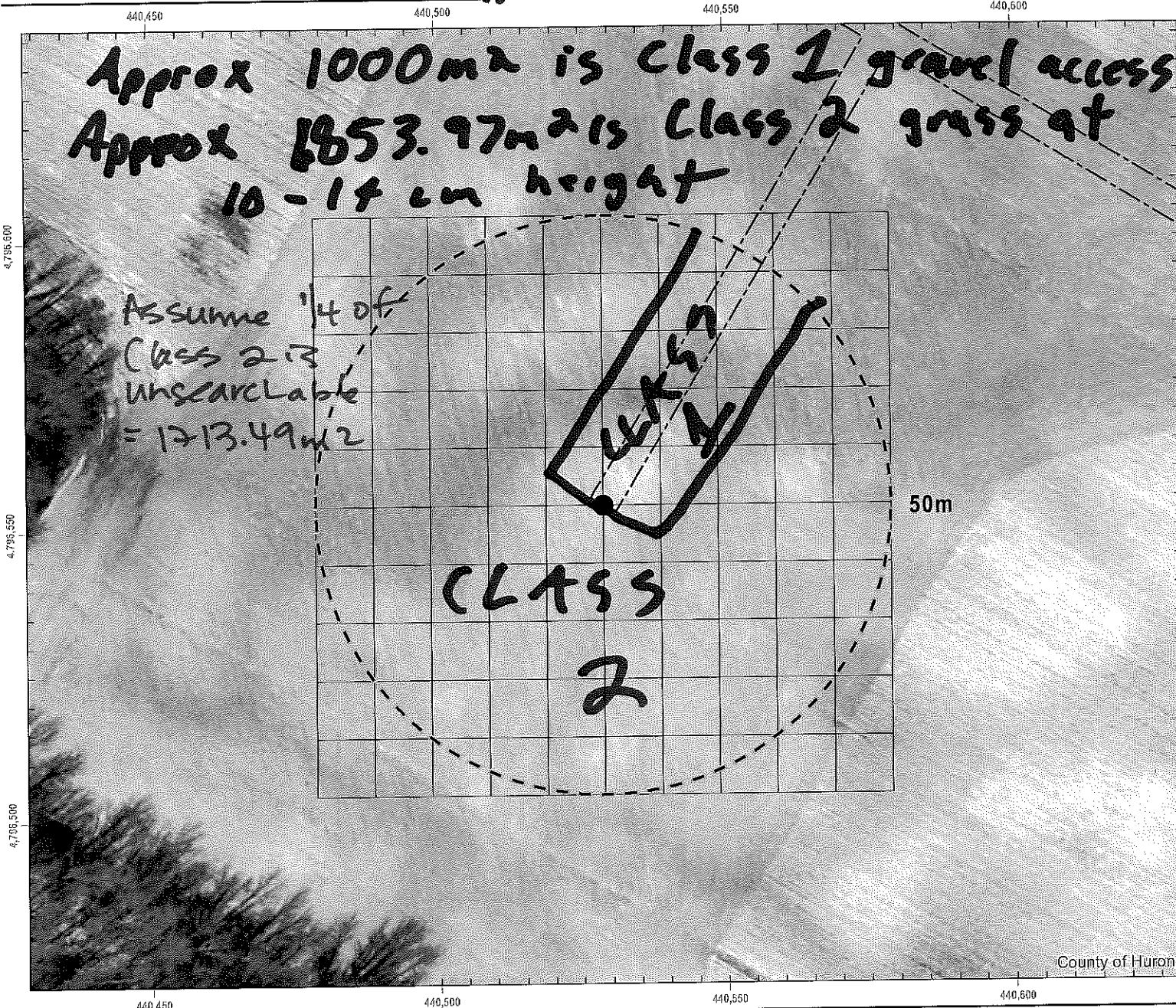
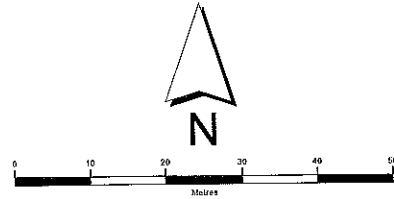
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-48

Survey Date: July 29 / 19

Actual Searched Area (m²): 6140.48 m²
(subtract from total search area - 7853.97m²)

Observers: Sam Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



County of Huron

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

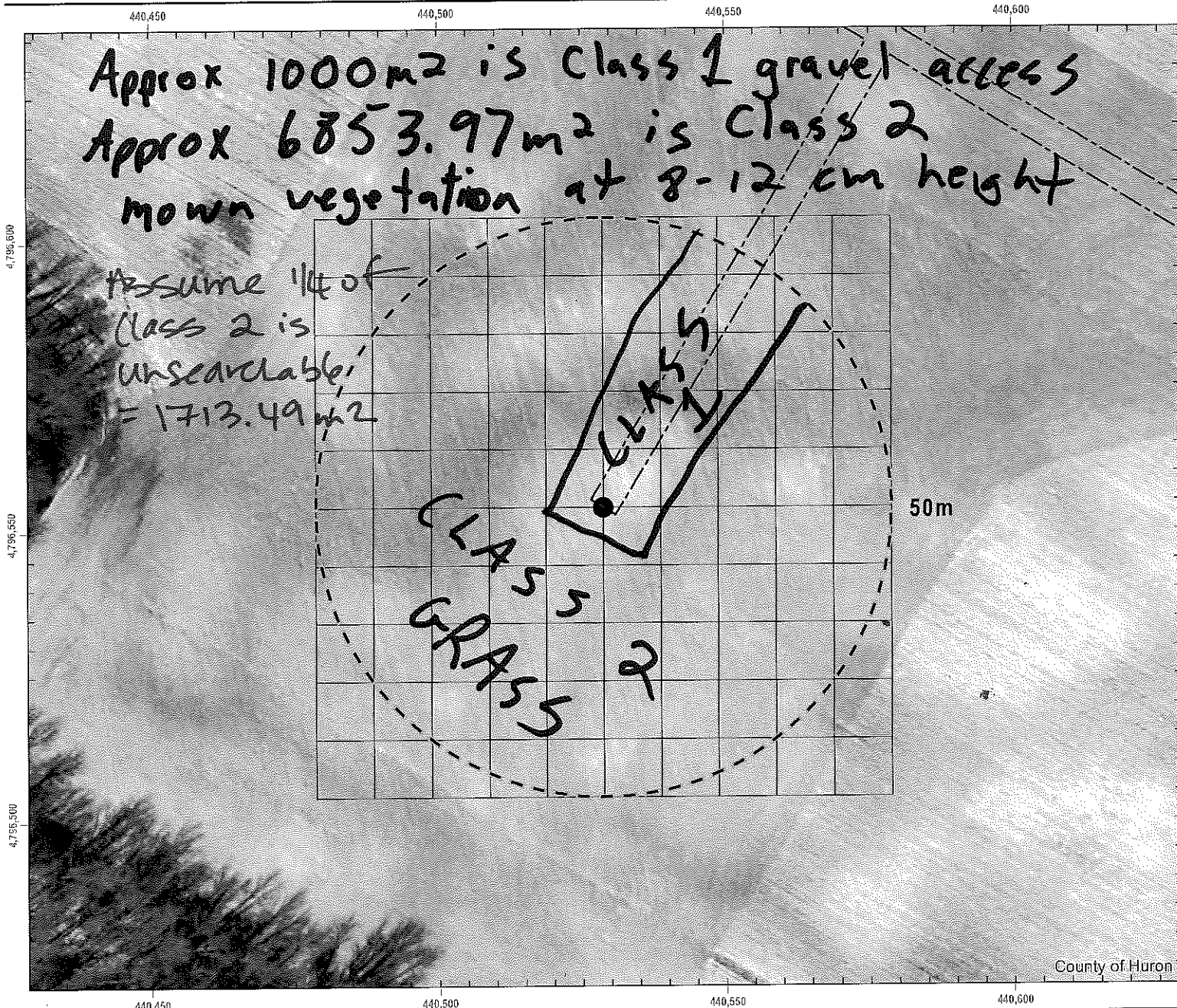
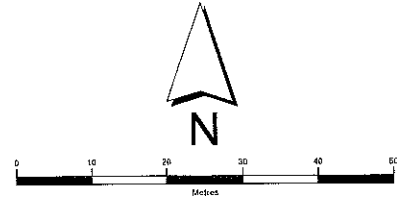
Site Number: T-48

Survey Date: Aug 18/19

Actual Searched Area (m²): 6140.48m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

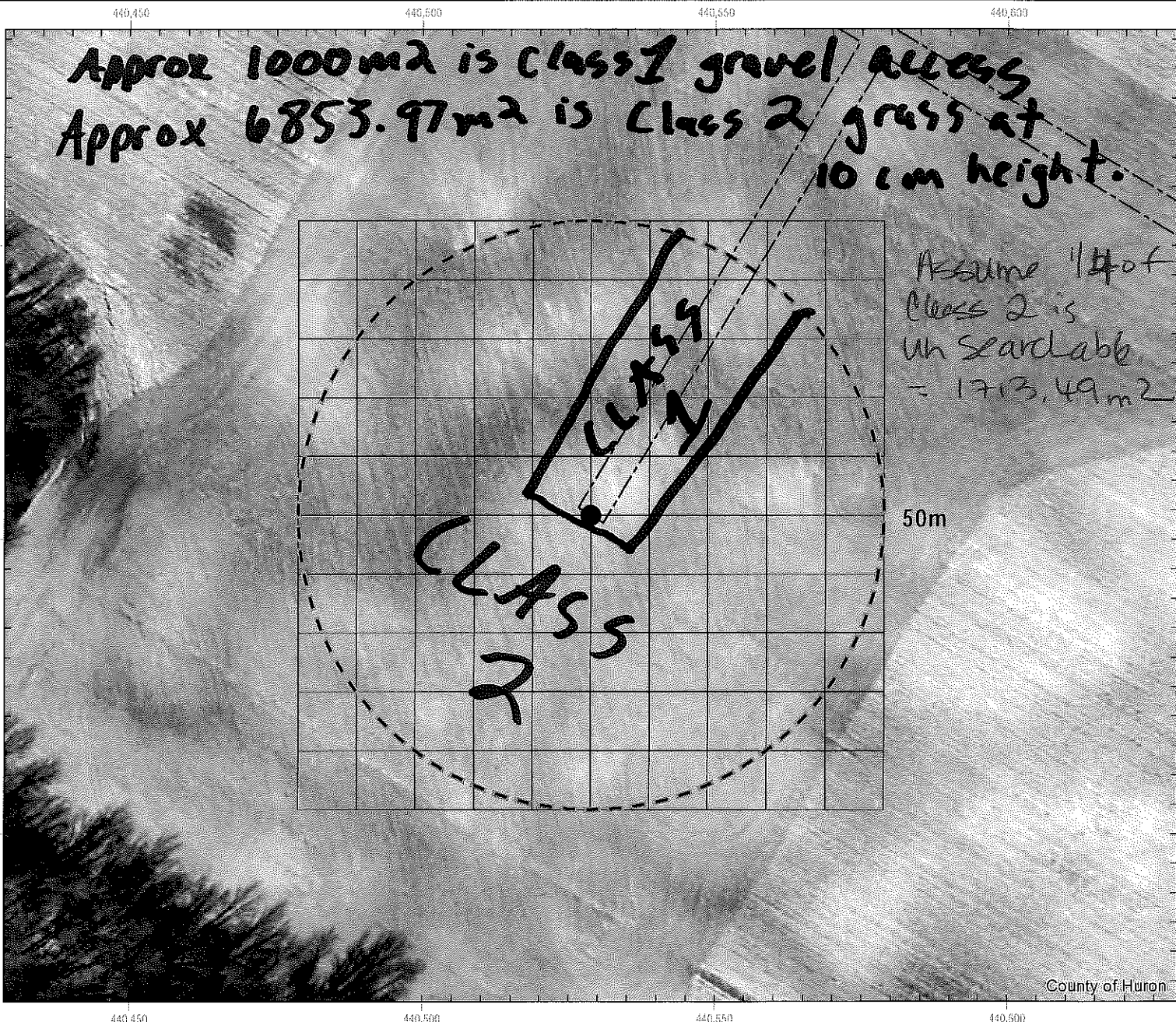
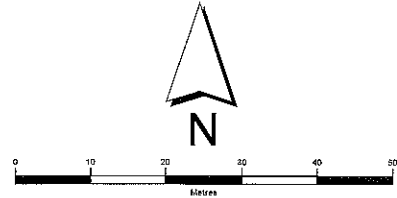
Site Number: T-48

Survey Date: Sept 19/19

Actual Searched Area (m²): 6140.48 m²

(subtract from total search area - 7853.97 m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.

WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

Project Name: PIA019991.0008 Grand Bend Wind Farm

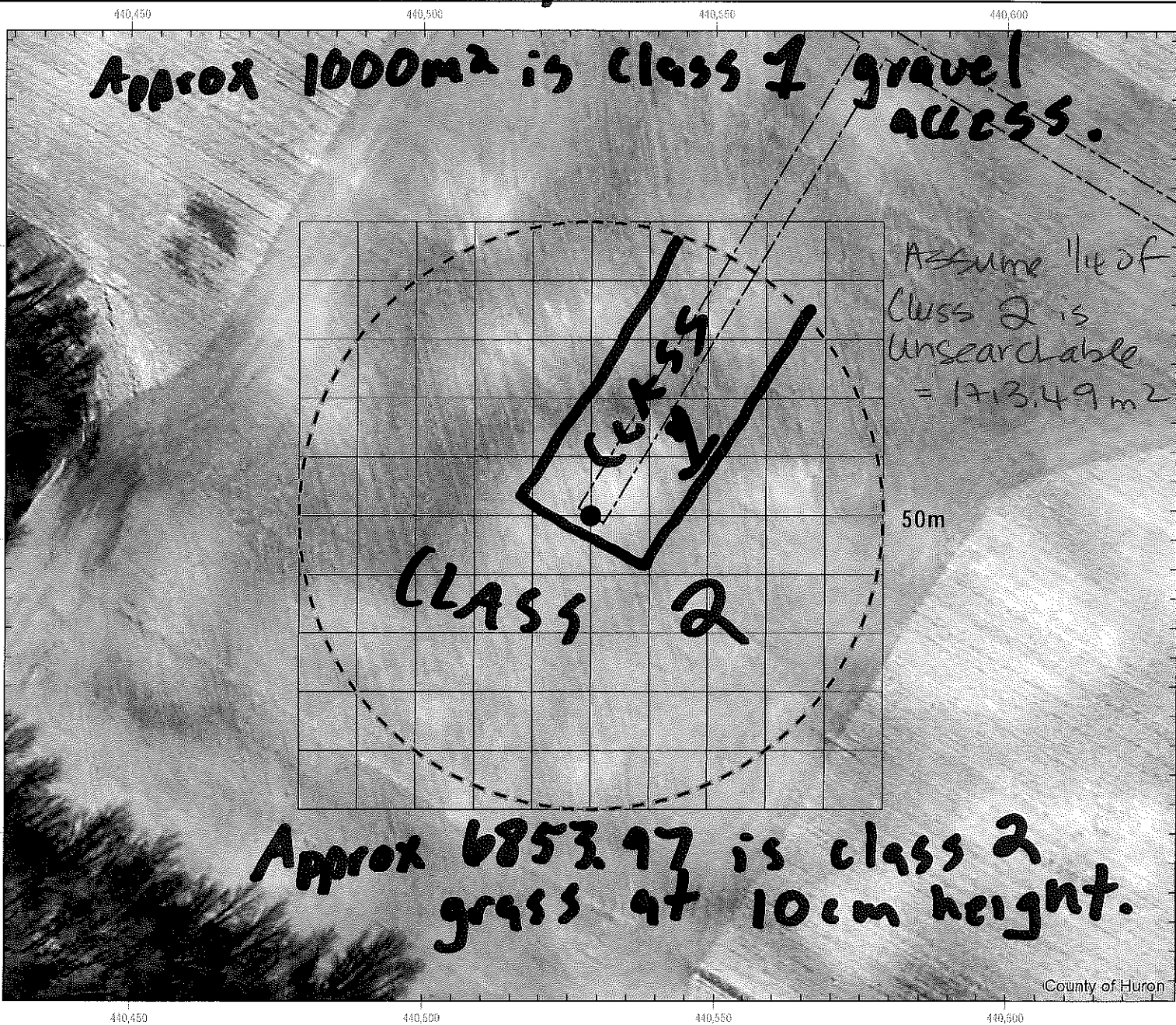
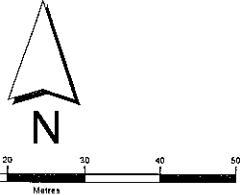
Site Number: T-48

Survey Date: Oct 27 / 19

Actual Searched Area (m²): 6140.48m²

(subtract from total search area - 7853.97m²)

Observers: Sara Henry, Sarah Jackson



% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.



WIND ENERGY BIRD AND BAT MONITORING (POST-CONSTRUCTION) 2019

Site Description and Habitat Mapping Form (Carcass Searches)

Map the search plot, indicating visibility classes, substrate, and area searched. Include vegetation height and type (i.e. soy, corn). Include photographs that face North, South, East, and West that document current vegetation conditions of the search area.

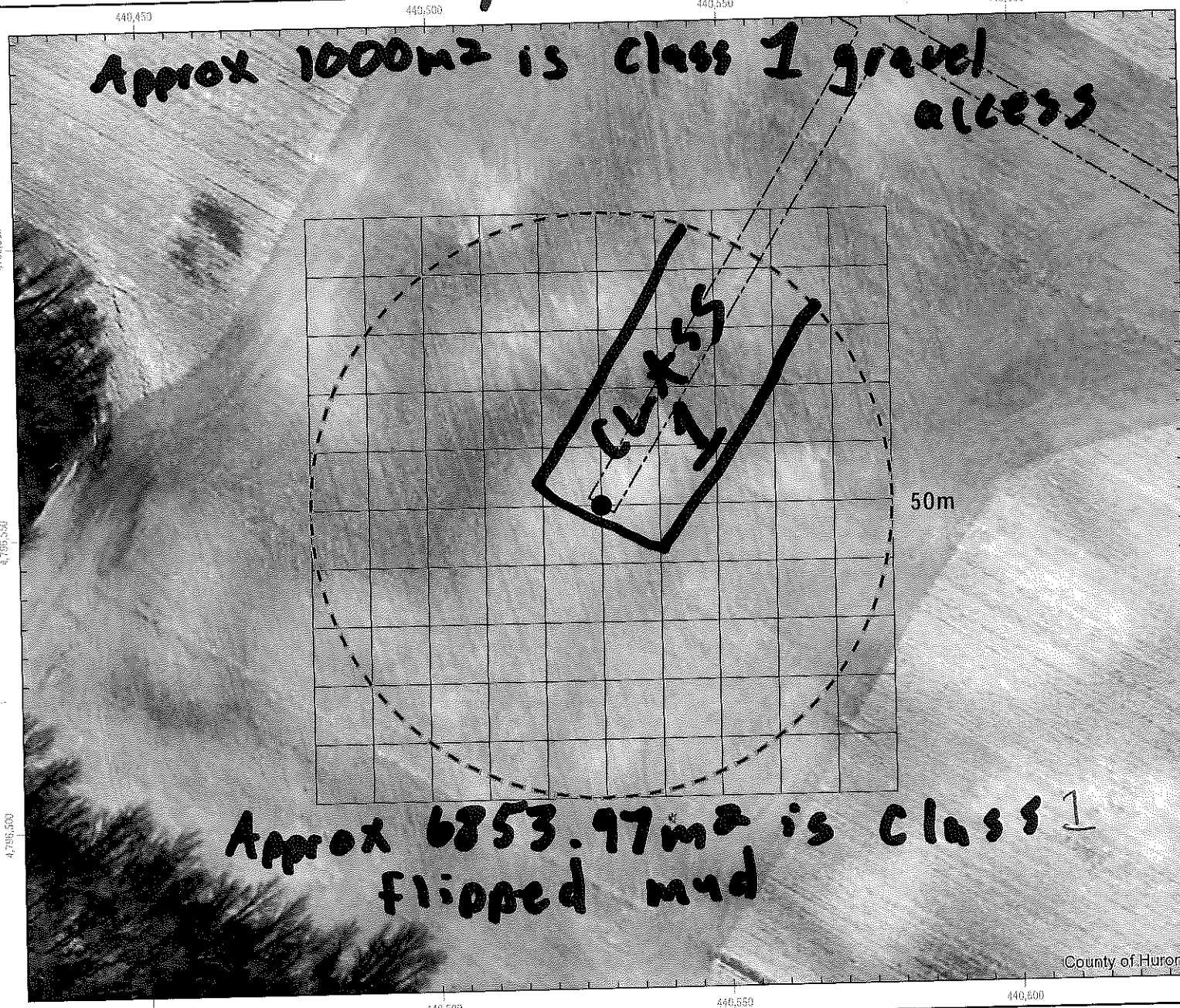
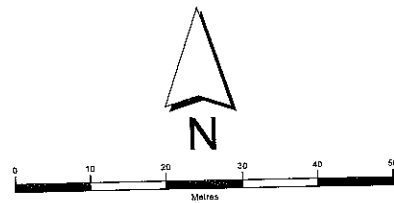
Project Name: PIA019991.0008 Grand Bend Wind Farm

Site Number: T-48

Survey Date: Nov 13 / 19

Actual Searched Area (m²): 7853.97m²
(subtract from total search area - 7853.97m²)

Observers: Sara Henry



County of Huron

% Vegetation Cover	Vegetation Height	Visibility Class
≥ 90% bare ground	≤ 15cm tall	Class 1 (Easy)
≥ 25% bare ground	≤ 15cm tall	Class 2 (Moderate)
≤ 25% bare ground	≤ 25% > 30cm tall	Class 3 (Difficult)
Little or no bare ground	≥ 25% > 30cm tall	Class 4 (Very Difficult)

SEARCH AREA IS DISPLAYED AS 10M BY 10M SQUARE GRIDS.





BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix D

Post-Construction Monitoring Raw Data

Appendix D - Table 1

Grand Bend Wind Farm Year 3 Mortality Monitoring Header Data - 2019

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-01	Raptor Mortality	1	5	2019	Spring	08:50	09:20	2	Sara,Sarah	175	7853.97	No	Circle	50 m radius	5	7	40	E	None	100	None
T-01	Raptor Mortality	6	6	2019	Spring	13:28	13:48	2	Sara,Sarah	36	7853.97	No	Circle	50 m radius	5	21	8	NW	Fog	100	Day before,Thunderstorm
T-01	Raptor Mortality	3	7	2019	Summer	08:24	08:48	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	20	6	NW	None	100	Light rain
T-01	Raptor Mortality	7	8	2019	Summer	12:15	12:35	2	Sara,Sarah	35	7853.97	No	Circle	50 m radius	5	25	13	NW	None	10	None
T-01	Raptor Mortality	4	9	2019	Fall	12:13	12:33	2	Sara,Sarah	28	7853.97	no	Circle	50 m radius	5	16	23	NW	None	100	None
T-01	Raptor Mortality	5	10	2019	Fall	09:44	10:04	2	Sara,Sarah	31	7853.97	no	Circle	50 m radius	5	9	18	E	None	5	Cold temps, frost advisory night before
T-01	Raptor Mortality	6	11	2019	Fall	10:23	10:43	2	Sara,Sarah	32	7853.97	no	Circle	50 m radius	5	2	18	SW	None	100	None
T-02	Sub-sample	2	5	2019	Spring	16:00	16:20	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	11	13	NW	None	95	None
T-02	Sub-sample	6	5	2019	Spring	13:20	13:42	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	14	11	W	None	100	None
T-02	Sub-sample	9	5	2019	Spring	8:48	9:06	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	11	31	SE	None	100	Strong winds
T-02	Sub-sample	13	5	2019	Spring	10:24	10:46	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	6	13	NE	None	100	Heavy rain
T-02	Sub-sample	16	5	2019	Spring	13:23	13:44	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	16	S	None	90	None
T-02	Sub-sample	20	5	2019	Spring	12:10	12:30	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	11	24	W	None	95	None
T-02	Sub-sample	23	5	2019	Spring	15:18	15:42	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	10	NW	None	0	Heavy rain,Thunderstorm
T-02	Sub-sample	27	5	2019	Spring	14:17	14:37	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	11	NW	None	0	None
T-02	Sub-sample	30	5	2019	Spring	12:31	12:53	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	17	13	SW	Drizzle	100	Fog
T-02	Sub-sample	3	6	2019	Spring	12:22	12:42	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	9	19	NW	None	0	None
T-02	Sub-sample	6	6	2019	Spring	13:55	14:15	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	8	NW	Fog	100	Day before,Thunderstorm
T-02	Sub-sample	9	6	2019	Spring	13:51	14:31	1	Sara	3	7853.97	No	Circle	50 m radius	5	27	24	SE	None	90	Hot summer temperature day before
T-02	Sub-sample	13	6	2019	Spring	16:07	16:52	1	Sara	4	7853.97	No	Circle	50 m radius	5	12	14	NW	None	100	Heavy rain,Overnight and into early daylight today ,Thunderstorm
T-02	Sub-sample	17	6	2019	Spring	13:18	13:38	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	8	NE	None	98	None
T-02	Sub-sample	20	6	2019	Spring	13:20	13:40	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	20	8	N	None	100	None
T-02	Sub-sample	23	6	2019	Spring	17:16	17:56	1	Sara	3	7853.97	No	Circle	50 m radius	5	24	10	NW	None	2	None
T-02	Sub-sample	27	6	2019	Spring	13:13	13:33	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	28	8	W	None	0	None
T-02	Sub-sample	30	6	2019	Spring	10:59	11:19	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	16	N	None	0	None
T-02	Sub-sample	4	7	2019	Summer	10:03	10:25	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	27	13	SE	None	0	None
T-02	Sub-sample	8	7	2019	Summer	09:22	10:02	1	Sara	4	7853.97	No	Circle	50 m radius	5	21	6	NE	None	0	None
T-02	Sub-sample	11	7	2019	Summer	09:51	10:14	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	24	13	W	None	0	None
T-02	Sub-sample	15	7	2019	Summer	08:21	08:46	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	16	5	SE	None	0	None
T-02	Sub-sample	18	7	2019	Summer	14:02	14:26	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	29	16	SW	None	0	None
T-02	Sub-sample	22	7	2019	Summer	13:13	13:35	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	14	NW	None	100	None
T-02	Sub-sample	25	7	2019	Summer	08:12	08:32	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	17	3	SE	None	0	None
T-02	Sub-sample	29	7	2019	Summer	08:27	08:47	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	14	S	None	10	None
T-02	Sub-sample	1	8	2019	Summer	13:46	14:07	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	26	6	SW	None	0	None
T-02	Sub-sample	5	8	2019	Summer	12:34	12:58	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	28	13	SW	None	0	None
T-02	Sub-sample	8	8	2019	Summer	14:04	14:25	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	23	23	NW	None	0	None
T-02	Sub-sample	12	8	2019	Summer	13:10	13:30	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	27	13	SW	None	90	None
T-02	Sub-sample	15	8	2019	Summer	09:54	10:14	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	16	E	None	100	None
T-02	Sub-sample	19	8	2019	Summer	11:44	12:06	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	10	NW	None	0	Light rain
T-02	Sub-sample	22	8	2019	Summer	13:31	13:53	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	21	W	None	0	None
T-02	Sub-sample	25	8	2019	Summer	14:37	15:17	1	Sara	3	7853.97	No	Circle	50 m radius	5	23	18	SE	None	25	None
T-02	Sub-sample	29	8	2019	Summer	12:10	12:31	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	18	SW	None	10	None
T-02	Sub-sample	2	9	2019	Fall	12:37	12:57	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	22	14	W	None	80	None
T-02	Sub-sample	5	9	2019	Fall	13:45	14:05	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	20	8	NW	None	0	None
T-02	Sub-sample	9	9	2019	Fall	14:14	14:34	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	21	8	SE	None	0	None
T-02	Sub-sample	12	9	2019	Fall	12:48	13:14	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	17	16	E	None	100	Fog,Light rain
T-02	Sub-sample	16	9	2019	Fall	12:44	13:04	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	21	6	NE	None	50	None
T-02	Sub-sample	19	9	2019	Fall	12:46	13:06	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	23	19	SE	None	5	None
T-02	Sub-sample	23	9	2019	Fall	12:31	12:52	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	21	14	NW	None	40	Light rain
T-02	Sub-sample	26	9	2019	Fall	11:50	12:10	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	18	21	W	None	0	None
T-02	Sub-sample	30	9	2019	Fall	11:26	11:46	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	17	16	SE	None	90	None
T-02	Sub-sample	3	10	2019	Fall	12:16	12:36	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	11	21	SE	Drizzle	100	Heavy rain
T-02	Sub-sample	7	10	2019	Fall	12:36	12:58	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	16	19	W	None	50	None
T-02	Sub-sample	10	10	2019	Fall	13:13	13:34	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	21	18	SE	None	0	None
T-02	Sub-sample	14	10	2019	Fall	13:16	13:36	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	9	26	W	None	50	None
T-02	Sub-sample	17	10	2019	Fall	12:46	13:06	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	7	31	W	None	100	Heavy rain,Strong winds
T-02	Sub-sample	21	10	2019	Fall	13:23	13:45	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	16	29	SE	None	100	None
T-02	Sub-sample	24	10	2019	Fall	11:47	12:27	1	Sarah	3	7853.97	no	Circle	50 m radius	5	9	18	NW	None	95	None
T-02	Sub-sample	28	10	2019	Fall	10:30	11:10	1	Sara	4	7853.97	no	Circle	50 m radius	5	10	11	SE	None	0	Heavy rain,Saturday night
T-02	Sub-sample	31	10	2019	Fall	09:05	09:45	1	Sara	3	7853.97	no	Circle	50 m radius	5	6	14	NE	Light rain	100	Heavy rain,Intermittent rain,Light rain,Throughout day and night before
T-02	Sub-sample	4	11	2019	Fall	14:57	15:37	1	Sara	4	7853.97	no	Circle	50 m radius	5	10	23	W	None	90	Intermittent rain,Night before
T-02	Sub-sample	11	11	2019	Fall	09:58	10:18	2	Sara,Sarah	7	7853.97	no	Circle	50 m radius	5	-3	19	E	Light snow	100	Light snow
T-02	Sub-sample	18	11	2019	Fall	13:00	13:40	1	Sara	7	7853.97	no	Circle	50 m radius	5	4	13	SE	None	100	Snow melt
T-02	Sub-sample	25	11	2019	Fall	12:17	12:57	1	Sara	7	7853.97	no	Circle	50 m radius	5	6	16	SW	None	100	None
T-03	Raptor Mortality	1	5	2019	Spring	09:47	10:25	2	Sara,Sarah	175	7853.97	No	Circle	50 m radius	5	7	42	E	None	100	Heavy rain
T-03	Raptor Mortality	6	6	2019	Spring	14:24	14:45	2	Sara,Sarah	36	7853.97	No	Circle	50 m radius	5	21	10	NW	Fog	100	Day before,Thunderstorm
T-03	Raptor Mortality	3	7	2019	Summer	09:08	09:28	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	21	5	NW	None	100	Light rain
T-03	Raptor Mortality	7	8	2019	Summer	11:40	12:00	2	Sara,Sarah	35	7853.97	No	Circle	50 m radius	5	29	10	NW	None	20	None
T-03	Raptor Mortality	4	9	2019	Fall	11:37	11:58	2	Sara,Sarah	28	7853.97	no	Circle	50 m radius	5	17	24	NW	None	100	None
T-03	Raptor Mortality	5	10	2019	Fall	10:17	10:37	2	Sara,Sarah	31	7853.97	no	Circle	50 m radius	5	9	21	E	None	5	Frost advisory might before
T-03	Raptor Mortality	6	11	2019	Fall	10:53	11:18	2	Sara,Sarah	32	7853.97	no	Circle	50 m radius	5	2	18	SW	None	100	None
T-05	Raptor Mortality	1	5	2019	Spring	11:30	12:00	2	Sara,Sarah	175	7853.97	No	Circle	50 m radius	5	9	34	SE	None	90	Heavy rain,None
T-05	R																				

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-05	Raptor Mortality	7	8	2019	Summer	10:32	10:52	2	Sara,Sarah	35	7853.97	No	Circle	50 m radius	5	24	6	N	None	25	None
T-05	Raptor Mortality	4	9	2019	Fall	11:01	11:21	2	Sara,Sarah	28	7853.97	no	Circle	50 m radius	5	17	24	NW	None	100	None
T-05	Raptor Mortality	5	10	2019	Fall	10:50	11:10	2	Sara,Sarah	31	7853.97	no	Circle	50 m radius	5	11	23	E	None	5	Frost advisory night before
T-05	Raptor Mortality	6	11	2019	Fall	11:31	11:51	2	Sara,Sarah	32	7853.97	no	Circle	50 m radius	5	2	21	SW	None	100	None
T-06	Raptor Mortality	1	5	2019	Spring	12:15	12:40	2	Sara,Sarah	175	7853.97	No	Circle	50 m radius	5	11	34	SE	None	95	Heavy rain
T-06	Raptor Mortality	5	6	2019	Spring	13:21	13:41	2	Sara,Sarah	35	7853.97	No	Circle	50 m radius	5	19	13	S	None	100	Heavy rain
T-06	Raptor Mortality	3	7	2019	Summer	10:12	10:32	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	23	6	N	None	10	Light rain
T-06	Raptor Mortality	7	8	2019	Summer	11:03	11:23	2	Sara,Sarah	35	7853.97	No	Circle	50 m radius	5	26	10	NW	None	10	None
T-06	Raptor Mortality	4	9	2019	Fall	10:21	10:41	2	Sara,Sarah	28	7853.97	no	Circle	50 m radius	5	17	23	NW	None	100	None
T-06	Raptor Mortality	5	10	2019	Fall	11:27	11:47	2	Sara,Sarah	31	7853.97	no	Circle	50 m radius	5	12	24	SE	None	5	Frost advisory night before
T-06	Raptor Mortality	6	11	2019	Fall	11:55	12:16	2	Sara,Sarah	32	7853.97	no	Circle	50 m radius	5	2	21	SW	None	100	None
T-07	Sub-sample	3	5	2019	Spring	17:02	17:26	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	8	23	NW	None	100	Fog,Light rain
T-07	Sub-sample	7	5	2019	Spring	14:40	15:04	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	5	19	NW	None	90	Heavy rain
T-07	Sub-sample	10	5	2019	Spring	09:49	10:12	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	10	18	W	Light rain	100	Heavy rain,Overnight ,Thunderstorm
T-07	Sub-sample	14	5	2019	Spring	12:49	13:10	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	9	18	NW	None	10	None
T-07	Sub-sample	17	5	2019	Spring	10:16	10:37	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	6	24	NW	None	100	None
T-07	Sub-sample	21	5	2019	Spring	14:11	14:35	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	12	10	NW	None	70	None
T-07	Sub-sample	24	5	2019	Spring	14:10	14:31	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	14	14	W	None	100	None
T-07	Sub-sample	28	5	2019	Spring	11:34	11:33	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	14	14	SE	None	100	Light rain
T-07	Sub-sample	31	5	2019	Spring	14:59	15:19	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	11	SW	None	25	None
T-07	Sub-sample	4	6	2019	Spring	13:26	13:47	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	18	SW	None	0	None
T-07	Sub-sample	7	6	2019	Spring	14:16	14:38	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	24	10	N	None	0	None
T-07	Sub-sample	11	6	2019	Spring	12:45	13:35	1	Sarah	4	7853.97	No	Circle	50 m radius	5	19	16	W	None	0	None
T-07	Sub-sample	14	6	2019	Spring	13:23	13:44	1	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	20	24	W	None	0	None
T-07	Sub-sample	18	6	2019	Spring	15:00	15:23	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	13	W	None	0	None
T-07	Sub-sample	22	6	2019	Spring	14:00	14:40	1	Sara	4	7853.97	No	Circle	50 m radius	5	18	16	NW	None	0	None
T-07	Sub-sample	25	6	2019	Spring	13:32	14:12	1	Sarah	4	7853.97	No	Circle	50 m radius	5	21	21	W	None	95	None
T-07	Sub-sample	28	6	2019	Spring	07:50	08:30	1	Sarah	3	7853.97	No	Circle	50 m radius	5	18	5	SE	None	90	None
T-07	Sub-sample	2	7	2019	Summer	09:58	10:30	1	Sara	4	7853.97	No	Circle	50 m radius	5	23	8	W	None	95	None
T-07	Sub-sample	5	7	2019	Summer	11:58	12:38	1	Sara	3	7853.97	No	Circle	50 m radius	5	28	13	SW	None	0	None
T-07	Sub-sample	9	7	2019	Summer	09:28	09:49	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	5	NW	None	80	None
T-07	Sub-sample	12	7	2019	Summer	13:01	13:21	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	19	NW	None	100	None
T-07	Sub-sample	16	7	2019	Summer	09:27	09:47	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	27	14	SW	None	0	None
T-07	Sub-sample	20	7	2019	Summer	13:00	13:32	1	Sara	4	7853.97	No	Circle	50 m radius	5	31	16	SW	None	10	Intermittent rain,Lightning, heat wave
T-07	Sub-sample	23	7	2019	Summer	09:22	09:42	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	11	NW	None	0	None
T-07	Sub-sample	26	7	2019	Summer	14:06	14:26	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	29	13	SW	None	0	None
T-07	Sub-sample	30	7	2019	Summer	14:08	14:29	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	26	16	W	None	70	Heavy rain
T-07	Sub-sample	2	8	2019	Summer	11:40	12:03	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	26	8	N	None	0	None
T-07	Sub-sample	6	8	2019	Summer	15:26	15:46	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	25	13	NW	None	100	None
T-07	Sub-sample	9	8	2019	Summer	12:28	12:49	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	23	21	W	None	0	None
T-07	Sub-sample	13	8	2019	Summer	12:24	12:49	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	28	8	N	None	0	None
T-07	Sub-sample	16	8	2019	Summer	09:35	09:55	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	8	E	None	10	None
T-07	Sub-sample	20	8	2019	Summer	14:17	14:37	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	27	16	S	None	60	None
T-07	Sub-sample	23	8	2019	Summer	14:34	14:55	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	19	NW	None	60	None
T-07	Sub-sample	27	8	2019	Summer	12:17	12:57	1	Sarah	4	7853.97	No	Circle	50 m radius	5	21	16	S	Light rain	100	Heavy rain
T-07	Sub-sample	30	8	2019	Summer	11:24	12:05	1	Sarah	3	7853.97	No	Circle	50 m radius	5	21	21	NW	None	0	None
T-07	Sub-sample	3	9	2019	Fall	13:07	13:26	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	23	27	S	None	100	None
T-07	Sub-sample	6	9	2019	Fall	10:16	10:56	1	Sara	3	7853.97	no	Circle	50 m radius	5	17	8	SE	None	100	None
T-07	Sub-sample	9	9	2019	Fall	14:49	15:29	1	Sarah	3	7853.97	no	Circle	50 m radius	5	21	8	SE	None	0	None
T-07	Sub-sample	13	9	2019	Fall	11:36	11:56	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	18	26	SE	Light rain	100	None
T-07	Sub-sample	17	9	2019	Fall	12:29	12:49	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	21	13	SE	None	0	None
T-07	Sub-sample	20	9	2019	Fall	12:14	12:54	1	Sara	3	7853.97	no	Circle	50 m radius	5	26	10	S	None	0	None
T-07	Sub-sample	24	9	2019	Fall	13:02	13:22	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	20	13	W	None	40	None
T-07	Sub-sample	27	9	2019	Fall	11:59	12:19	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	18	16	S	None	90	None
T-07	Sub-sample	1	10	2019	Fall	11:49	12:09	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	27	18	SW	None	100	None
T-07	Sub-sample	4	10	2019	Fall	10:13	10:53	1	Sara	3	7853.97	no	Circle	50 m radius	5	10	18	NE	None	95	Light rain,Overnight
T-07	Sub-sample	8	10	2019	Fall	13:09	13:29	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	17	16	SE	None	0	None
T-07	Sub-sample	11	10	2019	Fall	10:50	11:50	1	Sara	3	7853.97	no	Circle	50 m radius	5	19	26	SE	None	30	None
T-07	Sub-sample	15	10	2019	Fall	11:13	11:35	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	8	14	SE	None	25	None
T-07	Sub-sample	18	10	2019	Fall	10:15	10:39	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	7	14	NW	None	30	None
T-07	Sub-sample	22	10	2019	Fall	09:34	09:55	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	12	16	S	None	50	Light rain
T-07	Sub-sample	25	10	2019	Fall	12:49	13:29	1	Sara	3	7853.97	no	Circle	50 m radius	5	12	10	SW	None	90	None
T-07	Sub-sample	29	10	2019	Fall	12:51	13:31	1	Sara	4	7853.97	no	Circle	50 m radius	5	13	16	SW	None	100	None
T-07	Sub-sample	5	11	2019	Fall	12:28	13:08	1	Sara	7	7853.97	no	Circle	50 m radius	5	6	26	W	None	85	None
T-07	Sub-sample	14	11	2019	Fall	11:28	12:08	1	Sarah	9	7853.97	no	Circle	50 m radius	5	-1	21	SW	None	100	Heavy snow
T-07	Sub-sample	20	11	2019	Fall	10:24	11:04	1	Sarah	6	7853.97	no	Circle	50 m radius	5	5	14	NW	None	60	None
T-07	Sub-sample	26	11	2019	Fall	13:07	13:47	1	Sara	6	7853.97	no	Circle	50 m radius	5	8	8	NW	None	20	None
T-08	Raptor Mortality	5	6	2019	Spring	13:48	14:10	2	Sara,Sarah	35	7853.97	No	Circle	50 m radius	5	19	13	S	None	100	Heavy rain
T-08	Raptor Mortality	3	7	2019	Summer	10:41	11:06	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	23	6	N	None	5	None
T-08	Raptor Mortality	7	8	2019	Summer	09:55	10:15	2	Sara,Sarah	35	7853.97	No	Circle	50 m radius	5	24	6	N	None	80	None
T-08	Raptor Mortality	4	9	2019	Fall	09:57	10:17	2	Sara,Sarah	28	7853.97	no	Circle	50 m radius	5	17	23	NW	None	100	None
T-08	Raptor Mortality	5	10	2019	Fall	12:04	12:24	2	Sara,Sarah	31	7853.97	no	Circle	50 m radius	5	13	24	SE	None	20	Frost advisory night before
T-08	Raptor Mortality	6	11	2019	Fall	12:50	13:10	2	Sara,Sarah	32	7853.97	no	Circle	50 m radius	5	2	19	SW	None	100	None

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-09	Raptor Mitigation	14	5	2019	Spring	12:25	12:45	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	9	18	NW	None	0	None
T-09	Raptor Mitigation	17	5	2019	Spring	09:48	10:10	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	7	24	NW	None	100	None
T-09	Raptor Mitigation	21	5	2019	Spring	13:48	14:08	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	12	16	NW	None	0	None
T-09	Raptor Mitigation	24	5	2019	Spring	13:42	14:05	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	15	13	NW	None	100	None
T-09	Raptor Mitigation	28	5	2019	Spring	11:09	11:30	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	14	14	SE	Drizzle	100	Light rain
T-09	Raptor Mitigation	31	5	2019	Spring	14:20	14:45	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	17	11	SW	None	90	None
T-09	Raptor Mitigation	4	6	2019	Spring	13:03	13:23	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	18	SW	None	0	None
T-09	Raptor Mitigation	7	6	2019	Spring	13:50	14:10	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	24	10	N	None	0	None
T-09	Raptor Mitigation	10	6	2019	Spring	13:27	13:50	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	19	S	Light rain	100	Light rain
T-09	Raptor Mitigation	14	6	2019	Spring	12:57	13:18	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	18	21	W	None	0	None
T-09	Raptor Mitigation	18	6	2019	Spring	14:27	14:52	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	13	W	None	0	None
T-09	Raptor Mitigation	21	6	2019	Spring	10:41	11:28	1	Sarah	3	7853.97	No	Circle	50 m radius	5	18	13	NW	None	0	None
T-09	Raptor Mitigation	25	6	2019	Spring	13:36	14:19	1	Sara	4	7853.97	No	Circle	50 m radius	5	21	16	SW	None	90	None
T-09	Raptor Mitigation	28	6	2019	Spring	07:48	08:28	1	Sara	3	7853.97	No	Circle	50 m radius	5	19	6	SE	None	50	None
T-09	Raptor Mitigation	2	7	2019	Summer	10:00	10:31	1	Sarah	4	7853.97	No	Circle	50 m radius	5	23	8	W	None	95	None
T-09	Raptor Mitigation	5	7	2019	Summer	11:51	12:39	1	Sarah	3	7853.97	No	Circle	50 m radius	5	30	13	SW	None	0	None
T-09	Raptor Mitigation	9	7	2019	Summer	09:53	10:15	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	5	NE	None	0	None
T-09	Raptor Mitigation	12	7	2019	Summer	13:25	13:47	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	19	NW	None	100	None
T-09	Raptor Mitigation	16	7	2019	Summer	09:54	10:16	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	28	16	SW	None	0	None
T-09	Raptor Mitigation	20	7	2019	Summer	12:21	12:54	1	Sara	4	7853.97	No	Circle	50 m radius	5	31	16	SW	None	0	Intermittent rain,Lightning, heat wave
T-09	Raptor Mitigation	23	7	2019	Summer	09:46	10:10	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	11	NW	None	0	None
T-09	Raptor Mitigation	26	7	2019	Summer	09:25	09:46	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	6	SW	None	0	None
T-09	Raptor Mitigation	30	7	2019	Summer	14:34	15:15	1	Sarah	4	7853.97	No	Circle	50 m radius	5	26	16	W	None	75	None
T-09	Raptor Mitigation	2	8	2019	Summer	11:14	11:35	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	26	8	N	None	0	None
T-09	Raptor Mitigation	6	8	2019	Summer	15:56	16:36	1	Sarah	4	7853.97	No	Circle	50 m radius	5	25	13	NW	None	100	None
T-09	Raptor Mitigation	9	8	2019	Summer	11:47	12:09	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	16	W	None	0	None
T-09	Raptor Mitigation	13	8	2019	Summer	08:58	08:38	1	Sarah	4	7853.97	No	Circle	50 m radius	5	19	5	E	None	0	None
T-09	Raptor Mitigation	16	8	2019	Summer	10:00	10:20	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	8	E	None	20	None
T-09	Raptor Mitigation	20	8	2019	Summer	13:44	14:05	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	27	16	S	None	30	None
T-09	Raptor Mitigation	23	8	2019	Summer	14:08	14:29	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	19	NW	None	15	None
T-09	Raptor Mitigation	27	8	2019	Summer	13:00	13:44	1	Sarah	4	7853.97	No	Circle	50 m radius	5	21	16	S	Drizzle	100	Heavy rain
T-09	Raptor Mitigation	30	8	2019	Summer	12:30	13:10	1	Sara	3	7853.97	No	Circle	50 m radius	5	22	21	NW	None	5	None
T-09	Raptor Mitigation	3	9	2019	Fall	08:55	09:36	1	Sarah	4	7853.97	no	Circle	50 m radius	5	16	14	SE	None	90	None
T-09	Raptor Mitigation	6	9	2019	Fall	10:14	10:54	1	Sarah	3	7853.97	no	Circle	50 m radius	5	16	6	SE	None	100	None
T-09	Raptor Mitigation	9	9	2019	Fall	14:45	15:26	1	Sara	3	7853.97	no	Circle	50 m radius	5	22	10	NW	None	0	None
T-09	Raptor Mitigation	13	9	2019	Fall	11:59	12:21	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	18	26	SE	None	100	Light rain
T-09	Raptor Mitigation	17	9	2019	Fall	13:05	13:27	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	23	11	NE	None	0	None
T-09	Raptor Mitigation	20	9	2019	Fall	13:00	13:43	1	Sara	3	7853.97	no	Circle	50 m radius	5	26	10	S	None	5	None
T-09	Raptor Mitigation	24	9	2019	Fall	12:27	12:57	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	19	11	W	None	40	None
T-09	Raptor Mitigation	27	9	2019	Fall	08:57	09:39	1	Sarah	4	7853.97	no	Circle	50 m radius	5	12	11	SE	None	95	None
T-09	Raptor Mitigation	1	10	2019	Fall	12:23	13:05	1	Sarah	4	7853.97	no	Circle	50 m radius	5	28	18	SW	None	100	None
T-09	Raptor Mitigation	4	10	2019	Fall	10:45	10:26	1	Sarah	3	7853.97	no	Circle	50 m radius	5	10	16	NE	None	70	Heavy rain
T-09	Raptor Mitigation	8	10	2019	Fall	13:41	14:01	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	17	16	SE	None	0	None
T-09	Raptor Mitigation	11	10	2019	Fall	11:41	12:24	1	Sarah	3	7853.97	no	Circle	50 m radius	5	17	24	SE	None	50	None
T-09	Raptor Mitigation	15	10	2019	Fall	10:50	11:10	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	7	13	SE	None	20	None
T-09	Raptor Mitigation	18	10	2019	Fall	09:06	09:46	1	Sara	3	7853.97	no	Circle	50 m radius	5	8	13	N	None	100	None
T-09	Raptor Mitigation	22	10	2019	Fall	10:16	10:39	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	12	16	S	None	95	Light rain
T-09	Raptor Mitigation	25	10	2019	Fall	13:36	14:16	1	Sara	3	7853.97	no	Circle	50 m radius	5	11	13	NW	None	100	None
T-09	Raptor Mitigation	29	10	2019	Fall	12:07	12:47	1	Sara	4	7853.97	no	Circle	50 m radius	5	14	16	SW	None	100	None
T-09	Raptor Mitigation	5	11	2019	Fall	12:31	13:15	1	Sarah	7	7853.97	no	Circle	50 m radius	5	5	26	W	None	60	None
T-09	Raptor Mitigation	14	11	2019	Fall	11:30	12:10	1	Sara	9	7853.97	no	Circle	50 m radius	5	-2	19	SW	None	100	Heavy snow,Light snow,Throughout week
T-09	Raptor Mitigation	20	11	2019	Fall	11:12	11:52	1	Sarah	6	7853.97	no	Circle	50 m radius	5	5	14	NW	None	50	None
T-09	Raptor Mitigation	26	11	2019	Fall	12:18	12:58	1	Sara	6	7853.97	no	Circle	50 m radius	5	8	8	NW	None	5	None
T-11	Raptor Mitigation	3	5	2019	Spring	14:10	14:40	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	8	22	NW	None	100	Fog,Light rain
T-11	Raptor Mitigation	7	5	2019	Spring	13:39	14:02	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	7	19	W	None	85	None
T-11	Raptor Mitigation	10	5	2019	Spring	08:49	09:10	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	8	18	NW	None	100	Heavy rain,Thunderstorm
T-11	Raptor Mitigation	14	5	2019	Spring	10:59	11:24	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	8	16	NW	None	65	None
T-11	Raptor Mitigation	17	5	2019	Spring	08:27	08:47	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	7	21	NW	Fog	100	None
T-11	Raptor Mitigation	21	5	2019	Spring	13:07	13:34	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	12	16	NW	None	0	None
T-11	Raptor Mitigation	24	5	2019	Spring	12:17	12:40	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	14	11	NW	None	100	None
T-11	Raptor Mitigation	28	5	2019	Spring	09:45	10:07	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	14	13	SE	Fog	100	Light rain
T-11	Raptor Mitigation	31	5	2019	Spring	13:15	13:36	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	16	11	SW	None	90	None
T-11	Raptor Mitigation	4	6	2019	Spring	11:29	11:49	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	16	18	SW	None	90	None
T-11	Raptor Mitigation	7	6	2019	Spring	13:15	13:38	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	24	10	N	None	0	None
T-11	Raptor Mitigation	10	6	2019	Spring	12:44	13:06	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	21	SE	Drizzle	100	Light rain
T-11	Raptor Mitigation	14	6	2019	Spring	12:15	12:38	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	18	21	W	None	0	None
T-11	Raptor Mitigation	18	6	2019	Spring	13:52	14:12	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	11	W	None	0	None
T-11	Raptor Mitigation	21	6	2019	Spring	09:49	10:30	1	Sarah	3	7853.97	No	Circle	50 m radius	5	17	13	NW	None	0	None
T-11	Raptor Mitigation	25	6	2019	Spring	13:02	13:22	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	21	21	W	None	20	None
T-11	Raptor Mitigation	28	6	2019	Spring	08:49	09:10	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	6	S	None	90	None
T-11	Raptor Mitigation	2	7	2019	Summer	09:00	09:33	1	Sarah	4	7853.97	No	Circle	50 m radius	5	22	6	W	None	90	None
T-11	Raptor Mitigation	5	7	2019	Summer	10:56	11:17	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	28	11	SW	None	0	None
T-11	Raptor Mitigation	9	7	2019	Summer	10:33	10:57	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	3	W	None	0	None

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-11	Raptor Mitigation	23	7	2019	Summer	08:15	08:57	1	Sarah	3	7853.97	No	Circle	50 m radius	5	16	5	W	None	0	None
T-11	Raptor Mitigation	26	7	2019	Summer	14:39	15:19	1	Sarah	3	7853.97	No	Circle	50 m radius	5	29	13	SW	None	0	None
T-11	Raptor Mitigation	30	7	2019	Summer	09:02	09:44	1	Sara	4	7853.97	No	Circle	50 m radius	5	22	11	NW	None	60	Heavy rain,Night before
T-11	Raptor Mitigation	2	8	2019	Summer	12:54	13:34	1	Sarah	3	7853.97	No	Circle	50 m radius	5	27	8	NW	None	0	None
T-11	Raptor Mitigation	6	8	2019	Summer	11:03	11:45	1	Sarah	4	7853.97	No	Circle	50 m radius	5	23	8	NW	None	100	None
T-11	Raptor Mitigation	9	8	2019	Summer	10:50	11:35	1	Sarah	3	7853.97	No	Circle	50 m radius	5	21	14	W	None	0	None
T-11	Raptor Mitigation	13	8	2019	Summer	08:38	09:22	1	Sara	4	7853.97	No	Circle	50 m radius	5	22	5	NE	None	0	None
T-11	Raptor Mitigation	16	8	2019	Summer	08:27	09:09	1	Sarah	3	7853.97	No	Circle	50 m radius	5	16	6	E	None	40	None
T-11	Raptor Mitigation	20	8	2019	Summer	15:03	15:43	1	Sarah	4	7853.97	No	Circle	50 m radius	5	27	16	S	None	60	None
T-11	Raptor Mitigation	23	8	2019	Summer	13:17	14:00	1	Sara	3	7853.97	No	Circle	50 m radius	5	24	21	NW	None	75	None
T-11	Raptor Mitigation	27	8	2019	Summer	10:57	11:42	1	Sarah	4	7853.97	No	Circle	50 m radius	5	21	18	S	Light rain	100	Light rain
T-11	Raptor Mitigation	30	8	2019	Summer	11:26	12:10	1	Sara	3	7853.97	No	Circle	50 m radius	5	20	16	NW	None	0	None
T-11	Raptor Mitigation	3	9	2019	Fall	13:50	14:30	1	Sarah	4	7853.97	no	Circle	50 m radius	5	23	27	S	None	100	None
T-11	Raptor Mitigation	6	9	2019	Fall	11:10	11:50	1	Sara	3	7853.97	no	Circle	50 m radius	5	19	5	E	None	100	None
T-11	Raptor Mitigation	10	9	2019	Fall	10:59	11:42	1	Sara	4	7853.97	no	Circle	50 m radius	5	21	21	W	None	100	None
T-11	Raptor Mitigation	13	9	2019	Fall	12:27	12:48	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	19	24	SE	None	100	Light rain
T-11	Raptor Mitigation	17	9	2019	Fall	08:15	08:55	1	Sarah	4	7853.97	no	Circle	50 m radius	5	14	8	E	None	0	None
T-11	Raptor Mitigation	21	9	2019	Fall	15:04	15:45	1	Sarah	4	7853.97	no	Circle	50 m radius	5	30	18	SW	None	0	None
T-11	Raptor Mitigation	24	9	2019	Fall	08:13	08:53	1	Sarah	3	7853.97	no	Circle	50 m radius	5	13	5	S	None	60	None
T-11	Raptor Mitigation	27	9	2019	Fall	13:23	14:03	1	Sara	3	7853.97	no	Circle	50 m radius	5	22	24	S	None	50	None
T-11	Raptor Mitigation	1	10	2019	Fall	08:25	09:07	1	Sarah	4	7853.97	no	Circle	50 m radius	5	20	13	S	None	0	None
T-11	Raptor Mitigation	4	10	2019	Fall	09:20	10:05	1	Sarah	3	7853.97	no	Circle	50 m radius	5	9	14	NE	None	100	Heavy rain
T-11	Raptor Mitigation	8	10	2019	Fall	09:37	10:17	1	Sara	4	7853.97	no	Circle	50 m radius	5	9	11	E	None	0	None
T-11	Raptor Mitigation	11	10	2019	Fall	10:59	11:40	1	Sara	3	7853.97	no	Circle	50 m radius	5	18	26	SE	None	75	None
T-11	Raptor Mitigation	15	10	2019	Fall	12:11	12:31	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	11	18	S	None	25	None
T-11	Raptor Mitigation	18	10	2019	Fall	13:33	14:13	1	Sara	3	7853.97	no	Circle	50 m radius	5	10	18	NW	None	50	None
T-11	Raptor Mitigation	22	10	2019	Fall	10:52	11:13	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	12	23	S	None	80	None
T-11	Raptor Mitigation	25	10	2019	Fall	11:39	12:19	1	Sara	3	7853.97	no	Circle	50 m radius	5	10	6	SW	None	10	None
T-11	Raptor Mitigation	29	10	2019	Fall	11:15	11:55	1	Sara	4	7853.97	no	Circle	50 m radius	5	13	16	SW	None	100	None
T-11	Raptor Mitigation	5	11	2019	Fall	11:41	12:22	1	Sarah	7	7853.97	no	Circle	50 m radius	5	6	26	W	None	75	None
T-11	Raptor Mitigation	14	11	2019	Fall	10:25	11:05	1	Sarah	9	7853.97	no	Circle	50 m radius	5	-3	19	SW	Light snow	100	Heavy snow
T-11	Raptor Mitigation	20	11	2019	Fall	12:14	12:54	1	Sarah	6	7853.97	no	Circle	50 m radius	5	6	16	NW	None	0	None
T-11	Raptor Mitigation	26	11	2019	Fall	11:17	11:57	1	Sara	4	7853.97	no	Circle	50 m radius	5	8	11	W	None	5	None
T-12	Raptor Mortality	8	5	2019	Spring	10:25	10:45	2	Sara,Sarah	175	7853.97	No	Circle	50 m radius	5	11	29	E	None	5	None
T-12	Raptor Mortality	12	6	2019	Spring	10:25	10:45	1	Sara,Sarah	53	7853.97	No	Circle	50 m radius	5	21	21	S	None	0	None
T-12	Raptor Mortality	10	7	2019	Summer	10:54	11:15	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	28	11	S	None	0	None
T-12	Raptor Mortality	14	8	2019	Summer	12:52	13:32	1	Sarah	28	7853.97	No	Circle	50 m radius	5	26	13	NE	None	0	None
T-12	Raptor Mortality	11	9	2019	Fall	15:34	15:54	2	Sara,Sarah	28	7853.97	no	Circle	50 m radius	5	27	13	NW	None	0	None
T-12	Raptor Mortality	9	10	2019	Fall	11:25	12:05	1	Sarah	26	7853.97	no	Circle	50 m radius	5	14	18	SE	None	0	None
T-12	Raptor Mortality	14	11	2019	Fall	10:35	11:15	1	Sara	35	7853.97	no	Circle	50 m radius	5	-2	19	SW	None	100	Heavy snow,Light snow,Throughout week
T-13	Raptor Mortality	8	5	2019	Spring	10:49	11:12	2	Sara,Sarah	175	7853.97	No	Circle	50 m radius	5	7	29	E	None	5	None
T-13	Raptor Mortality	12	6	2019	Spring	09:59	10:20	2	Sara,Sarah	35	7853.97	No	Circle	50 m radius	5	19	16	S	None	0	None
T-13	Raptor Mortality	10	7	2019	Summer	11:21	11:44	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	28	11	S	None	0	None
T-13	Raptor Mortality	14	8	2019	Summer	12:45	13:35	1	Sara	35	7853.97	No	Circle	50 m radius	5	28	14	NE	None	5	None
T-13	Raptor Mortality	18	9	2019	Fall	11:21	11:42	2	Sara,Sarah	35	7853.97	no	Circle	50 m radius	5	21	18	SE	None	0	None
T-13	Raptor Mortality	9	10	2019	Fall	11:20	12:05	1	Sara	21	7853.97	no	Circle	50 m radius	5	16	21	SE	None	0	None
T-13	Raptor Mortality	14	11	2019	Fall	09:44	10:24	1	Sara	35	7853.97	no	Circle	50 m radius	5	-2	19	SW	Light snow	100	Heavy snow,Light snow,Throughout week
T-14	Raptor Mitigation	3	5	2019	Spring	13:40	14:03	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	6	21	NW	None	100	Fog,Light rain
T-14	Raptor Mitigation	7	5	2019	Spring	13:09	13:30	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	7	19	NW	None	98	Heavy rain
T-14	Raptor Mitigation	10	5	2019	Spring	08:25	08:45	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	8	18	NW	None	100	None
T-14	Raptor Mitigation	14	5	2019	Spring	11:29	11:52	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	9	16	NW	None	20	None
T-14	Raptor Mitigation	17	5	2019	Spring	08:51	09:13	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	7	21	NW	None	100	None
T-14	Raptor Mitigation	21	5	2019	Spring	12:35	12:55	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	12	14	NW	None	0	None
T-14	Raptor Mitigation	24	5	2019	Spring	12:44	13:05	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	14	11	NW	Fog	100	None
T-14	Raptor Mitigation	28	5	2019	Spring	10:13	22:33	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	14	13	SE	None	100	Light rain
T-14	Raptor Mitigation	31	5	2019	Spring	00:40	13:04	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	16	13	SW	None	95	None
T-14	Raptor Mitigation	4	6	2019	Spring	11:54	12:18	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	16	18	SW	None	100	None
T-14	Raptor Mitigation	7	6	2019	Spring	12:44	13:04	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	24	11	N	None	0	None
T-14	Raptor Mitigation	10	6	2019	Spring	12:16	12:36	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	21	SE	Drizzle	100	Light rain
T-14	Raptor Mitigation	14	6	2019	Spring	11:46	12:08	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	16	21	W	None	0	None
T-14	Raptor Mitigation	18	6	2019	Spring	13:25	13:45	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	11	W	None	0	None
T-14	Raptor Mitigation	21	6	2019	Spring	08:14	08:55	1	Sarah	3	7853.97	No	Circle	50 m radius	5	14	10	NW	None	0	None
T-14	Raptor Mitigation	25	6	2019	Spring	12:34	12:57	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	19	21	W	None	98	None
T-14	Raptor Mitigation	28	6	2019	Spring	09:15	09:49	1	Sarah	3	7853.97	No	Circle	50 m radius	5	22	6	W	None	80	None
T-14	Raptor Mitigation	2	7	2019	Summer	10:48	11:18	1	Sarah	4	7853.97	No	Circle	50 m radius	5	23	8	W	None	100	None
T-14	Raptor Mitigation	5	7	2019	Summer	10:07	10:47	1	Sarah	3	7853.97	No	Circle	50 m radius	5	28	11	SW	None	0	None
T-14	Raptor Mitigation	9	7	2019	Summer	11:16	11:38	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	25	3	W	None	10	None
T-14	Raptor Mitigation	12	7	2019	Summer	11:50	12:15	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	18	NW	None	100	None
T-14	Raptor Mitigation	16	7	2019	Summer	10:56	11:16	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	28	19	SW	None	100	None
T-14	Raptor Mitigation	20	7	2019	Summer	11:14	11:44	1	Sara	4	7853.97	No	Circle	50 m radius	5	30	14	SW	None	10	Intermittent rain,Lightning, heat wave
T-14	Raptor Mitigation	23	7	2019	Summer	10:34	11:14	1	Sara	3	7853.97	No	Circle	50 m radius	5	21	18	NW	None	0	None
T-14	Raptor Mitigation	26	7	2019	Summer	14:36	14:36	1	Sara	3	7853.97	No	Circle	50 m radius	5	29	10	SW	None	0	None
T-14	Raptor Mitigation	30	7	2019	Summer	14:47	15:30	1	Sara	4	7853.97	No	Circle	50 m radius	5	26	16	NW	None	20	Heavy rain,Night before

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-14	Raptor Mitigation	13	8	2019	Summer	13:40	14:00	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	28	10	NW	None	60	None
T-14	Raptor Mitigation	16	8	2019	Summer	13:42	14:22	1	Sara	3	7853.97	No	Circle	50 m radius	5	26	10	W	None	50	None
T-14	Raptor Mitigation	20	8	2019	Summer	15:02	15:45	1	Sara	4	7853.97	No	Circle	50 m radius	5	29	16	S	None	50	Early morning ,Light rain
T-14	Raptor Mitigation	23	8	2019	Summer	13:10	13:52	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	14	N	None	85	None
T-14	Raptor Mitigation	27	8	2019	Summer	10:13	10:53	1	Sarah	4	7853.97	No	Circle	50 m radius	5	21	18	S	Light rain	100	Light rain
T-14	Raptor Mitigation	30	8	2019	Summer	11:22	12:06	1	Sarah	3	7853.97	No	Circle	50 m radius	5	21	19	NW	None	0	None
T-14	Raptor Mitigation	3	9	2019	Fall	13:54	14:34	1	Sara	4	7853.97	no	Circle	50 m radius	5	24	27	S	None	100	None
T-14	Raptor Mitigation	6	9	2019	Fall	11:06	11:46	1	Sarah	3	7853.97	no	Circle	50 m radius	5	18	5	SE	None	100	None
T-14	Raptor Mitigation	10	9	2019	Fall	10:55	11:35	1	Sarah	4	7853.97	no	Circle	50 m radius	5	18	18	SE	None	100	None
T-14	Raptor Mitigation	13	9	2019	Fall	13:19	13:40	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	21	24	SE	None	100	Light rain
T-14	Raptor Mitigation	17	9	2019	Fall	11:37	11:57	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	21	13	SE	None	0	None
T-14	Raptor Mitigation	21	9	2019	Fall	15:49	16:30	1	Sarah	4	7853.97	no	Circle	50 m radius	5	30	18	SW	None	20	None
T-14	Raptor Mitigation	24	9	2019	Fall	10:52	11:12	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	18	11	SW	None	50	None
T-14	Raptor Mitigation	27	9	2019	Fall	13:18	13:58	1	Sarah	3	7853.97	no	Circle	50 m radius	5	22	26	S	None	40	None
T-14	Raptor Mitigation	1	10	2019	Fall	12:31	13:13	1	Sara	4	7853.97	no	Circle	50 m radius	5	26	19	SW	None	100	None
T-14	Raptor Mitigation	4	10	2019	Fall	08:31	09:12	1	Sarah	3	7853.97	no	Circle	50 m radius	5	9	14	N	None	100	Heavy rain
T-14	Raptor Mitigation	8	10	2019	Fall	08:43	09:25	1	Sara	4	7853.97	no	Circle	50 m radius	5	8	11	E	None	0	None
T-14	Raptor Mitigation	11	10	2019	Fall	10:54	11:34	1	Sarah	3	7853.97	no	Circle	50 m radius	5	14	23	SE	None	85	None
T-14	Raptor Mitigation	15	10	2019	Fall	12:35	12:56	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	12	21	S	None	20	None
T-14	Raptor Mitigation	18	10	2019	Fall	13:28	14:08	1	Sarah	3	7853.97	no	Circle	50 m radius	5	9	14	NW	None	60	None
T-14	Raptor Mitigation	22	10	2019	Fall	11:24	11:44	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	13	23	S	None	0	Light rain
T-14	Raptor Mitigation	25	10	2019	Fall	10:48	11:28	1	Sara	3	7853.97	no	Circle	50 m radius	5	9	6	SW	None	95	None
T-14	Raptor Mitigation	29	10	2019	Fall	10:27	11:07	1	Sara	4	7853.97	no	Circle	50 m radius	5	12	14	SW	None	100	None
T-14	Raptor Mitigation	5	11	2019	Fall	11:37	12:17	1	Sara	7	7853.97	no	Circle	50 m radius	5	6	26	W	None	90	None
T-14	Raptor Mitigation	14	11	2019	Fall	09:39	10:19	1	Sarah	9	7853.97	no	Circle	50 m radius	5	-3	18	SW	Light snow	100	Heavy snow
T-14	Raptor Mitigation	20	11	2019	Fall	13:06	14:46	1	Sarah	6	7853.97	no	Circle	50 m radius	5	6	16	NW	None	0	None
T-14	Raptor Mitigation	26	11	2019	Fall	10:25	11:05	1	Sara	4	7853.97	no	Circle	50 m radius	5	7	11	W	None	0	None
T-16	Sub-sample	3	5	2019	Spring	13:08	13:30	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	7	18	NW	None	100	Fog,Light rain
T-16	Sub-sample	7	5	2019	Spring	12:43	13:04	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	7	16	NW	None	100	Heavy rain
T-16	Sub-sample	10	5	2019	Spring	08:02	08:22	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	8	16	NW	None	100	Heavy rain,Thunderstorm
T-16	Sub-sample	14	5	2019	Spring	11:58	12:18	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	9	16	NW	None	10	None
T-16	Sub-sample	17	5	2019	Spring	09:17	09:37	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	7	24	NW	None	100	None
T-16	Sub-sample	21	5	2019	Spring	12:09	12:30	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	12	14	NW	None	5	None
T-16	Sub-sample	24	5	2019	Spring	13:09	13:31	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	15	14	NW	None	100	None
T-16	Sub-sample	28	5	2019	Spring	10:37	11:00	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	14	13	SE	Drizzle	100	Light rain
T-16	Sub-sample	31	5	2019	Spring	13:54	14:14	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	16	11	SW	None	95	None
T-16	Sub-sample	4	6	2019	Spring	12:29	12:55	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	19	18	SW	None	10	None
T-16	Sub-sample	7	6	2019	Spring	12:17	12:39	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	24	11	N	None	0	None
T-16	Sub-sample	10	6	2019	Spring	11:46	12:09	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	23	SE	None	100	Light rain
T-16	Sub-sample	14	6	2019	Spring	11:18	11:41	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	16	21	W	None	0	None
T-16	Sub-sample	18	6	2019	Spring	12:54	13:16	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	6	SW	None	0	None
T-16	Sub-sample	21	6	2019	Spring	09:02	09:42	1	Sarah	3	7853.97	No	Circle	50 m radius	5	16	11	NW	None	0	None
T-16	Sub-sample	25	6	2019	Spring	12:10	12:30	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	19	21	W	None	98	None
T-16	Sub-sample	28	6	2019	Spring	09:19	09:52	1	Sara	3	7853.97	No	Circle	50 m radius	5	22	8	SE	None	25	None
T-16	Sub-sample	2	7	2019	Summer	10:45	11:19	1	Sara	4	7853.97	No	Circle	50 m radius	5	21	8	NW	None	100	None
T-16	Sub-sample	5	7	2019	Summer	10:06	10:46	1	Sara	3	7853.97	No	Circle	50 m radius	5	28	13	SW	None	0	None
T-16	Sub-sample	9	7	2019	Summer	11:53	00:13	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	25	3	W	None	0	None
T-16	Sub-sample	12	7	2019	Summer	11:26	11:46	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	18	NW	None	100	None
T-16	Sub-sample	16	7	2019	Summer	11:24	11:44	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	28	19	SW	None	100	None
T-16	Sub-sample	20	7	2019	Summer	10:04	10:34	1	Sara	4	7853.97	No	Circle	50 m radius	5	27	13	S	None	20	Intermittent rain,Lightning, heat wave
T-16	Sub-sample	23	7	2019	Summer	10:39	11:19	1	Sarah	3	7853.97	No	Circle	50 m radius	5	19	13	NW	None	0	None
T-16	Sub-sample	26	7	2019	Summer	13:04	13:30	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	29	11	SW	None	0	None
T-16	Sub-sample	30	7	2019	Summer	13:29	13:52	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	25	14	W	None	80	Heavy rain
T-16	Sub-sample	2	8	2019	Summer	12:12	12:32	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	27	8	NW	None	0	None
T-16	Sub-sample	6	8	2019	Summer	14:23	14:44	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	25	11	NW	None	95	None
T-16	Sub-sample	9	8	2019	Summer	10:26	10:46	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	14	W	None	0	None
T-16	Sub-sample	13	8	2019	Summer	12:57	13:19	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	28	8	N	None	0	None
T-16	Sub-sample	16	8	2019	Summer	10:32	10:52	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	6	E	None	20	None
T-16	Sub-sample	20	8	2019	Summer	12:42	13:05	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	26	18	SW	None	80	None
T-16	Sub-sample	23	8	2019	Summer	12:40	13:01	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	14	N	None	65	None
T-16	Sub-sample	27	8	2019	Summer	09:27	10:08	1	Sarah	4	7853.97	No	Circle	50 m radius	5	20	19	S	Light rain	100	Light rain
T-16	Sub-sample	30	8	2019	Summer	10:50	11:12	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	20	14	NW	None	0	None
T-16	Sub-sample	3	9	2019	Fall	12:44	13:59	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	21	24	SE	None	100	None
T-16	Sub-sample	6	9	2019	Fall	12:58	13:20	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	17	6	E	None	100	None
T-16	Sub-sample	10	9	2019	Fall	10:25	10:46	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	18	18	SE	None	100	None
T-16	Sub-sample	13	9	2019	Fall	13:45	14:05	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	21	23	SE	None	90	Light rain
T-16	Sub-sample	17	9	2019	Fall	12:00	12:20	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	21	13	SE	None	0	None
T-16	Sub-sample	21	9	2019	Fall	16:33	17:09	1	Sarah	4	7853.97	no	Circle	50 m radius	5	31	18	SW	None	30	None
T-16	Sub-sample	24	9	2019	Fall	10:21	10:41	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	10	W	None	20	None
T-16	Sub-sample	27	9	2019	Fall	12:54	13:14	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	20	23	S	None	80	None
T-16	Sub-sample	1	10	2019	Fall	11:23	11:43	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	27	18	SW	None	60	None
T-16	Sub-sample	4	10	2019	Fall	14:30	14:50	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	11	16	NE	None	100	Heavy rain
T-16	Sub-sample	8	10	2019	Fall	12:38	12:58	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	16	16	SE	None	0	None
T-16	Sub-sample																				

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-16	Sub-sample	22	10	2019	Fall	11:53	12:13	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	13	24	S	None	10	Light rain
T-16	Sub-sample	25	10	2019	Fall	10:01	10:41	1	Sara	3	7853.97	no	Circle	50 m radius	5	7	5	S	None	90	None
T-16	Sub-sample	29	10	2019	Fall	09:39	10:19	1	Sara	4	7853.97	no	Circle	50 m radius	5	12	14	S	None	100	None
T-16	Sub-sample	5	11	2019	Fall	11:13	11:33	2	Sara,Sarah	7	7853.97	no	Circle	50 m radius	5	6	26	W	None	90	None
T-16	Sub-sample	14	11	2019	Fall	08:53	09:33	1	Sara	9	7853.97	no	Circle	50 m radius	5	-3	19	SW	None	100	Heavy snow,Light snow,Throughout week
T-16	Sub-sample	21	11	2019	Fall	11:17	11:57	1	Sarah	7	7853.97	no	Circle	50 m radius	5	6	24	SE	None	100	None
T-16	Sub-sample	26	11	2019	Fall	09:38	10:17	1	Sara	4	7853.97	no	Circle	50 m radius	5	7	11	W	None	0	None
T-17	Sub-sample	3	5	2019	Spring	10:53	11:15	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	8	13	NW	None	100	Fog,Light rain
T-17	Sub-sample	7	5	2019	Spring	11:06	11:27	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	5	13	NW	None	100	Heavy rain
T-17	Sub-sample	10	5	2019	Spring	11:03	11:24	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	8	18	NE	Light rain	100	Heavy rain,None,Thunderstorm
T-17	Sub-sample	14	5	2019	Spring	10:23	10:44	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	8	16	NW	None	75	None
T-17	Sub-sample	17	5	2019	Spring	11:48	12:09	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	8	24	NW	None	100	None
T-17	Sub-sample	21	5	2019	Spring	11:37	11:57	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	11	14	NW	None	0	None
T-17	Sub-sample	24	5	2019	Spring	11:46	12:06	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	13	10	NW	None	100	None
T-17	Sub-sample	28	5	2019	Spring	12:27	12:47	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	13	16	SE	None	100	Light rain
T-17	Sub-sample	31	5	2019	Spring	12:03	12:23	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	14	13	SW	None	90	None
T-17	Sub-sample	4	6	2019	Spring	10:56	03:20	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	15	11	S	None	100	None
T-17	Sub-sample	7	6	2019	Spring	11:43	12:03	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	23	14	N	None	0	None
T-17	Sub-sample	11	6	2019	Spring	11:18	12:03	1	Sarah	4	7853.97	No	Circle	50 m radius	5	18	16	W	None	0	None
T-17	Sub-sample	14	6	2019	Spring	10:30	10:51	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	14	21	W	None	0	None
T-17	Sub-sample	18	6	2019	Spring	11:35	11:56	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	21	5	W	None	0	None
T-17	Sub-sample	22	6	2019	Spring	13:05	13:45	1	Sara	4	7853.97	No	Circle	50 m radius	5	18	16	NW	None	0	None
T-17	Sub-sample	25	6	2019	Spring	11:17	11:57	1	Sarah	3	7853.97	No	Circle	50 m radius	5	19	21	W	None	100	None
T-17	Sub-sample	28	6	2019	Spring	10:04	10:33	1	Sara	3	7853.97	No	Circle	50 m radius	5	24	10	S	None	50	None
T-17	Sub-sample	2	7	2019	Summer	11:39	12:09	1	Sarah	4	7853.97	No	Circle	50 m radius	5	23	11	NW	None	100	None
T-17	Sub-sample	5	7	2019	Summer	09:07	09:48	1	Sarah	3	7853.97	No	Circle	50 m radius	5	26	10	S	None	0	None
T-17	Sub-sample	9	7	2019	Summer	12:48	13:09	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	26	10	W	None	0	None
T-17	Sub-sample	12	7	2019	Summer	10:55	11:15	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	16	NW	None	100	None
T-17	Sub-sample	16	7	2019	Summer	12:21	12:36	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	28	16	SW	None	100	None
T-17	Sub-sample	20	7	2019	Summer	09:15	09:45	1	Sara	4	7853.97	No	Circle	50 m radius	5	27	11	S	None	95	Intermittent rain,Lightning, heat wave
T-17	Sub-sample	23	7	2019	Summer	12:28	12:53	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	19	NW	None	0	None
T-17	Sub-sample	26	7	2019	Summer	12:18	12:17	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	28	11	SW	None	0	None
T-17	Sub-sample	30	7	2019	Summer	12:47	13:07	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	24	14	SW	None	100	Heavy rain,Night before
T-17	Sub-sample	2	8	2019	Summer	09:19	09:40	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	5	NE	None	0	None
T-17	Sub-sample	6	8	2019	Summer	13:26	14:06	1	Sarah	4	7853.97	No	Circle	50 m radius	5	24	11	W	None	95	None
T-17	Sub-sample	9	8	2019	Summer	09:58	10:19	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	20	13	W	None	0	None
T-17	Sub-sample	13	8	2019	Summer	10:40	11:00	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	24	8	NE	None	0	None
T-17	Sub-sample	16	8	2019	Summer	11:32	11:53	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	23	8	E	None	90	None
T-17	Sub-sample	20	8	2019	Summer	10:36	10:56	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	26	14	S	None	95	Early morning ,Light rain
T-17	Sub-sample	23	8	2019	Summer	09:57	10:17	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	17	10	N	None	0	None
T-17	Sub-sample	26	8	2019	Summer	13:13	13:54	1	Sarah	3	7853.97	No	Circle	50 m radius	5	23	31	SE	None	65	None
T-17	Sub-sample	30	8	2019	Summer	10:19	10:40	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	20	14	NW	None	0	None
T-17	Sub-sample	3	9	2019	Fall	12:11	12:29	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	21	24	SE	None	100	None
T-17	Sub-sample	6	9	2019	Fall	13:34	14:16	1	Sarah	3	7853.97	no	Circle	50 m radius	5	17	6	E	Light rain	100	None
T-17	Sub-sample	10	9	2019	Fall	09:48	10:09	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	16	19	SE	None	75	None
T-17	Sub-sample	13	9	2019	Fall	11:07	11:27	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	18	26	SE	None	100	None
T-17	Sub-sample	17	9	2019	Fall	09:33	09:53	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	16	10	E	None	10	None
T-17	Sub-sample	20	9	2019	Fall	10:18	10:58	1	Sara	3	7853.97	no	Circle	50 m radius	5	21	11	SE	None	50	None
T-17	Sub-sample	24	9	2019	Fall	09:40	10:01	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	14	8	NW	None	10	None
T-17	Sub-sample	27	9	2019	Fall	11:25	11:48	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	18	16	S	None	85	None
T-17	Sub-sample	1	10	2019	Fall	10:53	11:14	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	24	16	SW	None	0	None
T-17	Sub-sample	4	10	2019	Fall	13:48	14:12	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	11	14	N	None	100	Heavy rain
T-17	Sub-sample	8	10	2019	Fall	11:47	12:07	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	14	16	SE	None	0	None
T-17	Sub-sample	11	10	2019	Fall	09:31	09:51	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	13	21	SE	None	25	None
T-17	Sub-sample	15	10	2019	Fall	09:58	10:18	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	5	10	SE	None	0	None
T-17	Sub-sample	18	10	2019	Fall	12:58	12:57	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	9	16	NW	None	90	None
T-17	Sub-sample	22	10	2019	Fall	16:08	16:28	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	13	31	SW	None	90	None
T-17	Sub-sample	25	10	2019	Fall	11:04	11:45	1	Sarah	3	7853.97	no	Circle	50 m radius	5	9	5	SW	None	80	None
T-17	Sub-sample	29	10	2019	Fall	11:11	11:53	1	Sarah	4	7853.97	no	Circle	50 m radius	5	12	14	SW	None	100	None
T-17	Sub-sample	5	11	2019	Fall	10:44	11:04	2	Sara,Sarah	7	7853.97	no	Circle	50 m radius	5	5	24	W	None	75	None
T-17	Sub-sample	13	11	2019	Fall	12:01	12:41	1	Sarah	8	7853.97	no	Circle	50 m radius	5	5	18	S	None	100	Heavy snow
T-17	Sub-sample	21	11	2019	Fall	10:18	10:59	1	Sarah	8	7853.97	no	Circle	50 m radius	5	5	24	SE	None	100	None
T-17	Sub-sample	26	11	2019	Fall	11:08	11:48	1	Sarah	5	7853.97	no	Circle	50 m radius	5	7	10	W	None	10	None
T-18	Sub-sample	3	5	2019	Spring	10:34	10:55	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	8	14	NW	Fog	100	Fog,Light rain
T-18	Sub-sample	7	5	2019	Spring	10:30	10:51	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	5	13	NW	None	100	Heavy rain
T-18	Sub-sample	10	5	2019	Spring	10:38	10:59	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	8	18	NW	Light rain	100	Heavy rain,Thunderstorm
T-18	Sub-sample	14	5	2019	Spring	09:56	10:18	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	8	16	NW	None	75	None
T-18	Sub-sample	17	5	2019	Spring	11:16	11:40	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	8	24	NW	None	100	None
T-18	Sub-sample	21	5	2019	Spring	11:11	11:31	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	11	14	NW	None	0	None
T-18	Sub-sample	24	5	2019	Spring	11:23	11:43	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	12	13	NW	None	100	None
T-18	Sub-sample	28	5	2019	Spring	12:04	12:24	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	13	16	SE	None	100	Light rain
T-18	Sub-sample	31	5	2019	Spring	11:37	11:57	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	13	8	SW	None	0	None
T-18	Sub-sample	4	6	2019	Spring	10:30	10:52	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	15	11	S	None	100	None
T-18	Sub-sample																				

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-18	Sub-sample	18	6	2019	Spring	11:10	11:31	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	21	5	W	None	0	None
T-18	Sub-sample	22	6	2019	Spring	12:21	13:00	1	Sara	4	7853.97	No	Circle	50 m radius	5	17	14	NW	None	0	None
T-18	Sub-sample	25	6	2019	Spring	11:13	11:53	1	Sara	3	7853.97	No	Circle	50 m radius	5	19	21	W	None	100	None
T-18	Sub-sample	28	6	2019	Spring	10:05	10:35	1	Sarah	3	7853.97	No	Circle	50 m radius	5	26	10	S	None	85	None
T-18	Sub-sample	2	7	2019	Summer	11:37	12:38	1	Sara	4	7853.97	No	Circle	50 m radius	5	21	11	NW	None	100	None
T-18	Sub-sample	5	7	2019	Summer	09:09	09:50	1	Sara	3	7853.97	No	Circle	50 m radius	5	24	10	S	None	0	None
T-18	Sub-sample	9	7	2019	Summer	12:24	12:44	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	26	10	W	None	0	None
T-18	Sub-sample	12	7	2019	Summer	10:31	10:51	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	16	NW	None	100	None
T-18	Sub-sample	16	7	2019	Summer	11:55	12:16	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	28	19	SW	None	95	None
T-18	Sub-sample	20	7	2019	Summer	08:41	09:11	1	Sara	4	7853.97	No	Circle	50 m radius	5	25	16	SW	None	75	Intermittent rain,Lightning, heat wave
T-18	Sub-sample	23	7	2019	Summer	12:03	12:23	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	19	NW	None	0	None
T-18	Sub-sample	26	7	2019	Summer	11:51	12:11	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	27	8	SW	None	0	None
T-18	Sub-sample	30	7	2019	Summer	12:14	12:34	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	24	14	SW	None	100	Heavy rain
T-18	Sub-sample	2	8	2019	Summer	09:46	10:07	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	5	NE	None	0	None
T-18	Sub-sample	6	8	2019	Summer	13:24	14:06	1	Sara	4	7853.97	No	Circle	50 m radius	5	24	11	W	None	95	None
T-18	Sub-sample	9	8	2019	Summer	09:33	09:53	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	20	13	W	None	0	None
T-18	Sub-sample	13	8	2019	Summer	10:12	10:34	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	24	8	NE	None	0	None
T-18	Sub-sample	16	8	2019	Summer	11:06	11:26	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	23	8	E	None	40	None
T-18	Sub-sample	20	8	2019	Summer	09:59	10:19	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	13	SE	None	50	Light rain
T-18	Sub-sample	23	8	2019	Summer	09:32	09:52	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	17	10	N	None	0	None
T-18	Sub-sample	26	8	2019	Summer	11:59	12:40	1	Sarah	3	7853.97	No	Circle	50 m radius	5	23	27	SE	None	50	None
T-18	Sub-sample	30	8	2019	Summer	09:57	10:17	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	20	14	W	None	0	None
T-18	Sub-sample	3	9	2019	Fall	11:50	12:07	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	20	19	SE	None	100	None
T-18	Sub-sample	6	9	2019	Fall	13:33	14:13	1	Sara	3	7853.97	no	Circle	50 m radius	5	17	6	E	Light rain	100	None
T-18	Sub-sample	10	9	2019	Fall	09:22	09:44	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	16	16	SE	None	100	None
T-18	Sub-sample	13	9	2019	Fall	10:42	11:02	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	24	SE	None	100	None
T-18	Sub-sample	17	9	2019	Fall	09:58	10:19	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	16	10	E	None	0	None
T-18	Sub-sample	21	9	2019	Fall	17:20	18:00	1	Sarah	4	7853.97	no	Circle	50 m radius	5	30	14	SW	None	50	None
T-18	Sub-sample	24	9	2019	Fall	09:17	09:37	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	14	8	NW	None	30	None
T-18	Sub-sample	27	9	2019	Fall	11:01	11:21	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	14	16	S	None	100	None
T-18	Sub-sample	1	10	2019	Fall	10:30	10:50	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	24	16	SW	None	20	None
T-18	Sub-sample	4	10	2019	Fall	13:10	13:30	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	11	14	N	None	100	Heavy rain
T-18	Sub-sample	8	10	2019	Fall	12:10	12:30	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	16	16	SE	None	0	None
T-18	Sub-sample	11	10	2019	Fall	09:55	10:16	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	13	21	SE	None	50	None
T-18	Sub-sample	15	10	2019	Fall	10:22	10:42	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	5	10	SE	None	10	None
T-18	Sub-sample	18	10	2019	Fall	12:34	12:55	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	9	16	NW	None	90	None
T-18	Sub-sample	22	10	2019	Fall	12:55	13:15	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	15	31	SW	None	5	Light rain
T-18	Sub-sample	25	10	2019	Fall	08:50	09:30	1	Sara	3	7853.97	no	Circle	50 m radius	5	6	6	SE	None	95	None
T-18	Sub-sample	29	10	2019	Fall	08:47	09:27	1	Sara	4	7853.97	no	Circle	50 m radius	5	10	14	SE	None	100	None
T-18	Sub-sample	5	11	2019	Fall	10:19	10:39	2	Sara,Sarah	7	7853.97	no	Circle	50 m radius	5	6	24	W	None	80	None
T-18	Sub-sample	13	11	2019	Fall	11:57	12:37	1	Sara	8	7853.97	no	Circle	50 m radius	5	-5	16	S	None	100	Day before ,Heavy snow
T-18	Sub-sample	21	11	2019	Fall	09:32	10:12	1	Sara	8	7853.97	no	Circle	50 m radius	5	4	26	SE	None	100	None
T-18	Sub-sample	26	11	2019	Fall	10:22	11:02	1	Sarah	5	7853.97	no	Circle	50 m radius	5	6	8	W	None	0	None
T-19	Raptor Mortality	8	5	2019	Spring	9:15	9:54	2	Sara,Sarah	175	7853.97	No	Circle	50 m radius	5	9	27	E	None	10	None
T-19	Raptor Mortality	12	6	2019	Spring	09:28	09:48	2	Sara,Sarah	35	7853.97	No	Circle	50 m radius	5	19	13	S	None	5	None
T-19	Raptor Mortality	10	7	2019	Summer	10:10	10:30	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	25	10	W	None	0	None
T-19	Raptor Mortality	14	8	2019	Summer	14:09	14:30	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	26	13	NE	None	0	None
T-19	Raptor Mortality	16	9	2019	Fall	13:51	14:11	2	Sara,Sarah	18	7853.97	no	Circle	50 m radius	5	22	8	NE	None	80	None
T-19	Raptor Mortality	9	10	2019	Fall	10:45	11:06	2	Sara,Sarah	23	7853.97	no	Circle	50 m radius	5	13	18	SE	None	0	None
T-19	Raptor Mortality	14	11	2019	Fall	08:43	09:23	1	Sarah	26	7853.97	no	Circle	50 m radius	5	-3	18	SW	Light snow	100	Heavy snow
T-20	Sub-sample	2	5	2019	Spring	16:40	17:00	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	11	11	NW	None	100	None
T-20	Sub-sample	6	5	2019	Spring	14:04	14:26	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	14	10	W	None	100	None
T-20	Sub-sample	9	5	2019	Spring	9:20	9:40	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	12	31	SE	None	100	Strong winds
T-20	Sub-sample	13	5	2019	Spring	11:14	11:42	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	6	16	NE	None	100	Heavy rain
T-20	Sub-sample	16	5	2019	Spring	14:17	14:38	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	21	S	None	95	None
T-20	Sub-sample	20	5	2019	Spring	12:57	13:21	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	11	24	W	None	100	None
T-20	Sub-sample	23	5	2019	Spring	15:54	16:17	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	24	31	NW	None	0	Heavy rain,Thunderstorm
T-20	Sub-sample	27	5	2019	Spring	15:00	15:20	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	11	NW	None	98	None
T-20	Sub-sample	30	5	2019	Spring	13:07	13:36	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	11	W	None	100	None
T-20	Sub-sample	3	6	2019	Spring	12:53	13:13	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	9	19	NW	None	0	None
T-20	Sub-sample	6	6	2019	Spring	15:17	15:37	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	13	NW	Fog	100	Day before,Thunderstorm
T-20	Sub-sample	9	6	2019	Spring	15:16	15:56	1	Sara	3	7853.97	No	Circle	50 m radius	5	27	23	S	None	90	Hot summer temperature day before
T-20	Sub-sample	13	6	2019	Spring	17:03	17:43	1	Sara	4	7853.97	No	Circle	50 m radius	5	12	16	NW	Drizzle	100	During night before and early daylight today ,Heavy rain,Thunderstorm
T-20	Sub-sample	17	6	2019	Spring	13:52	14:13	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	8	NE	None	95	None
T-20	Sub-sample	21	6	2019	Spring	11:41	12:25	1	Sarah	4	7853.97	No	Circle	50 m radius	5	18	18	NW	None	0	None
T-20	Sub-sample	24	6	2019	Spring	13:45	14:25	1	Sarah	3	7853.97	No	Circle	50 m radius	5	25	23	SE	None	95	None
T-20	Sub-sample	27	6	2019	Spring	13:47	14:07	1	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	28	8	SW	None	0	None
T-20	Sub-sample	30	6	2019	Spring	11:28	11:26	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	18	NW	None	0	None
T-20	Sub-sample	4	7	2019	Summer	09:26	09:48	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	25	11	SE	None	0	None
T-20	Sub-sample	8	7	2019	Summer	08:27	09:07	1	Sara	4	7853.97	No	Circle	50 m radius	5	18	6	NE	None	0	None
T-20	Sub-sample	11	7	2019	Summer	09:21	09:41	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	24	13	W	None	0	None
T-20	Sub-sample	15	7	2019	Summer	09:06	09:27	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	19	10	SE	None	0	None
T-20	Sub-sample	18	7	2019	Summer	15:02	15:23	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	31	16	SW	None	10	None
T-20	Sub-sample	22																			

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-20	Sub-sample	1	8	2019	Summer	13:10	13:30	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	26	6	SW	None	0	None
T-20	Sub-sample	5	8	2019	Summer	11:50	12:10	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	26	13	SW	None	75	None
T-20	Sub-sample	8	8	2019	Summer	14:37	14:57	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	23	23	NW	None	20	None
T-20	Sub-sample	12	8	2019	Summer	13:44	14:04	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	27	13	SW	None	90	None
T-20	Sub-sample	15	8	2019	Summer	10:28	10:48	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	16	SE	None	100	None
T-20	Sub-sample	19	8	2019	Summer	11:02	11:25	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	10	NW	None	10	Light rain
T-20	Sub-sample	22	8	2019	Summer	14:26	14:48	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	19	NW	None	5	None
T-20	Sub-sample	26	8	2019	Summer	10:35	10:56	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	21	23	SE	None	20	None
T-20	Sub-sample	29	8	2019	Summer	12:44	13:04	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	18	SW	None	10	None
T-20	Sub-sample	2	9	2019	Fall	13:08	13:28	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	22	14	W	None	20	None
T-20	Sub-sample	5	9	2019	Fall	13:14	13:34	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	20	8	NW	None	0	None
T-20	Sub-sample	9	9	2019	Fall	13:43	14:03	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	19	6	SE	None	20	None
T-20	Sub-sample	12	9	2019	Fall	13:25	13:45	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	18	E	None	100	Fog,Light rain
T-20	Sub-sample	16	9	2019	Fall	13:18	13:38	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	22	8	NE	None	40	None
T-20	Sub-sample	19	9	2019	Fall	13:20	14:00	1	Sara	3	7853.97	no	Circle	50 m radius	5	25	16	S	None	0	None
T-20	Sub-sample	23	9	2019	Fall	13:05	13:25	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	21	16	NW	None	85	Light rain
T-20	Sub-sample	26	9	2019	Fall	11:18	11:39	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	18	21	W	None	0	None
T-20	Sub-sample	30	9	2019	Fall	11:57	12:17	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	17	16	SE	None	50	None
T-20	Sub-sample	3	10	2019	Fall	12:44	13:04	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	11	21	SE	Drizzle	100	Heavy rain
T-20	Sub-sample	7	10	2019	Fall	13:09	13:29	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	16	19	W	None	80	None
T-20	Sub-sample	10	10	2019	Fall	13:54	14:14	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	20	21	SE	None	15	None
T-20	Sub-sample	14	10	2019	Fall	14:01	14:23	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	9	24	W	None	50	None
T-20	Sub-sample	17	10	2019	Fall	13:27	13:50	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	7	31	NW	None	100	Heavy rain,Strong winds
T-20	Sub-sample	21	10	2019	Fall	12:49	13:10	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	16	27	E	None	100	None
T-20	Sub-sample	24	10	2019	Fall	10:43	11:26	1	Sarah	3	7853.97	no	Circle	50 m radius	5	9	16	NW	None	100	None
T-20	Sub-sample	28	10	2019	Fall	11:25	12:12	1	Sarah	4	7853.97	no	Circle	50 m radius	5	12	16	S	None	0	Light rain
T-20	Sub-sample	31	10	2019	Fall	09:59	10:39	1	Sara	3	7853.97	no	Circle	50 m radius	5	6	14	NE	Heavy rain	100	Heavy rain,Intermittent rain,Light rain,Throughout day and night before
T-20	Sub-sample	4	11	2019	Fall	14:46	15:26	1	Sarah	4	7853.97	no	Circle	50 m radius	5	11	23	SW	None	70	Heavy rain
T-20	Sub-sample	11	11	2019	Fall	10:27	10:47	2	Sara,Sarah	7	7853.97	no	Circle	50 m radius	5	-3	21	E	Light snow	100	Light snow
T-20	Sub-sample	18	11	2019	Fall	12:02	12:42	1	Sara	7	7853.97	no	Circle	50 m radius	5	4	13	SE	None	100	Snow melt
T-20	Sub-sample	25	11	2019	Fall	11:18	12:00	1	Sara	7	7853.97	no	Circle	50 m radius	5	6	14	S	None	100	None
T-21	Raptor Mitigation	3	5	2019	Spring	11:25	11:48	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	8	14	NW	None	100	None
T-21	Raptor Mitigation	7	5	2019	Spring	9:30	9:53	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	5	13	N	None	100	Heavy rain
T-21	Raptor Mitigation	10	5	2019	Spring	11:32	11:52	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	6	18	NW	Light rain	100	Heavy rain,Thunderstorm
T-21	Raptor Mitigation	14	5	2019	Spring	08:20	09:00	1	Sara	4	7853.97	No	Circle	50 m radius	5	6	16	NW	None	20	None
T-21	Raptor Mitigation	17	5	2019	Spring	12:15	12:35	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	9	23	NW	None	95	None
T-21	Raptor Mitigation	21	5	2019	Spring	08:25	09:05	1	Sara	4	7853.97	No	Circle	50 m radius	5	10	7	NW	None	5	Cooler temperatures
T-21	Raptor Mitigation	24	5	2019	Spring	08:15	08:35	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	11	13	NW	None	100	None
T-21	Raptor Mitigation	28	5	2019	Spring	08:12	08:32	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	13	14	SE	Fog	100	Light rain
T-21	Raptor Mitigation	31	5	2019	Spring	08:13	08:58	1	Sarah	3	7853.97	No	Circle	50 m radius	5	8	2	SW	None	60	None
T-21	Raptor Mitigation	4	6	2019	Spring	09:40	10:01	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	14	11	S	None	100	None
T-21	Raptor Mitigation	7	6	2019	Spring	08:18	09:00	1	Sara	3	7853.97	No	Circle	50 m radius	5	16	6	NE	None	0	None
T-21	Raptor Mitigation	11	6	2019	Spring	09:00	09:41	1	Sarah	4	7853.97	No	Circle	50 m radius	5	12	10	W	None	0	None
T-21	Raptor Mitigation	14	6	2019	Spring	08:12	08:57	1	Sarah	3	7853.97	No	Circle	50 m radius	5	12	16	W	None	0	None
T-21	Raptor Mitigation	18	6	2019	Spring	08:17	09:00	1	Sara	4	7853.97	No	Circle	50 m radius	5	15	3	NW	None	10	None
T-21	Raptor Mitigation	22	6	2019	Spring	10:48	11:28	1	Sara	4	7853.97	No	Circle	50 m radius	5	17	8	NW	None	0	None
T-21	Raptor Mitigation	25	6	2019	Spring	7:55	08:42	1	Sarah	4	7853.97	No	Circle	50 m radius	5	18	19	SW	None	0	None
T-21	Raptor Mitigation	28	6	2019	Spring	10:42	11:12	1	Sara	3	7853.97	No	Circle	50 m radius	5	24	10	S	None	70	None
T-21	Raptor Mitigation	2	7	2019	Summer	08:12	08:42	1	Sara	4	7853.97	No	Circle	50 m radius	5	21	5	W	None	75	None
T-21	Raptor Mitigation	5	7	2019	Summer	08:14	08:54	1	Sara	3	7853.97	No	Circle	50 m radius	5	24	10	SE	None	0	None
T-21	Raptor Mitigation	9	7	2019	Summer	08:17	08:59	1	Sara	4	7853.97	No	Circle	50 m radius	5	16	3	NE	None	0	None
T-21	Raptor Mitigation	12	7	2019	Summer	09:38	09:58	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	16	W	None	100	None
T-21	Raptor Mitigation	15	7	2019	Summer	11:21	11:43	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	26	11	S	None	15	None
T-21	Raptor Mitigation	18	7	2019	Summer	13:10	13:50	1	Sara	3	7853.97	No	Circle	50 m radius	5	28	16	SW	None	10	None
T-21	Raptor Mitigation	22	7	2019	Summer	14:18	14:58	1	Sara	4	7853.97	No	Circle	50 m radius	5	21	18	NW	None	100	None
T-21	Raptor Mitigation	26	7	2019	Summer	08:08	08:52	1	Sara	4	7853.97	No	Circle	50 m radius	5	19	6	SE	None	0	None
T-21	Raptor Mitigation	30	7	2019	Summer	08:06	08:47	1	Sarah	4	7853.97	No	Circle	50 m radius	5	21	10	NW	None	100	Heavy rain
T-21	Raptor Mitigation	2	8	2019	Summer	10:15	11:00	1	Sarah	3	7853.97	No	Circle	50 m radius	5	23	6	N	None	0	None
T-21	Raptor Mitigation	5	8	2019	Summer	14:02	14:43	1	Sarah	3	7853.97	No	Circle	50 m radius	5	22	16	SW	None	0	None
T-21	Raptor Mitigation	8	8	2019	Summer	16:49	17:09	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	24	16	NW	None	0	None
T-21	Raptor Mitigation	12	8	2019	Summer	08:11	08:55	1	Sara	4	7853.97	No	Circle	50 m radius	5	21	6	SE	None	50	None
T-21	Raptor Mitigation	16	8	2019	Summer	14:30	15:00	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	26	10	W	None	50	None
T-21	Raptor Mitigation	19	8	2019	Summer	09:50	09:50	2	Sara,Sarah	7	7853.97	No	Circle	50 m radius	5	18	16	E	None	0	None
T-21	Raptor Mitigation	20	8	2019	Summer	08:34	09:17	1	Sarah	8	7853.97	No	Circle	50 m radius	5	21	11	SE	None	60	None
T-21	Raptor Mitigation	23	8	2019	Summer	08:27	09:10	1	Sarah	3	7853.97	No	Circle	50 m radius	5	14	8	NE	None	0	None
T-21	Raptor Mitigation	26	8	2019	Summer	11:07	11:50	1	Sara	3	7853.97	No	Circle	50 m radius	5	22	27	SE	None	20	None
T-21	Raptor Mitigation	30	8	2019	Summer	13:23	14:05	1	Sara	4	7853.97	No	Circle	50 m radius	5	22	21	NW	None	5	None
T-21	Raptor Mitigation	3	9	2019	Fall	08:20	09:00	1	Sara	4	7853.97	no	Circle	50 m radius	5	13	13	SE	None	30	None
T-21	Raptor Mitigation	6	9	2019	Fall	09:24	10:05	1	Sarah	3	7853.97	no	Circle	50 m radius	5	12	6	SE	None	90	None
T-21	Raptor Mitigation	9	9	2019	Fall	12:47	13:27	1	Sarah	3	7853.97	no	Circle	50 m radius	5	18	6	SE	None	45	None
T-21	Raptor Mitigation	12	9	2019	Fall	13:56	14:40	1	Sara	3	7853.97	no	Circle	50 m radius	5	17	16	E	None	100	Heavy rain,Night before ,Thunderstorm
T-21	Raptor Mitigation	16	9	2019	Fall	14:25	15:10	1	Sara	4	7853.97	no	Circle	50 m radius	5	23	8	NW	None	0	None
T-21	Raptor Mitigation	20	9	2019	Fall	11:23	12:03	1	Sara	4	7853.97	no	Circle	50 m radius	5	24	11	S	None	5	None
T-21	Raptor Mitigation	23	9</																		

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-21	Raptor Mitigation	4	10	2019	Fall	09:20	10:04	1	Sara	4	7853.97	no	Circle	50 m radius	5	9	14	NE	None	100	Light rain,Overnight
T-21	Raptor Mitigation	8	10	2019	Fall	08:37	09:18	1	Sarah	4	7853.97	no	Circle	50 m radius	5	6	8	E	None	0	None
T-21	Raptor Mitigation	12	10	2019	Fall	11:51	12:15	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	8	23	SW	None	90	None
T-21	Raptor Mitigation	15	10	2019	Fall	09:33	09:53	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	4	8	SE	None	0	None
T-21	Raptor Mitigation	18	10	2019	Fall	08:19	09:00	1	Sarah	3	7853.97	no	Circle	50 m radius	5	6	8	NE	None	100	None
T-21	Raptor Mitigation	22	10	2019	Fall	17:05	17:28	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	13	27	SW	None	100	None
T-21	Raptor Mitigation	25	10	2019	Fall	12:44	13:25	1	Sarah	3	7853.97	no	Circle	50 m radius	5	10	10	W	None	100	None
T-21	Raptor Mitigation	29	10	2019	Fall	09:39	10:19	1	Sarah	4	7853.97	no	Circle	50 m radius	5	11	13	S	None	100	None
T-21	Raptor Mitigation	5	11	2019	Fall	09:25	09:45	2	Sara,Sarah	7	7853.97	no	Circle	50 m radius	5	5	27	W	None	0	None
T-21	Raptor Mitigation	13	11	2019	Fall	10:51	11:31	1	Sarah	8	7853.97	no	Circle	50 m radius	5	-6	18	S	None	100	Heavy snow
T-21	Raptor Mitigation	19	11	2019	Fall	12:36	13:16	1	Sara	6	7853.97	no	Circle	50 m radius	5	5	8	S	None	75	None
T-21	Raptor Mitigation	26	11	2019	Fall	13:07	13:48	1	Sarah	7	7853.97	no	Circle	50 m radius	5	8	8	NW	None	60	None
T-22	Raptor Mitigation	3	5	2019	Spring	11:55	12:16	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	8	18	NW	None	100	Fog,Heavy rain
T-22	Raptor Mitigation	7	5	2019	Spring	9:56	10:21	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	5	13	N	None	100	Heavy rain
T-22	Raptor Mitigation	10	5	2019	Spring	11:57	12:19	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	6	19	NW	Light rain	100	Heavy rain,Thunderstorm
T-22	Raptor Mitigation	14	5	2019	Spring	09:09	09:31	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	7	16	NW	None	25	None
T-22	Raptor Mitigation	17	5	2019	Spring	12:37	12:58	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	9	23	NW	None	98	None
T-22	Raptor Mitigation	21	5	2019	Spring	10:41	11:01	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	10	14	NW	None	25	None
T-22	Raptor Mitigation	24	5	2019	Spring	08:48	09:28	1	Sara	3	7853.97	No	Circle	50 m radius	5	10	16	NW	None	100	None
T-22	Raptor Mitigation	28	5	2019	Spring	08:40	09:21	1	Sarah	4	7853.97	No	Circle	50 m radius	5	13	15	SE	Fog	100	Light rain
T-22	Raptor Mitigation	31	5	2019	Spring	09:07	09:28	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	10	11	NW	None	0	None
T-22	Raptor Mitigation	4	6	2019	Spring	10:04	10:24	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	15	11	S	None	100	None
T-22	Raptor Mitigation	7	6	2019	Spring	10:45	11:07	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	11	N	None	0	None
T-22	Raptor Mitigation	11	6	2019	Spring	09:45	10:28	1	Sarah	4	7853.97	No	Circle	50 m radius	5	15	10	SW	None	0	None
T-22	Raptor Mitigation	14	6	2019	Spring	09:37	09:58	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	13	19	W	None	10	None
T-22	Raptor Mitigation	18	6	2019	Spring	12:12	12:43	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	6	SW	None	0	None
T-22	Raptor Mitigation	22	6	2019	Spring	11:33	12:13	1	Sara	4	7853.97	No	Circle	50 m radius	5	17	10	NW	None	0	None
T-22	Raptor Mitigation	25	6	2019	Spring	10:40	11:04	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	21	W	None	100	None
T-22	Raptor Mitigation	28	6	2019	Spring	10:43	11:08	1	Sarah	3	7853.97	No	Circle	50 m radius	5	26	10	SW	None	90	None
T-22	Raptor Mitigation	2	7	2019	Summer	08:53	09:25	1	Sara	4	7853.97	No	Circle	50 m radius	5	25	5	W	None	75	Other
T-22	Raptor Mitigation	5	7	2019	Summer	08:15	08:55	1	Sarah	3	7853.97	No	Circle	50 m radius	5	21	8	SE	None	0	None
T-22	Raptor Mitigation	9	7	2019	Summer	13:58	14:25	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	26	10	NW	None	0	None
T-22	Raptor Mitigation	12	7	2019	Summer	10:03	10:24	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	16	NW	None	100	None
T-22	Raptor Mitigation	15	7	2019	Summer	11:50	12:12	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	26	11	S	None	5	None
T-22	Raptor Mitigation	18	7	2019	Summer	13:02	13:42	1	Sarah	3	7853.97	No	Circle	50 m radius	5	29	16	SW	None	30	None
T-22	Raptor Mitigation	22	7	2019	Summer	14:17	14:57	1	Sarah	4	7853.97	No	Circle	50 m radius	5	22	14	NW	None	100	None
T-22	Raptor Mitigation	26	7	2019	Summer	09:57	10:37	1	Sara	4	7853.97	No	Circle	50 m radius	5	25	6	SW	None	0	None
T-22	Raptor Mitigation	30	7	2019	Summer	08:51	09:32	1	Sarah	4	7853.97	No	Circle	50 m radius	5	21	10	NW	None	20	Heavy rain
T-22	Raptor Mitigation	2	8	2019	Summer	10:20	11:00	1	Sara	3	7853.97	No	Circle	50 m radius	5	26	7	N	None	0	None
T-22	Raptor Mitigation	5	8	2019	Summer	13:58	14:38	1	Sara	4	7853.97	No	Circle	50 m radius	5	28	14	SW	None	0	None
T-22	Raptor Mitigation	8	8	2019	Summer	16:21	16:43	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	24	16	NW	None	0	Early morning ,Light rain
T-22	Raptor Mitigation	12	8	2019	Summer	09:03	09:45	1	Sara	4	7853.97	No	Circle	50 m radius	5	23	10	S	None	30	None
T-22	Raptor Mitigation	16	8	2019	Summer	13:43	14:23	1	Sarah	4	7853.97	No	Circle	50 m radius	5	25	5	SW	None	30	None
T-22	Raptor Mitigation	20	8	2019	Summer	09:27	09:48	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	13	SE	None	0	None
T-22	Raptor Mitigation	23	8	2019	Summer	08:35	09:20	1	Sara	3	7853.97	No	Circle	50 m radius	5	14	5	SE	None	0	None
T-22	Raptor Mitigation	26	8	2019	Summer	11:08	11:50	1	Sarah	3	7853.97	No	Circle	50 m radius	5	22	26	SE	None	20	None
T-22	Raptor Mitigation	30	8	2019	Summer	13:20	14:00	1	Sarah	3	7853.97	No	Circle	50 m radius	5	21	21	NW	None	0	None
T-22	Raptor Mitigation	3	9	2019	Fall	09:06	09:44	1	Sara	4	7853.97	no	Circle	50 m radius	5	16	16	SE	None	100	None
T-22	Raptor Mitigation	6	9	2019	Fall	09:25	10:05	1	Sara	3	7853.97	no	Circle	50 m radius	5	16	8	SE	None	90	None
T-22	Raptor Mitigation	9	9	2019	Fall	12:51	13:36	1	Sara	3	7853.97	no	Circle	50 m radius	5	19	5	S	None	25	None
T-22	Raptor Mitigation	12	9	2019	Fall	13:51	14:31	1	Sarah	3	7853.97	no	Circle	50 m radius	5	16	18	E	None	100	Fog,Light rain
T-22	Raptor Mitigation	16	9	2019	Fall	14:21	15:02	1	Sarah	4	7853.97	no	Circle	50 m radius	5	23	10	NE	None	0	None
T-22	Raptor Mitigation	19	9	2019	Fall	13:28	14:08	1	Sarah	3	7853.97	no	Circle	50 m radius	5	24	18	SE	None	10	None
T-22	Raptor Mitigation	23	9	2019	Fall	13:30	13:50	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	21	16	NW	None	60	Light rain
T-22	Raptor Mitigation	27	9	2019	Fall	09:03	09:45	1	Sara	4	7853.97	no	Circle	50 m radius	5	13	14	SE	None	95	None
T-22	Raptor Mitigation	30	9	2019	Fall	13:23	14:03	1	Sara	3	7853.97	no	Circle	50 m radius	5	22	14	SE	None	0	None
T-22	Raptor Mitigation	4	10	2019	Fall	08:32	09:14	1	Sara	4	7853.97	no	Circle	50 m radius	5	9	18	NE	None	100	Light rain,Overnight
T-22	Raptor Mitigation	8	10	2019	Fall	09:24	10:04	1	Sarah	4	7853.97	no	Circle	50 m radius	5	12	14	E	None	0	None
T-22	Raptor Mitigation	12	10	2019	Fall	12:20	12:45	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	8	24	SW	None	95	None
T-22	Raptor Mitigation	15	10	2019	Fall	09:08	09:30	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	3	8	SE	None	20	None
T-22	Raptor Mitigation	18	10	2019	Fall	09:05	09:47	1	Sarah	3	7853.97	no	Circle	50 m radius	5	6	8	N	None	95	None
T-22	Raptor Mitigation	22	10	2019	Fall	16:37	17:00	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	13	31	SW	None	90	None
T-22	Raptor Mitigation	25	10	2019	Fall	11:52	12:35	1	Sarah	3	7853.97	no	Circle	50 m radius	5	10	5	SW	None	75	None
T-22	Raptor Mitigation	29	10	2019	Fall	10:22	11:02	1	Sarah	4	7853.97	no	Circle	50 m radius	5	12	14	SW	None	100	None
T-22	Raptor Mitigation	5	11	2019	Fall	09:49	10:12	2	Sara,Sarah	7	7853.97	no	Circle	50 m radius	5	5	27	W	None	0	None
T-22	Raptor Mitigation	13	11	2019	Fall	11:00	11:40	1	Sara	8	7853.97	no	Circle	50 m radius	5	-5	16	S	None	100	Heavy snow,Yesterday
T-22	Raptor Mitigation	19	11	2019	Fall	13:24	14:04	1	Sara	6	7853.97	no	Circle	50 m radius	5	6	5	S	None	70	Fog,Overnight
T-22	Raptor Mitigation	26	11	2019	Fall	12:21	13:02	1	Sarah	7	7853.97	no	Circle	50 m radius	5	8	10	NW	None	20	None
T-23	Raptor Mortality	15	5	2019	Spring	09:57	10:20	2	Sara,Sarah	175	7853.97	No	Circle	50 m radius	5	8	10	W	None	25	None
T-23	Raptor Mortality	19	6	2019	Spring	10:44	11:04	2	Sara,Sarah	35	7853.97	No	Circle	50 m radius	5	23	6	SE	None	15	None
T-23	Raptor Mortality	17	7	2019	Summer	11:33	11:53	2	Sara,Sarah	29	7853.97	No	Circle	50 m radius	5	25	5	NE	None	100	None
T-23	Raptor Mortality	21	8	2019	Summer	12:29	13:10	1	Sara	34	7853.97	No	Circle	50 m radius	5	24	14	SW	None	100	None
T-23	Raptor Mortality	18	9	2019	Fall	11:57	12:41	1	Sara	27	7853.97	no	Circle	50 m radius	5	22	21	SE	None	0	None
T-23	R																				

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-25	Raptor Mortality	19	6	2019	Spring	10:20	10:40	2	Sara,Sarah	35	7853.97	No	Circle	50 m radius	5	23	6	SE	None	15	None
T-25	Raptor Mortality	17	7	2019	Summer	11:02	11:23	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	25	5	NE	None	100	Fog,Heavy rain
T-25	Raptor Mortality	21	8	2019	Summer	12:32	13:18	1	Sarah	28	7853.97	No	Circle	50 m radius	5	25	13	SW	None	100	None
T-25	Raptor Mortality	18	9	2019	Fall	11:53	12:33	1	Sarah	28	7853.97	no	Circle	50 m radius	5	21	18	SE	None	0	None
T-25	Raptor Mortality	23	10	2019	Fall	11:42	12:22	1	Sarah	35	7853.97	no	Circle	50 m radius	5	9	31	SW	None	0	None
T-25	Raptor Mortality	21	11	2019	Fall	12:24	13:04	1	Sarah	29	7853.97	no	Circle	50 m radius	5	7	26	SE	Light rain	100	None
T-26	Raptor Mitigation	2	5	2019	Spring	14:15	14:45	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	8	13	NW	None	40	None
T-26	Raptor Mitigation	6	5	2019	Spring	12:49	13:09	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	14	11	SW	None	100	None
T-26	Raptor Mitigation	9	5	2019	Spring	9:57	10:37	1	Sara	3	7853.97	No	Circle	50 m radius	5	13	32	SE	None	100	Strong winds
T-26	Raptor Mitigation	13	5	2019	Spring	12:39	12:03	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	7	14	NE	Drizzle	100	None
T-26	Raptor Mitigation	16	5	2019	Spring	12:33	12:55	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	15	11	S	None	70	None
T-26	Raptor Mitigation	20	5	2019	Spring	11:37	11:37	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	11	24	W	None	100	Heavy rain,Thunderstorm
T-26	Raptor Mitigation	23	5	2019	Spring	14:23	15:03	1	Sara	3	7853.97	No	Circle	50 m radius	5	20	24	SW	None	0	Heavy rain,This morning ,Thunderstorm
T-26	Raptor Mitigation	27	5	2019	Spring	13:21	13:48	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	21	8	NW	None	0	None
T-26	Raptor Mitigation	30	5	2019	Spring	13:52	14:12	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	11	W	None	90	None
T-26	Raptor Mitigation	3	6	2019	Spring	11:50	11:11	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	9	23	NW	None	0	None
T-26	Raptor Mitigation	6	6	2019	Spring	12:27	13:07	1	Sara	3	7853.97	No	Circle	50 m radius	5	14	11	W	None	100	Night before ,Thunderstorm
T-26	Raptor Mitigation	9	6	2019	Spring	12:01	12:41	1	Sara	3	7853.97	No	Circle	50 m radius	5	25	26	SE	None	80	Hot summer temperature yesterday
T-26	Raptor Mitigation	13	6	2019	Spring	15:14	15:53	1	Sara	4	7853.97	No	Circle	50 m radius	5	12	14	NW	None	100	During night before and early daylight today ,Heavy rain,Thunderstorm
T-26	Raptor Mitigation	17	6	2019	Spring	12:44	13:04	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	21	10	NE	None	90	None
T-26	Raptor Mitigation	20	6	2019	Spring	12:52	13:12	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	6	NE	None	100	None
T-26	Raptor Mitigation	23	6	2019	Spring	16:20	17:00	1	Sara	3	7853.97	No	Circle	50 m radius	5	23	8	NW	None	0	None
T-26	Raptor Mitigation	27	6	2019	Spring	12:42	13:02	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	26	10	SW	None	0	None
T-26	Raptor Mitigation	30	6	2019	Spring	10:27	10:47	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	16	N	None	0	None
T-26	Raptor Mitigation	4	7	2019	Summer	10:39	11:20	1	Sara	4	7853.97	No	Circle	50 m radius	5	27	13	SE	None	0	None
T-26	Raptor Mitigation	8	7	2019	Summer	11:07	11:47	1	Sara	4	7853.97	No	Circle	50 m radius	5	23	6	N	None	0	None
T-26	Raptor Mitigation	11	7	2019	Summer	11:13	11:36	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	23	21	NW	None	0	None
T-26	Raptor Mitigation	15	7	2019	Summer	10:08	10:30	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	11	S	None	5	None
T-26	Raptor Mitigation	18	7	2019	Summer	12:00	12:40	1	Sara	3	7853.97	No	Circle	50 m radius	5	27	14	SW	None	25	None
T-26	Raptor Mitigation	22	7	2019	Summer	12:13	12:54	1	Sarah	4	7853.97	No	Circle	50 m radius	5	22	13	NW	None	15	None
T-26	Raptor Mitigation	25	7	2019	Summer	09:24	10:05	1	Sarah	3	7853.97	No	Circle	50 m radius	5	21	6	SW	None	0	None
T-26	Raptor Mitigation	29	7	2019	Summer	10:07	10:31	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	27	19	SW	None	50	None
T-26	Raptor Mitigation	1	8	2019	Summer	12:37	12:58	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	25	8	NE	None	0	None
T-26	Raptor Mitigation	5	8	2019	Summer	13:32	13:52	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	28	14	SW	None	0	None
T-26	Raptor Mitigation	8	8	2019	Summer	15:08	16:00	1	Sarah	3	7853.97	No	Circle	50 m radius	5	24	21	NW	None	0	None
T-26	Raptor Mitigation	12	8	2019	Summer	14:44	15:15	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	27	13	SW	None	60	None
T-26	Raptor Mitigation	15	8	2019	Summer	09:24	09:44	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	16	E	None	100	None
T-26	Raptor Mitigation	19	8	2019	Summer	09:38	09:59	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	13	NW	None	20	Light rain
T-26	Raptor Mitigation	22	8	2019	Summer	15:11	15:35	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	21	NW	None	30	None
T-26	Raptor Mitigation	25	8	2019	Summer	13:44	14:24	1	Sara	3	7853.97	No	Circle	50 m radius	5	23	19	SE	None	50	None
T-26	Raptor Mitigation	29	8	2019	Summer	13:48	14:11	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	21	SW	None	10	None
T-26	Raptor Mitigation	2	9	2019	Fall	08:56	09:36	1	Sara	4	7853.97	no	Circle	50 m radius	5	19	13	W	None	10	None
T-26	Raptor Mitigation	5	9	2019	Fall	12:41	13:01	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	19	8	NW	None	0	None
T-26	Raptor Mitigation	9	9	2019	Fall	11:45	12:05	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	18	6	SE	None	95	None
T-26	Raptor Mitigation	12	9	2019	Fall	12:22	12:42	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	16	E	None	100	Fog,Light rain
T-26	Raptor Mitigation	16	9	2019	Fall	12:15	12:35	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	21	6	NE	None	98	None
T-26	Raptor Mitigation	19	9	2019	Fall	12:19	12:39	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	23	19	SE	None	5	None
T-26	Raptor Mitigation	23	9	2019	Fall	12:00	12:20	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	20	14	NW	None	50	Light rain
T-26	Raptor Mitigation	26	9	2019	Fall	12:22	13:02	1	Sara	3	7853.97	no	Circle	50 m radius	5	18	23	W	None	20	None
T-26	Raptor Mitigation	30	9	2019	Fall	12:54	13:14	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	19	14	SE	None	10	None
T-26	Raptor Mitigation	3	10	2019	Fall	08:50	09:30	1	Sarah	3	7853.97	no	Circle	50 m radius	5	9	23	E	None	100	Heavy rain
T-26	Raptor Mitigation	7	10	2019	Fall	11:26	12:10	1	Sara	4	7853.97	no	Circle	50 m radius	5	14	16	W	None	75	None
T-26	Raptor Mitigation	10	10	2019	Fall	12:35	12:57	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	19	SE	None	0	None
T-26	Raptor Mitigation	14	10	2019	Fall	12:27	12:50	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	9	23	W	None	40	None
T-26	Raptor Mitigation	17	10	2019	Fall	11:52	12:12	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	7	31	NW	None	100	Heavy rain,Strong winds
T-26	Raptor Mitigation	21	10	2019	Fall	14:11	15:02	1	Sarah	4	7853.97	no	Circle	50 m radius	5	17	26	SE	None	100	None
T-26	Raptor Mitigation	24	10	2019	Fall	12:25	13:06	1	Sara	3	7853.97	no	Circle	50 m radius	5	9	19	NW	None	60	None
T-26	Raptor Mitigation	28	10	2019	Fall	10:25	11:08	1	Sarah	4	7853.97	no	Circle	50 m radius	5	9	11	SE	None	0	Light rain
T-26	Raptor Mitigation	31	10	2019	Fall	11:38	12:19	1	Sara	3	7853.97	no	Circle	50 m radius	5	6	13	NE	Light rain	100	Heavy rain,Intermittent rain,Light rain,Throughout day and night before
T-26	Raptor Mitigation	4	11	2019	Fall	15:47	16:27	1	Sara	4	7853.97	no	Circle	50 m radius	5	10	23	SW	None	70	Intermittent rain,Night before
T-26	Raptor Mitigation	11	11	2019	Fall	11:05	11:45	1	Sara	7	7853.97	no	Circle	50 m radius	5	-3	21	E	Light snow	100	Light snow
T-26	Raptor Mitigation	19	11	2019	Fall	11:33	12:13	1	Sara	8	7853.97	no	Circle	50 m radius	5	5	6	SE	None	30	Fog,Overnight
T-26	Raptor Mitigation	25	11	2019	Fall	09:15	09:55	1	Sarah	6	7853.97	no	Circle	50 m radius	5	3	13	S	None	75	None
T-27	Sub-sample	2	5	2019	Spring	13:40	14:02	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	8	10	W	None	95	None
T-27	Sub-sample	6	5	2019	Spring	12:19	12:41	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	14	11	SW	Light rain	100	None
T-27	Sub-sample	9	5	2019	Spring	9:56	10:28	1	Sarah	3	7853.97	No	Circle	50 m radius	5	12	31	SE	None	100	Strong winds
T-27	Sub-sample	13	5	2019	Spring	12:16	12:35	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	7	11	NE	None	100	Heavy rain
T-27	Sub-sample	16	5	2019	Spring	12:04	12:29	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	15	11	S	None	65	None
T-27	Sub-sample	20	5	2019	Spring	11:12	11:33	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	11	24	W	None	50	Heavy rain,Strong winds
T-27	Sub-sample	23	5	2019	Spring	14:24	15:04	1	Sarah	3	7853.97	No	Circle	50 m radius	5	24	29	SW	None	0	Heavy rain,Thunderstorm
T-27	Sub-sample	27	5	2019	Spring	12:57	13:18	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	20	8	NW	None	0	None
T-27	Sub-sample	30	5	2019	Spring	11:40	12:10	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	14	SW	None	100	None
T-27	Sub-sample	3	6	2019	Spring	11:18	11:45	2	Sara,Sarah	4	7853.97	No	Circle								

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-27	Sub-sample	17	6	2019	Spring	12:17	12:40	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	21	10	NW	None	85	None
T-27	Sub-sample	20	6	2019	Spring	12:28	12:48	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	6	NE	None	100	None
T-27	Sub-sample	24	6	2019	Spring	12:14	12:54	1	Sarah	4	7853.97	No	Circle	50 m radius	5	26	23	SE	None	100	None
T-27	Sub-sample	27	6	2019	Spring	12:17	12:37	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	26	6	SW	None	0	None
T-27	Sub-sample	30	6	2019	Spring	10:04	10:24	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	16	N	None	0	None
T-27	Sub-sample	4	7	2019	Summer	10:42	11:20	1	Sarah	4	7853.97	No	Circle	50 m radius	5	27	13	SE	None	0	None
T-27	Sub-sample	8	7	2019	Summer	10:24	11:02	1	Sara	4	7853.97	No	Circle	50 m radius	5	23	6	N	None	0	None
T-27	Sub-sample	11	7	2019	Summer	10:38	10:59	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	24	14	NW	None	0	None
T-27	Sub-sample	15	7	2019	Summer	09:43	10:04	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	19	10	SE	None	5	None
T-27	Sub-sample	18	7	2019	Summer	12:01	12:42	1	Sarah	3	7853.97	No	Circle	50 m radius	5	27	13	W	None	50	None
T-27	Sub-sample	22	7	2019	Summer	12:13	12:53	1	Sara	4	7853.97	No	Circle	50 m radius	5	21	16	NW	None	20	None
T-27	Sub-sample	25	7	2019	Summer	09:22	10:02	1	Sara	3	7853.97	No	Circle	50 m radius	5	21	8	SW	None	0	None
T-27	Sub-sample	29	7	2019	Summer	09:44	10:04	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	24	16	SW	None	35	None
T-27	Sub-sample	1	8	2019	Summer	12:12	12:32	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	25	8	NE	None	0	None
T-27	Sub-sample	5	8	2019	Summer	13:09	13:29	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	28	14	SW	None	0	None
T-27	Sub-sample	8	8	2019	Summer	15:05	15:45	1	Sara	3	7853.97	No	Circle	50 m radius	5	24	18	NW	None	30	None
T-27	Sub-sample	12	8	2019	Summer	14:19	14:39	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	27	13	SW	None	60	None
T-27	Sub-sample	15	8	2019	Summer	08:53	09:13	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	14	E	None	95	None
T-27	Sub-sample	19	8	2019	Summer	10:06	10:26	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	11	NW	None	10	Light rain
T-27	Sub-sample	22	8	2019	Summer	12:18	12:43	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	18	NW	None	0	None
T-27	Sub-sample	25	8	2019	Summer	12:59	13:39	1	Sara	3	7853.97	No	Circle	50 m radius	5	22	18	SE	None	10	None
T-27	Sub-sample	29	8	2019	Summer	13:16	13:38	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	19	SW	None	10	None
T-27	Sub-sample	2	9	2019	Fall	12:07	12:27	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	22	14	W	None	5	None
T-27	Sub-sample	5	9	2019	Fall	12:17	12:37	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	19	8	NW	None	0	None
T-27	Sub-sample	9	9	2019	Fall	12:09	12:40	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	18	6	SE	None	80	None
T-27	Sub-sample	12	9	2019	Fall	11:57	12:17	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	18	E	None	100	Fog,Light rain
T-27	Sub-sample	16	9	2019	Fall	11:50	12:10	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	19	8	SE	None	100	None
T-27	Sub-sample	19	9	2019	Fall	11:46	12:06	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	21	18	SE	None	10	None
T-27	Sub-sample	23	9	2019	Fall	11:35	11:55	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	20	14	NW	None	100	Light rain
T-27	Sub-sample	26	9	2019	Fall	12:21	13:01	1	Sarah	3	7853.97	no	Circle	50 m radius	5	18	23	W	None	20	None
T-27	Sub-sample	30	9	2019	Fall	12:31	12:51	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	20	14	SE	None	80	None
T-27	Sub-sample	3	10	2019	Fall	11:42	12:04	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	11	21	SE	Drizzle	100	Heavy rain
T-27	Sub-sample	7	10	2019	Fall	11:25	12:05	1	Sarah	4	7853.97	no	Circle	50 m radius	5	14	16	SW	None	80	None
T-27	Sub-sample	10	10	2019	Fall	12:09	12:31	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	19	SE	None	10	None
T-27	Sub-sample	14	10	2019	Fall	11:58	12:20	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	9	23	W	None	50	None
T-27	Sub-sample	17	10	2019	Fall	11:25	11:46	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	6	29	NW	Drizzle	100	Heavy rain,Strong winds
T-27	Sub-sample	21	10	2019	Fall	14:16	14:56	1	Sara	4	7853.97	no	Circle	50 m radius	5	18	27	SE	None	100	None
T-27	Sub-sample	24	10	2019	Fall	11:37	12:17	1	Sara	3	7853.97	no	Circle	50 m radius	5	9	18	NW	None	100	None
T-27	Sub-sample	28	10	2019	Fall	09:38	10:19	1	Sarah	4	7853.97	no	Circle	50 m radius	5	7	11	SE	None	0	Light rain
T-27	Sub-sample	31	10	2019	Fall	10:54	11:34	1	Sara	3	7853.97	no	Circle	50 m radius	5	6	16	NE	Light rain	100	Heavy rain,Intermittent rain,Light rain,Throughout day and night before
T-27	Sub-sample	4	11	2019	Fall	15:36	16:16	1	Sarah	4	7853.97	no	Circle	50 m radius	5	10	23	SW	None	45	Heavy rain
T-27	Sub-sample	11	11	2019	Fall	11:03	11:43	1	Sarah	7	7853.97	no	Circle	50 m radius	5	-3	21	NE	Light snow	100	Light snow
T-27	Sub-sample	18	11	2019	Fall	14:00	14:40	1	Sara	7	7853.97	no	Circle	50 m radius	5	6	13	SE	None	100	Snow melt
T-27	Sub-sample	25	11	2019	Fall	08:31	09:11	1	Sarah	7	7853.97	no	Circle	50 m radius	5	3	13	S	None	60	None
T-29	Raptor Mortality	15	5	2019	Spring	10:27	10:48	2	Sara,Sarah	175	7853.97	No	Circle	50 m radius	5	12	10	W	None	35	None
T-29	Raptor Mortality	19	6	2019	Spring	09:20	09:40	2	Sara,Sarah	34	7853.97	No	Circle	50 m radius	5	21	5	SE	None	5	None
T-29	Raptor Mortality	17	7	2019	Summer	12:09	12:50	1	Sara	28	7853.97	No	Circle	50 m radius	5	25	8	NW	None	50	None
T-29	Raptor Mortality	21	8	2019	Summer	11:30	11:50	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	24	10	SW	None	70	None
T-29	Raptor Mortality	18	9	2019	Fall	09:59	10:40	1	Sara	28	7853.97	no	Circle	50 m radius	5	18	18	SE	None	0	None
T-29	Raptor Mortality	23	10	2019	Fall	10:32	10:52	2	Sara,Sarah	35	7853.97	no	Circle	50 m radius	5	9	27	SW	None	25	Light rain
T-29	Raptor Mortality	22	11	2019	Fall	11:26	12:06	1	Sarah	30	7853.97	no	Circle	50 m radius	5	1	29	NW	None	100	Heavy rain,Strong winds
T-30	Raptor Mortality	15	5	2019	Spring	11:07	11:30	2	Sara,Sarah	175	7853.97	No	Circle	50 m radius	5	13	11	W	None	5	None
T-30	Raptor Mortality	19	6	2019	Spring	09:44	10:05	2	Sara,Sarah	35	7853.97	No	Circle	50 m radius	5	21	5	SE	None	5	None
T-30	Raptor Mortality	17	7	2019	Summer	12:10	12:50	1	Sarah	29	7853.97	No	Circle	50 m radius	5	26	8	N	None	75	None
T-30	Raptor Mortality	21	8	2019	Summer	11:57	12:18	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	24	10	SW	None	100	None
T-30	Raptor Mortality	18	9	2019	Fall	09:56	10:37	1	Sarah	28	7853.97	no	Circle	50 m radius	5	18	18	SE	None	0	None
T-30	Raptor Mortality	23	10	2019	Fall	10:59	11:22	2	Sara,Sarah	35	7853.97	no	Circle	50 m radius	5	9	32	SW	None	90	Light rain
T-30	Raptor Mortality	22	11	2019	Fall	12:35	13:15	1	Sarah	30	7853.97	no	Circle	50 m radius	5	1	29	NW	None	100	Heavy rain,Strong winds
T-31	Sub-sample	3	5	2019	Spring	09:55	10:15	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	6	13	NW	Fog	100	Fog,Light rain
T-31	Sub-sample	7	5	2019	Spring	8:55	9:17	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	5	11	W	Light rain	100	Heavy rain
T-31	Sub-sample	10	5	2019	Spring	12:33	12:55	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	6	19	NW	Drizzle	100	Heavy rain,Thunderstorm
T-31	Sub-sample	14	5	2019	Spring	13:39	14:00	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	11	18	NW	None	0	None
T-31	Sub-sample	17	5	2019	Spring	13:10	13:30	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	9	26	NW	None	90	None
T-31	Sub-sample	21	5	2019	Spring	09:43	10:04	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	9	13	NW	None	15	None
T-31	Sub-sample	24	5	2019	Spring	10:44	11:10	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	12	13	NW	None	100	None
T-31	Sub-sample	28	5	2019	Spring	13:50	14:12	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	12	14	NE	None	100	Fog,Heavy rain night before ,Light rain
T-31	Sub-sample	31	5	2019	Spring	11:05	11:30	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	13	8	SW	None	80	None
T-31	Sub-sample	4	6	2019	Spring	09:09	09:29	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	14	11	S	None	100	None
T-31	Sub-sample	7	6	2019	Spring	09:45	10:05	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	10	N	None	0	None
T-31	Sub-sample	10	6	2019	Spring	11:08	11:28	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	23	SE	None	100	Heavy rain
T-31	Sub-sample	14	6	2019	Spring	14:01	14:23	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	21	23	W	None	0	None
T-31	Sub-sample	18	6	2019	Spring	9:38	09:58	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	18	3	NW	None	10	None
T-31	Sub-sample	21	6	2019	Spring	07:19	07:59	1	Sarah	3	7853.97	No	Circle	50 m radius	5	13	10	NW	None		

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-31	Sub-sample	5	7	2019	Summer	07:43	08:03	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	8	SE	None	0	None
T-31	Sub-sample	9	7	2019	Summer	15:07	15:47	1	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	11	NW	None	0	None
T-31	Sub-sample	12	7	2019	Summer	09:04	09:25	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	17	10	NW	None	100	None
T-31	Sub-sample	16	7	2019	Summer	08:20	09:00	1	Sara	4	7853.97	No	Circle	50 m radius	5	24	14	SW	None	0	None
T-31	Sub-sample	20	7	2019	Summer	07:57	08:30	1	Sara	4	7853.97	No	Circle	50 m radius	5	24	13	SW	None	60	Intermittent rain,Lightning and heat wave
T-31	Sub-sample	23	7	2019	Summer	13:15	13:35	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	18	NW	None	0	None
T-31	Sub-sample	26	7	2019	Summer	10:45	11:05	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	25	6	SW	None	0	None
T-31	Sub-sample	30	7	2019	Summer	11:07	11:27	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	8	W	None	40	Heavy rain,Night before
T-31	Sub-sample	2	8	2019	Summer	08:48	09:08	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	16	6	NE	None	0	None
T-31	Sub-sample	6	8	2019	Summer	12:25	12:46	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	10	W	None	100	None
T-31	Sub-sample	9	8	2019	Summer	08:53	09:14	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	17	8	SW	None	0	None
T-31	Sub-sample	13	8	2019	Summer	11:09	11:30	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	26	10	NE	None	20	None
T-31	Sub-sample	16	8	2019	Summer	12:46	13:06	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	23	5	SE	None	60	None
T-31	Sub-sample	20	8	2019	Summer	12:05	12:25	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	26	18	SW	None	90	None
T-31	Sub-sample	23	8	2019	Summer	11:05	11:25	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	14	N	None	30	None
T-31	Sub-sample	26	8	2019	Summer	09:56	10:22	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	19	SE	None	20	None
T-31	Sub-sample	30	8	2019	Summer	09:24	09:44	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	11	W	None	0	None
T-31	Sub-sample	3	9	2019	Fall	10:17	10:40	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	18	16	SE	None	90	None
T-31	Sub-sample	6	9	2019	Fall	08:36	09:16	1	Sarah	3	7853.97	no	Circle	50 m radius	5	12	6	SE	None	40	None
T-31	Sub-sample	10	9	2019	Fall	08:53	09:13	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	14	16	SE	None	100	None
T-31	Sub-sample	13	9	2019	Fall	10:05	10:27	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	24	SE	None	100	None
T-31	Sub-sample	17	9	2019	Fall	10:57	11:17	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	18	11	E	None	0	None
T-31	Sub-sample	20	9	2019	Fall	09:26	10:06	1	Sara	3	7853.97	no	Circle	50 m radius	5	19	10	SE	None	40	None
T-31	Sub-sample	24	9	2019	Fall	11:52	12:12	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	18	13	W	None	80	None
T-31	Sub-sample	27	9	2019	Fall	10:09	10:29	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	14	13	SE	None	50	None
T-31	Sub-sample	1	10	2019	Fall	09:38	09:58	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	22	14	SW	None	0	None
T-31	Sub-sample	4	10	2019	Fall	11:54	12:16	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	11	16	NE	None	100	Light rain
T-31	Sub-sample	8	10	2019	Fall	11:16	11:38	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	14	16	SE	None	0	None
T-31	Sub-sample	11	10	2019	Fall	08:58	09:21	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	11	18	SE	None	25	None
T-31	Sub-sample	15	10	2019	Fall	08:37	08:59	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	1	6	SE	None	25	None
T-31	Sub-sample	18	10	2019	Fall	11:19	11:42	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	8	16	NW	None	40	None
T-31	Sub-sample	22	10	2019	Fall	15:32	15:55	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	14	34	SW	None	80	None
T-31	Sub-sample	25	10	2019	Fall	10:15	10:54	1	Sarah	3	7853.97	no	Circle	50 m radius	5	8	5	S	None	80	None
T-31	Sub-sample	29	10	2019	Fall	08:49	09:29	1	Sarah	4	7853.97	no	Circle	50 m radius	5	9	14	SE	None	100	None
T-31	Sub-sample	5	11	2019	Fall	08:56	09:16	2	Sara,Sarah	7	7853.97	no	Circle	50 m radius	5	4	26	W	None	0	None
T-31	Sub-sample	13	11	2019	Fall	12:47	13:27	1	Sara	8	7853.97	no	Circle	50 m radius	5	-6	18	S	None	100	Day before ,Heavy snow
T-31	Sub-sample	19	11	2019	Fall	14:20	15:00	1	Sara	6	7853.97	no	Circle	50 m radius	5	5	5	NW	None	90	Fog,Night before
T-31	Sub-sample	26	11	2019	Fall	09:30	10:10	1	Sarah	7	7853.97	no	Circle	50 m radius	5	5	8	W	None	0	None
T-32	Raptor Mortality	8	5	2019	Spring	9:13	9:37	2	Sara,Sarah	175	7853.97	No	Circle	50 m radius	5	9	27	E	None	10	None
T-32	Raptor Mortality	12	6	2019	Spring	08:54	09:14	2	Sara,Sarah	35	7853.97	No	Circle	50 m radius	5	16	13	SE	None	5	None
T-32	Raptor Mortality	10	7	2019	Summer	09:32	09:52	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	22	10	SE	None	0	None
T-32	Raptor Mortality	14	8	2019	Summer	11:28	11:49	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	24	14	NE	None	0	None
T-32	Raptor Mortality	11	9	2019	Fall	16:19	16:46	2	Sara,Sarah	28	7853.97	no	Circle	50 m radius	5	27	13	NW	None	20	None
T-32	Raptor Mortality	25	9	2019	Fall	10:58	11:21	2	Sara,Sarah	14	7853.97	no	Circle	50 m radius	5	19	21	S	None	50	None
T-32	Raptor Mortality	23	10	2019	Fall	10:02	10:23	2	Sara,Sarah	18	7853.97	no	Circle	50 m radius	5	8	31	SW	None	10	Light rain
T-32	Raptor Mortality	13	11	2019	Fall	10:06	10:46	1	Sara	21	7853.97	no	Circle	50 m radius	5	-6	14	SW	None	100	Heavy snow,Strong winds
T-33	Sub-sample	3	5	2019	Spring	09:25	09:45	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	6	13	NW	Fog	100	Light rain,None
T-33	Sub-sample	7	5	2019	Spring	8:26	8:47	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	5	11	N	Light rain	100	Heavy rain
T-33	Sub-sample	10	5	2019	Spring	13:03	13:23	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	6	18	NW	None	100	Heavy rain,Thunderstorm
T-33	Sub-sample	14	5	2019	Spring	14:08	14:35	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	11	18	NW	None	0	None
T-33	Sub-sample	17	5	2019	Spring	13:53	14:15	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	9	24	NW	None	5	None
T-33	Sub-sample	21	5	2019	Spring	10:11	10:31	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	10	14	NW	None	15	None
T-33	Sub-sample	24	5	2019	Spring	10:15	10:38	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	12	11	NW	None	100	None
T-33	Sub-sample	28	5	2019	Spring	13:21	13:41	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	13	16	E	None	100	Fog,Heavy rain overnight, light rain through out day
T-33	Sub-sample	31	5	2019	Spring	10:03	10:23	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	13	5	SW	None	0	None
T-33	Sub-sample	4	6	2019	Spring	08:28	09:00	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	12	10	S	None	100	None
T-33	Sub-sample	7	6	2019	Spring	10:15	10:37	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	11	N	None	0	None
T-33	Sub-sample	11	6	2019	Spring	08:09	08:51	1	Sarah	4	7853.97	No	Circle	50 m radius	5	12	10	W	None	0	None
T-33	Sub-sample	14	6	2019	Spring	14:31	14:56	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	20	W	None	30	None
T-33	Sub-sample	18	6	2019	Spring	10:36	10:56	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	20	5	W	None	10	None
T-33	Sub-sample	22	6	2019	Spring	09:57	10:37	1	Sara	4	7853.97	No	Circle	50 m radius	5	15	10	NW	None	5	None
T-33	Sub-sample	25	6	2019	Spring	10:12	10:32	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	19	21	SW	None	100	None
T-33	Sub-sample	28	6	2019	Spring	07:15	07:35	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	5	SE	None	95	None
T-33	Sub-sample	2	7	2019	Summer	12:44	13:25	1	Sarah	4	7853.97	No	Circle	50 m radius	5	23	11	NW	None	100	Light rain
T-33	Sub-sample	5	7	2019	Summer	07:18	07:38	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	8	SE	None	0	None
T-33	Sub-sample	9	7	2019	Summer	15:02	15:42	1	Sarah	4	7853.97	No	Circle	50 m radius	5	27	10	NW	None	0	None
T-33	Sub-sample	12	7	2019	Summer	08:38	08:58	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	17	10	NW	None	100	None
T-33	Sub-sample	16	7	2019	Summer	12:42	13:02	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	28	16	SW	Light rain	100	None
T-33	Sub-sample	20	7	2019	Summer	07:21	07:51	1	Sara	4	7853.97	No	Circle	50 m radius	5	23	16	SW	None	100	Intermittent rain,Lightning , heat wave
T-33	Sub-sample	23	7	2019	Summer	13:53	14:13	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	18	NW	None	0	None
T-33	Sub-sample	26	7	2019	Summer	11:21	11:41	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	27	8	SW	None	0	None
T-33	Sub-sample	30	7	2019	Summer	10:22	10:46	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	10	NW	None	10	Heavy rain
T-33	Sub-sample	2	8	2019	Summer	08:20	08:41	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	16	6	NE	None	0	None
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Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-33	Sub-sample	16	8	2019	Summer	12:18	12:38	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	23	5	SE	None	95	None
T-33	Sub-sample	20	8	2019	Summer	11:26	11:47	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	25	14	S	None	100	None
T-33	Sub-sample	23	8	2019	Summer	10:36	10:58	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	11	N	None	25	None
T-33	Sub-sample	26	8	2019	Summer	09:28	09:48	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	19	SE	None	10	None
T-33	Sub-sample	30	8	2019	Summer	08:57	09:18	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	6	NW	None	0	None
T-33	Sub-sample	3	9	2019	Fall	10:49	11:23	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	18	16	SE	None	100	None
T-33	Sub-sample	6	9	2019	Fall	08:30	09:10	1	Sara	3	7853.97	no	Circle	50 m radius	5	14	6	SE	None	40	None
T-33	Sub-sample	10	9	2019	Fall	08:16	08:36	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	14	16	SE	None	100	None
T-33	Sub-sample	13	9	2019	Fall	09:34	09:54	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	15	24	SE	None	100	None
T-33	Sub-sample	17	9	2019	Fall	10:27	10:48	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	18	11	E	None	0	None
T-33	Sub-sample	21	9	2019	Fall	18:08	18:48	1	Sarah	4	7853.97	no	Circle	50 m radius	5	28	13	S	None	20	None
T-33	Sub-sample	24	9	2019	Fall	11:25	11:45	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	18	13	W	None	60	None
T-33	Sub-sample	27	9	2019	Fall	10:34	10:54	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	14	13	SE	None	70	None
T-33	Sub-sample	1	10	2019	Fall	10:03	10:23	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	24	16	SW	None	0	None
T-33	Sub-sample	4	10	2019	Fall	12:39	13:01	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	11	13	N	None	100	Light rain
T-33	Sub-sample	8	10	2019	Fall	10:53	11:13	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	13	16	E	None	0	None
T-33	Sub-sample	11	10	2019	Fall	08:29	08:52	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	11	18	SE	None	25	None
T-33	Sub-sample	15	10	2019	Fall	08:08	08:30	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	1	6	SE	None	25	None
T-33	Sub-sample	18	10	2019	Fall	12:04	12:25	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	8	16	NW	None	75	None
T-33	Sub-sample	22	10	2019	Fall	15:03	15:23	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	14	34	W	None	90	None
T-33	Sub-sample	25	10	2019	Fall	09:28	10:08	1	Sarah	3	7853.97	no	Circle	50 m radius	5	6	5	SE	None	20	None
T-33	Sub-sample	29	10	2019	Fall	08:05	08:45	1	Sarah	4	7853.97	no	Circle	50 m radius	5	8	16	SE	None	100	None
T-33	Sub-sample	5	11	2019	Fall	08:33	08:53	2	Sara,Sarah	7	7853.97	no	Circle	50 m radius	5	4	23	W	None	75	None
T-33	Sub-sample	13	11	2019	Fall	12:55	13:35	1	Sarah	8	7853.97	no	Circle	50 m radius	5	-6	18	S	None	100	Heavy snow
T-33	Sub-sample	20	11	2019	Fall	09:19	10:02	1	Sarah	7	7853.97	no	Circle	50 m radius	5	4	11	NW	None	100	None
T-33	Sub-sample	26	11	2019	Fall	08:38	09:58	2	Sara,Sarah	6	7853.97	no	Circle	50 m radius	5	4	8	SW	None	0	None
T-34	Raptor Mortality	29	5	2019	Spring	10:05	10:30	2	Sara,Sarah	182	7853.97	No	Circle	50 m radius	5	13	5	SE	None	100	Light rain
T-34	Raptor Mortality	26	6	2019	Spring	10:50	11:30	1	Sarah	28	7853.97	No	Circle	50 m radius	5	23	18	W	None	0	None
T-34	Raptor Mortality	24	7	2019	Summer	08:37	08:57	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	18	8	NW	None	0	None
T-34	Raptor Mortality	21	8	2019	Summer	14:15	14:42	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	23	11	W	None	25	None
T-34	Raptor Mortality	28	8	2019	Summer	11:39	12:00	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	22	14	SW	None	0	None
T-34	Raptor Mortality	25	9	2019	Fall	12:02	12:42	1	Sarah	28	7853.97	no	Circle	50 m radius	5	22	27	SW	None	60	None
T-34	Raptor Mortality	30	10	2019	Fall	13:41	14:23	1	Sarah	35	7853.97	no	Circle	50 m radius	5	7	8	E	Light rain	100	None
T-34	Raptor Mortality	27	11	2019	Fall	12:38	12:58	2	Sara,Sarah	27	7853.97	no	Circle	50 m radius	5	11	23	SW	Light rain	100	None
T-35	Raptor Mortality	29	5	2019	Spring	09:34	09:54	2	Sara,Sarah	175	7853.97	No	Circle	50 m radius	5	12	3	NE	None	100	Light rain,Night before
T-35	Raptor Mortality	26	6	2019	Spring	10:51	11:31	1	Sara	28	7853.97	No	Circle	50 m radius	5	22	16	SW	None	0	None
T-35	Raptor Mortality	24	7	2019	Summer	10:25	11:05	1	Sara	28	7853.97	No	Circle	50 m radius	5	20	8	NW	None	0	None
T-35	Raptor Mortality	21	8	2019	Summer	13:35	14:02	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	23	11	W	None	25	None
T-35	Raptor Mortality	28	8	2019	Summer	12:04	12:24	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	23	21	SW	None	0	None
T-35	Raptor Mortality	25	9	2019	Fall	11:29	11:49	2	Sara,Sarah	28	7853.97	no	Circle	50 m radius	5	22	27	SW	None	40	None
T-35	Raptor Mortality	30	10	2019	Fall	10:55	11:35	1	Sarah	35	7853.97	no	Circle	50 m radius	5	7	10	SE	Heavy rain	100	None
T-35	Raptor Mortality	27	11	2019	Fall	13:05	13:25	2	Sara,Sarah	27	7853.97	no	Circle	50 m radius	5	10	31	SW	None	100	Intermittent rain,Throughout early am
T-37	Raptor Mortality	29	5	2019	Spring	10:39	11:00	2	Sara,Sarah	182	7853.97	No	Circle	50 m radius	5	12	3	NW	None	100	Light rain,Night before
T-37	Raptor Mortality	26	6	2019	Spring	10:18	10:38	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	23	18	W	None	0	None
T-37	Raptor Mortality	24	7	2019	Summer	09:10	09:53	1	Sara	28	7853.97	No	Circle	50 m radius	5	19	8	NW	None	0	None
T-37	Raptor Mortality	21	8	2019	Summer	15:03	15:35	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	24	10	SW	None	25	None
T-37	Raptor Mortality	28	8	2019	Summer	11:14	11:35	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	22	14	SW	None	0	None
T-37	Raptor Mortality	25	9	2019	Fall	12:08	12:50	1	Sara	28	7853.97	no	Circle	50 m radius	5	24	31	SW	None	10	None
T-37	Raptor Mortality	30	10	2019	Fall	12:29	13:11	1	Sarah	35	7853.97	no	Circle	50 m radius	5	7	10	E	Heavy rain	100	None
T-37	Raptor Mortality	27	11	2019	Fall	12:06	12:28	2	Sara,Sarah	27	7853.97	no	Circle	50 m radius	5	11	23	SW	None	75	Intermittent rain,Throughout early am
T-38	Sub-sample	2	5	2019	Spring	12:55	13:20	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	7	10	NW	Fog	90	None
T-38	Sub-sample	6	5	2019	Spring	10:44	11:07	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	17	11	SW	None	90	None
T-38	Sub-sample	9	5	2019	Spring	10:19	10:54	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	16	29	SE	None	100	Strong winds
T-38	Sub-sample	13	5	2019	Spring	09:49	10:11	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	6	13	NE	None	100	Heavy rain
T-38	Sub-sample	16	5	2019	Spring	11:29	11:50	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	14	10	S	None	10	None
T-38	Sub-sample	20	5	2019	Spring	10:36	10:56	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	11	24	W	None	75	Heavy rain,Thunderstorm
T-38	Sub-sample	23	5	2019	Spring	13:49	14:09	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	27	SW	None	5	Heavy rain,Thunderstorm
T-38	Sub-sample	27	5	2019	Spring	12:20	12:45	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	20	8	NW	None	0	None
T-38	Sub-sample	30	5	2019	Spring	14:24	14:48	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	11	W	None	100	None
T-38	Sub-sample	3	6	2019	Spring	10:44	11:04	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	9	24	NW	None	0	None
T-38	Sub-sample	6	6	2019	Spring	11:52	12:11	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	10	N	None	100	Day before,Thunderstorm
T-38	Sub-sample	10	6	2019	Spring	10:35	10:58	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	18	23	SE	Light rain	100	Heavy rain
T-38	Sub-sample	13	6	2019	Spring	17:58	18:37	1	Sara	3	7853.97	No	Circle	50 m radius	5	12	14	NW	Drizzle	100	During night before and early daylight today ,Heavy rain,Thunderstorm
T-38	Sub-sample	17	6	2019	Spring	11:35	11:55	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	21	8	E	None	90	None
T-38	Sub-sample	20	6	2019	Spring	11:48	12:08	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	23	6	NE	None	100	None
T-38	Sub-sample	24	6	2019	Spring	11:14	12:00	1	Sarah	4	7853.97	No	Circle	50 m radius	5	24	21	SE	None	100	None
T-38	Sub-sample	27	6	2019	Spring	11:46	12:06	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	24	8	W	None	5	None
T-38	Sub-sample	30	6	2019	Spring	09:31	09:51	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	14	N	None	0	None
T-38	Sub-sample	4	7	2019	Summer	11:44	12:05	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	29	14	SE	None	20	None
T-38	Sub-sample	8	7	2019	Summer	12:01	12:41	1	Sara	4	7853.97	No	Circle	50 m radius	5	25	8	NW	None	0	None
T-38	Sub-sample	11	7	2019	Summer	11:52	12:14	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	23	21	NW	None	0	None
T-38	Sub-sample	15	7	2019	Summer	10:42	11:04	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	11	S	None	5	None
T-38	Sub-sample	18	7	2019	Summer	11:23	11:22	2	Sara,Sarah	3	7853.97	No	Circle	50 m							

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-38	Sub-sample	1	8	2019	Summer	11:34	11:56	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	24	10	NE	None	0	None
T-38	Sub-sample	5	8	2019	Summer	11:14	11:35	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	26	13	SW	None	35	None
T-38	Sub-sample	8	8	2019	Summer	13:24	13:44	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	23	NW	None	90	None
T-38	Sub-sample	12	8	2019	Summer	12:28	12:48	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	27	14	SW	None	50	None
T-38	Sub-sample	15	8	2019	Summer	11:11	11:31	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	13	SE	None	100	None
T-38	Sub-sample	19	8	2019	Summer	12:33	12:53	1	Sarah	4	7853.97	No	Circle	50 m radius	5	24	11	NW	None	0	Light rain
T-38	Sub-sample	22	8	2019	Summer	11:40	12:00	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	20	18	NW	None	0	None
T-38	Sub-sample	26	8	2019	Summer	08:58	08:57	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	18	18	SE	None	10	None
T-38	Sub-sample	26	8	2019	Summer	08:57	09:21	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	17	18	SE	None	10	None
T-38	Sub-sample	29	8	2019	Summer	11:25	11:45	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	16	SW	None	10	None
T-38	Sub-sample	2	9	2019	Fall	11:34	11:54	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	21	13	NW	None	60	None
T-38	Sub-sample	5	9	2019	Fall	11:25	11:48	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	19	8	N	None	0	None
T-38	Sub-sample	9	9	2019	Fall	10:57	11:17	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	14	11	SE	None	90	None
T-38	Sub-sample	12	9	2019	Fall	11:21	11:46	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	18	E	None	100	Fog,Light rain
T-38	Sub-sample	16	9	2019	Fall	11:17	11:37	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	19	8	SE	None	100	None
T-38	Sub-sample	19	9	2019	Fall	11:15	11:35	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	21	18	SE	None	0	None
T-38	Sub-sample	23	9	2019	Fall	11:02	11:21	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	20	14	NW	None	30	Light rain
T-38	Sub-sample	26	9	2019	Fall	09:45	10:07	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	17	W	None	10	None
T-38	Sub-sample	30	9	2019	Fall	10:33	10:53	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	14	16	SE	None	70	None
T-38	Sub-sample	3	10	2019	Fall	10:59	11:30	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	10	23	E	Light rain	100	Heavy rain
T-38	Sub-sample	7	10	2019	Fall	10:05	10:25	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	13	13	SW	None	95	None
T-38	Sub-sample	10	10	2019	Fall	10:33	10:56	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	12	18	E	None	10	None
T-38	Sub-sample	14	10	2019	Fall	11:22	11:42	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	8	24	W	None	10	None
T-38	Sub-sample	17	10	2019	Fall	10:49	11:09	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	6	31	NW	Light rain	100	Heavy rain,Strong winds
T-38	Sub-sample	21	10	2019	Fall	11:29	11:44	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	14	24	SE	None	100	None
T-38	Sub-sample	24	10	2019	Fall	10:40	11:20	1	Sara	3	7853.97	no	Circle	50 m radius	5	9	16	NW	None	100	None
T-38	Sub-sample	28	10	2019	Fall	12:25	13:06	1	Sarah	4	7853.97	no	Circle	50 m radius	5	13	19	S	None	0	Light rain
T-38	Sub-sample	31	10	2019	Fall	12:34	13:14	1	Sara	3	7853.97	no	Circle	50 m radius	5	7	14	NE	Light rain	100	Heavy rain,Intermittent rain,Light rain,Throughout day and night before
T-38	Sub-sample	4	11	2019	Fall	14:12	14:32	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	10	26	SW	None	0	Heavy rain
T-38	Sub-sample	13	11	2019	Fall	10:01	10:41	1	Sarah	9	7853.97	no	Circle	50 m radius	5	-7	14	SW	None	100	Heavy snow
T-38	Sub-sample	19	11	2019	Fall	10:38	11:18	1	Sara	6	7853.97	no	Circle	50 m radius	5	2	10	SE	None	30	Fog,Overnight
T-38	Sub-sample	25	11	2019	Fall	10:08	10:49	1	Sarah	6	7853.97	no	Circle	50 m radius	5	4	14	S	None	50	None
T-39	Raptor Mortality	8	5	2019	Spring	12:00	12:21	2	Sara,Sarah	175	7853.97	No	Circle	50 m radius	5	13	31	E	None	15	None
T-39	Raptor Mortality	12	6	2019	Spring	08:23	08:43	2	Sara,Sarah	35	7853.97	No	Circle	50 m radius	5	16	13	SE	None	5	None
T-39	Raptor Mortality	10	7	2019	Summer	08:50	09:12	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	21	10	SE	None	5	None
T-39	Raptor Mortality	14	8	2019	Summer	10:57	11:17	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	24	14	NE	None	0	None
T-39	Raptor Mortality	11	9	2019	Fall	14:44	15:05	2	Sara,Sarah	28	7853.97	no	Circle	50 m radius	5	27	10	NW	None	0	None
T-39	Raptor Mortality	9	10	2019	Fall	10:01	10:23	2	Sara,Sarah	28	7853.97	no	Circle	50 m radius	5	12	14	E	None	0	None
T-39	Raptor Mortality	13	11	2019	Fall	09:29	09:49	2	Sara,Sarah	36	7853.97	no	Circle	50 m radius	5	-7	11	SW	None	100	Heavy snow
T-41	Raptor Mitigation	2	5	2019	Spring	12:05	12:40	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	7	10	NW	None	98	None
T-41	Raptor Mitigation	6	5	2019	Spring	10:08	10:30	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	17	10	SW	None	75	None
T-41	Raptor Mitigation	9	5	2019	Spring	13:38	13:58	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	23	31	SE	None	100	Strong winds
T-41	Raptor Mitigation	13	5	2019	Spring	13:17	13:40	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	7	14	NE	None	100	Heavy rain
T-41	Raptor Mitigation	16	5	2019	Spring	11:23	10:58	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	14	8	S	None	100	None
T-41	Raptor Mitigation	20	5	2019	Spring	10:00	10:22	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	12	24	W	None	100	Heavy rain,Thunderstorm
T-41	Raptor Mitigation	23	5	2019	Spring	12:57	13:38	1	Sarah	3	7853.97	No	Circle	50 m radius	5	21	23	SW	None	0	Heavy rain,Thunderstorm
T-41	Raptor Mitigation	27	5	2019	Spring	11:26	11:46	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	18	6	NW	None	0	None
T-41	Raptor Mitigation	30	5	2019	Spring	11:05	11:30	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	14	SW	None	100	None
T-41	Raptor Mitigation	3	6	2019	Spring	10:05	10:29	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	9	24	NW	None	0	None
T-41	Raptor Mitigation	6	6	2019	Spring	10:53	11:33	1	Sara	3	7853.97	No	Circle	50 m radius	5	13	11	NW	None	100	Day before ,Thunderstorm
T-41	Raptor Mitigation	10	6	2019	Spring	21:36	09:56	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	18	21	SE	None	100	Heavy rain
T-41	Raptor Mitigation	14	6	2019	Spring	15:23	15:45	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	24	SW	None	90	None
T-41	Raptor Mitigation	17	6	2019	Spring	10:57	11:18	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	11	E	None	90	None
T-41	Raptor Mitigation	20	6	2019	Spring	11:03	11:23	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	20	11	NE	None	100	None
T-41	Raptor Mitigation	23	6	2019	Spring	15:28	16:08	1	Sara	3	7853.97	No	Circle	50 m radius	5	24	8	NW	None	0	None
T-41	Raptor Mitigation	27	6	2019	Spring	10:26	10:46	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	21	6	SW	None	5	None
T-41	Raptor Mitigation	30	6	2019	Spring	08:37	08:57	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	17	10	N	None	0	None
T-41	Raptor Mitigation	4	7	2019	Summer	12:20	12:19	1	Sarah	4	7853.97	No	Circle	50 m radius	5	28	14	SE	None	5	None
T-41	Raptor Mitigation	8	7	2019	Summer	14:17	14:57	1	Sara	4	7853.97	No	Circle	50 m radius	5	21	16	NW	None	0	None
T-41	Raptor Mitigation	11	7	2019	Summer	13:00	13:25	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	24	N	None	0	None
T-41	Raptor Mitigation	15	7	2019	Summer	12:27	12:47	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	27	11	SW	None	5	None
T-41	Raptor Mitigation	18	7	2019	Summer	10:19	10:59	1	Sara	3	7853.97	No	Circle	50 m radius	5	26	14	S	None	80	None
T-41	Raptor Mitigation	22	7	2019	Summer	10:25	11:05	1	Sarah	4	7853.97	No	Circle	50 m radius	5	19	11	NW	None	90	None
T-41	Raptor Mitigation	25	7	2019	Summer	11:28	11:48	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	24	11	W	None	0	None
T-41	Raptor Mitigation	29	7	2019	Summer	11:19	11:41	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	28	21	SW	None	95	None
T-41	Raptor Mitigation	1	8	2019	Summer	10:50	11:12	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	10	NW	None	0	None
T-41	Raptor Mitigation	5	8	2019	Summer	10:39	11:00	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	25	11	S	None	50	None
T-41	Raptor Mitigation	8	8	2019	Summer	11:18	11:40	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	19	NW	None	75	Early morning ,Light rain
T-41	Raptor Mitigation	12	8	2019	Summer	08:59	09:41	1	Sarah	4	7853.97	No	Circle	50 m radius	5	21	5	E	None	85	None
T-41	Raptor Mitigation	15	8	2019	Summer	11:43	12:06	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	13	SE	None	100	None
T-41	Raptor Mitigation	19	8	2019	Summer	13:45	14:25	1	Sara	4	7853.97	No	Circle	50 m radius	5	23	14	NW	None	0	None
T-41	Raptor Mitigation	22	8	2019	Summer	10:58	11:21	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	16	NW	None	10	None
T-41	Raptor Mitigation	25	8	2019	Summer	11:58	12:38	1	Sara	3	7853.97	No	Circle	50 m radius	5	20					

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-41	Raptor Mitigation	9	9	2019	Fall	10:01	10:22	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	12	11	E	None	90	None
T-41	Raptor Mitigation	12	9	2019	Fall	10:53	11:13	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	16	E	Fog	100	None
T-41	Raptor Mitigation	16	9	2019	Fall	10:20	10:40	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	18	10	SE	None	100	None
T-41	Raptor Mitigation	19	9	2019	Fall	10:45	11:05	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	19	18	SE	None	25	None
T-41	Raptor Mitigation	23	9	2019	Fall	09:07	09:27	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	18	14	NW	None	100	None
T-41	Raptor Mitigation	26	9	2019	Fall	10:16	10:36	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	17	21	W	None	15	None
T-41	Raptor Mitigation	30	9	2019	Fall	10:03	10:25	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	14	16	SE	None	90	None
T-41	Raptor Mitigation	3	10	2019	Fall	09:07	09:47	1	Sara	3	7853.97	no	Circle	50 m radius	5	9	23	E	None	100	During day and night before ,Heavy rain,Intermittent rain,Light rain,Thunderstorm
T-41	Raptor Mitigation	7	10	2019	Fall	10:31	10:51	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	13	13	SW	None	95	None
T-41	Raptor Mitigation	10	10	2019	Fall	11:41	12:01	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	15	19	SE	None	5	None
T-41	Raptor Mitigation	14	10	2019	Fall	10:20	10:43	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	8	23	W	None	25	None
T-41	Raptor Mitigation	17	10	2019	Fall	07:58	08:23	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	6	32	NW	Heavy rain	100	Light rain,Strong winds
T-41	Raptor Mitigation	21	10	2019	Fall	11:01	11:21	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	13	23	SE	None	95	None
T-41	Raptor Mitigation	24	10	2019	Fall	12:56	13:36	1	Sarah	3	7853.97	no	Circle	50 m radius	5	9	18	NW	None	20	None
T-41	Raptor Mitigation	28	10	2019	Fall	12:37	13:20	1	Sara	4	7853.97	no	Circle	50 m radius	5	14	19	S	None	0	Heavy rain,Throughout Saturday night
T-41	Raptor Mitigation	31	10	2019	Fall	11:40	12:22	1	Sarah	3	7853.97	no	Circle	50 m radius	5	6	11	NE	Heavy rain	100	Heavy rain
T-41	Raptor Mitigation	4	11	2019	Fall	13:23	14:03	1	Sara	4	7853.97	no	Circle	50 m radius	5	9	29	SW	None	95	None
T-41	Raptor Mitigation	13	11	2019	Fall	08:57	09:18	2	Sara,Sarah	9	7853.97	no	Circle	50 m radius	5	-7	11	SW	None	100	Heavy snow
T-41	Raptor Mitigation	19	11	2019	Fall	09:45	10:25	1	Sara	6	7853.97	no	Circle	50 m radius	5	1	10	SE	None	100	Fog,Overnight
T-41	Raptor Mitigation	25	11	2019	Fall	12:36	13:16	1	Sarah	6	7853.97	no	Circle	50 m radius	5	6	16	SW	None	100	None
T-42	Sub-sample	2	5	2019	Spring	11:20	11:45	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	7	10	NW	None	90	None
T-42	Sub-sample	6	5	2019	Spring	14:42	15:05	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	14	11	W	None	90	None
T-42	Sub-sample	9	5	2019	Spring	13:18	13:35	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	31	SE	None	100	Strong winds
T-42	Sub-sample	13	5	2019	Spring	09:14	09:40	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	6	13	NE	None	100	None
T-42	Sub-sample	16	5	2019	Spring	10:35	10:55	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	14	3	S	None	98	None
T-42	Sub-sample	20	5	2019	Spring	09:34	09:55	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	12	24	W	None	100	Heavy rain,Thunderstorm
T-42	Sub-sample	23	5	2019	Spring	12:58	13:38	1	Sara	3	7853.97	No	Circle	50 m radius	5	21	27	SW	None	0	Heavy rain,This morning ,Thunderstorm
T-42	Sub-sample	27	5	2019	Spring	11:01	11:22	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	18	8	NW	None	0	None
T-42	Sub-sample	30	5	2019	Spring	10:35	11:00	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	13	SW	None	100	None
T-42	Sub-sample	3	6	2019	Spring	09:38	09:59	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	9	24	NW	None	0	None
T-42	Sub-sample	6	6	2019	Spring	10:54	11:34	1	Sarah	3	7853.97	No	Circle	50 m radius	5	16	10	N	None	100	Day before,None,Thunderstorm
T-42	Sub-sample	10	6	2019	Spring	10:01	10:22	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	18	22	SE	Heavy rain	100	Heavy rain
T-42	Sub-sample	14	6	2019	Spring	15:48	16:14	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	24	SW	None	100	None
T-42	Sub-sample	17	6	2019	Spring	10:30	10:50	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	10	E	None	98	None
T-42	Sub-sample	20	6	2019	Spring	14:11	14:31	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	10	NW	None	100	Light rain
T-42	Sub-sample	24	6	2019	Spring	9:36	10:20	1	Sarah	4	7853.97	No	Circle	50 m radius	5	20	19	SE	None	100	None
T-42	Sub-sample	27	6	2019	Spring	11:07	11:27	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	24	8	W	None	5	None
T-42	Sub-sample	30	6	2019	Spring	08:59	09:19	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	17	10	N	None	0	None
T-42	Sub-sample	4	7	2019	Summer	12:19	12:58	1	Sara	4	7853.97	No	Circle	50 m radius	5	29	10	S	None	5	None
T-42	Sub-sample	8	7	2019	Summer	13:32	14:12	1	Sara	4	7853.97	No	Circle	50 m radius	5	21	16	NW	None	0	None
T-42	Sub-sample	11	7	2019	Summer	12:31	12:56	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	24	N	None	0	None
T-42	Sub-sample	15	7	2019	Summer	12:52	13:12	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	27	11	SW	None	10	None
T-42	Sub-sample	18	7	2019	Summer	10:20	23:02	1	Sarah	3	7853.97	No	Circle	50 m radius	5	25	14	SE	None	90	None
T-42	Sub-sample	22	7	2019	Summer	10:24	11:04	1	Sarah	4	7853.97	No	Circle	50 m radius	5	19	16	NW	None	75	None
T-42	Sub-sample	25	7	2019	Summer	11:01	11:21	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	23	8	SW	None	0	None
T-42	Sub-sample	29	7	2019	Summer	11:44	12:04	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	28	21	SW	None	95	None
T-42	Sub-sample	1	8	2019	Summer	10:23	10:43	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	10	NE	None	0	None
T-42	Sub-sample	5	8	2019	Summer	10:15	10:35	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	25	11	S	None	40	None
T-42	Sub-sample	8	8	2019	Summer	11:48	12:08	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	19	NW	None	90	Early morning ,Light rain
T-42	Sub-sample	12	8	2019	Summer	11:33	11:56	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	26	10	SW	None	80	None
T-42	Sub-sample	15	8	2019	Summer	12:44	13:05	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	11	SE	Light rain	100	None
T-42	Sub-sample	19	8	2019	Summer	13:45	14:35	1	Sarah	4	7853.97	No	Circle	50 m radius	5	25	14	NW	None	0	Light rain
T-42	Sub-sample	22	8	2019	Summer	10:32	10:53	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	16	NW	None	20	None
T-42	Sub-sample	25	8	2019	Summer	11:08	11:48	1	Sara	3	7853.97	No	Circle	50 m radius	5	20	16	SE	None	40	None
T-42	Sub-sample	29	8	2019	Summer	09:56	10:55	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	18	11	SW	None	0	None
T-42	Sub-sample	2	9	2019	Fall	11:04	11:26	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	21	13	NW	None	60	None
T-42	Sub-sample	5	9	2019	Fall	10:26	10:47	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	17	5	N	None	0	None
T-42	Sub-sample	9	9	2019	Fall	10:25	10:45	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	14	11	SE	None	90	None
T-42	Sub-sample	12	9	2019	Fall	10:20	10:40	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	16	E	Drizzle	100	None
T-42	Sub-sample	16	9	2019	Fall	10:44	11:04	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	18	10	SE	None	100	None
T-42	Sub-sample	19	9	2019	Fall	10:15	10:37	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	17	16	SE	None	10	None
T-42	Sub-sample	23	9	2019	Fall	10:28	10:48	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	19	14	NW	Drizzle	100	Light rain
T-42	Sub-sample	26	9	2019	Fall	10:41	11:02	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	17	18	W	None	20	None
T-42	Sub-sample	30	9	2019	Fall	09:40	10:00	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	13	16	E	None	100	None
T-42	Sub-sample	3	10	2019	Fall	13:40	14:00	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	12	18	SE	Light rain	100	During day and night before ,Heavy rain,Intermittent rain,Light rain,Thunderstorm
T-42	Sub-sample	7	10	2019	Fall	10:55	11:16	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	13	13	SW	None	90	None
T-42	Sub-sample	10	10	2019	Fall	11:17	11:37	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	15	19	SE	None	5	None
T-42	Sub-sample	14	10	2019	Fall	10:48	11:08	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	8	23	W	None	20	None
T-42	Sub-sample	17	10	2019	Fall	10:17	10:37	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	6	31	NW	Light rain	100	Heavy rain,Strong winds
T-42	Sub-sample	21	10	2019	Fall	10:38	10:58	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	12	23	SE	None	90	None
T-42	Sub-sample	24	10	2019	Fall	10:06	10:26	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	9	14	NW	None	100	None
T-42	Sub-sample	28	10	2019	Fall	11:36	12:16	1	Sara	4	7853.97	no	Circle	50 m radius	5	13	16	S	None	0	Heavy rain,Throughout Saturday night
T-42	Sub-sample	31	10	2019	Fall	12:24	13:05	1	Sarah	3	78										

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-42	Sub-sample	25	11	2019	Fall	10:58	11:38	1	Sarah	6	7853.97	no	Circle	50 m radius	5	5	16	S	None	100	None
T-43	Raptor Mitigation	2	5	2019	Spring	10:10	10:41	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	6	8	NW	None	100	None
T-43	Raptor Mitigation	6	5	2019	Spring	9:33	9:57	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	16	11	SW	None	10	None
T-43	Raptor Mitigation	9	5	2019	Spring	14:04	14:20	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	23	31	SE	None	100	Strong winds
T-43	Raptor Mitigation	13	5	2019	Spring	13:46	14:06	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	7	14	N	None	100	None
T-43	Raptor Mitigation	16	5	2019	Spring	08:13	08:45	1	Sarah	3	7853.97	No	Circle	50 m radius	5	8	3	SE	None	60	None
T-43	Raptor Mitigation	20	5	2019	Spring	09:07	09:27	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	12	24	W	None	100	Heavy rain,Thunderstorm
T-43	Raptor Mitigation	23	5	2019	Spring	12:24	12:46	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	23	SE	None	10	Heavy rain,Thunderstorm
T-43	Raptor Mitigation	27	5	2019	Spring	8:15	08:55	1	Sara	4	7853.97	No	Circle	50 m radius	5	11	3	NW	None	0	None
T-43	Raptor Mitigation	30	5	2019	Spring	08:06	08:28	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	15	6	S	Fog	100	None
T-43	Raptor Mitigation	3	6	2019	Spring	09:09	09:32	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	8	24	NW	None	0	None
T-43	Raptor Mitigation	6	6	2019	Spring	08:14	08:56	1	Sarah	3	7853.97	No	Circle	50 m radius	5	13	11	N	None	100	None
T-43	Raptor Mitigation	10	6	2019	Spring	08:13	08:55	1	Sarah	4	7853.97	No	Circle	50 m radius	5	19	21	SE	Heavy rain	100	None
T-43	Raptor Mitigation	13	6	2019	Spring	10:52	11:15	1	Sara	3	7853.97	No	Circle	50 m radius	5	15	11	SW	None	100	During night before and early daylight today ,Heavy rain,Thunderstorm
T-43	Raptor Mitigation	13	6	2019	Spring	12:39	12:52	1	Sara	3	7853.97	No	Circle	50 m radius	5	13	11	NW	None	100	Heavy rain,Night before and early daylight ,Thunderstorm
T-43	Raptor Mitigation	17	6	2019	Spring	08:24	09:04	1	Sara	4	7853.97	No	Circle	50 m radius	5	14	5	NW	None	100	None
T-43	Raptor Mitigation	20	6	2019	Spring	08:08	08:49	1	Sarah	3	7853.97	No	Circle	50 m radius	5	17	11	NE	None	100	Light rain
T-43	Raptor Mitigation	23	6	2019	Spring	14:42	15:22	1	Sara	3	7853.97	No	Circle	50 m radius	5	21	11	W	None	0	None
T-43	Raptor Mitigation	27	6	2019	Spring	08:19	08:59	1	Sara	4	7853.97	No	Circle	50 m radius	5	19	5	S	None	80	None
T-43	Raptor Mitigation	30	6	2019	Spring	08:11	08:31	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	17	10	N	None	0	None
T-43	Raptor Mitigation	4	7	2019	Summer	07:51	08:34	1	Sarah	4	7853.97	No	Circle	50 m radius	5	21	8	SE	None	0	None
T-43	Raptor Mitigation	8	7	2019	Summer	15:06	15:46	1	Sara	4	7853.97	No	Circle	50 m radius	5	21	18	NW	None	0	None
T-43	Raptor Mitigation	11	7	2019	Summer	07:55	08:36	1	Sarah	3	7853.97	No	Circle	50 m radius	5	23	8	W	None	30	None
T-43	Raptor Mitigation	15	7	2019	Summer	13:36	13:56	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	28	14	SW	None	15	None
T-43	Raptor Mitigation	18	7	2019	Summer	08:16	08:56	1	Sarah	3	7853.97	No	Circle	50 m radius	5	21	10	SE	None	0	None
T-43	Raptor Mitigation	22	7	2019	Summer	08:18	08:58	1	Sara	4	7853.97	No	Circle	50 m radius	5	18	10	NW	None	100	None
T-43	Raptor Mitigation	25	7	2019	Summer	11:56	12:16	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	24	11	W	None	0	None
T-43	Raptor Mitigation	29	7	2019	Summer	12:36	12:56	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	29	23	SW	None	95	None
T-43	Raptor Mitigation	1	8	2019	Summer	08:15	08:55	1	Sara	3	7853.97	No	Circle	50 m radius	5	15	5	NE	None	0	None
T-43	Raptor Mitigation	5	8	2019	Summer	09:47	10:08	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	8	SE	None	5	None
T-43	Raptor Mitigation	8	8	2019	Summer	10:23	11:03	1	Sara	3	7853.97	No	Circle	50 m radius	5	21	19	W	None	100	Early morning ,Light rain
T-43	Raptor Mitigation	12	8	2019	Summer	08:09	08:51	1	Sarah	4	7853.97	No	Circle	50 m radius	5	21	5	E	None	50	None
T-43	Raptor Mitigation	15	8	2019	Summer	12:17	12:37	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	11	SE	None	100	Light rain
T-43	Raptor Mitigation	19	8	2019	Summer	08:05	08:48	1	Sarah	4	7853.97	No	Circle	50 m radius	5	21	13	NW	None	75	None
T-43	Raptor Mitigation	22	8	2019	Summer	08:23	09:03	1	Sara	3	7853.97	No	Circle	50 m radius	5	19	14	NW	None	75	None
T-43	Raptor Mitigation	26	8	2019	Summer	08:17	08:40	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	17	18	SE	None	10	None
T-43	Raptor Mitigation	29	8	2019	Summer	09:31	09:51	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	18	11	SW	None	0	None
T-43	Raptor Mitigation	2	9	2019	Fall	08:10	08:50	1	Sarah	4	7853.97	no	Circle	50 m radius	5	16	5	NW	None	100	None
T-43	Raptor Mitigation	5	9	2019	Fall	09:57	10:18	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	13	3	NE	None	0	None
T-43	Raptor Mitigation	9	9	2019	Fall	08:38	08:59	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	11	10	E	None	95	None
T-43	Raptor Mitigation	12	9	2019	Fall	08:10	08:53	1	Sarah	3	7853.97	no	Circle	50 m radius	5	16	13	NW	Drizzle	100	None
T-43	Raptor Mitigation	16	9	2019	Fall	09:24	10:04	1	Sara	4	7853.97	no	Circle	50 m radius	5	17	10	SE	None	100	None
T-43	Raptor Mitigation	19	9	2019	Fall	08:17	08:57	1	Sara	3	7853.97	no	Circle	50 m radius	5	14	10	S	None	0	None
T-43	Raptor Mitigation	23	9	2019	Fall	08:20	09:00	1	Sara	4	7853.97	no	Circle	50 m radius	5	18	11	NW	None	100	None
T-43	Raptor Mitigation	26	9	2019	Fall	09:14	09:34	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	16	W	None	20	None
T-43	Raptor Mitigation	30	9	2019	Fall	09:15	09:35	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	13	16	E	None	100	None
T-43	Raptor Mitigation	3	10	2019	Fall	08:18	08:58	1	Sara	3	7853.97	no	Circle	50 m radius	5	9	24	E	None	100	During the day and night before ,Heavy rain,intermittent rain,Light rain,Thunderstorm
T-43	Raptor Mitigation	7	10	2019	Fall	09:34	09:55	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	12	11	SW	None	95	None
T-43	Raptor Mitigation	10	10	2019	Fall	08:24	09:02	1	Sara	3	7853.97	no	Circle	50 m radius	5	8	16	SE	None	5	None
T-43	Raptor Mitigation	14	10	2019	Fall	09:46	10:09	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	7	19	W	None	25	None
T-43	Raptor Mitigation	17	10	2019	Fall	08:35	09:15	1	Sara	3	7853.97	no	Circle	50 m radius	5	7	40	NW	Light rain	100	Intermittent rain,throughout Wednesday during day and night
T-43	Raptor Mitigation	21	10	2019	Fall	08:10	08:50	1	Sarah	4	7853.97	no	Circle	50 m radius	5	8	14	SE	None	80	None
T-43	Raptor Mitigation	24	10	2019	Fall	08:05	08:46	1	Sarah	3	7853.97	no	Circle	50 m radius	5	9	16	NW	None	90	None
T-43	Raptor Mitigation	28	10	2019	Fall	08:10	08:50	1	Sarah	4	7853.97	no	Circle	50 m radius	5	3	8	SE	None	0	None
T-43	Raptor Mitigation	31	10	2019	Fall	10:30	11:10	1	Sarah	3	7853.97	no	Circle	50 m radius	5	7	13	NE	Heavy rain	100	Heavy rain
T-43	Raptor Mitigation	4	11	2019	Fall	12:55	13:15	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	9	29	SW	None	100	Heavy rain
T-43	Raptor Mitigation	11	11	2019	Fall	09:18	09:38	2	Sara,Sarah	7	7853.97	no	Circle	50 m radius	5	-2	13	E	Light snow	100	Light snow
T-43	Raptor Mitigation	18	11	2019	Fall	11:00	11:40	1	Sara	7	7853.97	no	Circle	50 m radius	5	4	16	SE	None	100	None
T-43	Raptor Mitigation	25	11	2019	Fall	10:10	10:50	1	Sara	7	7853.97	no	Circle	50 m radius	5	5	14	S	None	25	None
T-44	Raptor Mortality	29	5	2019	Spring	11:45	12:08	2	Sara,Sarah	182	7853.97	No	Circle	50 m radius	5	14	6	NE	None	100	Light rain
T-44	Raptor Mortality	26	6	2019	Spring	09:35	09:54	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	22	14	W	None	0	None
T-44	Raptor Mortality	24	7	2019	Summer	09:18	09:58	1	Sarah	28	7853.97	No	Circle	50 m radius	5	19	8	NW	None	0	None
T-44	Raptor Mortality	21	8	2019	Summer	15:42	16:17	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	23	10	W	None	20	None
T-44	Raptor Mortality	28	8	2019	Summer	10:38	11:00	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	21	11	SW	None	0	None
T-44	Raptor Mortality	25	9	2019	Fall	10:25	10:45	2	Sara,Sarah	28	7853.97	no	Circle	50 m radius	5	19	21	S	None	70	None
T-44	Raptor Mortality	30	10	2019	Fall	10:08	10:48	1	Sara	35	7853.97	no	Circle	50 m radius	5	7	8	E	Light rain	100	Intermittent rain
T-44	Raptor Mortality	27	11	2019	Fall	11:23	11:43	2	Sara,Sarah	27	7853.97	no	Circle	50 m radius	5	9	27	S	None	100	Intermittent rain,Throughout early am
T-45	Raptor Mortality	29	5	2019	Spring	11:10	11:32	2	Sara,Sarah	182	7853.97	No	Circle	50 m radius	5	14	5	SE	None	100	Fog,Light rain
T-45	Raptor Mortality	26	6	2019	Spring	09:01	09:23	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	22	14	W	None	0	None
T-45	Raptor Mortality	24	7	2019	Summer	10:16	10:56	1	Sarah	28	7853.97	No	Circle	50 m radius	5	20	6	NW	None	0	None
T-45	Raptor Mortality	21	8	2019	Summer	16:25	16:56	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	23	10	W	None	0	None
T-45	Raptor Mortality	28	8	2019	Summer	10:07	10:30	2	Sara,Sarah	28	7853.97	No	Circle	50 m radius	5	21	11	SW	None	0	None
T-45	Raptor Mortality	25	9	2019	Fall	09:45	10:05	2	Sara,Sarah	28	7853.97	no</									

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-46	Raptor Mitigation	6	5	2019	Spring	8:57	9:21	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	11	10	S	None	5	None
T-46	Raptor Mitigation	9	5	2019	Spring	14:29	14:46	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	31	S	Light rain	100	Strong winds
T-46	Raptor Mitigation	13	5	2019	Spring	08:15	08:40	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	6	13	NW	Light rain	100	Heavy rain
T-46	Raptor Mitigation	16	5	2019	Spring	09:25	09:45	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	12	5	SE	None	5	None
T-46	Raptor Mitigation	20	5	2019	Spring	08:12	08:35	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	12	23	W	None	20	Heavy rain,Thunderstorm
T-46	Raptor Mitigation	23	5	2019	Spring	11:21	12:01	1	Sara	3	7853.97	No	Circle	50 m radius	5	21	24	SW	None	100	Heavy rain,This morning before search ,Thunderstorm
T-46	Raptor Mitigation	27	5	2019	Spring	10:29	10:50	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	16	6	NW	None	0	None
T-46	Raptor Mitigation	30	5	2019	Spring	08:38	09:19	1	Sarah	3	7853.97	No	Circle	50 m radius	5	15	6	S	Fog	100	None
T-46	Raptor Mitigation	3	6	2019	Spring	08:18	08:38	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	8	24	NW	None	0	None
T-46	Raptor Mitigation	6	6	2019	Spring	09:26	09:25	1	Sara	3	7853.97	No	Circle	50 m radius	5	12	10	NW	None	100	Day before ,Thunderstorm
T-46	Raptor Mitigation	9	6	2019	Spring	09:50	10:30	1	Sara	3	7853.97	No	Circle	50 m radius	5	23	24	SE	None	50	Hot summer temperature day before
T-46	Raptor Mitigation	13	6	2019	Spring	13:25	14:05	1	Sarah	4	7853.97	No	Circle	50 m radius	5	16	11	W	Fog	100	Heavy rain,Thunderstorm
T-46	Raptor Mitigation	17	6	2019	Spring	09:25	09:47	1	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	16	8	NE	None	75	None
T-46	Raptor Mitigation	20	6	2019	Spring	09:21	09:42	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	19	13	NE	None	100	None
T-46	Raptor Mitigation	23	6	2019	Spring	13:52	14:32	1	Sara	3	7853.97	No	Circle	50 m radius	5	21	10	W	None	0	None
T-46	Raptor Mitigation	27	6	2019	Spring	09:25	09:45	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	5	SE	None	5	None
T-46	Raptor Mitigation	30	6	2019	Spring	07:45	08:05	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	16	8	N	None	0	None
T-46	Raptor Mitigation	4	7	2019	Summer	13:12	13:50	1	Sarah	4	7853.97	No	Circle	50 m radius	5	30	13	SE	None	5	None
T-46	Raptor Mitigation	8	7	2019	Summer	17:24	18:04	1	Sara	4	7853.97	No	Circle	50 m radius	5	20	18	NW	None	0	None
T-46	Raptor Mitigation	11	7	2019	Summer	14:09	14:07	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	23	23	NW	None	0	None
T-46	Raptor Mitigation	15	7	2019	Summer	14:28	14:49	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	29	13	SW	None	5	None
T-46	Raptor Mitigation	18	7	2019	Summer	09:51	10:11	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	10	SE	None	15	None
T-46	Raptor Mitigation	22	7	2019	Summer	09:27	10:08	1	Sarah	4	7853.97	No	Circle	50 m radius	5	18	10	NW	None	100	None
T-46	Raptor Mitigation	25	7	2019	Summer	12:53	13:13	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	25	14	W	None	0	None
T-46	Raptor Mitigation	29	7	2019	Summer	13:06	13:27	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	29	27	SW	None	40	None
T-46	Raptor Mitigation	1	8	2019	Summer	09:20	09:41	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	20	8	NE	None	0	None
T-46	Raptor Mitigation	5	8	2019	Summer	09:12	09:32	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	23	8	SE	None	35	None
T-46	Raptor Mitigation	8	8	2019	Summer	12:20	12:59	1	Sarah	3	7853.97	No	Circle	50 m radius	5	21	23	W	None	100	Light rain,Morning
T-46	Raptor Mitigation	12	8	2019	Summer	10:32	10:52	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	24	8	SW	None	50	None
T-46	Raptor Mitigation	15	8	2019	Summer	13:14	13:34	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	8	NE	None	90	Light rain
T-46	Raptor Mitigation	19	8	2019	Summer	15:24	15:44	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	26	13	W	None	0	Light rain
T-46	Raptor Mitigation	22	8	2019	Summer	09:24	09:48	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	13	NW	None	0	None
T-46	Raptor Mitigation	25	8	2019	Summer	10:15	10:55	1	Sara	3	7853.97	No	Circle	50 m radius	5	19	18	SE	None	5	None
T-46	Raptor Mitigation	29	8	2019	Summer	08:35	08:59	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	16	8	SW	None	0	None
T-46	Raptor Mitigation	2	9	2019	Fall	10:36	10:56	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	19	11	NW	None	40	None
T-46	Raptor Mitigation	5	9	2019	Fall	08:57	09:22	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	8	3	NE	None	0	None
T-46	Raptor Mitigation	9	9	2019	Fall	09:06	09:26	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	12	11	E	None	95	None
T-46	Raptor Mitigation	12	9	2019	Fall	09:50	10:10	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	13	NE	None	100	None
T-46	Raptor Mitigation	16	9	2019	Fall	08:26	08:47	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	16	10	E	None	100	None
T-46	Raptor Mitigation	19	9	2019	Fall	09:20	09:41	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	14	10	S	None	0	None
T-46	Raptor Mitigation	23	9	2019	Fall	09:56	10:16	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	19	13	NW	Drizzle	100	Light rain
T-46	Raptor Mitigation	26	9	2019	Fall	08:21	08:41	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	13	SW	None	90	None
T-46	Raptor Mitigation	30	9	2019	Fall	08:21	08:41	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	13	16	E	None	100	None
T-46	Raptor Mitigation	3	10	2019	Fall	10:25	10:46	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	10	23	E	None	100	Heavy rain
T-46	Raptor Mitigation	7	10	2019	Fall	08:42	09:04	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	11	10	SW	None	100	None
T-46	Raptor Mitigation	10	10	2019	Fall	09:28	09:49	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	11	16	E	None	10	None
T-46	Raptor Mitigation	14	10	2019	Fall	08:47	09:07	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	7	9	W	None	75	None
T-46	Raptor Mitigation	17	10	2019	Fall	09:26	09:46	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	7	40	NW	Drizzle	100	None
T-46	Raptor Mitigation	21	10	2019	Fall	09:20	09:40	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	9	19	E	None	85	None
T-46	Raptor Mitigation	24	10	2019	Fall	09:33	09:53	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	9	13	NW	None	30	None
T-46	Raptor Mitigation	28	10	2019	Fall	09:02	09:22	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	4	10	SE	None	0	None
T-46	Raptor Mitigation	31	10	2019	Fall	08:53	09:33	1	Sarah	3	7853.97	no	Circle	50 m radius	5	7	10	N	Drizzle	100	Heavy rain
T-46	Raptor Mitigation	4	11	2019	Fall	12:03	12:43	1	Sarah	4	7853.97	no	Circle	50 m radius	5	9	29	S	None	100	Heavy rain
T-46	Raptor Mitigation	11	11	2019	Fall	08:26	08:46	2	Sara,Sarah	7	7853.97	no	Circle	50 m radius	5	-2	16	NE	Light snow	100	Light snow
T-46	Raptor Mitigation	18	11	2019	Fall	09:19	10:00	1	Sara	7	7853.97	no	Circle	50 m radius	5	-2	14	SE	None	100	Snow melting
T-46	Raptor Mitigation	25	11	2019	Fall	08:35	09:15	1	Sara	7	7853.97	no	Circle	50 m radius	5	4	13	S	None	90	None
T-48	Sub-sample	2	5	2019	Spring	08:20	08:50	2	Sara,Sarah	157	7853.97	No	Circle	50 m radius	5	2	9	N	None	100	Fog
T-48	Sub-sample	6	5	2019	Spring	8:21	8:45	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	11	10	S	None	5	None
T-48	Sub-sample	9	5	2019	Spring	14:50	15:10	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	31	S	Light rain	100	Strong winds
T-48	Sub-sample	13	5	2019	Spring	08:44	08:43	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	6	13	NW	Drizzle	100	Heavy rain
T-48	Sub-sample	16	5	2019	Spring	09:48	10:09	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	13	5	SE	None	2	None
T-48	Sub-sample	20	5	2019	Spring	08:38	08:58	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	12	21	W	None	15	Heavy rain,Thunderstorm
T-48	Sub-sample	23	5	2019	Spring	11:28	12:09	1	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	20	21	SW	None	100	Heavy rain,Thunderstorm
T-48	Sub-sample	27	5	2019	Spring	09:55	09:54	2	Sarah	4	7853.97	No	Circle	50 m radius	5	15	5	NW	None	0	None
T-48	Sub-sample	30	5	2019	Spring	09:48	10:10	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	10	S	None	100	None
T-48	Sub-sample	3	6	2019	Spring	08:43	09:03	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	8	24	NW	None	100	None
T-48	Sub-sample	6	6	2019	Spring	9:31	10:11	1	Sarah	3	7853.97	No	Circle	50 m radius	5	14	11	N	None	100	Day before,Thunderstorm
T-48	Sub-sample	9	6	2019	Spring	10:44	11:24	1	Sara	3	7853.97	No	Circle	50 m radius	5	24	26	SE	None	60	Hot summer temperature day before
T-48	Sub-sample	13	6	2019	Spring	13:18	13:58	1	Sara	4	7853.97	No	Circle	50 m radius	5	13	14	NW	None	100	During overnight and early daylight ,Heavy rain,Thunderstorm
T-48	Sub-sample	17	6	2019	Spring	09:54	10:14	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	18	10	E	None	90	None
T-48	Sub-sample	20	6	2019	Spring	10:20	10:42	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	20	13	NE	None	100	None
T-48	Sub-sample	24	6	2019	Spring	8:09	08:55	1	Sarah	4	7853.97	No	Circle	50 m radius	5	19	19	SE	None	100	None
T-48	Sub-sample	27	6	2019	Spring	09:51	10:11	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21</					

Turbine Number	Survey Type	Day	Month	Year	Season	Start Time (24 hr)	End Time (24 hr)	Number of Searchers	Searchers Names	Days Since Last Search	Actual Area Searched (m ²)	Dog Used	Search Area Shape	Search Area Dimension	Transect Separation (m)	Temperature (°C)	Wind Speed (km/hr)	Wind Direction	Precipitation	Cloud Cover Percent	Significant Weather Before Visit
T-48	Sub-sample	11	7	2019	Summer	13:39	14:01	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	24	N	None	0	None
T-48	Sub-sample	15	7	2019	Summer	14:04	14:24	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	29	13	SW	None	5	None
T-48	Sub-sample	18	7	2019	Summer	09:27	09:47	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	22	10	SE	None	10	None
T-48	Sub-sample	22	7	2019	Summer	09:19	09:19	1	Sara	4	7853.97	No	Circle	50 m radius	5	19	14	NW	None	100	None
T-48	Sub-sample	22	7	2019	Summer	09:20	10:00	1	Sara	4	7853.97	No	Circle	50 m radius	5	18	10	NW	None	100	None
T-48	Sub-sample	25	7	2019	Summer	12:26	12:47	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	25	14	W	None	0	None
T-48	Sub-sample	29	7	2019	Summer	13:30	13:55	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	29	27	SW	None	10	None
T-48	Sub-sample	1	8	2019	Summer	09:50	10:10	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	20	8	NE	None	0	None
T-48	Sub-sample	5	8	2019	Summer	08:45	09:08	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	22	6	SE	None	30	None
T-48	Sub-sample	8	8	2019	Summer	12:18	12:58	1	Sara	3	7853.97	No	Circle	50 m radius	5	22	26	W	None	95	Early morning ,Light rain
T-48	Sub-sample	12	8	2019	Summer	10:59	11:19	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	24	8	SW	None	75	None
T-48	Sub-sample	15	8	2019	Summer	13:37	13:57	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	21	8	NE	None	95	Light rain
T-48	Sub-sample	19	8	2019	Summer	14:59	15:19	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	25	16	NW	None	0	Light rain
T-48	Sub-sample	22	8	2019	Summer	09:51	10:20	2	Sara,Sarah	3	7853.97	No	Circle	50 m radius	5	18	13	NW	None	0	None
T-48	Sub-sample	25	8	2019	Summer	09:30	10:10	1	Sara	3	7853.97	No	Circle	50 m radius	5	17	18	E	None	5	None
T-48	Sub-sample	29	8	2019	Summer	09:03	09:23	2	Sara,Sarah	4	7853.97	No	Circle	50 m radius	5	18	11	SW	None	0	None
T-48	Sub-sample	2	9	2019	Fall	10:11	10:31	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	19	11	NW	None	60	None
T-48	Sub-sample	5	9	2019	Fall	08:36	08:56	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	8	3	NE	None	0	None
T-48	Sub-sample	9	9	2019	Fall	09:29	09:51	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	12	11	E	None	90	None
T-48	Sub-sample	12	9	2019	Fall	09:27	09:47	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	13	NE	None	100	Fog,Light rain
T-48	Sub-sample	16	9	2019	Fall	08:50	09:11	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	10	E	None	100	None
T-48	Sub-sample	19	9	2019	Fall	09:44	10:04	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	17	14	SE	None	10	None
T-48	Sub-sample	23	9	2019	Fall	09:34	09:54	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	19	13	NW	None	100	Light rain
T-48	Sub-sample	26	9	2019	Fall	08:44	09:04	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	16	13	SW	None	90	None
T-48	Sub-sample	30	9	2019	Fall	08:44	09:06	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	13	16	E	None	100	None
T-48	Sub-sample	3	10	2019	Fall	09:57	10:19	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	10	21	E	Drizzle	100	Heavy rain
T-48	Sub-sample	7	10	2019	Fall	09:08	09:28	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	12	11	SW	None	100	None
T-48	Sub-sample	10	10	2019	Fall	09:53	10:19	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	12	16	E	None	20	None
T-48	Sub-sample	14	10	2019	Fall	09:15	09:36	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	7	19	W	None	10	None
T-48	Sub-sample	17	10	2019	Fall	09:48	10:08	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	6	31	NW	Light rain	100	Heavy rain,Strong winds
T-48	Sub-sample	21	10	2019	Fall	10:05	10:25	2	Sara,Sarah	4	7853.97	no	Circle	50 m radius	5	11	23	E	None	95	None
T-48	Sub-sample	24	10	2019	Fall	09:11	09:31	2	Sara,Sarah	3	7853.97	no	Circle	50 m radius	5	8	13	NW	None	70	None
T-48	Sub-sample	28	10	2019	Fall	09:30	10:10	1	Sara	4	7853.97	no	Circle	50 m radius	5	6	10	SE	None	0	Heavy rain,Through out Saturday evening
T-48	Sub-sample	31	10	2019	Fall	09:41	10:22	1	Sarah	3	7853.97	no	Circle	50 m radius	5	7	13	NE	Light rain	100	Heavy rain
T-48	Sub-sample	4	11	2019	Fall	12:06	12:46	1	Sara	4	7853.97	no	Circle	50 m radius	5	9	29	S	None	100	Intermittent rain,Night before
T-48	Sub-sample	11	11	2019	Fall	08:49	09:09	2	Sara,Sarah	7	7853.97	no	Circle	50 m radius	5	-2	16	E	Light snow	100	Light snow
T-48	Sub-sample	18	11	2019	Fall	10:05	10:45	1	Sara	7	7853.97	no	Circle	50 m radius	5	3	14	SE	None	100	Snow melt
T-48	Sub-sample	25	11	2019	Fall	09:21	10:01	1	Sara	7	7853.97	no	Circle	50 m radius	5	4	13	S	None	20	None

Appendix D - Table 2
Grand Bend Wind Farm Year 3 - Avian (Non-Raptor) Turbine Mortalities - 2019

Turbine ID	Day	Month	Year	Species Common Name	Sex	Carcass Condition	Carcass Injuries	Est. Time Since Death (Hours)	Visibility Class	Substrate	Direction from TB (degrees)	Distance from TB (m)	UTM	Carcass Easting (NAD83)	Carcass Northing (NAD83)
T-02	18	7	2019	Bird spp. (unknown)	Unknown	Scavenged	None visible	24	1	Bare ground/soil	116	37	17T	444408	4811743
T-07	3	5	2019	Horned Lark	Male	Fresh	None visible	12	1	Bare ground/soil	268	27	17T	443927	4809147
T-11	3	5	2019	Bird spp. (unknown)	Unknown	Complete decomposition	None visible	9999	3	Long vegetation	194	25	17T	444323	4808436
T-11	13	9	2019	Nashville Warbler	Unknown	Early decomposition	Wound to abdomen	24	1	Gravel	244	23	17T	444309	4808451
T-16	26	7	2019	Cliff Swallow	Unknown	Early decomposition	Severed wing	12	2	Mown vegetation	27	21	17T	443906	4807630
T-16	26	7	2019	Bird spp. (unknown)	Unknown	Scavenged	None visible	9999	2	Mown vegetation	236	44	17T	443859	4807587
T-16	26	7	2019	Bird spp. (unknown)	Unknown	Scavenged	None visible	36	2	Mown vegetation	309	47	17T	443859	4807641
T-16	2	8	2019	Bird spp. (unknown)	Unknown	Scavenged	None visible	9999	2	Mown vegetation	350	38	17T	443890	4807648
T-17	14	6	2019	Red-eyed Vireo	Unknown	Early decomposition	None visible	36	1	Bare ground/soil	138	50	17T	443409	4805317
T-18	7	5	2019	Brown Creeper	Unknown	Scavenged	None visible	9999	1	Bare ground/soil	139	25	17T	443733	4805318
T-18	4	10	2019	Yellow-bellied Flycatcher	Unknown	Scavenged	None visible	48	1	Bare ground/soil	252	41	17T	443678	4805325
T-22	26	11	2019	Ring-billed Gull	Unknown	Fresh	Broken neck	12	1	Gravel	6	19	17T	443976	4804654
T-26	27	5	2019	American Redstart	Unknown	Moderate decomposition	Severed wing	24	3	Cultivated crop	35	20	17T	443351	4803830
T-27	6	6	2019	Red-eyed Vireo	Unknown	Early decomposition	None visible	24	1	Bare ground/soil	186	35	17T	443634	4803646
T-27	24	6	2019	Bobolink	Male	Scavenged	None visible	9999	1	Gravel	99	11	17T	443649	4803679
T-27	22	8	2019	Bobolink	Unknown	Advanced decomposition	None visible	48	1	Bare ground/soil	283	30	17T	443609	4803688
T-29	15	5	2019	Swamp Sparrow	Unknown	Fresh	None visible	12	1	Gravel	266	2	17T	443152	4802383
T-31	9	7	2019	Cedar Waxwing	Unknown	Early decomposition	Decapitated	24	1	Gravel	21	42	17T	443555	4801149
T-33	3	9	2019	Chestnut-sided Warbler	Female	Early decomposition	None visible	24	2	Mown vegetation	261	30	17T	442808	4800460
T-33	3	9	2019	Song Sparrow	Unknown	Fresh		9999	2	Mown vegetation	356	47	17T	442835	4800512
T-38	19	8	2019	Purple Martin	Unknown	Advanced decomposition		48	2	Mown vegetation	74	23	17T	442431	4799499

T-38	5	9	2019	Black-and-white Warbler	Unknown	Fresh	None visible	12	1	Gravel	214	10	17T	442404	4799485
T-38	9	9	2019	Bird spp. (unknown)	Unknown	Scavenged		9999	1	Gravel	300	13	17T	442398	4799499
T-38	10	10	2019	Ruby-crowned Kinglet	Female	Early decomposition	None visible	24	2	Bare ground/soil	169	46	17T	442418	4799447
T-41	20	6	2019	Great Crested Flycatcher	Unknown	Fresh	None visible	24	1	Bare ground/soil	65	18	17T	441781	4798153
T-41	29	8	2019	Cedar Waxwing	Unknown	Fresh	None visible	24	1	Gravel	273	20	17T	441744	4798146
T-42	28	10	2019	Golden-crowned Kinglet	Male	Fresh		8	2	Mown vegetation	150	35	17T	441624	4797820
T-43	27	5	2019	Indigo Bunting	Male	Early decomposition	None visible	12	1	Gravel	165	7	17T	442251	4797824
T-46	21	10	2019	Yellow-rumped Warbler	Unknown	Scavenged	None visible	9999	1	Gravel	207	16	17T	440543	4796878
T-48	27	5	2019	Chipping Sparrow	Unknown	Fresh	Head injury	24	2	Gravel	72	35	17T	440562	4796565
Red denotes sub-sample turbine															

Appendix D - Table 3
Grand Bend Wind Farm Year 3 - Raptor Mortality Turbine Mortalities - 2019

Turbine ID	Day	Month	Year	Species Common Name	Sex	Carcass Condition	Carcass Injuries	Est. Time Since Death (Hours)	Visibility Class	Substrate	Direction from TB (degrees)	Distance from TB (m)	UTM	Carcass Easting	Carcass Northing
T-06	6	11	2019	Turkey Vulture	Unknown	Advanced decomposition	None visible	9999	3	Cultivated crop	301	32	17T	444008	4809550
T-07	20	8	2019	Red-tailed Hawk	Unknown	Advanced decomposition	Broken wing	48	1	Bare ground/soil	4	23	17T	443956	4809170
T-11	4	10	2019	Cooper's Hawk	Unknown	Scavenged		9999	4	Growing crop,Cultivated	195	29	17T	444322	4808433
T-13	3	5	2019	Sharp-shinned Hawk	Unknown	Advanced decomposition	None visible	9999	2	Gravel,Long vegetation	284	47	17T	444183	4808052
T-20	3	10	2019	Turkey Vulture	Unknown	Early decomposition	None visible	24	1	Bare ground/soil	181	20	17T	446912	4804805
T-21	25	6	2019	Cooper's Hawk	Unknown	Early decomposition	None visible	24	1	Gravel	197	5	17T	443652	4804587
T-27	22	8	2019	Turkey Vulture	Unknown	Early decomposition	None visible	24	1	Bare ground/soil	350	33	17T	443632	4803714
T-42	12	9	2019	Turkey Vulture	Unknown	Fresh	Broken neck	24	2	Mown vegetation	264	22	17T	441585	4797848

Red denotes sub-sample turbine

Appendix D - Table 4
Grand Bend Wind Farm Year 3 - Bat Mortalities - 2019

Turbine ID	Day	Month	Year	Species Common Name	Sex	Carcass Condition	Carcass Injuries	Est. Time Since Death (Hours)	Visibility Class	Substrate	Direction from TB (degrees)	Distance from TB (m)	UTM	Carcass Easting (NAD83)	Carcass Northing (NAD83)
T-02	18	7	2019	Hoary Bat	Unknown	Advanced decomposition		9999	1	Bare ground/soil	231	26	17T	444356	4811744
T-02	22	8	2019	Hoary Bat	Unknown	Fresh	None visible	12	1	Bare ground/soil	118	28	17T	444401	4811747
T-02	22	8	2019	Silver-haired Bat	Unknown	Early decomposition	None visible	36	1	Bare ground/soil	324	45	17T	444350	4811796
T-07	27	9	2019	Silver-haired Bat	Unknown	Fresh	None visible	8	1	Bare ground/soil	350	13	17T	443952	4809160
T-07	3	9	2019	Silver-haired Bat	Unknown	Moderate decomposition	None visible	48	1	Bare ground/soil	300	33	17T	443925	4809164
T-07	3	9	2019	Big Brown Bat	Unknown	Complete decomposition	None visible	72	1	Bare ground/soil	173	42	17T	443959	4809106
T-07	1	10	2019	Eastern Red Bat	Unknown	Fresh	None visible	10	1	Gravel	347	42	17T	443945	4809188
T-07	3	9	2019	Silver-haired Bat	Unknown	Advanced decomposition	None visible	72	1	Gravel	232	44	17T	443919	4809120
T-09	20	8	2019	Eastern Red Bat	Unknown	Fresh	None visible	24	1	Gravel	263	36	17T	444287	4808851
T-11	27	8	2019	Big Brown Bat	Unknown	Fresh	None visible	12	1	Gravel	254	29	17T	444302	4808453
T-14	23	7	2019	Big Brown Bat	Unknown	Fresh	None visible	6	2	Long vegetation	117	41	17T	443838	4807883
T-16	20	8	2019	Eastern Red Bat	Unknown	Moderate decomposition	None visible	9999	2	Mown vegetation	334	49	17T	443875	4807655
T-16	20	8	2019	Silver-haired Bat	Unknown	Early decomposition	None visible	72	2	Mown vegetation	228	50	17T	443858	4807578
T-17	20	7	2019	Hoary Bat	Unknown	Fresh	None visible	6	1	Bare ground/soil	69	20	17T	443396	4805362
T-17	28	6	2019	Big Brown Bat	Unknown	Fresh	None visible	6	1	Bare ground/soil	303	35	17T	443348	4805374
T-17	9	7	2019	Big Brown Bat	Unknown	Advanced decomposition		9999	1	Bare ground/soil	46	37	17T	443403	4805381
T-18	30	7	2019	Big Brown Bat	Unknown	Fresh	None visible	8	1	Bare ground/soil	120	37	17T	443748	4805318
T-20	3	6	2019	Hoary Bat	Unknown	Fresh	None visible	12	1	Bare ground/soil	205	11	17T	446908	4804815
T-20	5	8	2019	Hoary Bat	Unknown	Fresh	None visible	8	1	Gravel	360	18	17T	446913	4804843
T-20	5	8	2019	Eastern Red Bat	Unknown	Fresh	None visible	12	1	Gravel	337	33	17T	446900	4804855

T-20	15	8	2019	Little Brown Myotis	Unknown	Fresh	None visible	6	1	Bare ground/soil	188	35	17T	446908	4804790
T-20	5	8	2019	Hoary Bat	Unknown	Early decomposition	None visible	36	1	Gravel	336	36	17T	446898	4804858
T-20	27	6	2019	Silver-haired Bat	Unknown	Fresh	None visible	24	1	Bare ground/soil	6	36	17T	446917	4804860
T-21	23	8	2019	Silver-haired Bat	Unknown	Advanced decomposition		72	1	Gravel	289	6	17T	443648	4804594
T-21	5	7	2019	Eastern Red Bat	Unknown	Advanced decomposition	None visible	48	1	Gravel	1	38	17T	443655	4804630
T-26	22	8	2019	Eastern Red Bat	Unknown	Complete decomposition	None visible	72	1	Gravel	27	3	17T	443341	4803817
T-27	15	8	2019	Eastern Red Bat	Unknown	Early decomposition	None visible	24	1	Gravel	64	6	17T	443643	4803683
T-27	24	10	2019	Eastern Red Bat	Unknown	Fresh	None visible	12	1	Gravel	291	22	17T	443617	4803689
T-27	19	8	2019	Big Brown Bat	Unknown	Fresh		24	1	Bare ground/soil	20	34	17T	443649	4803713
T-29	18	9	2019	Little Brown Myotis	Unknown	Advanced decomposition	None visible	9999	1	Gravel	196	29	17T	443146	4802355
T-30	23	10	2019	Hoary Bat	Unknown	Early decomposition	None visible	9999	1	Gravel	195	29	17T	443003	4801986
T-31	4	10	2019	Hoary Bat	Unknown	Early decomposition	None visible	36	2	Low shrub, Mown vegetation	320	6	17T	443536	4801115
T-31	30	7	2019	Hoary Bat	Unknown	Fresh	None visible	6	2		84	8	17T	443548	4801111
T-31	23	7	2019	Hoary Bat	Unknown	Scavenged		9999	1	Mown vegetation, Cultivated crop	161	10	17T	443543	4801100
T-31	9	8	2019	Hoary Bat	Unknown	Fresh	None visible	12	2	Mown vegetation	190	16	17T	443537	4801094
T-31	30	7	2019	Big Brown Bat	Unknown	Scavenged	None visible	24	2		118	20	17T	443557	4801100
T-31	4	10	2019	Eastern Red Bat	Unknown	Moderate decomposition	None visible	72	2		166	36	17T	443548	4801075
T-31	9	8	2019	Hoary Bat	Unknown	Early decomposition	Broken wing	24	2		105	38	17T	443577	4801100
T-31	9	7	2019	Eastern Red Bat	Unknown	Fresh	None visible	8	2	Low shrub	359	44	17T	443539	4801154
T-31	18	6	2019	Silver-haired Bat	Unknown	Early decomposition	None visible	36	2	Bare ground/soil, Low shrub	132	44	17T	443572	4801081
T-33	20	8	2019	Silver-haired Bat	Unknown	Fresh	None visible	8	2	Mown vegetation	2	38	17T	442839	4800503

T-35	28	8	2019	Little Brown Myotis	Unknown	Fresh	None visible	10	1	Gravel	323	17	17T	442747	4800027
T-38	17	6	2019	Silver-haired Bat	Unknown	Fresh	None visible	12	1	Gravel	8	5	17T	442410	4799498
T-38	19	8	2019	Hoary Bat	Unknown	Complete decomposition	None visible	9999	2	Mown vegetation	340	24	17T	442402	4799515
T-38	19	8	2019	Hoary Bat	Unknown	Advanced decomposition	None visible	72	2	Mown vegetation	344	26	17T	442402	4799518
T-38	15	8	2019	Hoary Bat	Unknown	Fresh	None visible	12	2	Mown vegetation	322	41	17T	442384	4799525
T-41	27	6	2019	Big Brown Bat	Unknown	Early decomposition	None visible	36	1	Bare ground/soil, Growing crop	53	6	17T	441769	4798149
T-41	25	8	2019	Hoary Bat	Unknown	Fresh	None visible	12	1	Gravel	288	9	17T	441756	4798148
T-42	24	6	2019	Silver-haired Bat	Unknown	Moderate decomposition	None visible	36	2	Mown vegetation	208	24	17T	441595	4797829
T-42	19	8	2019	Silver-haired Bat	Unknown	Moderate decomposition	None visible	9999	1	Gravel	32	28	17T	441622	4797874
T-42	29	7	2019	Little Brown Myotis	Unknown	Scavenged		9999	1	Gravel	53	30	17T	441631	4797868
T-42	26	9	2019	Silver-haired Bat	Unknown	Fresh	None visible	6	1	Gravel	24	38	17T	441623	4797885
T-42	29	7	2019	Hoary Bat	Unknown	Early decomposition	None visible	24	2	Mown vegetation	67	39	17T	441643	4797865
T-45	25	9	2019	Big Brown Bat	Unknown	Fresh		24	3	Growing crop, Cultivated crop	55	40	17T	440186	4796980
T-46	12	8	2019	Eastern Red Bat	Unknown	Scavenged		9999	1	Gravel	205	9	17T	440546	4796883
T-46	5	8	2019	Hoary Bat	Unknown	Early decomposition	None visible	36	3	Long vegetation	133	45	17T	440583	4796861
T-48	9	6	2019	Big Brown Bat	Unknown	Early decomposition	None visible	36	1	Gravel	51	10	17T	440537	4796560
T-48	22	8	2019	Silver-haired Bat	Unknown	Early decomposition	None visible	24	1	Gravel	343	17	17T	440524	4796571
T-48	6	6	2019	Silver-haired Bat	Unknown	Fresh		6	2	Mown vegetation	125	30	17T	440553	4796537
T-48	16	5	2019	Silver-haired Bat	Unknown	Fresh	None visible	6	2	Mown vegetation	251	45	17T	440486	4796540
T-48	24	6	2019	Silver-haired Bat	Unknown	Moderate decomposition	None visible	36	2	Mown vegetation	140	48	17T	440559	4796517

Red denotes sub-sample turbine

Appendix D - Table 5
Grand Bend Wind Farm Year 3 - Incidental Mortalities (found outside of the 50 m search radius or found incidentally during other tasks)

Turbine ID	Day	Month	Year	Species Common Name	Sex	Carcass Condition	Carcass Injuries	Est. Time Since Death (Hours)	Visibility Class	Substrate	Direction from TB (degrees)	Distance from TB (m)	UTM	Carcass Easting (NAD83)	Carcass Northing (NAD83)
T-02	10	10	2019	Golden-crowned Kinglet	Male	Early decomposition	None visible	12	1	Bare ground/soil	254	56	17T	444322	4811746
T-07	1	10	2019	Silver-haired Bat	Unknown	Fresh	None visible	12	1	Bare ground/soil	14	59	17T	443969	4809205
T-07	22	10	2019	Golden-crowned Kinglet	Male	Early decomposition	None visible	48	1	Mud	340	55	17T	443936	4809199
T-11	3	5	2019	Mallard	Unknown	Scavenged	None visible	9999	3	Long vegetation	102	54	17T	444383	4808449
T-11	3	5	2019	Bird spp. (unknown)	Unknown	Scavenged		9999	3	Mud, Cultivated crop	66	58	17T	444383	4808484
T-16	6	8	2019	Ring-billed Gull	Unknown	Scavenged	Cut in half	9999	4	Growing crop	240	52	17T	443851	4807586
T-16	20	8	2019	Bird spp. (unknown)	Unknown	Complete decomposition	Cut in half	9999	2	Mown vegetation	229	71	17T	443842	4807565
T-16	20	8	2019	Hoary Bat	Unknown	Advanced decomposition		9999	2	Mown vegetation	310	51	17T	443857	4807645
T-17	9	7	2019	Bird spp. (unknown)	Unknown	Scavenged	None visible	48	1	Bare ground/soil	58	56	17T	443425	4805384
T-26	2	5	2019	Brown Creeper	Unknown	Early decomposition	None visible	36	3	Cultivated crop	318	56	17T	443303	4803856
T-27	30	5	2019	Bird spp. (unknown)	Unknown	Scavenged	None visible	9999	1	Bare ground/soil	233	51	17T	443597	4803651
T-27	19	8	2019	Silver-haired Bat	Unknown	Fresh	None visible	12	1	Bare ground/soil	106	52	17T	443688	4803666
T-27	19	9	2019	Golden-crowned Kinglet	Unknown	Scavenged	None visible	9999	1	Bare ground/soil	311	52	17T	443599	4803715
T-33	10	9	2019	Silver-haired Bat	Unknown	Complete decomposition		9999	2	Mown vegetation	7	52	17T	442845	4800516
T-38	15	8	2019	Hoary Bat	Unknown	Fresh	None visible	24	2	Mown vegetation	191	54	17T	440518	4796501
T-41	9	5	2019	Bobolink	Male	Fresh	Broken neck	8	2	Cultivated crop	277	58	17T	441706	4798153
T-42	16	9	2019	Silver-haired Bat	Unknown	Advanced decomposition	None visible	9999	2	Mown vegetation	46	61	17T	441651	4797892
T-48	8	8	2019	Barn Swallow	Unknown	Early decomposition	Wound to abdomen	12	2	Mown vegetation	68	57	17T	440582	4796575

Appendix D - Table 6
Grand Bend Wind Farm Year 3 - Searcher Efficiency Trial Results - 2019

Turbine ID	Searcher Name	Dog Used	Day Placed	Month Placed	Year	Tester	Searcher	Time	Species Common Name	Condition	Carcass UTM Zone	Carcass Easting (NAD83)	Carcass Northing (NAD83)	Distance from TB (m)	Direction from TB (degrees)	Marking	Significant Weather on Day of Trial	Scavenged	Found	Substrate	Visibility Class
T-02	Sara	No	6	5	2019	Sarah	Sara	11:45	Brown Creeper	Thawed	17T	444387	4811739	23	151	Orange Paint	None	no	no	Bare ground/soil	1
T-02	Sara	No	6	5	2019	Sarah	Sara	11:48	Horned Lark	Thawed	17T	444390	4811740	23	143	Orange Paint	None	no	yes	Bare ground/soil	1
T-02	Sarah	No	30	5	2019	Sara	Sarah	08:58	Hoary Bat	Thawed	17T	444375	4811763	4	339	Orange Paint	Fog	no	yes	Gravel	1
T-02	Sarah	No	30	5	2019	Sara	Sarah	09:01	Silver-haired Bat	Thawed	17T	444372	4811741	19	193	Orange Paint	Fog	no	yes	Bare ground/soil	1
T-02	Sara	No	13	6	2019	Sarah	Sara	12:50	Black-capped Chickadee	Thawed	17T	444380	4811759	4	92	Orange Paint	None	yes	no	Gravel	1
T-02	Sarah	No	20	6	2019	Sara	Sarah	08:37	Black-capped Chickadee	Thawed	17T	444364	4811763	12	287	Orange Paint	None	no	yes	Gravel	1
T-02	Sarah	No	4	7	2019	Sara	Sarah	08:35	Hoary Bat	Thawed	17T	444318	4811755	58	266	Orange Paint	None	no	no	Bare ground/soil	1
T-02	Sarah	No	19	8	2019	Sara	Sarah	08:35	Hoary Bat	Thawed	17T	444363	4811758	13	267	Orange Paint	None	no	yes	Bare ground/soil	1
T-02	Sara	No	22	8	2019	Sarah	Sara	08:39	Northern Parula	Thawed	17T	444385	4811774	18	30	Orange Paint	None	no	yes	Gravel	1
T-02	Sara	No	23	9	2019	Sarah	Sara	08:34	Black-and-white Warbler	Thawed	17T	444379	4811763	5	30	Orange Paint	None	no	yes	Bare ground/soil	1
T-02	Sara	No	23	9	2019	Sarah	Sara	08:32	Song Sparrow	Thawed	17T	444387	4811741	21	149	Orange Paint	None	no	yes	Bare ground/soil	1
T-02	Sarah	No	24	10	2019	Sara	Sarah	08:24	Golden-crowned Kinglet	Thawed	17T	444370	4811758	6	260	Orange Paint	Wind: Strong	no	yes	Gravel	1
T-02	Sarah	No	24	10	2019	Sara	Sarah	08:26	Hoary Bat	Thawed	17T	444370	4811738	22	197	Orange Paint	None	no	yes	Bare ground/soil	1
T-07	Sara	No	21	5	2019	Sarah	Sara	09:04	Magnolia Warbler	Thawed	17T	443968	4809177	33	23	Orange Paint	None	yes	no	Bare ground/soil	1
T-07	Sara	No	18	6	2019	Sarah	Sara	08:29	Bird spp. (unknown)	Thawed	17T	443950	4809153	8	323	Orange Paint	None	no	yes	Gravel	1
T-07	Sarah	No	25	6	2019	Sara	Sarah	08:39	Black-capped Chickadee	Thawed	17T	443969	4809135	19	128	Orange Paint	None	no	yes	Bare ground/soil	1
T-07	Sarah	No	25	6	2019	Sara	Sarah	08:40	Northern Parula	Thawed	17T	443959	4809142	6	135	Orange Paint	None	no	yes	Gravel	1
T-07	Sara	No	2	7	2019	Sarah	Sara	08:30	Hoary Bat	Thawed	17T	443968	4809158	18	49	Orange Paint	None	no	yes	Bare ground/soil	1
T-07	Sara	No	26	7	2019	Sarah	Sara	10:09	Silver-haired Bat	Thawed	17T	443968	4809153	15	65	Orange Paint	None	no	yes	Bare ground/soil	1

Turbine ID	Searcher Name	Dog Used	Day Placed	Month Placed	Year	Tester	Searcher	Time	Species Common Name	Condition	Carcass UTM Zone	Carcass Easting (NAD83)	Carcass Northing (NAD83)	Distance from TB (m)	Direction from TB (degrees)	Marking	Significant Weather on Day of Trial	Scavenged	Found	Substrate	Visibility Class
T-07	Sarah	No	30	7	2019	Sara	Sarah	08:38	Silver-haired Bat	Thawed	17T	443951	4809148	4	285	Orange Paint	None	no	yes	Gravel	1
T-07	Sarah	No	20	8	2019	Sara	Sarah	08:59	Northern Parula	Thawed	17T	443972	4809140	19	111	Orange Paint	None	no	yes	Bare ground/soil	1
T-07	Sara	No	27	9	2019	Sarah	Sara	08:42	Nashville Warbler	Thawed	17T	443949	4809158	13	335	Orange Paint	None	no	yes	Gravel	1
T-07	Sarah	No	1	10	2019	Sara	Sarah	08:29	Big Brown Bat	Thawed	17T	443978	4809136	26	113	Orange Paint	None	no	yes	Bare ground/soil	1
T-07	Sarah	No	8	10	2019	Sara	Sarah	10:26	Cedar Waxwing	Thawed	17T	443946	4809145	8	256	Orange Paint	None	no	yes	Gravel	1
T-07	Sarah	No	8	10	2019	Sara	Sarah	10:27	Nashville Warbler	Thawed	17T	443949	4809147	5	276	Orange Paint	None	no	yes	Gravel	1
T-16	Sara	No	21	5	2019	Sarah	Sara	08:52	Magnolia Warbler	Thawed	17T	443918	4807605	22	104	Orange Paint	None	yes	no	Mown vegetation	2
T-16	Sara	No	21	5	2019	Sarah	Sara	08:48	Ruby-crowned Kinglet	Thawed	17T	443903	4807603	9	135	Orange Paint	None	no	yes	Mown vegetation	2
T-16	Sarah	No	28	5	2019	Sara	Sarah	09:07	Eastern Red Bat	Thawed	17T	443893	4807611	3	287	Orange Paint	None	no	yes	Gravel	1
T-16	Sara	No	7	6	2019	Sarah	Sara	08:42	Hoary Bat	Thawed	17T	443901	4807590	21	168	Orange Paint	None	yes	no	Low shrub, Mown vegetation	2
T-16	Sara	No	7	6	2019	Sarah	Sara	08:44	Silver-haired Bat	Thawed	17T	443898	4807615	5	16	Orange Paint	None	no	yes	Gravel	1
T-16	Sarah	No	10	6	2019	Sara	Sarah	08:41	Black-capped Chickadee	Thawed	17T	443876	4807596	25	235	Orange Paint	None	no	yes	Mown vegetation	2
T-16	Sarah	No	10	6	2019	Sara	Sarah	08:39	Northern Parula	Thawed	17T	443885	4807597	17	221	Orange Paint	Wind: Strong	no	yes	Mown vegetation	2
T-16	Sara	No	18	6	2019	Sarah	Sara	08:40	American Goldfinch	Thawed	17T	443898	4807609	2	119	Orange Paint	None	no	yes	Mown vegetation	2
T-16	Sara	No	18	6	2019	Sarah	Sara	08:41	Black-capped Chickadee	Thawed	17T	443900	4807614	6	48	Orange Paint	None	no	no	Gravel	1
T-16	Sarah	No	25	6	2019	Sara	Sarah	08:30	American Goldfinch	Thawed	17T	443888	4807609	8	259	Orange Paint	None	no	yes	Gravel	1
T-16	Sara	No	2	7	2019	Sarah	Sara	08:40	Bird spp. (unknown)	Thawed	17T	443906	4807612	10	81	Orange Paint	None	yes	no	Mown vegetation	2
T-16	Sara	No	2	7	2019	Sarah	Sara	08:39	Hoary Bat	Thawed	17T	443896	4807618	8	355	Orange Paint	None	yes	no	Mown vegetation	2
T-16	Sara	No	19	7	2019	Sarah	Sara	08:51	Eastern Red Bat	Thawed	17T	443886	4807593	20	211	Orange Paint	None	no	yes	Gravel	1
T-16	Sara	No	19	7	2019	Sarah	Sara	08:53	Red-eyed Vireo	Thawed	17T	443911	4807615	16	70	Orange Paint	None	yes	no	Mown vegetation	2

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T-16	Sarah	No	30	7	2019	Sara	Sarah	08:51	Cedar Waxwing	Thawed	17T	443872	4807600	26	247	Orange Paint	None	no	yes	Mown vegetation	2
T-16	Sarah	No	30	7	2019	Sara	Sarah	08:54	Red-eyed Vireo	Thawed	17T	443864	4807613	33	275	Orange Paint	None	no	no	Mown vegetation	2
T-16	Sarah	No	20	8	2019	Sara	Sarah	08:49	Hoary Bat	Thawed	17T	443867	4807594	34	240	Orange Paint	None	no	yes	Mown vegetation	2
T-16	Sara	No	27	9	2019	Sarah	Sara	08:25	Hoary Bat	Thawed	17T	443911	4807595	22	136	Orange Paint	None	no	yes	Mown vegetation	2
T-16	Sara	No	27	9	2019	Sarah	Sara	08:28	Silver-haired Bat	Thawed	17T	443916	4807612	19	83	Orange Paint	None	no	yes	Mown vegetation	2
T-16	Sarah	No	1	10	2019	Sara	Sarah	08:39	Cedar Waxwing	Thawed	17T	443882	4807600	18	235	Orange Paint	None	no	yes	Mown vegetation	2
T-16	Sarah	No	1	10	2019	Sara	Sarah	08:41	Hoary Bat	Thawed	17T	443864	4807592	37	240	Orange Paint	None	no	yes	Mown vegetation	2
T-16	Sarah	No	8	10	2019	Sara	Sarah	09:31	Chestnut-sided Warbler	Thawed	17T	443874	4807584	35	220	Orange Paint	None	no	no	Mown vegetation	2
T-17	Sara	No	14	5	2019	Sarah	Sara	08:52	Ruby-crowned Kinglet	Thawed	17T	443385	4805312	43	168	Orange Paint	None	no	no	Bare ground/soil	1
T-17	Sarah	No	14	6	2019	Sara	Sarah	09:11	Hoary Bat	Thawed	17T	443368	4805340	16	211	Orange Paint	None	no	no	Bare ground/soil	1
T-17	Sara	No	9	7	2019	Sarah	Sara	08:27	Hoary Bat	Thawed	17T	443386	4805318	37	166	Orange Paint	None	yes	no	Bare ground/soil	1
T-17	Sara	No	9	7	2019	Sarah	Sara	08:29	Swamp Sparrow	Thawed	17T	443380	4805348	7	156	Orange Paint	None	no	yes	Bare ground/soil	1
T-17	Sarah	No	23	7	2019	Sara	Sarah	08:31	Cedar Waxwing	Thawed	17T	443364	4805352	13	260	Orange Paint	None	no	yes	Bare ground/soil	1
T-17	Sarah	No	23	7	2019	Sara	Sarah	08:32	Silver-haired Bat	Thawed	17T	443373	4805357	5	309	Orange Paint	None	no	yes	Gravel	1
T-17	Sara	No	26	7	2019	Sarah	Sara	10:22	Cedar Waxwing	Thawed	17T	443399	4805317	43	148	Orange Paint	None	no	yes	Bare ground/soil	1
T-17	Sara	No	26	7	2019	Sarah	Sara	10:18	Northern Parula	Thawed	17T	443381	4805330	25	170	Orange Paint	None	no	yes	Gravel	1
T-17	Sara	No	13	8	2019	Sarah	Sara	08:51	Northern Parula	Thawed	17T	443385	4805333	22	159	Orange Paint	None	no	no	Bare ground/soil	1
T-17	Sarah	No	16	8	2019	Sara	Sarah	08:55	Hoary Bat	Thawed	17T	443363	4805306	50	195	Orange Paint	None	no	yes	Bare ground/soil	1
T-17	Sarah	No	16	8	2019	Sara	Sarah	08:53	Northern Parula	Thawed	17T	443375	4805355	2	299	Orange Paint	None	no	yes	Gravel	1
T-17	Sarah	No	24	9	2019	Sara	Sarah	08:47	Hoary Bat	Thawed	17T	443366	4805328	29	203	Orange Paint	None	no	no	Gravel	1
T-17	Sarah	No	18	10	2019	Sara	Sarah	08:53	Silver-haired Bat	Thawed	17T	443367	4805320	36	195	Orange Paint	None	no	yes	Bare ground/soil	1

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T-17	Sara	No	22	10	2019	Sarah	Sara	09:22	Golden-crowned Kinglet	Thawed	17T	443381	4805361	8	28	Orange Paint	None	no	yes	Gravel	1
T-18	Sara	No	14	5	2019	Sarah	Sara	08:43	Magnolia Warbler	Thawed	17T	443719	4805347	11	10	Orange Paint	None	no	yes	Bare ground/soil	1
T-18	Sara	No	14	5	2019	Sarah	Sara	08:40	Magnolia Warbler	Thawed	17T	443719	4805327	9	170	Orange Paint	None	no	yes	Bare ground/soil	1
T-18	Sarah	No	28	5	2019	Sara	Sarah	08:54	Hoary Bat	Thawed	17T	443707	4805318	20	208	Orange Paint	None	no	yes	Bare ground/soil	1
T-18	Sarah	No	28	5	2019	Sara	Sarah	08:56	Silver-haired Bat	Thawed	17T	443713	4805330	7	217	Orange Paint	None	no	yes	Gravel	1
T-18	Sara	No	16	7	2019	Sarah	Sara	08:37	Silver-haired Bat	Thawed	17T	443715	4805293	42	182	Orange Paint	None	no	yes	Bare ground/soil	1
T-18	Sarah	No	23	7	2019	Sara	Sarah	08:37	Black-capped Chickadee	Thawed	17T	443700	4805298	42	204	Orange Paint	None	no	yes	Bare ground/soil	1
T-18	Sarah	No	16	8	2019	Sara	Sarah	08:59	Hoary Bat	Thawed	17T	443706	4805334	11	263	Orange Paint	None	no	yes	Bare ground/soil	1
T-18	Sarah	No	24	9	2019	Sara	Sarah	08:42	Hoary Bat	Thawed	17T	443708	4805318	19	206	Orange Paint	None	no	yes	Bare ground/soil	1
T-18	Sarah	No	24	9	2019	Sara	Sarah	08:40	Nashville Warbler	Thawed	17T	443711	4805336	6	269	Orange Paint	None	no	yes	Gravel	1
T-18	Sara	No	4	10	2019	Sarah	Sara	08:20	Silver-haired Bat	Thawed	17T	443721	4805334	4	116	Orange Paint	None	no	no	Gravel	1
T-20	Sara	No	6	5	2019	Sarah	Sara	12:04	Lincoln's Sparrow	Thawed	17T	446906	4804825	7	276	Orange Paint	None	no	yes	Bare ground/soil	1
T-20	Sara	No	27	5	2019	Sarah	Sara	09:01	Eastern Red Bat	Thawed	17T	446903	4804827	11	288	Orange Paint	None	no	no	Bare ground/soil	1
T-20	Sarah	No	6	6	2019	Sara	Sarah	08:49	Golden-crowned Kinglet	Thawed	17T	446920	4804841	19	22	Orange Paint	None	yes	no	Gravel	1
T-20	Sarah	No	6	6	2019	Sara	Sarah	08:50	Hoary Bat	Thawed	17T	446915	4804832	8	12	Orange Paint	None	no	yes	Gravel	1
T-20	Sara	No	27	6	2019	Sarah	Sara	08:25	American Goldfinch	Thawed	17T	446904	4804825	9	277	Orange Paint	None	yes	no	Bare ground/soil	1
T-20	Sarah	No	18	7	2019	Sara	Sarah	08:34	Great Crested Flycatcher	Thawed	17T	446914	4804864	40	0	Orange Paint	Temp.: Hot	yes	no	Gravel	1
T-20	Sarah	No	18	7	2019	Sara	Sarah	08:37	Silver-haired Bat	Thawed	17T	446923	4804824	9	88	Orange Paint	Temp.: Hot	no	yes	Gravel	1
T-20	Sara	No	8	8	2019	Sarah	Sara	10:35	Hoary Bat	Thawed	17T	446905	4804840	18	333	Orange Paint	Wind: Strong	no	no	Bare ground/soil	1
T-20	Sarah	No	12	9	2019	Sara	Sarah	08:37	Hoary Bat	Thawed	17T	446926	4804868	46	16	Orange Paint	None	no	yes	Bare ground/soil	1

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T-20	Sara	No	23	9	2019	Sarah	Sara	08:45	Chestnut-sided Warbler	Thawed	17T	446914	4804833	9	7	Orange Paint	None	no	no	Gravel	1
T-20	Sara	No	10	10	2019	Sarah	Sara	08:42	Cedar Waxwing	Thawed	17T	446900	4804828	14	286	Orange Paint	None	no	yes	Gravel	1
T-20	Sarah	No	24	10	2019	Sara	Sarah	08:39	Ruby-crowned Kinglet	Thawed	17T	446922	4804821	9	109	Orange Paint	Wind: Strong	no	yes	Bare ground/soil	1
T-20	Sarah	No	28	10	2019	Sara	Sarah	08:34	Eastern Red Bat	Thawed	17T	446914	4804860	36	0	Orange Paint	None	no	yes	Gravel	1
T-20	Sarah	No	28	10	2019	Sara	Sarah	08:33	Golden-crowned Kinglet	Thawed	17T	446917	4804828	6	44	Orange Paint	None	no	no	Gravel	1
T27	Sara	No	3	10	2019	Sarah	Sara	08:46	Big Brown Bat	Thawed	17T	443622	4803675	17	252	Orange Paint	None	no	yes	Bare ground/soil	1
T-27	Sarah	No	9	5	2019	Sara	Sarah	08:37	Magnolia Warbler	Thawed	17T	443608	4803693	33	293	Orange Paint	Wind: Strong	no	yes	Bare ground/soil	1
T-27	Sara	No	27	5	2019	Sarah	Sara	09:24	Hoary Bat	Thawed	17T	443631	4803676	8	243	Orange Paint	None	no	yes	Bare ground/soil	1
T-27	Sara	No	27	5	2019	Sarah	Sara	09:18	Silver-haired Bat	Thawed	17T	443652	4803674	15	113	Orange Paint	None	no	yes	Bare ground/soil	1
T-27	Sarah	No	30	5	2019	Sara	Sarah	09:14	Eastern Red Bat	Thawed	17T	443624	4803690	18	305	Orange Paint	Sky: Fog	no	no	Low shrub	2
T-27	Sarah	No	6	6	2019	Sara	Sarah	09:03	Hoary Bat	Thawed	17T	443659	4803687	22	72	Orange Paint	None	no	yes	Gravel	1
T-27	Sarah	No	4	7	2019	Sara	Sarah	08:54	Red-eyed Vireo	Thawed	17T	443620	4803728	52	339	Orange Paint	None	no	yes	Bare ground/soil	1
T-27	Sarah	No	4	7	2019	Sara	Sarah	08:52	Swamp Sparrow	Thawed	17T	443593	4803709	54	302	Orange Paint	None	no	yes	Bare ground/soil	1
T-27	Sara	No	22	7	2019	Sarah	Sara	08:34	Eastern Red Bat	Thawed	17T	443616	4803700	30	312	Orange Paint	None	no	no	Bare ground/soil	1
T-27	Sara	No	22	7	2019	Sarah	Sara	08:30	Silver-haired Bat	Thawed	17T	443681	4803671	44	102	Orange Paint	None	no	yes	Bare ground/soil	1
T-27	Sarah	No	2	9	2019	Sara	Sarah	09:43	Eastern Red Bat	Thawed	17T	443624	4803688	16	300	Orange Paint	None	yes	no	Bare ground/soil	1
T-27	Sarah	No	2	9	2019	Sara	Sarah	09:42	Eastern Red Bat	Thawed	17T	443636	4803683	4	317	Orange Paint	None	no	yes	Bare ground/soil	1
T-27	Sara	No	19	9	2019	Sarah	Sara	08:35	Black-and-white Warbler	Thawed	17T	443637	4803676	4	203	Orange Paint	None	no	no	Gravel	1
T-27	Sara	No	19	9	2019	Sarah	Sara	08:37	Savannah Sparrow	Thawed	17T	443640	4803680	2	76	Orange Paint	None	no	yes	Bare ground/soil	1
T-27	Sara	No	3	10	2019	Sarah	Sara	08:48	Hoary Bat	Thawed	17T	443638	4803677	3	178	Orange Paint	None	no	yes	Gravel	1

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T-27	Sara	No	17	10	2019	Sarah	Sara	08:36	Nashville Warbler	Thawed	17T	443626	4803673	14	239	Orange Paint	Wind: Strong	yes	no	Bare ground/soil	1
T-27	Sarah	No	28	10	2019	Sara	Sarah	08:47	Ruby-crowned Kinglet	Thawed	17T	443645	4803686	9	46	Orange Paint	None	no	yes	Gravel	1
T-31	Sara	No	24	5	2019	Sarah	Sara	09:09	Hoary Bat	Thawed	17T	443516	4801078	40	218	Orange Paint	None	no	yes	Mown vegetation	2
T-31	Sara	No	24	5	2019	Sarah	Sara	09:12	Silver-haired Bat	Thawed	17T	443540	4801127	18	358	Orange Paint	None	no	yes	Mown vegetation	2
T-31	Sarah	No	31	5	2019	Sara	Sarah	08:49	Eastern Red Bat	Thawed	17T	443561	4801117	22	69	Orange Paint	None	no	yes	Low shrub	2
T-31	Sarah	No	31	5	2019	Sara	Sarah	08:47	Silver-haired Bat	Thawed	17T	443558	4801120	21	58	Orange Paint	None	no	yes	Gravel	1
T-31	Sarah	No	10	6	2019	Sara	Sarah	08:23	American Goldfinch	Thawed	17T	443558	4801120	21	59	Orange Paint	None	no	yes	Low shrub	2
T-31	Sara	No	9	7	2019	Sarah	Sara	08:47	Red-eyed Vireo	Thawed	17T	443528	4801102	14	242	Orange Paint	None	no	no	Low shrub, Mown vegetation	2
T-31	Sara	No	19	7	2019	Sarah	Sara	08:33	Cedar Waxwing	Thawed	17T	443538	4801139	30	356	Orange Paint	None	no	yes	Bare ground/soil, Mown vegetation	2
T-31	Sarah	No	6	8	2019	Sara	Sarah	11:28	Silver-haired Bat	Thawed	17T	443556	4801113	17	74	Orange Paint	None	yes	no	Gravel	1
T-31	Sarah	No	20	8	2019	Sara	Sarah	08:35	Hoary Bat	Thawed	17T	443542	4801099	10	169	Orange Paint	None	no	no	Mown vegetation	2
T-31	Sara	No	3	9	2019	Sarah	Sara	08:40	Hoary Bat	Thawed	17T	443557	4801125	23	46	Orange Paint	None	no	no	Gravel	1
T-31	Sarah	No	17	9	2019	Sara	Sarah	08:39	Savannah Sparrow	Thawed	17T	443571	4801117	32	75	Orange Paint	None	no	no	Mown vegetation	2
T-31	Sarah	No	18	10	2019	Sara	Sarah	08:37	Eastern Red Bat	Thawed	17T	443556	4801113	16	74	Orange Paint	None	no	yes	Low shrub, Mown vegetation	2
T-31	Sarah	No	18	10	2019	Sara	Sarah	08:39	Hoary Bat	Thawed	17T	443566	4801115	27	76	Orange Paint	None	no	yes	Mown vegetation	2
T-31	Sara	No	22	10	2019	Sarah	Sara	09:11	Hoary Bat	Thawed	17T	443546	4801141	32	10	Orange Paint	None	no	yes	Moss, weeds, dead succulents	2
T-33	Sara	No	24	5	2019	Sarah	Sara	09:22	Eastern Red Bat	Thawed	17T	442815	4800467	24	278	Orange Paint	None	no	yes	Mown vegetation	2

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T-33	Sarah	No	31	5	2019	Sara	Sarah	08:57	Hoary Bat	Thawed	17T	442809	4800486	37	307	Orange Paint	None	no	yes	Mown vegetation	2
T-33	Sara	No	7	6	2019	Sarah	Sara	08:23	Hoary Bat	Thawed	17T	442814	4800475	26	296	Orange Paint	None	no	yes	Bare ground/soil, Mown vegetation	2
T-33	Sarah	No	14	6	2019	Sara	Sarah	08:35	Hoary Bat	Thawed	17T	442827	4800487	26	333	Orange Paint	None	yes	no	Bare ground/soil	2
T-33	Sarah	No	14	6	2019	Sara	Sarah	08:33	Northern Parula	Thawed	17T	442807	4800492	43	312	Orange Paint	None	no	yes	Mown vegetation	2
T-33	Sara	No	16	7	2019	Sarah	Sara	08:22	Great Crested Flycatcher	Thawed	17T	442823	4800459	15	252	Orange Paint	None	no	no	Mown vegetation	2
T-33	Sara	No	16	7	2019	Sarah	Sara	08:25	Silver-haired Bat	Thawed	17T	442829	4800450	16	212	Orange Paint	None	no	no	Gravel	1
T-33	Sarah	No	6	8	2019	Sara	Sarah	12:01	American Goldfinch	Thawed	17T	442828	4800497	35	342	Orange Paint	None	no	yes	Mown vegetation	2
T-33	Sarah	No	6	8	2019	Sara	Sarah	12:00	Hoary Bat	Thawed	17T	442827	4800487	26	334	Orange Paint	None	no	no	Mown vegetation	2
T-33	Sara	No	13	8	2019	Sarah	Sara	08:42	American Goldfinch	Thawed	17T	442837	4800463	2	231	Orange Paint	None	no	no	Gravel	1
T-33	Sara	No	13	8	2019	Sarah	Sara	08:40	Hoary Bat	Thawed	17T	442804	4800479	38	293	Orange Paint	None	no	no	Bare ground/soil	2
T-33	Sara	No	3	9	2019	Sarah	Sara	08:29	Hoary Bat	Thawed	17T	442792	4800475	48	283	Orange Paint	None	no	no	Mown vegetation	2
T-33	Sara	No	3	9	2019	Sarah	Sara	08:32	Silver-haired Bat	Thawed	17T	442804	4800474	35	286	Orange Paint	None	no	no	Mown vegetation	2
T-33	Sarah	No	17	9	2019	Sara	Sarah	08:28	Black-and-white Warbler	Thawed	17T	442819	4800494	36	327	Orange Paint	None	no	yes	Mown vegetation	2
T-33	Sarah	No	17	9	2019	Sara	Sarah	08:30	Chestnut-sided Warbler	Thawed	17T	442817	4800503	45	331	Orange Paint	None	no	yes	Mown vegetation	2
T-33	Sara	No	4	10	2019	Sarah	Sara	08:11	Eastern Red Bat	Thawed	17T	442815	4800466	23	275	Orange Paint	Percip.: Intermittent Rain	no	no	Mown vegetation	2
T-33	Sara	No	4	10	2019	Sarah	Sara	08:12	Silver-haired Bat	Thawed	17T	442823	4800465	15	273	Orange Paint	Percip.: Intermittent Rain	no	yes	Mown vegetation	2
T-33	Sara	No	22	10	2019	Sarah	Sara	09:00	Hoary Bat	Thawed	17T	442831	4800454	12	215	Orange Paint	None	no	no	Mown vegetation	2
T-38	Sarah	No	16	5	2019	Sara	Sarah	08:55	Magnolia Warbler	Thawed	17T	442395	4799521	33	333	Orange Paint	None	no	yes	Mown vegetation	2
T-38	Sarah	No	16	5	2019	Sara	Sarah	08:53	Ruby-crowned Kinglet	Thawed	17T	442394	4799517	30	328	Orange Paint	None	no	yes	Mown vegetation	2

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T-38	Sara	No	17	6	2019	Sarah	Sara	08:35	Hoary Bat	Thawed	17T	442376	4799494	34	275	Orange Paint	None	no	yes	Mown vegetation	2
T-38	Sara	No	17	6	2019	Sarah	Sara	08:37	Northern Parula	Thawed	17T	442381	4799493	29	272	Orange Paint	None	no	yes	Mown vegetation	2
T-38	Sara	No	27	6	2019	Sarah	Sara	08:47	Black-capped Chickadee	Thawed	17T	442385	4799491	25	268	Orange Paint	None	no	yes	Mown vegetation	2
T-38	Sara	No	27	6	2019	Sarah	Sara	08:44	Northern Parula	Thawed	17T	442384	4799502	28	292	Orange Paint	None	no	yes	Mown vegetation	2
T-38	Sarah	No	11	7	2019	Sara	Sarah	08:38	Silver-haired Bat	Thawed	17T	442385	4799525	42	323	Orange Paint	None	no	no	Mown vegetation	2
T-38	Sara	No	22	7	2019	Sarah	Sara	08:47	Cedar Waxwing	Thawed	17T	442373	4799492	37	270	Orange Paint	None	no	yes	Mown vegetation	2
T-38	Sara	No	8	8	2019	Sarah	Sara	10:55	Eastern Red Bat	Thawed	17T	442408	4799478	13	188	Orange Paint	Wind: Strong	no	no	Mown vegetation	2
T-38	Sara	No	8	8	2019	Sarah	Sara	10:58	Hoary Bat	Thawed	17T	442402	4799485	10	231	Orange Paint	Wind: Strong	no	yes	Mown vegetation	2
T-38	Sarah	No	12	8	2019	Sara	Sarah	09:56	American Goldfinch	Thawed	17T	442396	4799524	35	336	Orange Paint	None	no	yes	But brown dry grass ,Mown vegetation	2
T-38	Sarah	No	12	8	2019	Sara	Sarah	09:59	Hoary Bat	Thawed	17T	442399	4799533	43	345	Orange Paint	None	no	no	Brown dry grass ,Mown vegetation	2
T-38	Sarah	No	12	9	2019	Sara	Sarah	08:56	Hoary Bat	Thawed	17T	442375	4799534	55	320	Orange Paint	None	no	no	Mown vegetation	2
T-38	Sarah	No	12	9	2019	Sara	Sarah	08:54	Silver-haired Bat	Thawed	17T	442413	4799500	9	19	Orange Paint	None	no	yes	Mown vegetation	2
T-38	Sara	No	16	9	2019	Sarah	Sara	10:01	Hoary Bat	Thawed	17T	442373	4799506	39	292	Orange Paint	None	no	no	Dead grass/soil	2
T-38	Sara	No	16	9	2019	Sarah	Sara	10:04	Silver-haired Bat	Thawed	17T	442408	4799487	4	202	Orange Paint	None	no	yes	Gravel	1
T-38	Sara	No	3	10	2019	Sarah	Sara	08:34	Cedar Waxwing	Thawed	17T	442373	4799519	46	307	Orange Paint	None	no	yes	Dead grass,Mud	2
T-42	Sarah	No	9	5	2019	Sara	Sarah	08:21	Magnolia Warbler	Thawed	17T	441620	4797838	18	131	Yellow Paint	Wind: Strong	no	yes	Mown vegetation	2
T-42	Sarah	No	9	5	2019	Sara	Sarah	08:19	Ruby-crowned Kinglet	Thawed	17T	441616	4797845	10	117	Orange Paint	Wind: Strong	no	yes	Mown vegetation	2
T-42	Sara	No	17	6	2019	Sarah	Sara	08:49	Hoary Bat	Thawed	17T	441600	4797856	9	312	Orange Paint	None	no	yes	Mown vegetation	2
T-42	Sarah	No	18	7	2019	Sara	Sarah	09:08	Silver-haired Bat	Thawed	17T	441637	4797878	41	46	Orange Paint	Temp.: Hot	no	yes	Mown vegetation	2

Turbine ID	Searcher Name	Dog Used	Day Placed	Month Placed	Year	Tester	Searcher	Time	Species Common Name	Condition	Carcass UTM Zone	Carcass Easting (NAD83)	Carcass Northing (NAD83)	Distance from TB (m)	Direction from TB (degrees)	Marking	Significant Weather on Day of Trial	Scavenged	Found	Substrate	Visibility Class
T-42	Sara	No	1	8	2019	Sarah	Sara	08:41	American Goldfinch	Thawed	17T	441601	4797857	9	319	Orange Paint	None	no	yes	Mown vegetation	2
T-42	Sara	No	1	8	2019	Sarah	Sara	08:43	Silver-haired Bat	Thawed	17T	441599	4797841	11	223	Orange Paint	None	no	no	Mown vegetation	2
T-42	Sarah	No	12	8	2019	Sara	Sarah	10:09	Hoary Bat	Thawed	17T	441639	4797863	34	67	Orange Paint	None	no	yes	Mown vegetation	2
T-42	Sarah	No	19	8	2019	Sara	Sarah	09:02	Hoary Bat	Thawed	17T	441633	4797858	27	72	Orange Paint	None	no	no	Mown vegetation	2
T-42	Sara	No	22	8	2019	Sarah	Sara	09:00	Hoary Bat	Thawed	17T	441590	4797848	17	263	Orange Paint	None	no	yes	Mown vegetation	2
T-42	Sara	No	22	8	2019	Sarah	Sara	08:58	Silver-haired Bat	Thawed	17T	441599	4797860	14	323	Orange Paint	None	no	no	Mown vegetation	2
T-42	Sara	No	16	9	2019	Sarah	Sara	10:14	Hoary Bat	Thawed	17T	441599	4797866	18	333	Orange Paint	None	no	no	Mown vegetation	2
T-42	Sara	No	17	10	2019	Sarah	Sara	08:49	Eastern Red Bat	Thawed	17T	441604	4797858	9	338	Orange Paint	Percip.: Light Rain; Wind: Strong	no	yes	Gravel	1
T-42	Sara	No	17	10	2019	Sarah	Sara	08:48	Hoary Bat	Thawed	17T	441603	4797864	15	341	Orange Paint	Percip.: Light Rain; Wind: Strong	no	yes	Mown vegetation	2
T-42	Sarah	No	21	10	2019	Sara	Sarah	08:43	Eastern Red Bat	Thawed	17T	441624	4797852	17	80	Orange Paint	None	no	yes	Mown vegetation	2
T-42	Sarah	No	21	10	2019	Sara	Sarah	08:45	Silver-haired Bat	Thawed	17T	441631	4797850	24	89	Orange Paint	None	no	yes	Mown vegetation	2
T-48	Sarah	No	16	5	2019	Sara	Sarah	09:06	Magnolia Warbler	Thawed	17T	440549	4796565	23	59	Orange Paint	None	no	no	Mown vegetation	2
T-48	Sara	No	13	6	2019	Sarah	Sara	13:11	American Goldfinch	Thawed	17T	440523	4796547	8	225	Orange Paint	Percip.: Intermittent Rain; Sky: Fog	no	yes	Mown vegetation	2
T-48	Sara	No	13	6	2019	Sarah	Sara	13:13	Hoary Bat	Thawed	17T	440522	4796548	9	233	Orange Paint	Sky: Fog	no	yes	Mown vegetation	2
T-48	Sarah	No	20	6	2019	Sara	Sarah	09:02	American Goldfinch	Thawed	17T	440553	4796560	25	74	Orange Paint	None	no	yes	Mown vegetation	2
T-48	Sarah	No	20	6	2019	Sara	Sarah	09:01	Northern Parula	Thawed	17T	440552	4796569	28	55	Orange Paint	None	no	no	Mown vegetation	2
T-48	Sarah	No	11	7	2019	Sara	Sarah	08:16	Great Crested Flycatcher	Thawed	17T	440564	4796565	37	70	Orange Paint	None	no	yes	Mown vegetation	2
T-48	Sarah	No	11	7	2019	Sara	Sarah	08:14	Silver-haired Bat	Thawed	17T	440554	4796574	32	49	Orange Paint	None	no	yes	Mown vegetation	2
T-48	Sara	No	1	8	2019	Sarah	Sara	08:53	Hoary Bat	Thawed	17T	440537	4796583	31	15	Orange Paint	None	no	yes	Mown vegetation	2
T-48	Sarah	No	19	8	2019	Sara	Sarah	09:12	Northern Parula	Thawed	17T	440548	4796571	26	46	Orange Paint	None	no	yes	Mown vegetation	2

Turbine ID	Searcher Name	Dog Used	Day Placed	Month Placed	Year	Tester	Searcher	Time	Species Common Name	Condition	Carcass UTM Zone	Carcass Easting (NAD83)	Carcass Northing (NAD83)	Distance from TB (m)	Direction from TB (degrees)	Marking	Significant Weather on Day of Trial	Scavenged	Found	Substrate	Visibility Class
T-48	Sarah	No	2	9	2019	Sara	Sarah	09:56	Eastern Red Bat	Thawed	17T	440551	4796570	28	51	Orange Paint	None	no	yes	Mown vegetation	2
T-48	Sara	No	19	9	2019	Sarah	Sara	08:51	Chestnut-sided Warbler	Thawed	17T	440523	4796586	34	350	Orange Paint	None	no	yes	Mown vegetation	2
T-48	Sara	No	10	10	2019	Sarah	Sara	08:59	Chestnut-sided Warbler	Thawed	17T	440526	4796587	34	354	Orange Paint	None	no	yes	Mown vegetation	2
T-48	Sara	No	10	10	2019	Sarah	Sara	09:00	Eastern Red Bat	Thawed	17T	440524	4796586	33	351	Orange Paint	None	no	yes	Mown vegetation	2
T-48	Sarah	No	21	10	2019	Sara	Sarah	09:04	Hoary Bat	Thawed	17T	440550	4796565	23	60	Orange Paint	None	no	no	Mown vegetation	2

Appendix D - Table 7												
Grand Bend Wind Farm Year 3 -Scavenger (Carcass) Removal Trial Results - 2019												
Project Name	Treatment Group	Year	Season Month	Month Start	Month End	Searcher Name	Number of Carcasses Placed	Number of Carcasses Scavenged	Number or Carcasses Found	Proportion Found	Proportion Turbines Searched	Weighted Searcher Efficiency
Grand Bend Wind	1	2019	Spring	5	6	Sarah Jackson	30	2	24	80.00	0.490	0.857
Grand Bend Wind	1	2019	Spring	5	6	Sara Henry	30	5	21	70.00	0.510	0.840
Grand Bend Wind	1	2019	Summer	7	8	Sarah Jackson	30	2	21	70.00	0.462	0.750
Grand Bend Wind	1	2019	Summer	7	8	Sara Henry	30	4	15	50.00	0.538	0.577
Grand Bend Wind	1	2019	Fall	9	10	Sarah Jackson	30	1	23	76.67	0.490	0.793
Grand Bend Wind	1	2019	Fall	9	10	Sara Henry	30	1	19	63.33	0.510	0.655

Appendix D - Table 8

Grand Bend Wind Farm Year 3 -Scavenger (Carcass) Removal Trial Results - 2019

Spring Trial (May/June)																		
Turbine ID	Date Placed	Species Common Name	Visibility Class	Condition	Substrate	Marking	Time Placed	Weather Placed	Distance from TB (m)	Direction from TB (degrees)	Carcass Easting (NAD83)	Carcass Northing (NAD83)	Visit 0 # Carcasses Placed	Visit 1 # Remaining	Visit 2 # Remaining2	Visit 3 # Remaining3	Visit 4 # Remaining4	Scavenged
T-25	7-May-19	Brown Creeper	2	Thawed	Cultivated crop	Orange Paint	15:22	18C; Sky: Clear,Temp.: Warm,Wind: Light	21	85	444018.4858	4804037.278	1	0	-	-	-	Yes
T-25	7-May-19	Lincoln's Sparrow	2	Thawed	Cultivated crop	Orange Paint	15:20	18C; Sky: Clear,Temp.: Warm,Wind: Light	15	98	444012.0336	4804033.356	1	0	-	-	-	Yes
T-25	7-May-19	Sharp-shinned Hawk	2	Thawed	Cultivated crop	Orange Paint	15:21	18C; Sky: Clear,Temp.: Warm,Wind: Light	23	103	444019.8107	4804030.207	1	1	1	0	-	Yes
TOTAL													3	1	1	0	-	
T-32	14-May-19	Eastern Red Bat	2	Thawed	Bare ground/soil,Growin	Orange Paint	14:45	21C; Sky: Clear,Temp.:	12	288	442436.4457	4800450.979	1	0	-	-	-	Yes
T-32	14-May-19	Hoary Bat	2	Thawed	Bare ground/soil,Growin	Orange Paint	14:44	21C; Sky: Clear,Temp.: Warm,Wind: Light	15	317	442438.1576	4800457.957	1	0	-	-	-	Yes
T-32	14-May-19	Silver-haired Bat	2	Thawed	Bare ground/soil,Growin	Orange Paint	14:48	21C; Sky: Clear,Temp.: Warm,Wind: Light	11	313	442440.0146	4800454.719	1	0	-	-	-	Yes
TOTAL													3	0	-	-	-	
T-34	14-May-19	Eastern Red Bat	2	Thawed	Cultivated crop	Orange Paint	14:56	24C; Sky: Cloudy,Temp.: Warm,Wind: Medium	46	148	442267.3926	4800079.572	1	0	-	-	-	Yes
T-34	14-May-19	Hoary Bat	2	Thawed	Cultivated crop	Orange Paint	14:53	24C; Sky: Cloudy,Temp.: Warm,Wind: Medium	39	132	442272.1522	4800092.305	1	0	-	-	-	Yes
TOTAL													2	0	-	-	-	
T-37	21-May-19	Magnolia Warbler	2	Thawed	Cultivated crop	Orange Paint	15:18	24C; Sky: Cloudy,Temp.: Warm,Wind: Medium	35	99	442096.3965	4799662.529	1	0	-	-	-	Yes
T-37	21-May-19	Ruby-crowned Kinglet	2	Thawed	Cultivated crop	Orange Paint	15:16	24C; Sky: Cloudy,Temp.: Warm,Wind: Medium	15	89	442077.263	4799668.349	1	0	-	-	-	Yes
TOTAL													2	0	-	-	-	
T-05	4-Jun-19	Brown Creeper	1	Thawed	Bare ground/soil	Orange Paint	13:55	20C; Sky: Clear,Temp.: Warm,Wind: Medium	17	16	444211.4818	4809883.964	1	0	-	-	-	Yes
T-05	4-Jun-19	Eastern Red Bat	1	Thawed	Bare ground/soil	Orange Paint	13:57	20C; Sky: Clear,Temp.: Warm,Wind: Medium	24	17	444213.936	4809890.677	1	0	-	-	-	Yes
T-05	4-Jun-19	Golden-crowned Kinglet	1	Thawed	Bare ground/soil	Orange Paint	13:55	20C; Sky: Clear,Temp.: Warm,Wind: Medium	9	258	444198.1675	4809865.902	1	0	-	-	-	Yes
TOTAL													3	0	-	-	-	
T-06	4-Jun-19	Golden-crowned Kinglet	1	Thawed	Bare ground/soil	Orange Paint	14:04	20C; Sky: Clear,Temp.: Warm,Wind: Medium	8	120	444042.5746	4809528.385	1	1	0	-	-	Yes
T-06	4-Jun-19	Hoary Bat	1	Thawed	Bare ground/soil	Orange Paint	14:02	20C; Sky: Clear,Temp.: Warm,Wind: Medium	27	229	444015.3589	4809515.085	1	1	0	-	-	Yes
TOTAL													2	2	0	-	-	

Turbine ID	Date Placed	Species Common Name	Visibility Class	Condition	Substrate	Marking	Time Placed	Weather Placed	Distance from TB (m)	Direction from TB (degrees)	Carcass Easting (NAD83)	Carcass Northing (NAD83)	Visit 0 # Carcasses Placed	Visit 1 # Remaining	Visit 2 # Remaining2	Visit 3 # Remaining3	Visit 4 # Remaining4	Scavenged
Summer Trial (July/August)																		
Turbine ID	Date Placed	Species Common Name	Visibility Class	Condition	Substrate	Marking	Time Placed	Weather Placed	Distance from TB (m)	Direction from TB (degrees)	Carcass Easting (NAD83)	Carcass Northing (NAD83)	Visit 0 # Carcasses Placed	Visit 1 # Remaining	Visit 2 # Remaining2	Visit 3 # Remaining3	Visit 4 # Remaining4	Scavenged
T-01	4-Jul-19	Chipping Sparrow	2	Thawed	Bare ground/soil, Growing crop	Orange Paint	15:01	24C; Sky: Clear, Temp.: Warm, Wind: Medium	15	2	444037.0877	4811891.547	1	1	1	0	-	Yes
T-01	4-Jul-19	Indigo Bunting	2	Thawed	Bare ground/soil, Growing crop	Orange Paint	14:59	24C; Sky: Clear, Temp.: Warm, Wind: Medium	10	136	444042.9227	4811869.815	1	1	1	0	-	Yes
T-01	4-Jul-19	Swamp Sparrow	2	Thawed	Bare ground/soil, Growing crop	Orange Paint	14:55	24C; Sky: Clear, Temp.: Warm, Wind: Medium	23	98	444058.8507	4811873.407	1	0	-	-	-	Yes
TOTAL													3	2	2	0	-	
T-45	4-Jul-19	Dark-eyed Junco	1	Thawed	Gravel	Orange Paint	13:52	24C; Sky: Clear, Temp.: Warm, Wind: Medium	27	218	440137.0614	4796935.911	1	0	-	-	-	Yes
T-45	4-Jul-19	Song Sparrow	1	Thawed	Gravel	Orange Paint	13:57	24C; Sky: Clear, Temp.: Warm, Wind: Medium	42	216	440128.6391	4796922.819	1	0	-	-	-	Yes
TOTAL													2	0	-	-	-	
T-12	23-Jul-19	Black-capped Chickadee	2	Thawed	Bare ground/soil, Cultivated crop	Orange Paint	14:41	24C; Sky: Clear, Temp.: Warm, Wind: Medium	45	105	444044.5814	4808301.72	1	0	-	-	-	Yes
T-12	23-Jul-19	Silver-haired Bat	2	Thawed	Bare ground/soil, Cultivated crop	Orange Paint	14:42	24C; Sky: Clear, Temp.: Warm, Wind: Medium	45	96	444046.4043	4808309.225	1	1	0	-	-	Yes
TOTAL													2	1	0	-	-	
T-32	23-Jul-19	Eastern Red Bat	2	Thawed	Bare ground/soil, Low shrub	Orange Paint	14:16	24C; Sky: Clear, Temp.: Warm, Wind: Medium	28	148	442462.423	4800423.302	1	0	0	-	-	Yes
T-32	23-Jul-19	Silver-haired Bat	2	Thawed	Bare ground/soil, Low shrub	Orange Paint	14:24	24C; Sky: Clear, Temp.: Warm, Wind: Medium	23	171	442451.3129	4800424.669	1	1	0	-	-	Yes
T-32	23-Jul-19	Swamp Sparrow	2	Thawed	Bare ground/soil, Low shrub	Orange Paint	14:22	24C; Sky: Clear, Temp.: Warm, Wind: Medium	31	144	442466.2951	4800421.756	1	0	-	-	-	Yes
TOTAL													3	1	0	-	-	
T-19	9-Aug-19	Eastern Red Bat	1	Thawed	Gravel	Orange Paint	13:14	22C; Sky: Cloudy, Temp.: Warm, Wind: Medium	6	33	446264.7261	4804832.802	1	1	1	0	-	Yes
T-19	9-Aug-19	Hoary Bat	1	Thawed	Gravel	Orange Paint	13:15	22C; Sky: Cloudy, Temp.: Warm, Wind: Medium	12	228	446252.7164	4804820.265	1	1	1	0	-	Yes
TOTAL													2	2	2	0	-	
T-35	9-Aug-19	Cliff Swallow	1	Thawed	Gravel	Orange Paint	13:38	22C; Sky: Cloudy, Temp.: Warm, Wind: Medium	42	291	442717.522	4800027.657	1	0	-	-	-	Yes

Turbine ID	Date Placed	Species Common Name	Visibility Class	Condition	Substrate	Marking	Time Placed	Weather Placed	Distance from TB (m)	Direction from TB (degrees)	Carcass Easting (NAD83)	Carcass Northing (NAD83)	Visit 0 # Carcasses Placed	Visit 1 # Remaining	Visit 2 # Remaining2	Visit 3 # Remaining3	Visit 4 # Remaining4	Scavenged
T-35	9-Aug-19	Cooper's Hawk	1	Thawed	Gravel	Orange Paint	13:34	22C; Sky: Cloudy,Temp.: Warm,Wind: Medium	4	113	442760.732	4800010.632	1	0	-	-	-	Yes
T-35	9-Aug-19	Hoary Bat	1	Thawed	Gravel	Orange Paint	13:36	22C; Sky: Cloudy,Temp.: Warm,Wind: Medium	13	49	442766.9382	4800020.673	1	1	0	-	-	Yes
TOTAL													3	1	0	-	-	
Fall Trial (September/October)																		
Turbine ID	Date Placed	Species Common Name	Visibility Class	Condition	Substrate	Marking	Time Placed	Weather Placed	Distance from TB (m)	Direction from TB (degrees)	Carcass Easting (NAD83)	Carcass Northing (NAD83)	Visit 0 # Carcasses Placed	Visit 1 # Remaining	Visit 2 # Remaining2	Visit 3 # Remaining3	Visit 4 # Remaining4	Scavenged
T-44	2-Sep-19	Eastern Red Bat	2	Thawed	Mown vegetation	Orange Paint	13:50	15C; Sky: Cloudy,Temp.: Warm,Wind: Light	15	315	441112.6549	4797235.455	1	0	-	-	-	Yes
T-44	2-Sep-19	Hoary Bat	2	Thawed	Mown vegetation	Orange Paint	13:53	15C; Sky: Cloudy,Temp.: Warm,Wind: Light	14	359	441123.2314	4797238.894	1	0	-	-	-	Yes
T-44	2-Sep-19	Turkey Vulture	2	Thawed	Mown vegetation	Orange Paint	13:48	15C; Sky: Cloudy,Temp.: Warm,Wind: Light	28	295	441098.3883	4797236.657	1	0	-	-	-	Yes
TOTAL													3	0	0	-	-	
T-45	2-Sep-19	Eastern Red Bat	1	Thawed	Gravel	Orange Paint	14:01	15C; Sky: Cloudy,Temp.: Warm,Wind: Light	41	222	440126.1495	4796926.71	1	0	-	-	-	Yes
T-45	2-Sep-19	Silver-haired Bat	1	Thawed	Gravel	Orange Paint	14:03	15C; Sky: Cloudy,Temp.: Warm,Wind: Light	33	223	440131.215	4796932.934	1	0	-	-	-	Yes
TOTAL													2	0	-	-	-	
T-03	24-Sep-19	Black-and-white Warbler	1	Thawed	Gravel	Orange Paint	13:45	16C; Sky: Partly Cloudy,Temp.: Warm,Wind: Light	16	139	445892.748	4810053.419	1	0	-	-	-	Yes
T-03	24-Sep-19	Hoary Bat	1	Thawed	Gravel	Orange Paint	13:47	16C; Sky: Partly Cloudy,Temp.: Warm,Wind: Light	5	52	445886.047	4810068.794	1	0	-	-	-	Yes
T-03	24-Sep-19	Savannah Sparrow	1	Thawed	Gravel	Orange Paint	13:46	16C; Sky: Partly Cloudy,Temp.: Warm,Wind: Light	42	161	445895.2559	4810026.222	1	1	0	-	-	Yes
TOTAL													3	0	-	-	-	
T-06	24-Sep-19	Hoary Bat	2	Thawed	Cultivated crop	Orange Paint	13:29	16C; Sky: Partly Cloudy,Temp.: Warm,Wind: Light	44	247	443994.5325	4809515.706	1	0	-	-	-	Yes
T-06	24-Sep-19	Turkey Vulture	2	Thawed	Cultivated crop,Harvested wheat field ,Low shrub	Orange Paint	13:32	16C; Sky: Partly Cloudy,Temp.: Warm,Wind: Light	50	126	444075.319	4809502.591	1	1	1	1	1	No
TOTAL													2	1	0	-	-	
T-08	11-Oct-19	Cedar Waxwing	2	Thawed	Cultivated crop	Orange Paint	18:01	26C; Sky: Clear,Temp.: Warm,Wind: Light	16	38	443728.1077	4808853.069	1	1	0	-	-	Yes
T-08	11-Oct-19	Hoary Bat	2	Thawed	Cultivated crop	Orange Paint	18:03	26C; Sky: Clear,Temp.: Warm,Wind: Light	18	29	443726.4439	4808855.687	1	1	0	-	-	Yes
T-08	11-Oct-19	Silver-haired Bat	2	Thawed	Cultivated crop	Orange Paint	18:04	26C; Sky: Clear,Temp.: Warm,Wind: Light	8	73	443725.9558	4808842.658	1	0	-	-	-	Yes
TOTAL													3	2	0	-	-	
T-13	11-Oct-19	Chestnut-sided Warbler	1	Thawed	Gravel	Orange Paint	18:15	26C; Sky: Clear,Temp.: Warm,Wind: Light	7	52	444233.6472	4808043.841	1	0	-	-	-	Yes

Turbine ID	Date Placed	Species Common Name	Visibility Class	Condition	Substrate	Marking	Time Placed	Weather Placed	Distance from TB (m)	Direction from TB (degrees)	Carcass Easting (NAD83)	Carcass Northing (NAD83)	Visit 0 # Carcasses Placed	Visit 1 # Remaining	Visit 2 # Remaining2	Visit 3 # Remaining3	Visit 4 # Remaining4	Scavenged
T-13	11-Oct-19	Hoary Bat	1	Thawed	Gravel	Orange Paint	18:14	26C; Sky: Clear,Temp.: Warm,Wind: Light	6	112	444233.9356	4808037.484	1	1	1	1	0	Yes
TOTAL													2	1	1	1	0	



BURNSIDE

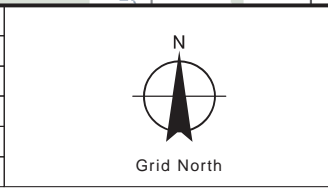
[THE DIFFERENCE IS OUR PEOPLE]

Appendix E

Mortalities per Turbine (Map Book)



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m
 False Northing: 0m
 Rotation: 0
 Scale Factor: 0.99960



Sources:

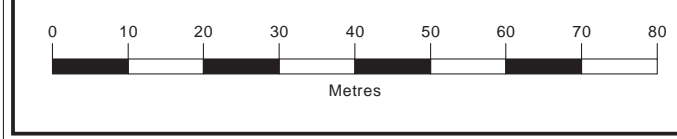
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Notes:

1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.



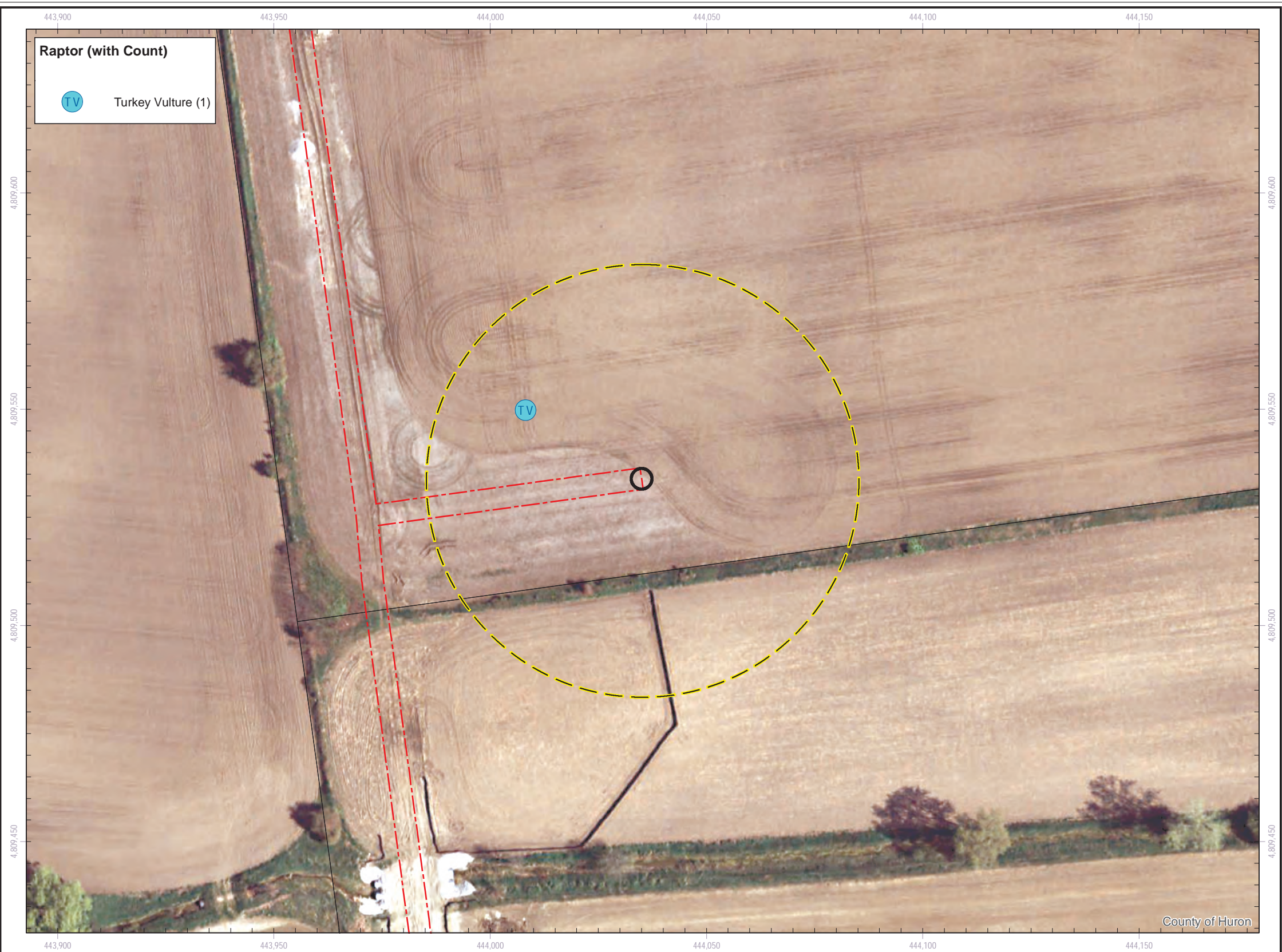
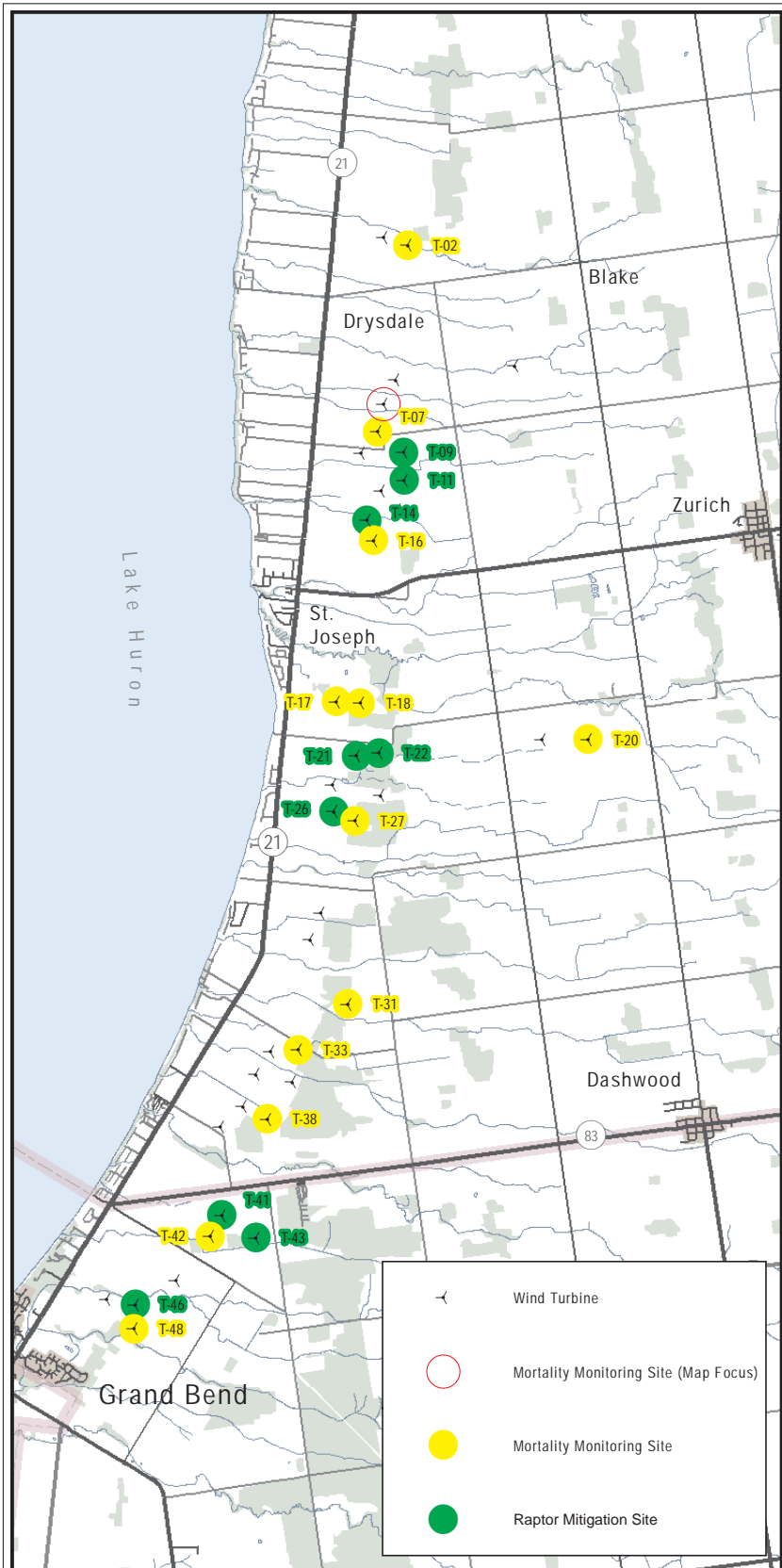
Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-02
 Carcass Search Results (2019)



Client
Grand Bend Wind GP Inc.

Drawn PS
 Checked HM
 Date 2020/03/16
 Scale H 1:1,000
 Project No. PIA019991

Figure No.
E-1



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m False Northing: 0m
 Rotation: 0 Scale Factor: 0.99960

Grid North

Search Radius (50m) Approach to Turbine

Turbine Base Footprint

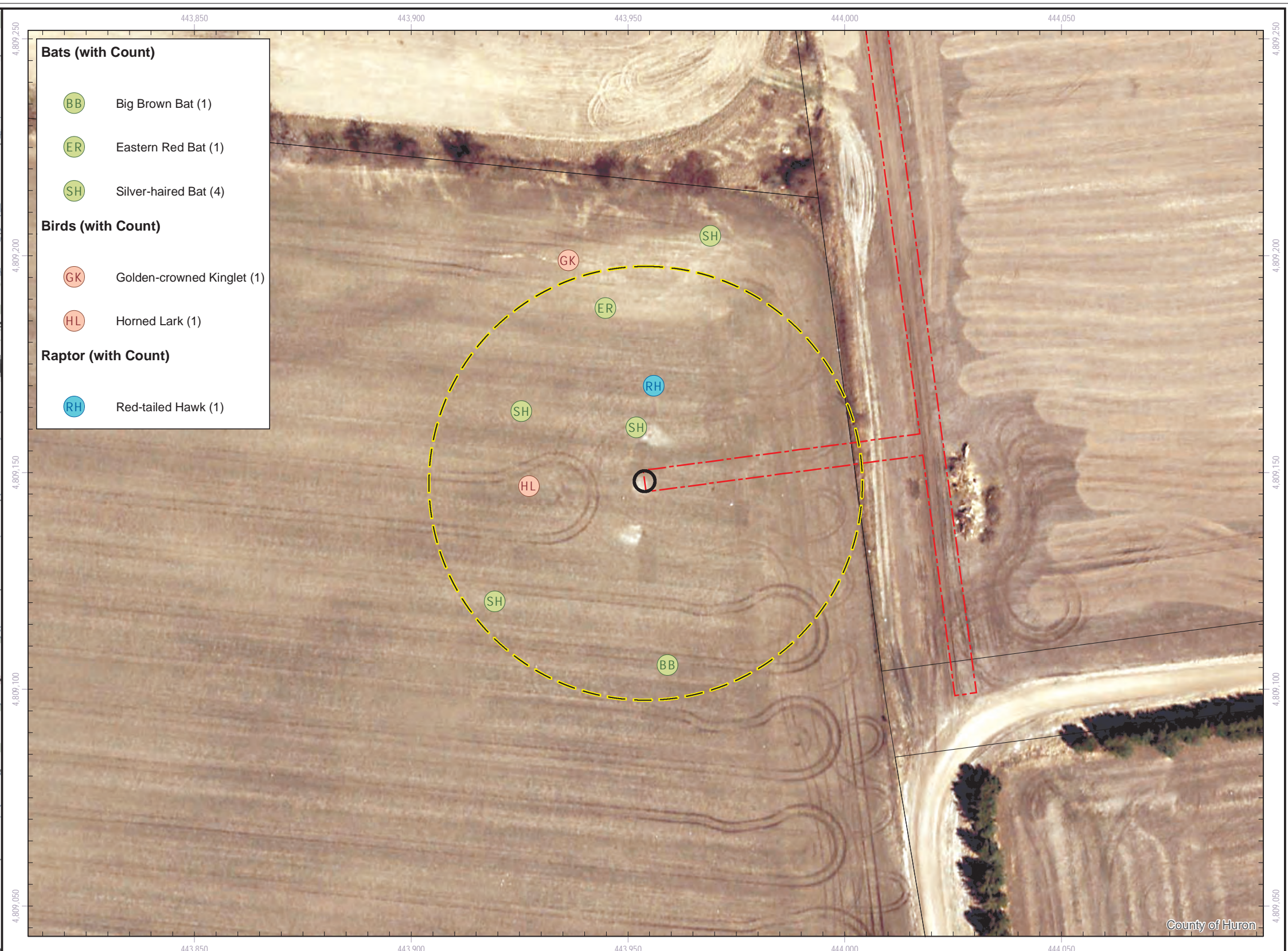
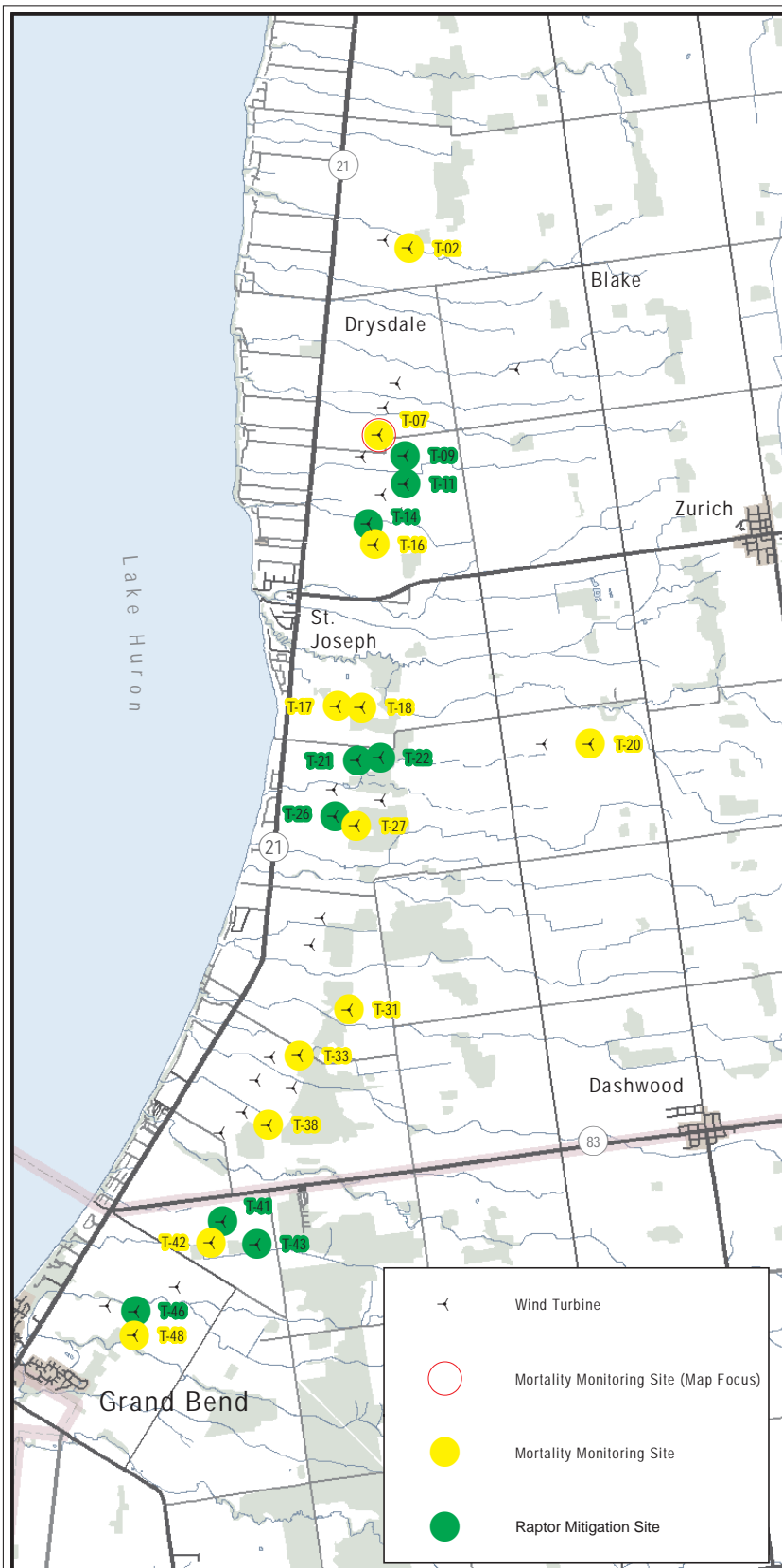
Sources:
 1. Ministry of Natural Resources, © Queen's Printer for Ontario
 2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
 3. Huron County
 4. R.J. Burnside & Associates Limited

Notes:
 1. Imagery reflects ground conditions in 2015.
 2. This map shows results for the 2019 monitoring year.

Client
Grand Bend Wind GP Inc.

Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-06
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-2
PS	HM	2020/03/16	
Scale	Project No. PIA019991		
H 1:1,000			



- Bats (with Count)**
- BB Big Brown Bat (1)
 - ER Eastern Red Bat (1)
 - SH Silver-haired Bat (4)
- Birds (with Count)**
- GK Golden-crowned Kinglet (1)
 - HL Horned Lark (1)
- Raptor (with Count)**
- RH Red-tailed Hawk (1)

Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m False Northing: 0m
 Rotation: 0 Scale Factor: 0.99960

Search Radius (50m)
 Approach to Turbine

Turbine Base Footprint

Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.

Grand Bend Wind GP Inc.

Client

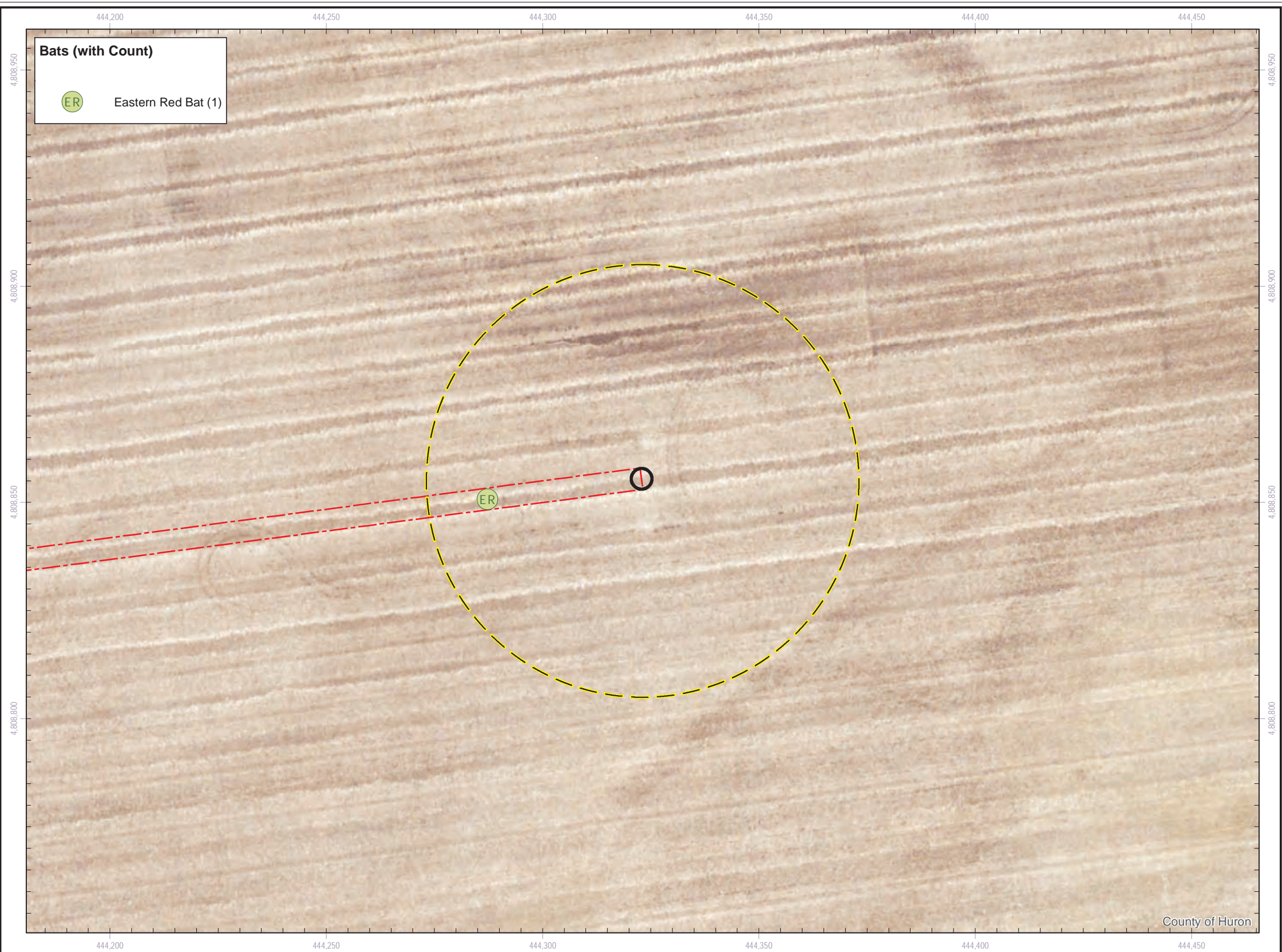
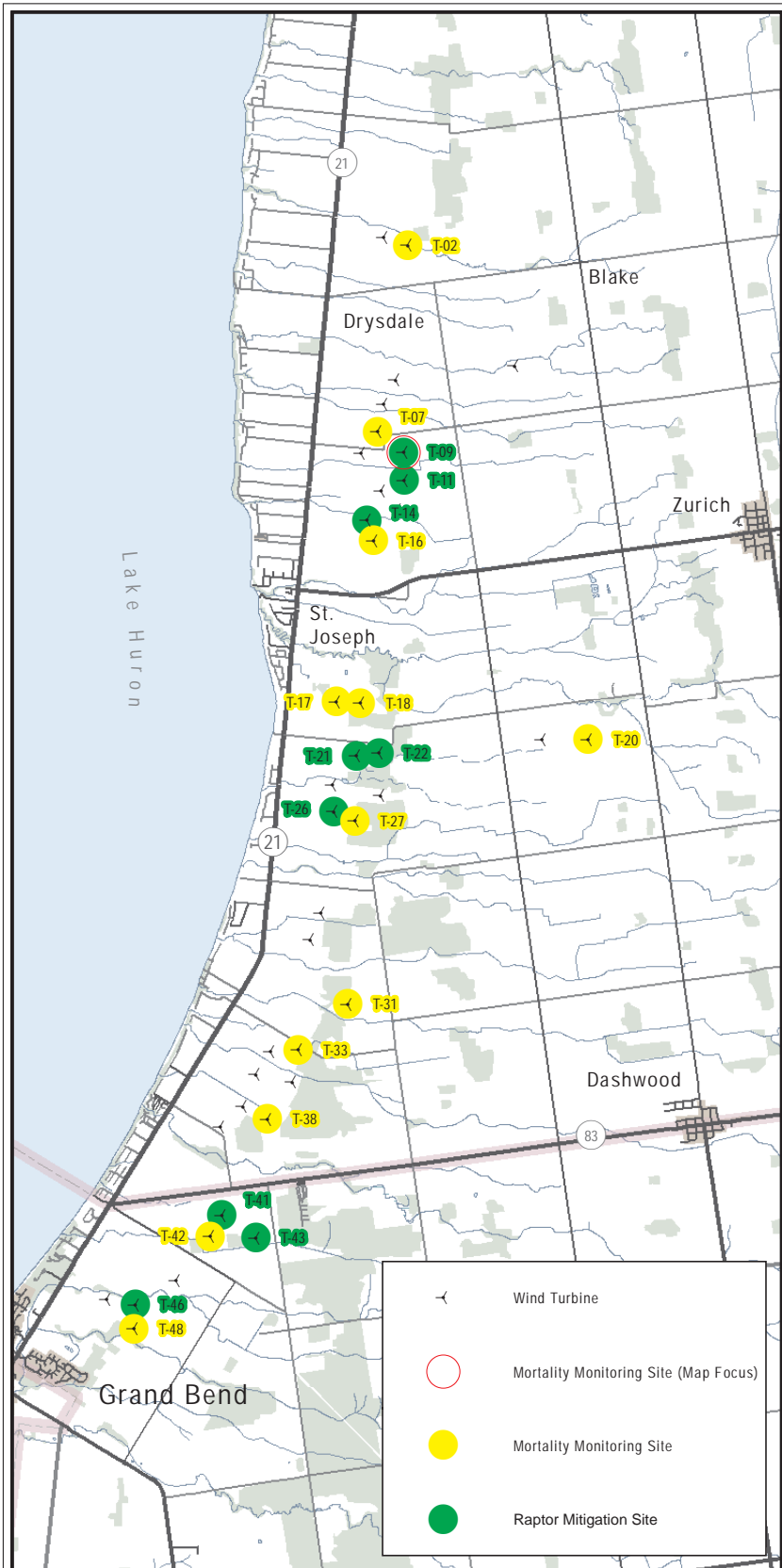
Figure Title

Post-Construction Environmental Monitoring for The Grand Bend Windfarm

Turbine T-07

Carcass Search Results (2019)

Drawn	Checked	Date	Figure No.
PS	HM	2020/03/16	
Scale	Project No.		E-3
H 1:1,000	PIA019991		



Bats (with Count)

ER Eastern Red Bat (1)

Wind Turbine

Mortality Monitoring Site (Map Focus)

Mortality Monitoring Site

Raptor Mitigation Site

Search Radius (50m)

Approach to Turbine

Turbine Base Footprint

Datum: North American 1983

Coord. System: NAD 1983 UTM Zone 17N

Projection: Transverse Mercator

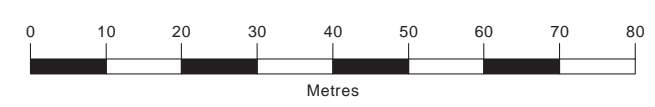
Central Meridian: 81°0'0.00"W

False Easting: 500,000m

False Northing: 0m

Rotation: 0

Scale Factor: 0.99960



Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.



Client

Grand Bend Wind GP Inc.

Figure Title

Post-Construction Environmental Monitoring for The Grand Bend Windfarm

Turbine T-09

Carcass Search Results (2019)

Drawn	Checked	Date	Figure No.
PS	HM	2020/03/16	
Scale	Project No.		
H 1:1,000			PIA019991

E-4



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m | False Northing: 0m
 Rotation: 0 | Scale Factor: 0.99960

Grid North

0 10 20 30 40 50 60 70 80
Metres

Legend:

- Wind Turbine
- Mortality Monitoring Site (Map Focus)
- Mortality Monitoring Site
- Raptor Mitigation Site
- Search Radius (50m)
- Approach to Turbine
- Turbine Base Footprint

Sources:

- Ministry of Natural Resources, © Queen's Printer for Ontario
- Natural Resources Canada © Her Majesty the Queen in Right of Canada.
- Huron County
- R.J. Burnside & Associates Limited

Notes:

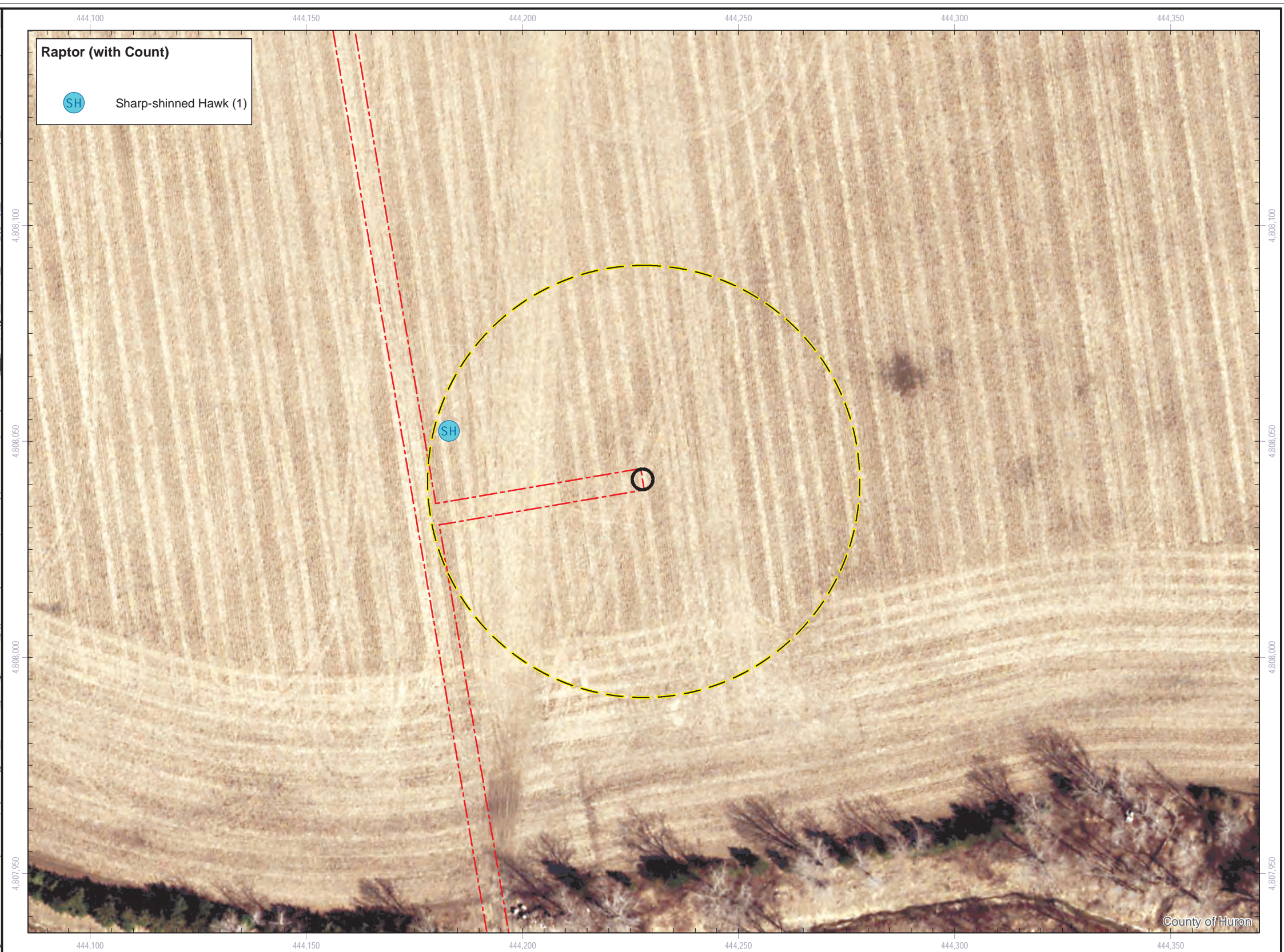
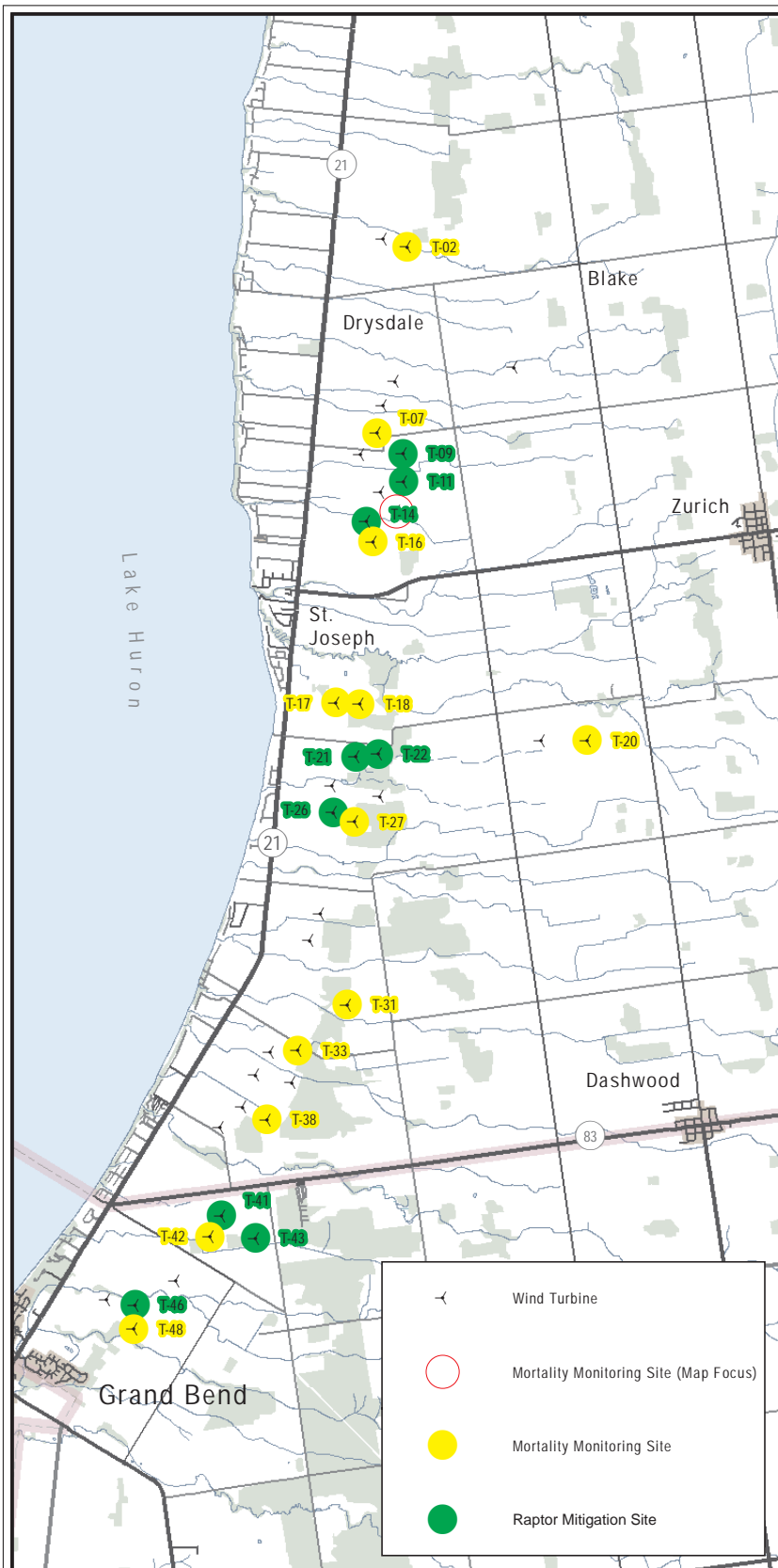
- Imagery reflects ground conditions in 2015.
- This map shows results for the 2019 monitoring year.

BURNSIDE

Client: **Grand Bend Wind GP Inc.**

Figure Title: **Post-Construction Environmental Monitoring for The Grand Bend Windfarm**
Turbine T-11
Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-5
PS	HM	2020/03/16	
Scale	Project No. PIA019991		
H 1:1,000			



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m | False Northing: 0m
 Rotation: 0 | Scale Factor: 0.99960

Grid North

Search Radius (50m) Approach to Turbine
 Turbine Base Footprint

Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.

Grand Bend Wind GP Inc.

Client

Figure Title

Post-Construction Environmental Monitoring for The Grand Bend Windfarm

Turbine T-13
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No.
PS	HM	2020/03/16	
Scale	Project No.		
H 1:1,000			PIA019991

E-6



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m | False Northing: 0m
 Rotation: 0 | Scale Factor: 0.99960

0 10 20 30 40 50 60 70 80
 Metres

Wind Turbine
 Mortality Monitoring Site (Map Focus)
 Mortality Monitoring Site
 Raptor Mitigation Site
 Search Radius (50m) Approach to Turbine
 Turbine Base Footprint

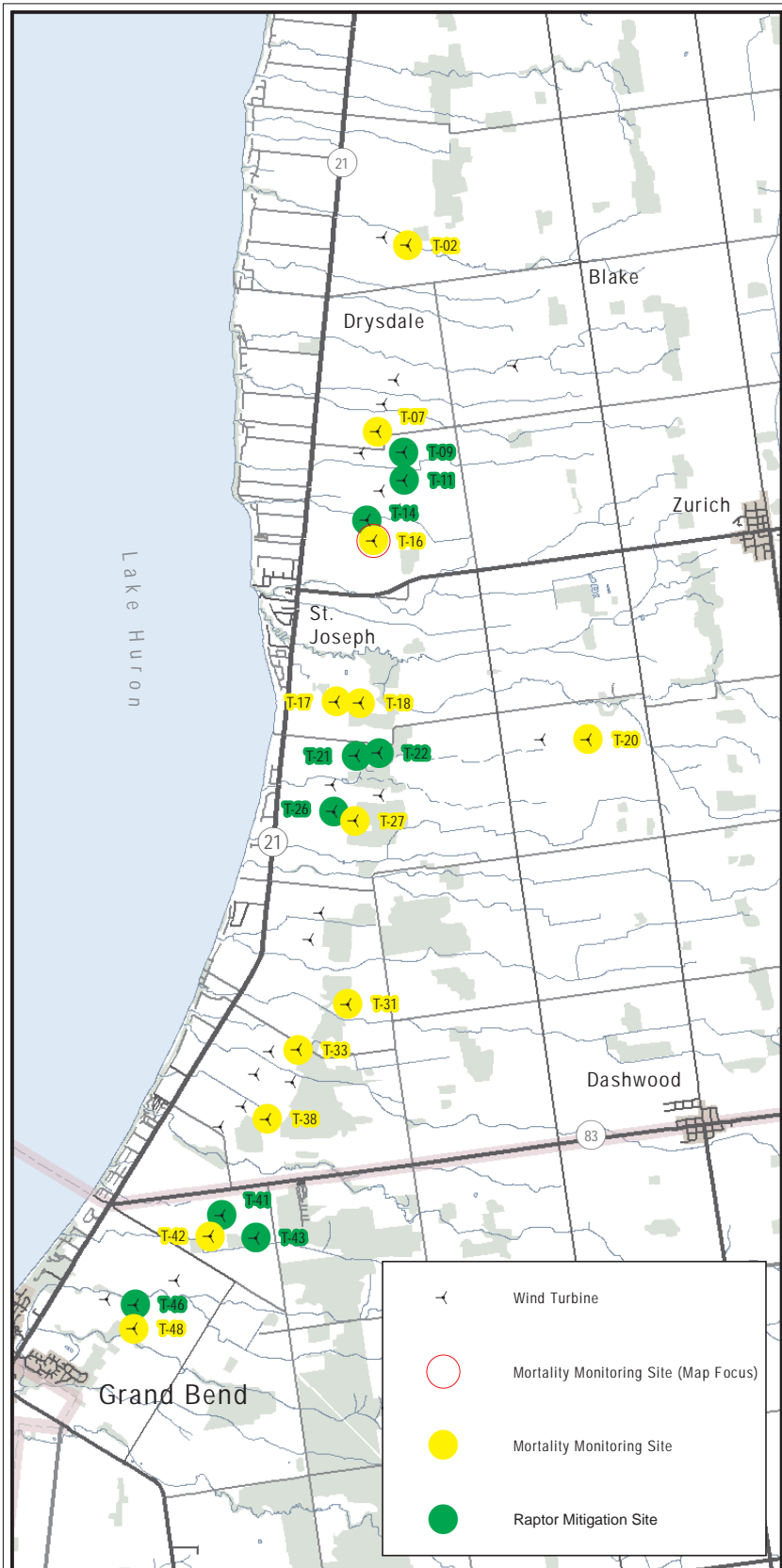
Sources:
 1. Ministry of Natural Resources, © Queen's Printer for Ontario
 2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
 3. Huron County
 4. R.J. Burnside & Associates Limited

Notes:
 1. Imagery reflects ground conditions in 2015.
 2. This map shows results for the 2019 monitoring year.

BURNSIDE
 Client
Grand Bend Wind GP Inc.

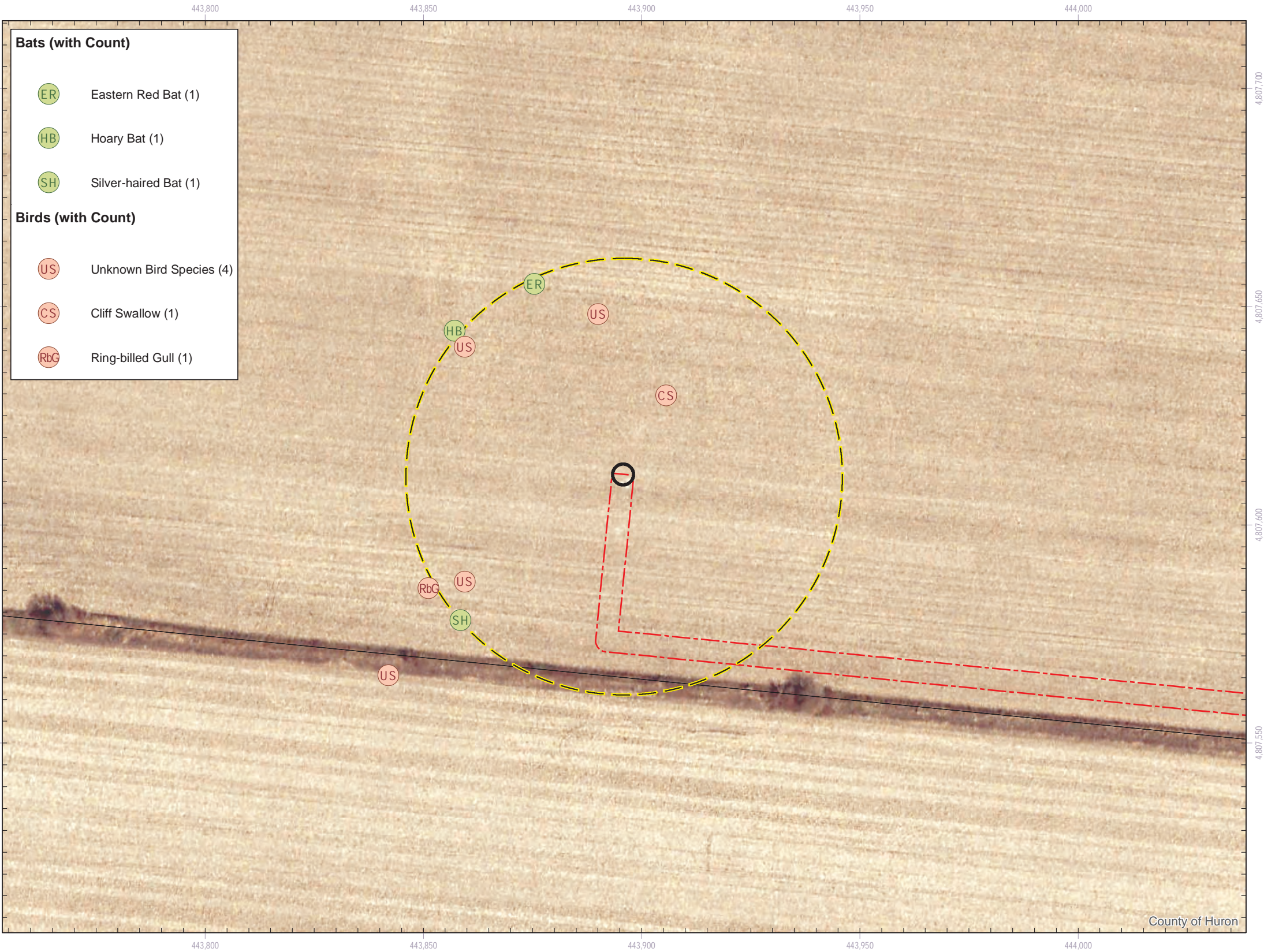
Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-14
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-7
PS	HM	2020/03/16	
Scale	Project No. PIA019991		
H 1:1,000			



- Wind Turbine
- Mortality Monitoring Site (Map Focus)
- Mortality Monitoring Site
- Raptor Mitigation Site

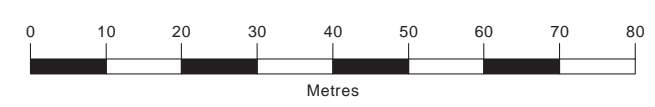
- Bats (with Count)**
- Eastern Red Bat (1)
 - Hoary Bat (1)
 - Silver-haired Bat (1)
- Birds (with Count)**
- Unknown Bird Species (4)
 - Cliff Swallow (1)
 - Ring-billed Gull (1)



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m False Northing: 0m
 Rotation: 0 Scale Factor: 0.99960



- Search Radius (50m)
- Approach to Turbine
- Turbine Base Footprint



Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

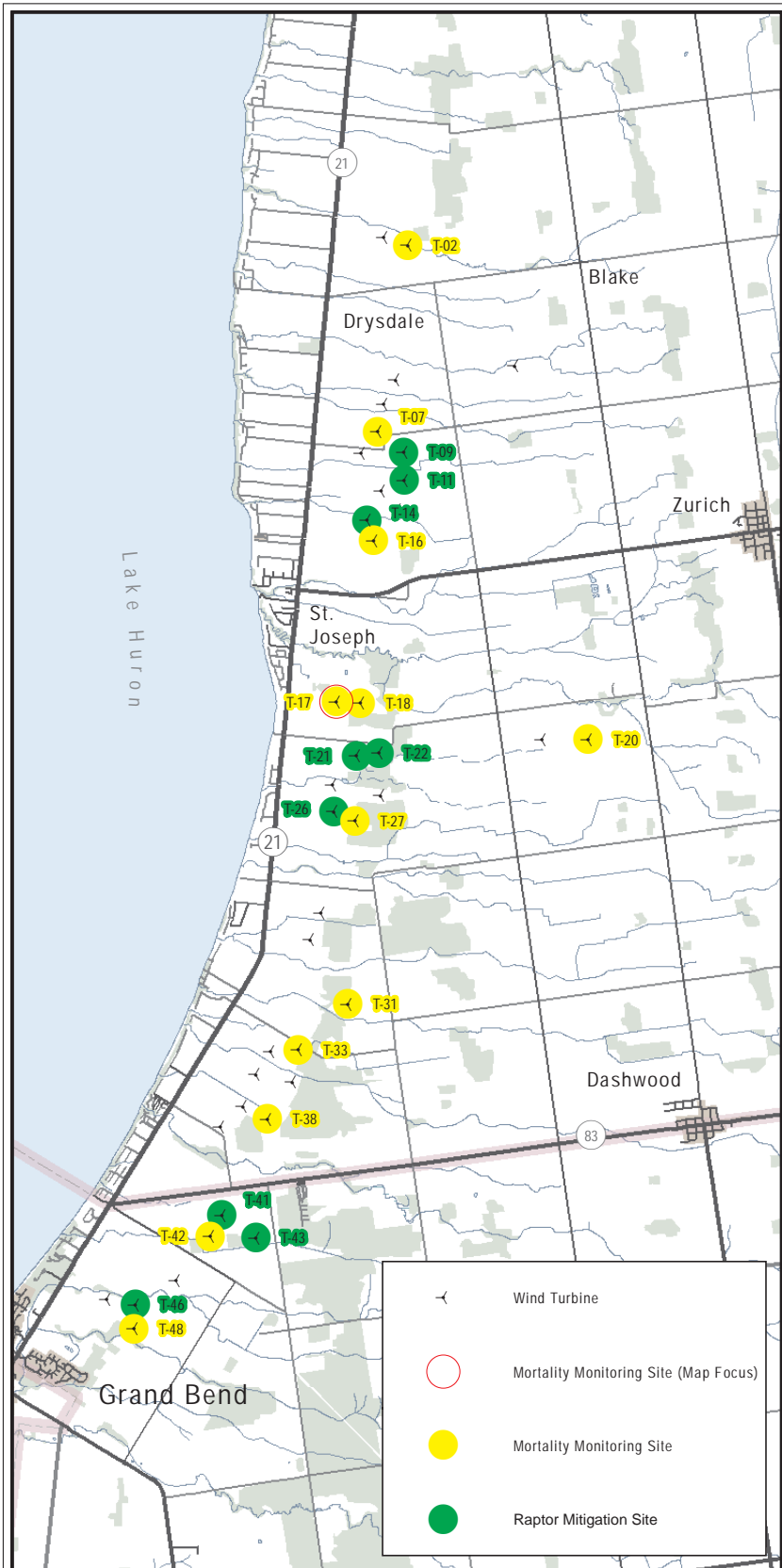
1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.



Client
Grand Bend Wind GP Inc.

Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-16
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-8
PS	HM	2020/03/16	
Scale	Project No. PIA019991		
H 1:1,000			

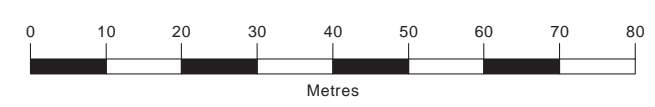


- Bats (with Count)**
- BB Big Brown Bat (2)
 - HB Hoary Bat (1)
- Birds (with Count)**
- US Unknown Bird Species (1)
 - RV Red-eyed Vireo (1)

- Wind Turbine
- Mortality Monitoring Site (Map Focus)
- Mortality Monitoring Site
- Raptor Mitigation Site

- Search Radius (50m)
- Approach to Turbine
- Turbine Base Footprint

Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m False Northing: 0m
 Rotation: 0 Scale Factor: 0.99960



Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

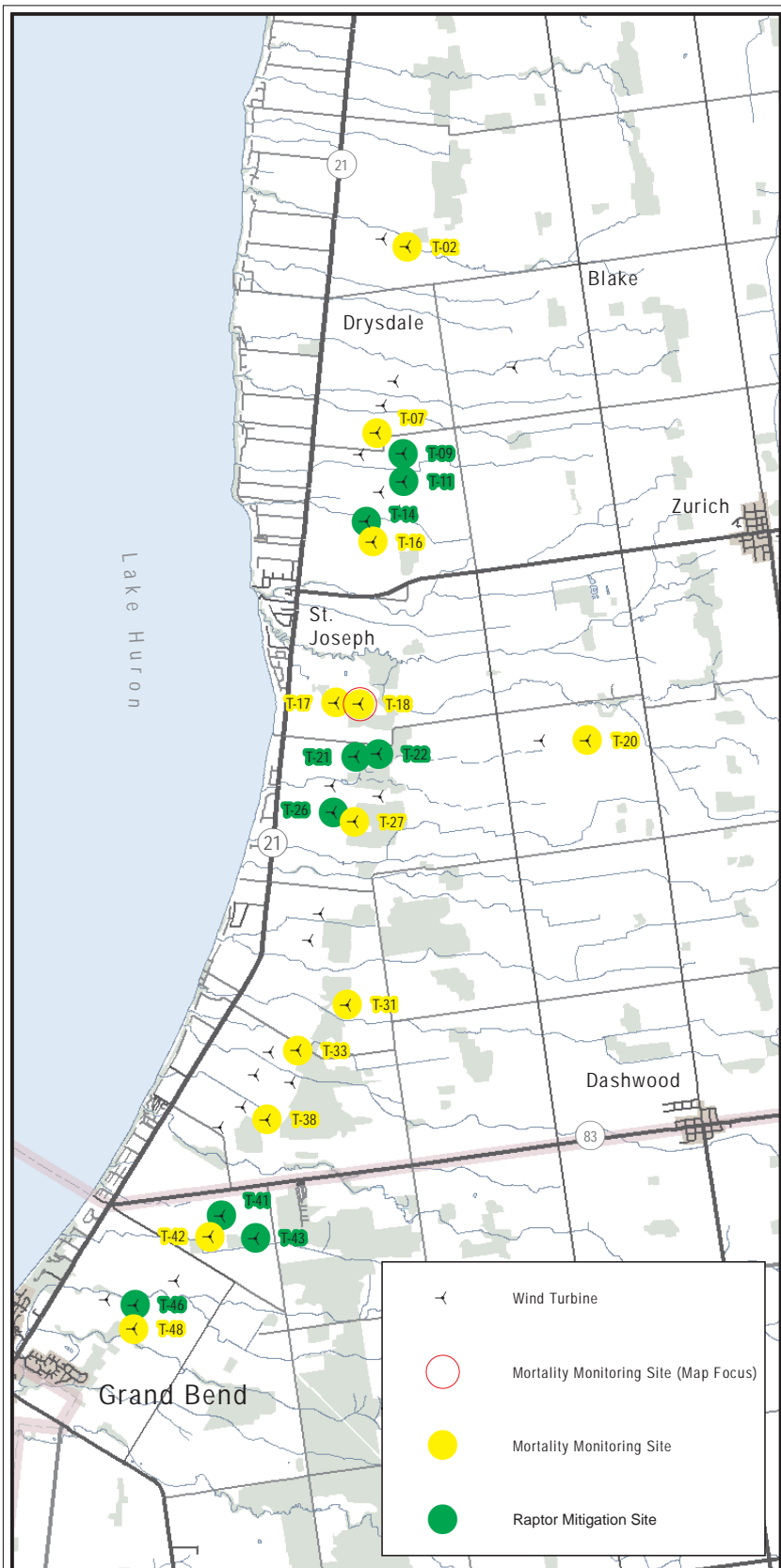
1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.



Client
Grand Bend Wind GP Inc.

Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-17
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-9
PS	HM	2020/03/16	
Scale	Project No. PIA019991		
H 1:1,000			



- Bats (with Count)**
- BB Big Brown Bat (1)
- Birds (with Count)**
- BCr Brown Creeper (1)
 - YF Yellow-bellied Flycatcher (1)



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m False Northing: 0m
 Rotation: 0 Scale Factor: 0.99960

Grid North

Search Radius (50m)
 Approach to Turbine

Turbine Base Footprint

Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.

Grand Bend Wind GP Inc.

Client

Figure Title

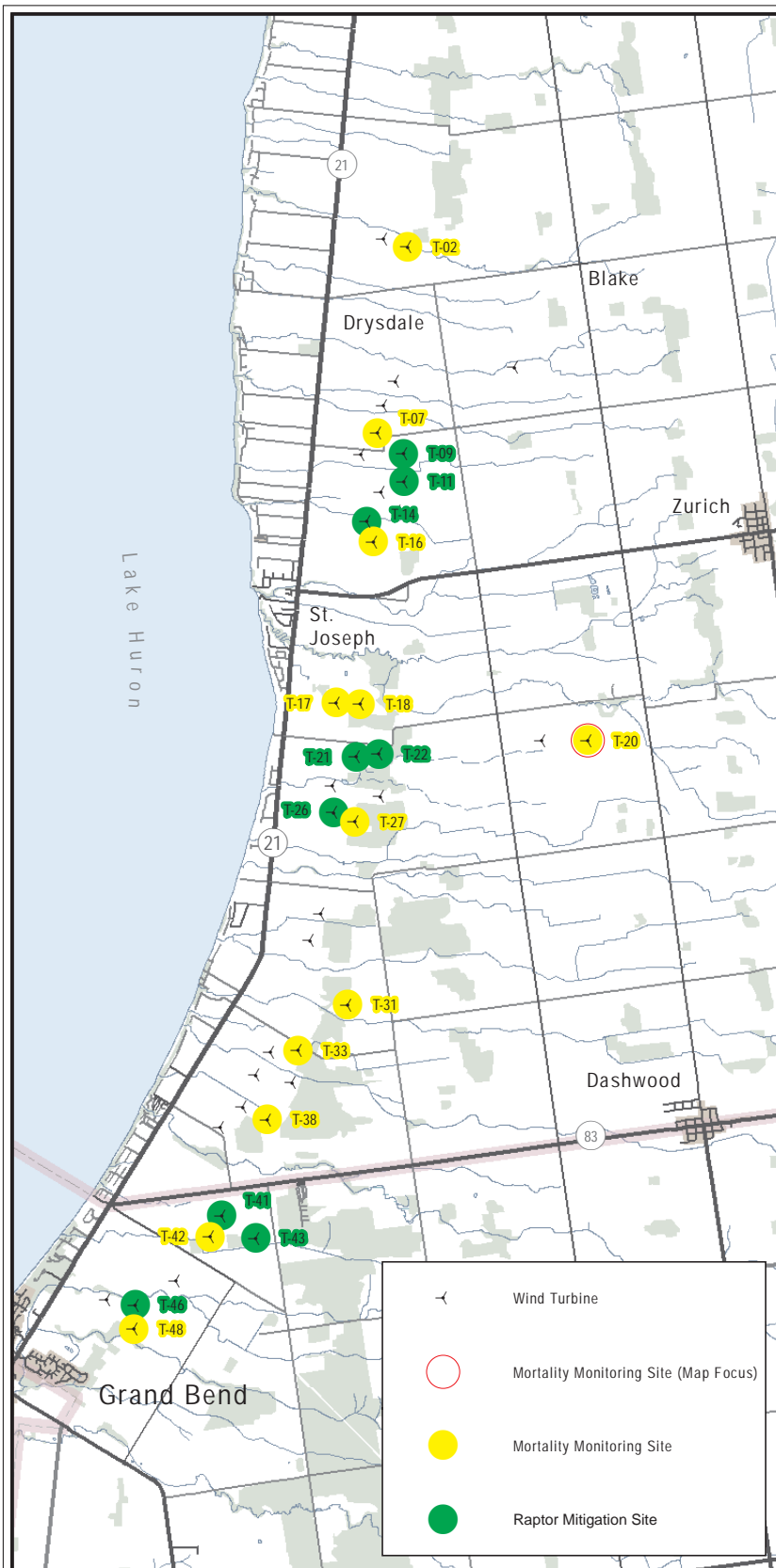
Post-Construction Environmental Monitoring for The Grand Bend Windfarm

Turbine T-18

Carcass Search Results (2019)

Drawn	Checked	Date	Figure No.
PS	HM	2020/03/16	
Scale	Project No.		
H 1:1,000			PIA019991

E-10



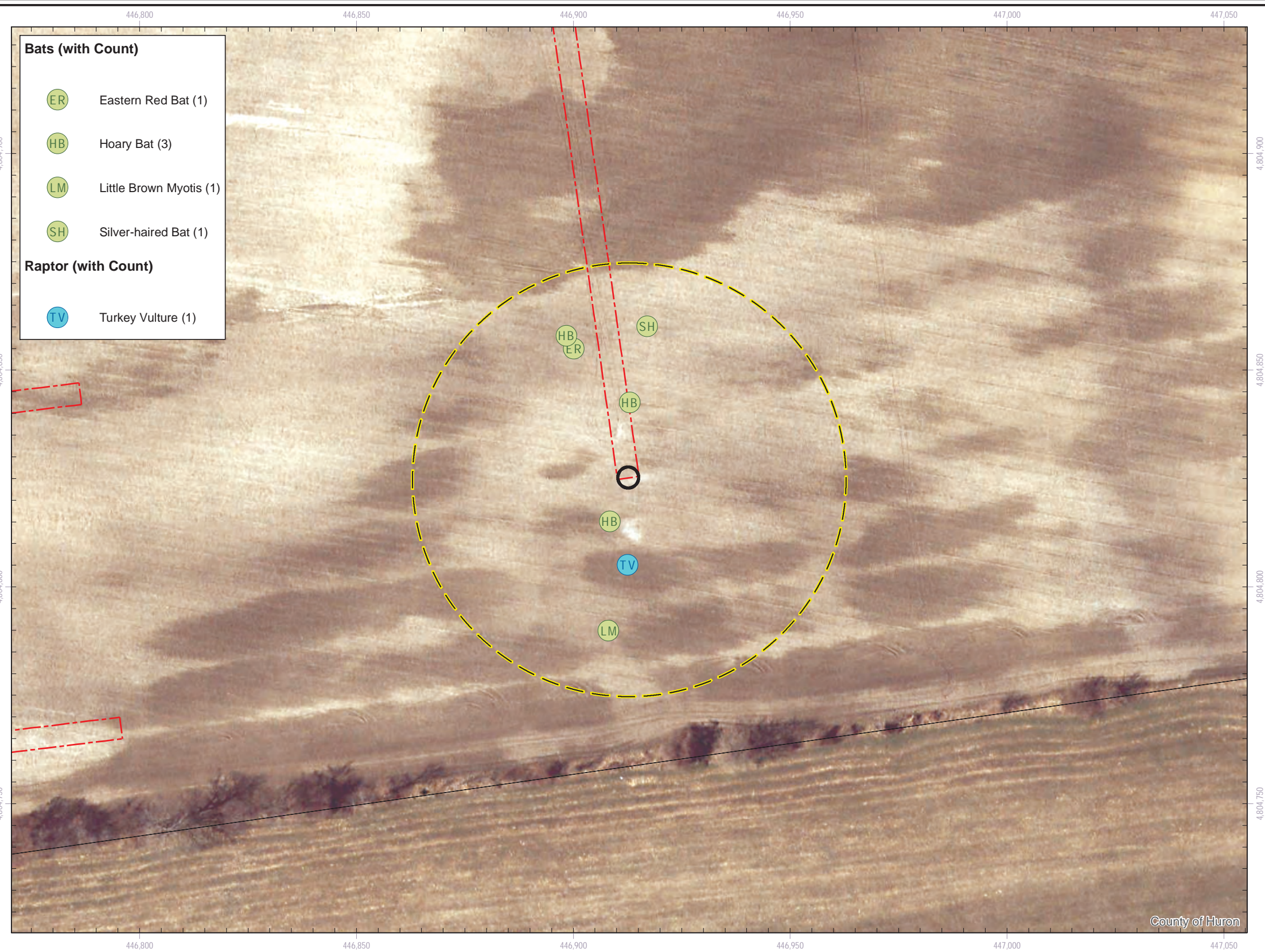
Wind Turbine
 Mortality Monitoring Site (Map Focus)
 Mortality Monitoring Site
 Raptor Mitigation Site

Bats (with Count)

- Eastern Red Bat (1)
- Hoary Bat (3)
- Little Brown Myotis (1)
- Silver-haired Bat (1)

Raptor (with Count)

- Turkey Vulture (1)



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m False Northing: 0m
 Rotation: 0 Scale Factor: 0.99960

Search Radius (50m) Approach to Turbine
 Turbine Base Footprint

Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.

Grand Bend Wind GP Inc.

Figure Title

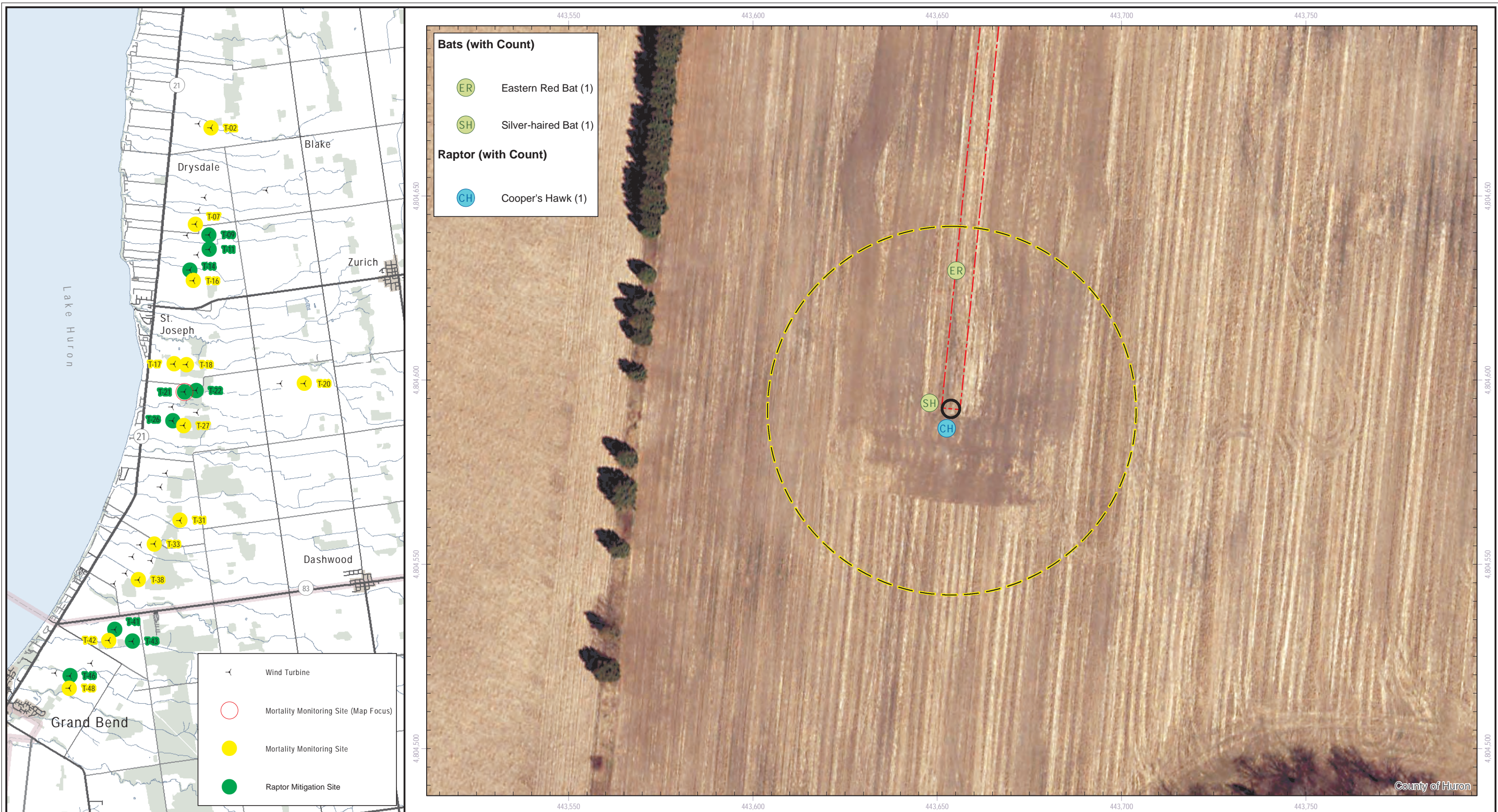
Post-Construction Environmental Monitoring for The Grand Bend Windfarm

Turbine T-20

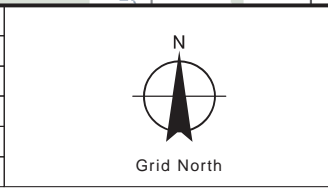
Carcass Search Results (2019)

Drawn	Checked	Date	Figure No.
PS	HM	2020/03/16	
Scale	Project No.		
H 1:1,000			PIA019991

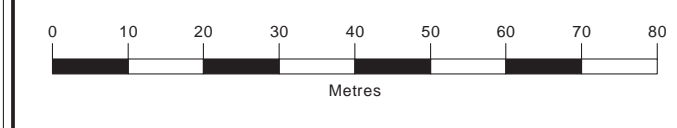
E-11



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m
 False Northing: 0m
 Rotation: 0
 Scale Factor: 0.99960



Search Radius (50m)
 Approach to Turbine
 Turbine Base Footprint



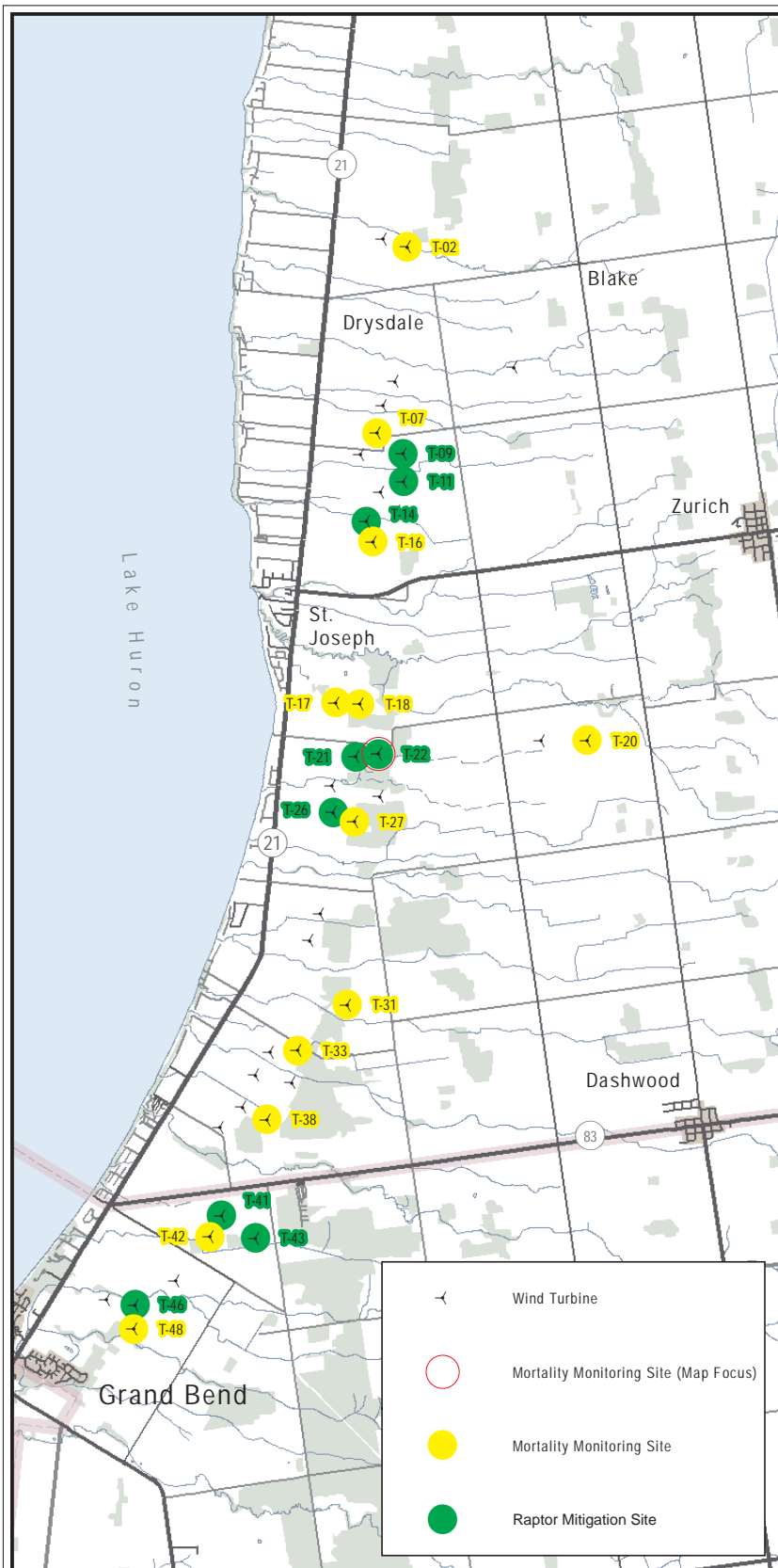
Sources:
 1. Ministry of Natural Resources, © Queen's Printer for Ontario
 2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
 3. Huron County
 4. R.J. Burnside & Associates Limited

Notes:
 1. Imagery reflects ground conditions in 2015.
 2. This map shows results for the 2019 monitoring year.



Client
Grand Bend Wind GP Inc.

Figure Title				Figure No. E-12
Post-Construction Environmental Monitoring for The Grand Bend Windfarm				
Turbine T-21				
Carcass Search Results (2019)				
Drawn	Checked	Date	Project No. PIA019991	
PS	HM	2020/03/16		
Scale	H 1:1,000			



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m | False Northing: 0m
 Rotation: 0 | Scale Factor: 0.99960

Grid North

Search Radius (50m) Approach to Turbine
 Turbine Base Footprint

Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

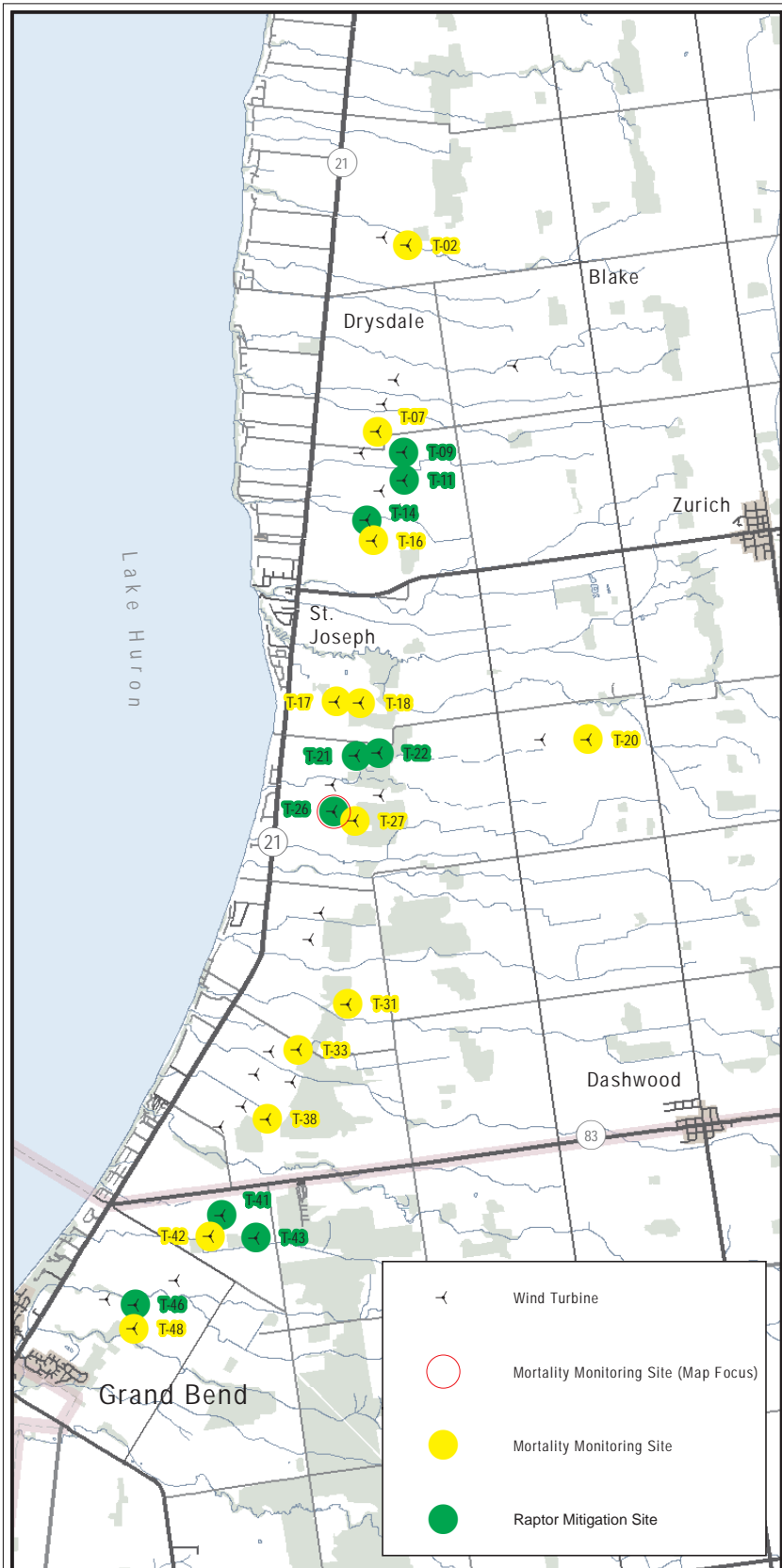
Notes:

1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.

Grand Bend Wind GP Inc.

Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-22
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-13
PS	HM	2020/03/16	
Scale	Project No. PIA019991		
H 1:1,000			



- Wind Turbine
- Mortality Monitoring Site (Map Focus)
- Mortality Monitoring Site
- Raptor Mitigation Site

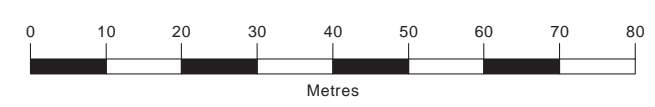
- Bats (with Count)**
- Eastern Red Bat (1)
- Birds (with Count)**
- American Redstart (1)
 - Brown Creeper (1)



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m False Northing: 0m
 Rotation: 0 Scale Factor: 0.99960



- Search Radius (50m)
- Approach to Turbine
- Turbine Base Footprint



Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.



Client
Grand Bend Wind GP Inc.

Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-26
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-14
PS	HM	2020/03/16	
Scale	Project No. PIA019991		
H 1:1,000			



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m | False Northing: 0m
 Rotation: 0 | Scale Factor: 0.99960

Grid North

0 10 20 30 40 50 60 70 80
Metres

Sources:

- Ministry of Natural Resources, © Queen's Printer for Ontario
- Natural Resources Canada © Her Majesty the Queen in Right of Canada.
- Huron County
- R.J. Burnside & Associates Limited

Notes:

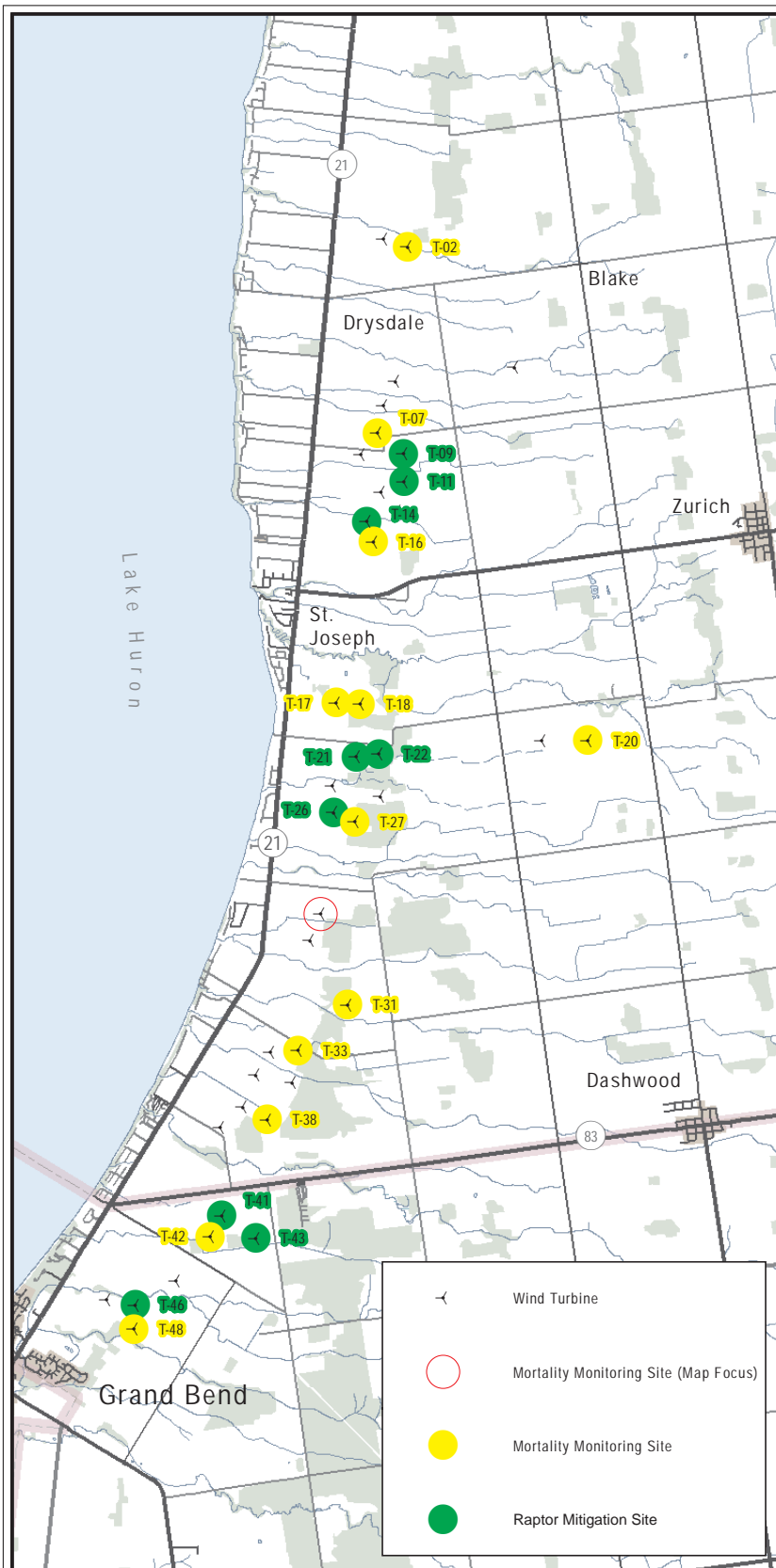
- Imagery reflects ground conditions in 2015.
- This map shows results for the 2019 monitoring year.

BURNSIDE

Client
Grand Bend Wind GP Inc.

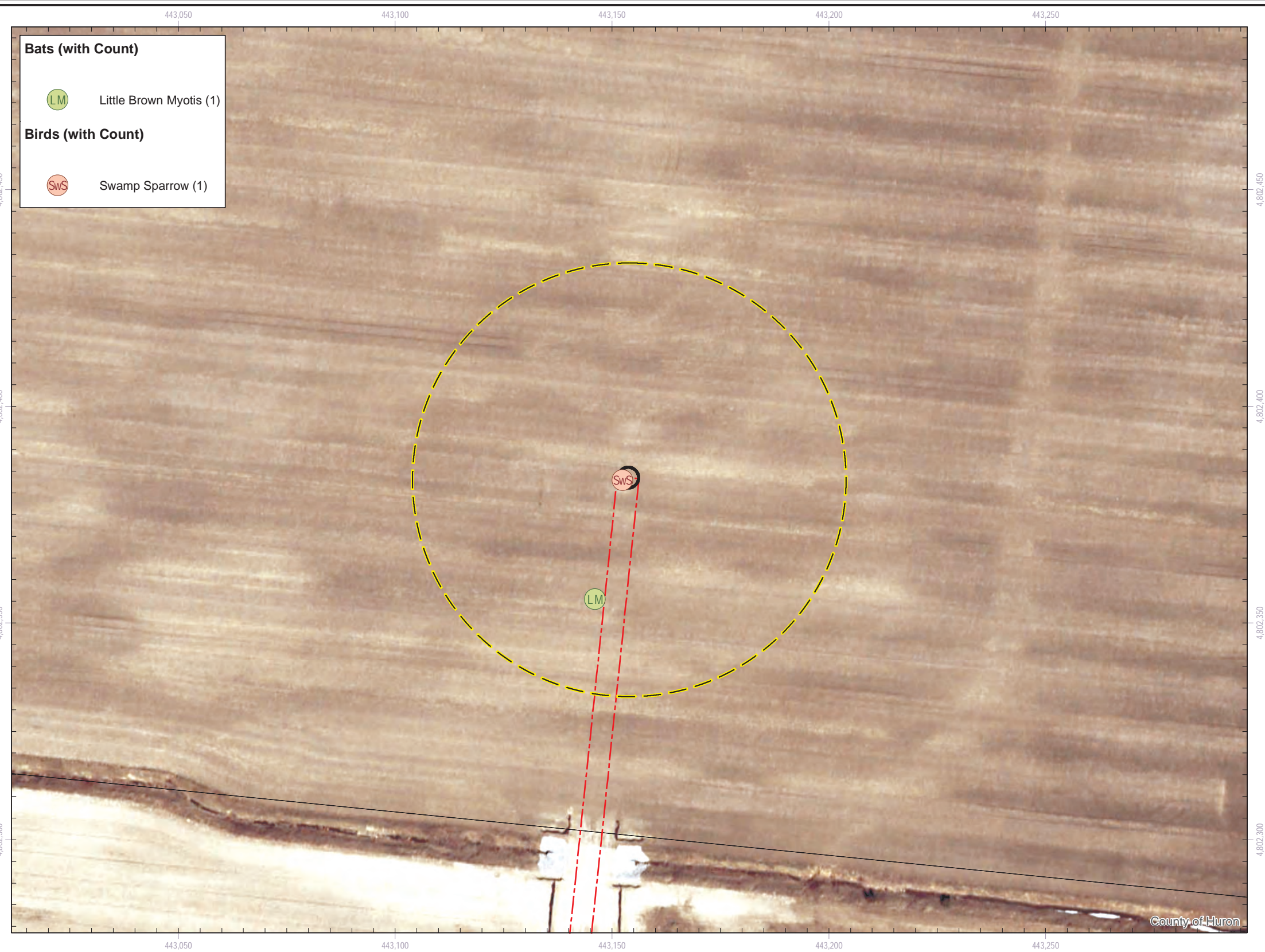
Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-27
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-15
PS	HM	2020/03/16	
Scale	Project No. PIA019991		
H 1:1,000			



- Wind Turbine
- Mortality Monitoring Site (Map Focus)
- Mortality Monitoring Site
- Raptor Mitigation Site

- Bats (with Count)**
- Little Brown Myotis (1)
- Birds (with Count)**
- Swamp Sparrow (1)



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m | False Northing: 0m
 Rotation: 0 | Scale Factor: 0.99960

Grid North

0 10 20 30 40 50 60 70 80
Metres

Search Radius (50m) Approach to Turbine

Turbine Base Footprint

Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.

BURNSIDE

Client
Grand Bend Wind GP Inc.

Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-29
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-16
PS	HM	2020/03/16	
Scale	Project No. PIA019991		
H 1:1,000			



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m False Northing: 0m
 Rotation: 0 Scale Factor: 0.99960

Grid North

Search Radius (50m) Approach to Turbine
 Turbine Base Footprint

Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.

BURNSIDE
 Client
Grand Bend Wind GP Inc.

Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-30
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-17
PS	HM	2020/03/16	
Scale	Project No.		
H 1:1,000			PIA019991



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m | False Northing: 0m
 Rotation: 0 | Scale Factor: 0.99960

0 10 20 30 40 50 60 70 80
 Metres

Wind Turbine
 Mortality Monitoring Site (Map Focus)
 Mortality Monitoring Site
 Raptor Mitigation Site

Search Radius (50m)
 Turbine Base Footprint
 Approach to Turbine

Sources:
 1. Ministry of Natural Resources, © Queen's Printer for Ontario
 2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
 3. Huron County
 4. R.J. Burnside & Associates Limited

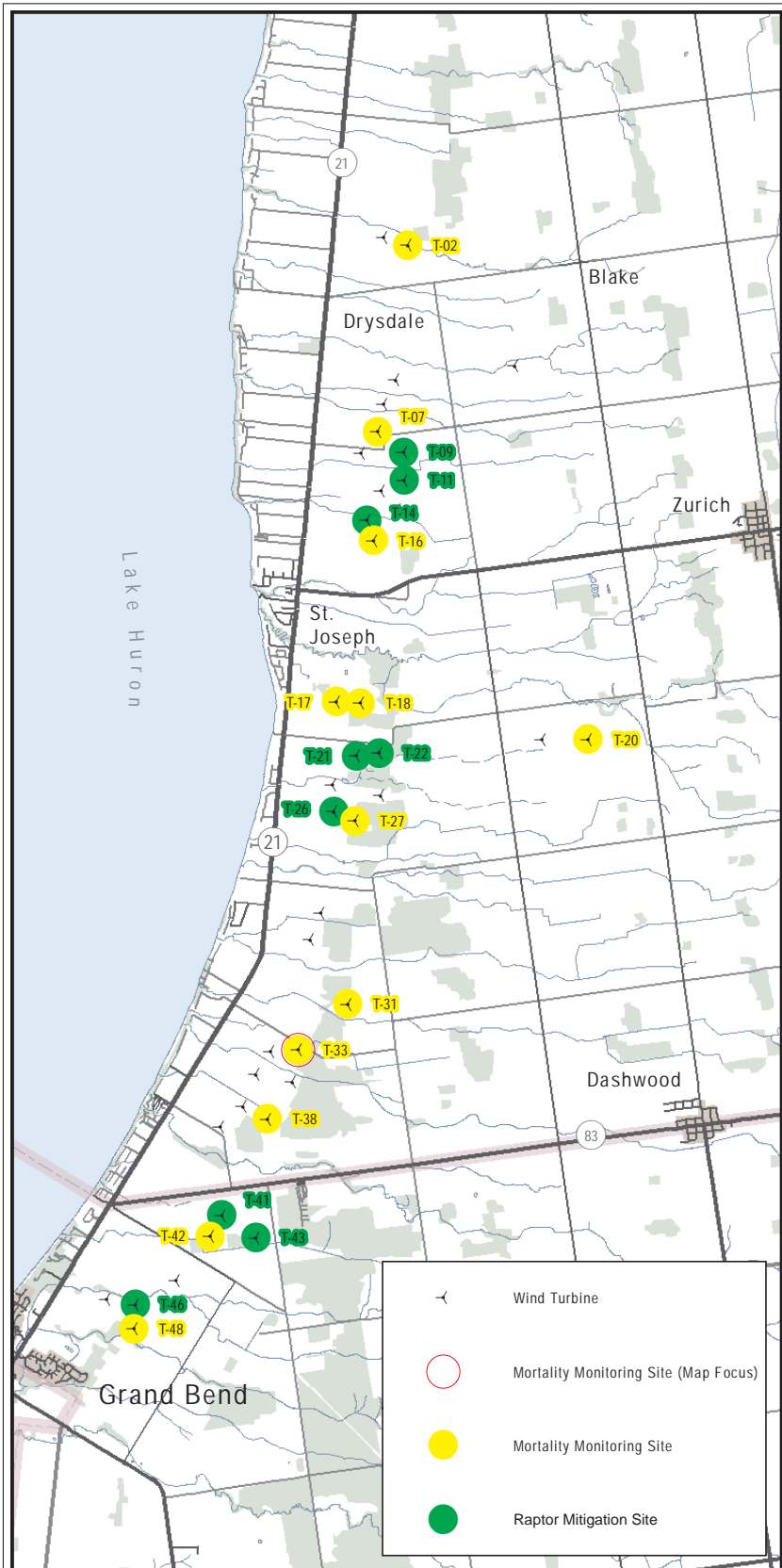
Notes:
 1. Imagery reflects ground conditions in 2015.
 2. This map shows results for the 2019 monitoring year.

BURNSIDE

Client
Grand Bend Wind GP Inc.

Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-31
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-18
PS	HM	2020/03/16	
Scale	Project No.		
H 1:1,000			PIA019991



- Wind Turbine
- Mortality Monitoring Site (Map Focus)
- Mortality Monitoring Site
- Raptor Mitigation Site

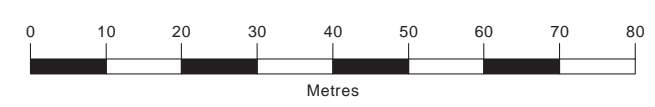
- Bats (with Count)**
- Silver-haired Bat (2)
- Birds (with Count)**
- Chestnut-sided Warbler (1)
 - Song Sparrow (1)



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m
 False Northing: 0m
 Rotation: 0
 Scale Factor: 0.99960



- Search Radius (50m)
- Approach to Turbine
- Turbine Base Footprint



Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.



Client
Grand Bend Wind GP Inc.

Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-33
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-19
PS	HM	2020/03/16	
Scale	Project No. PIA019991		
H 1:1,000			



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m False Northing: 0m
 Rotation: 0 Scale Factor: 0.99960

Grid North

0 10 20 30 40 50 60 70 80
 Metres

Legend:

- Wind Turbine
- Mortality Monitoring Site (Map Focus)
- Mortality Monitoring Site
- Raptor Mitigation Site
- Search Radius (50m)
- Approach to Turbine
- Turbine Base Footprint

Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

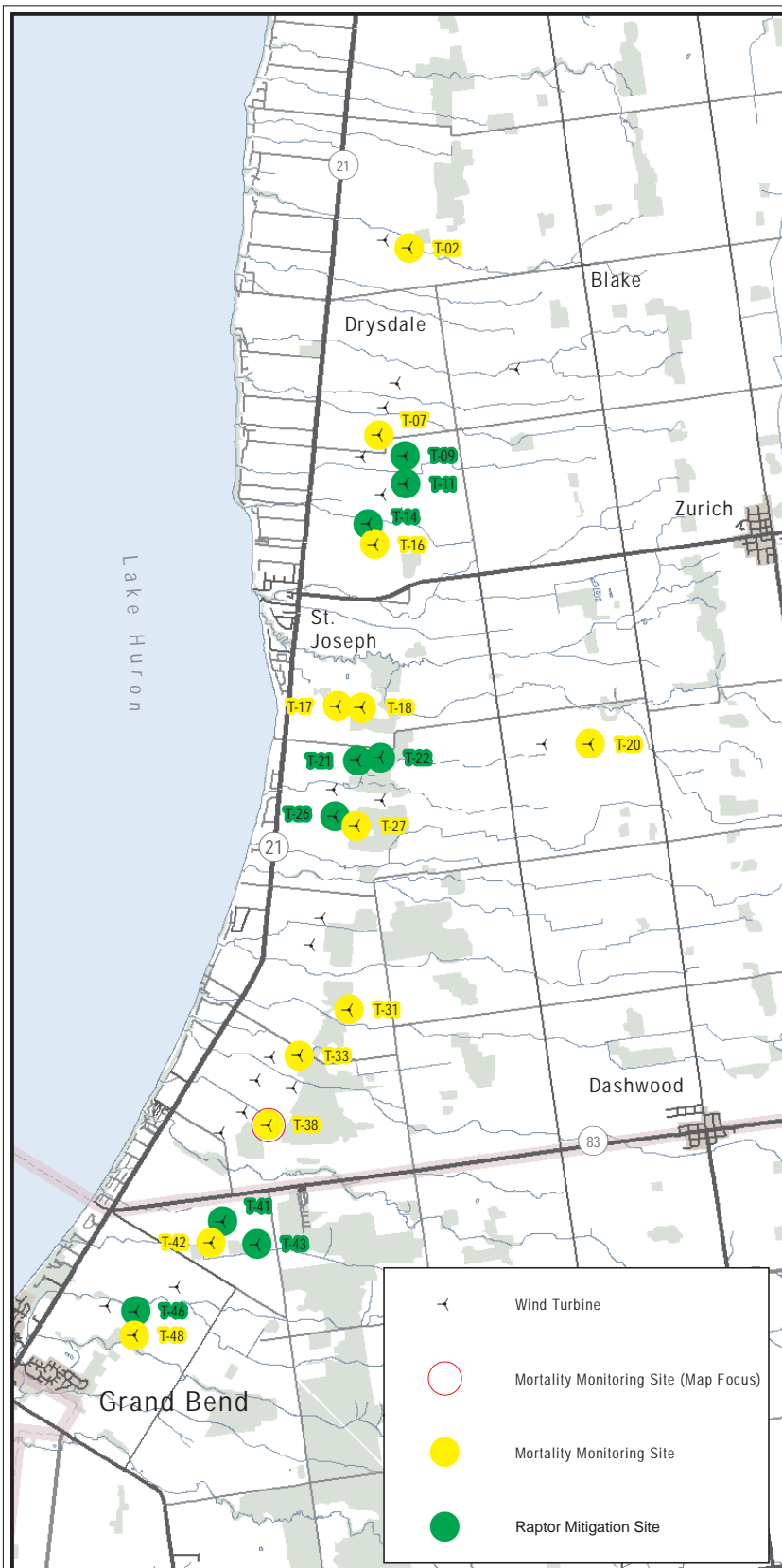
1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.

BURNSIDE

Client
Grand Bend Wind GP Inc.

Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-35
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-20
PS	HM	2020/03/16	
Scale	Project No.		
H 1:1,000			PIA019991



- Bats (with Count)**
- HB Hoary Bat (3)
 - SH Silver-haired Bat (1)
- Birds (with Count)**
- US Unknown Bird Species (1)
 - BWW Black-and-white Warbler (1)
 - PM Purple Martin (1)
 - RK Ruby-crowned Kinglet (1)



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m False Northing: 0m
 Rotation: 0 Scale Factor: 0.99960

0 10 20 30 40 50 60 70 80
 Metres

○ Search Radius (50m) - - - Approach to Turbine
 Turbine Base Footprint

Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.

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Grand Bend Wind GP Inc.

Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-38
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No.
PS	HM	2020/03/16	E-21
Scale	Project No.		
H 1:1,000		PIA019991	



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m | False Northing: 0m
 Rotation: 0 | Scale Factor: 0.99960

Grid North

0 10 20 30 40 50 60 70 80
 Metres

Legend:

- Wind Turbine
- Mortality Monitoring Site (Map Focus)
- Mortality Monitoring Site
- Raptor Mitigation Site
- Search Radius (50m)
- Approach to Turbine
- Turbine Base Footprint

Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

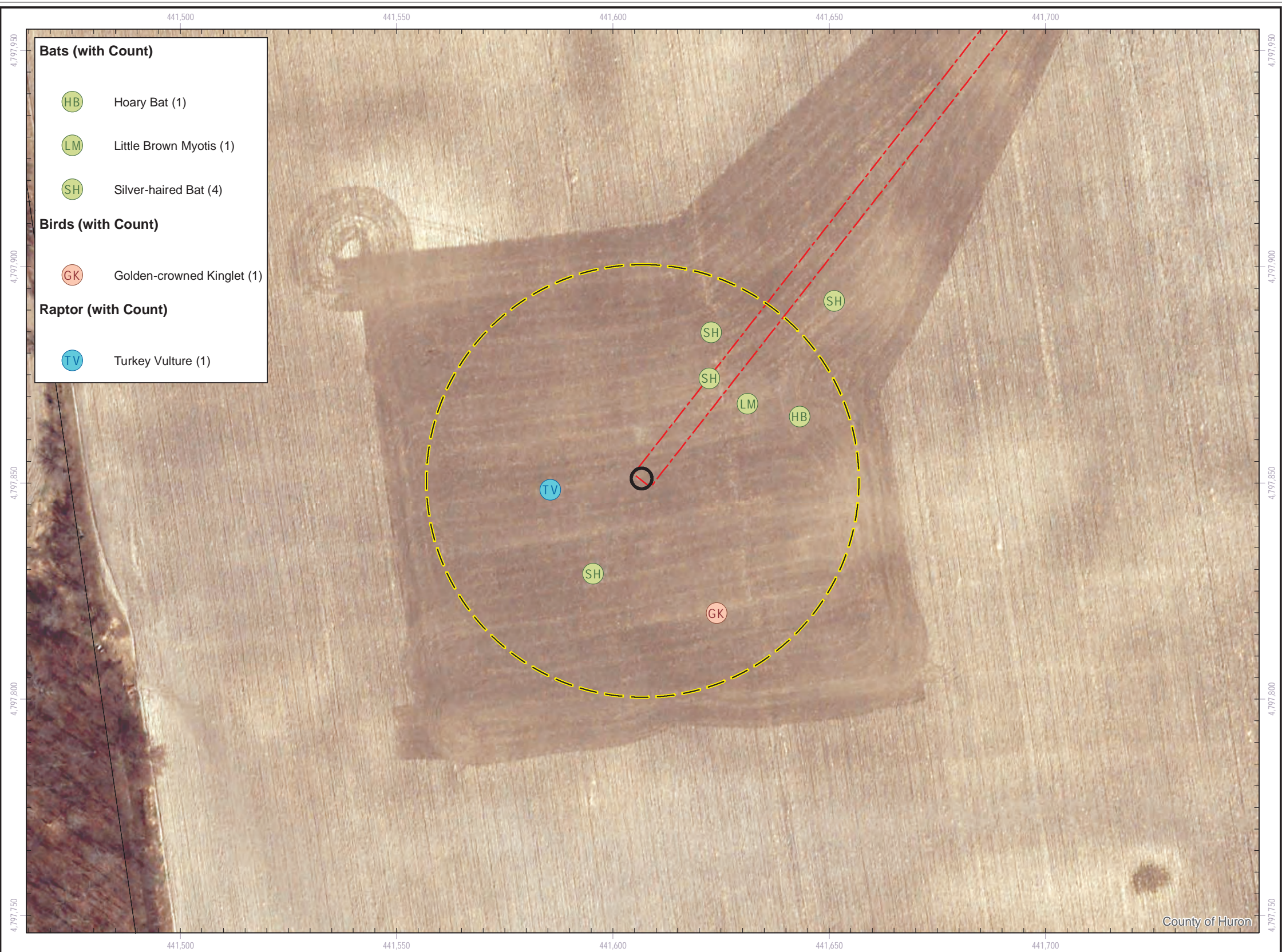
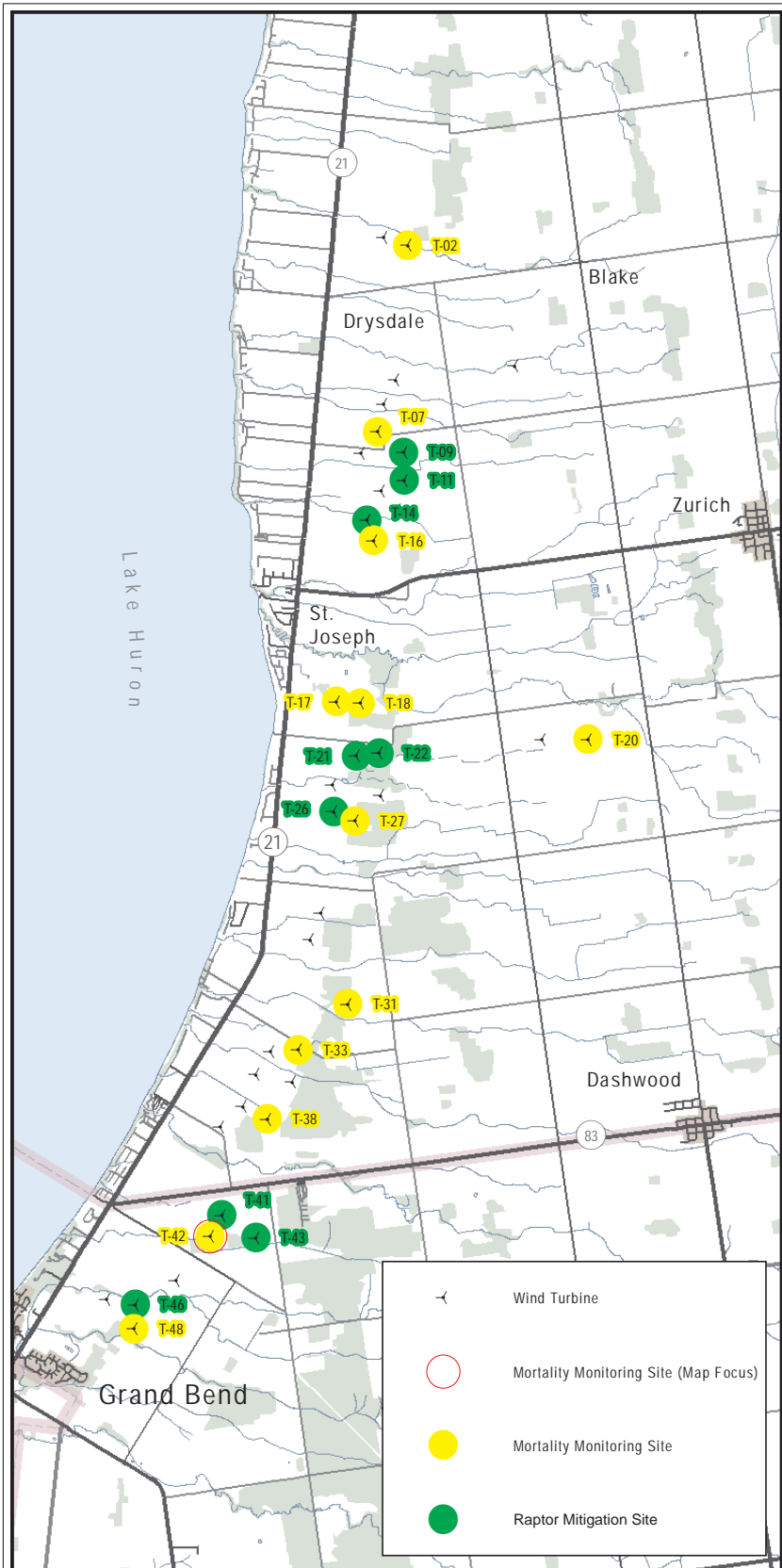
1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.

BURNSIDE

Client: **Grand Bend Wind GP Inc.**

Figure Title: **Post-Construction Environmental Monitoring for The Grand Bend Windfarm**
Turbine T-41
Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-22
PS	HM	2020/03/16	
Scale	Project No.		
H 1:1,000			PIA019991

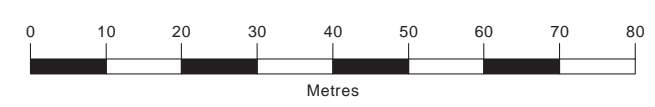


- Bats (with Count)**
- HB Hoary Bat (1)
 - LM Little Brown Myotis (1)
 - SH Silver-haired Bat (4)
- Birds (with Count)**
- GK Golden-crowned Kinglet (1)
- Raptor (with Count)**
- TV Turkey Vulture (1)

- Wind Turbine
- Mortality Monitoring Site (Map Focus)
- Mortality Monitoring Site
- Raptor Mitigation Site

- Search Radius (50m)
- Approach to Turbine
- Turbine Base Footprint

Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m False Northing: 0m
 Rotation: 0 Scale Factor: 0.99960



Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

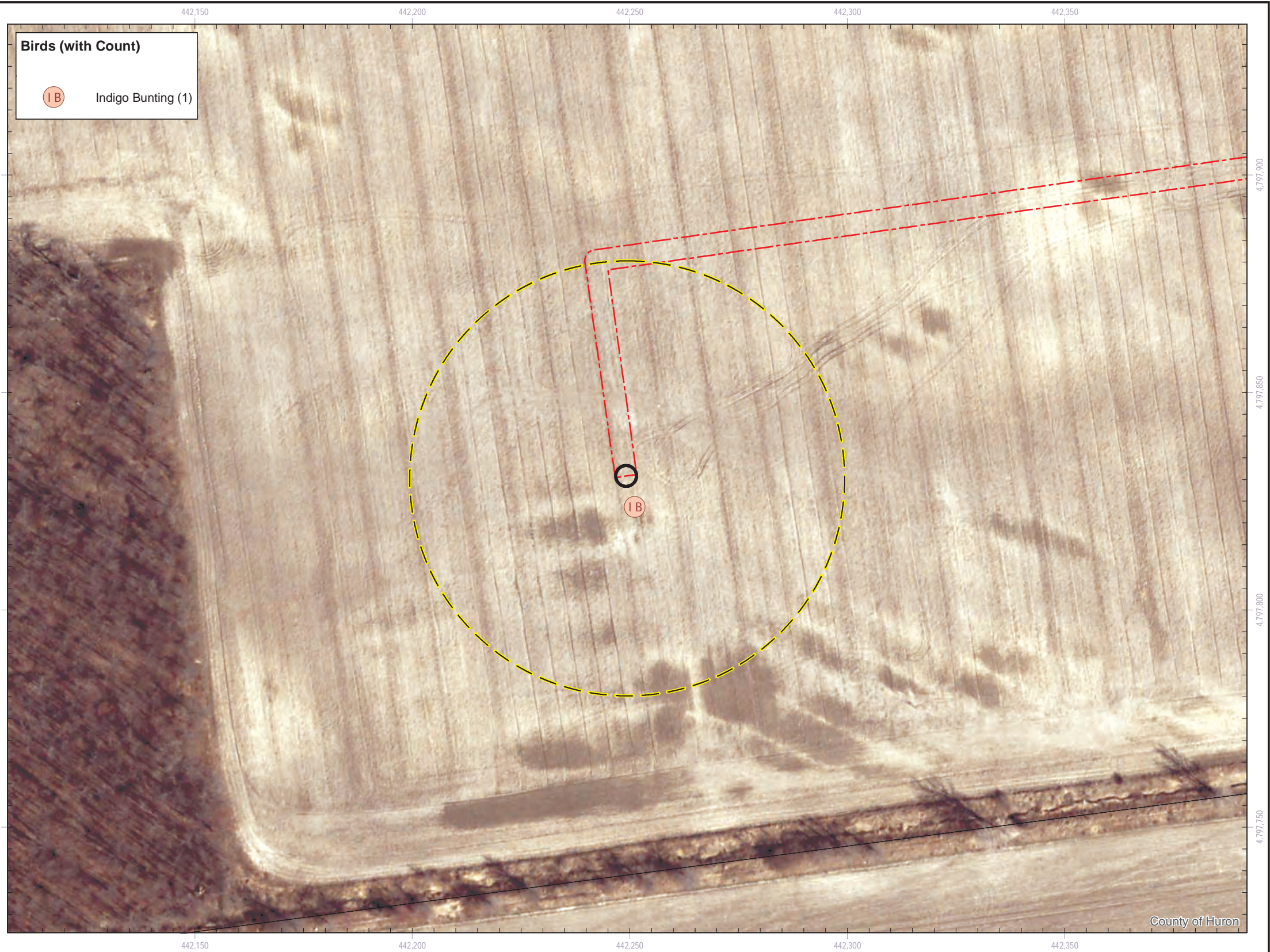
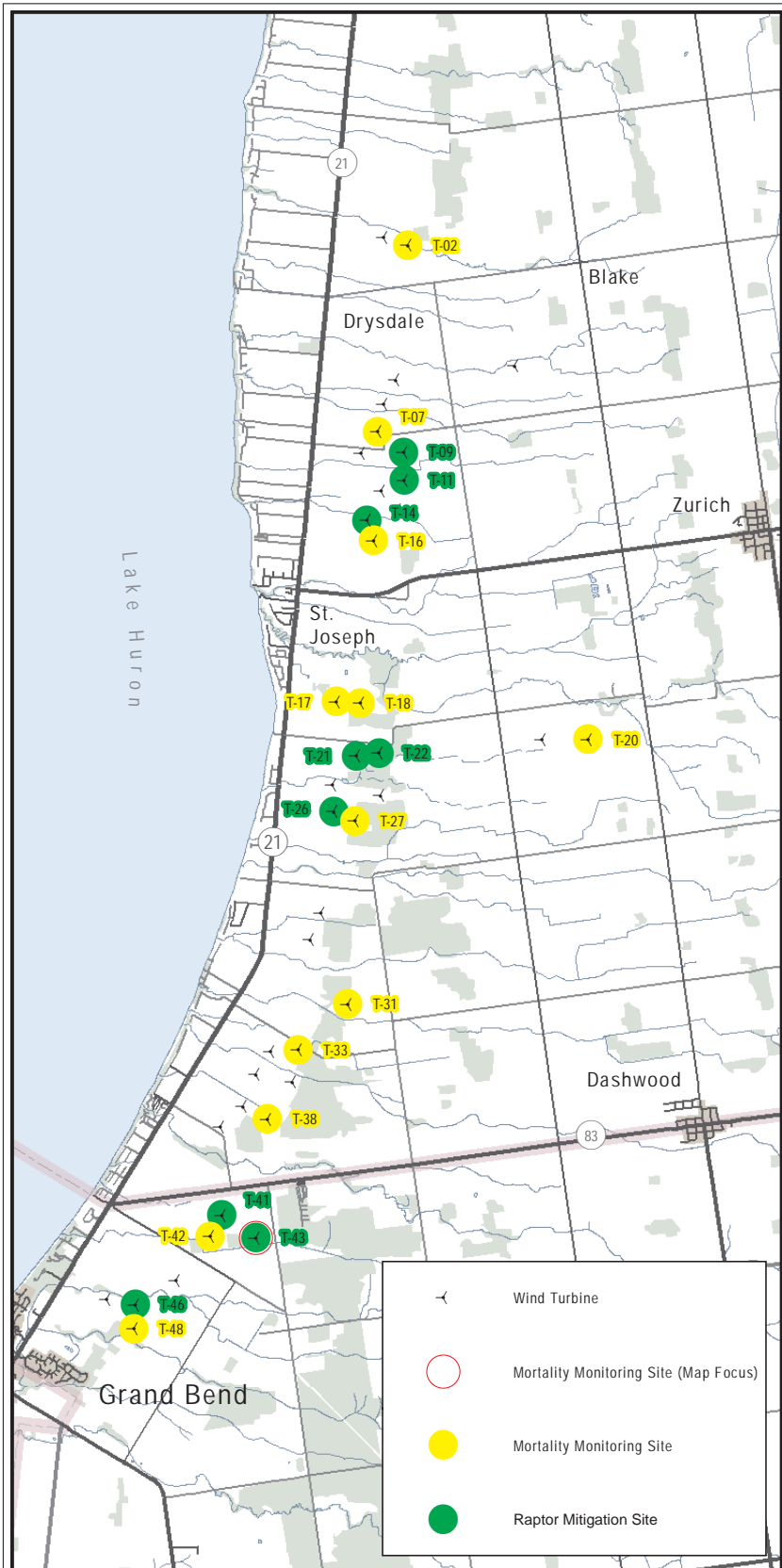
1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.



Client
Grand Bend Wind GP Inc.

Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-42
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-23
PS	HM	2020/03/16	
Scale	Project No.		
H 1:1,000			PIA019991



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m | False Northing: 0m
 Rotation: 0 | Scale Factor: 0.99960

Grid North

Search Radius (50m) Approach to Turbine
 Turbine Base Footprint

Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

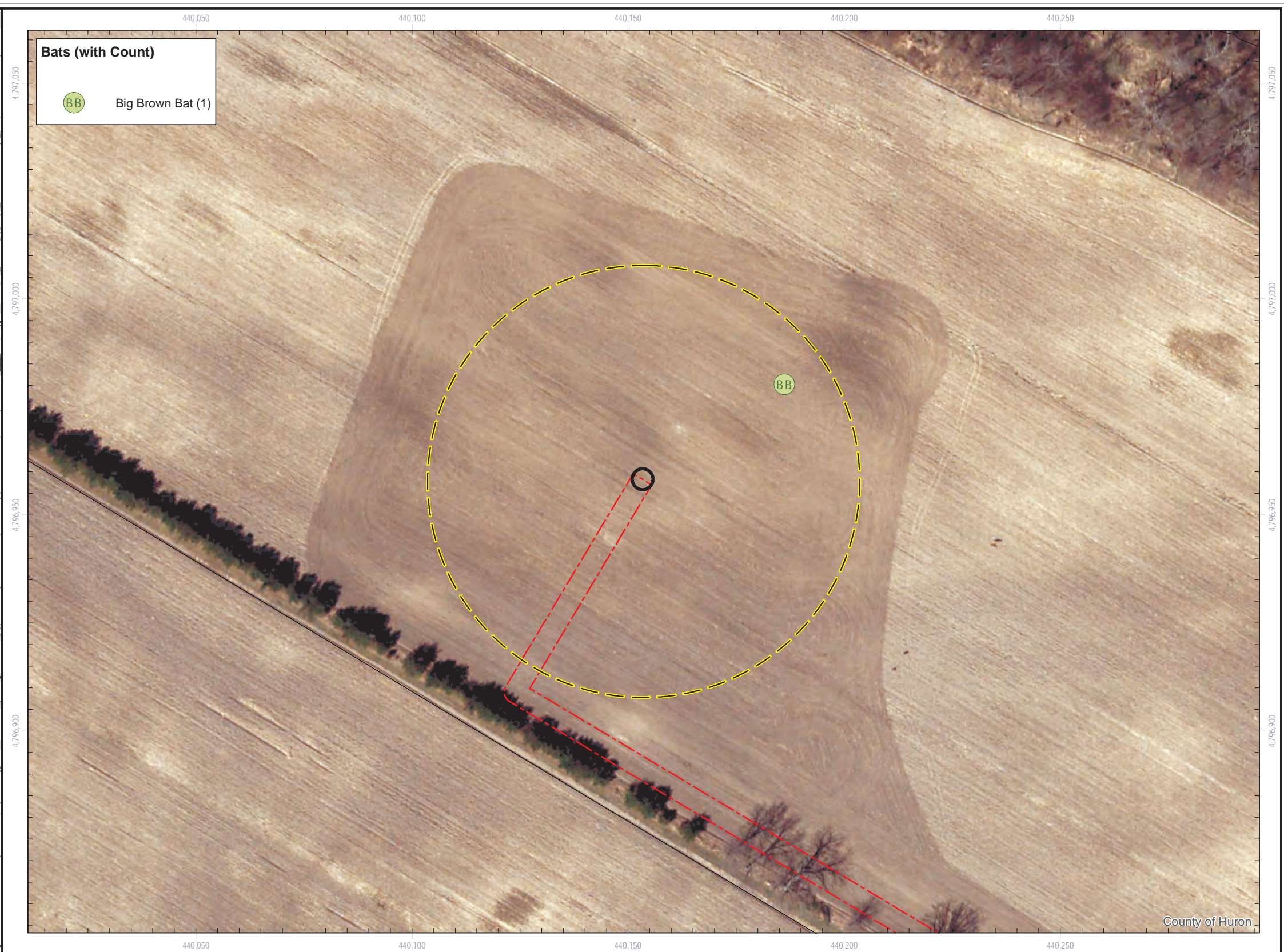
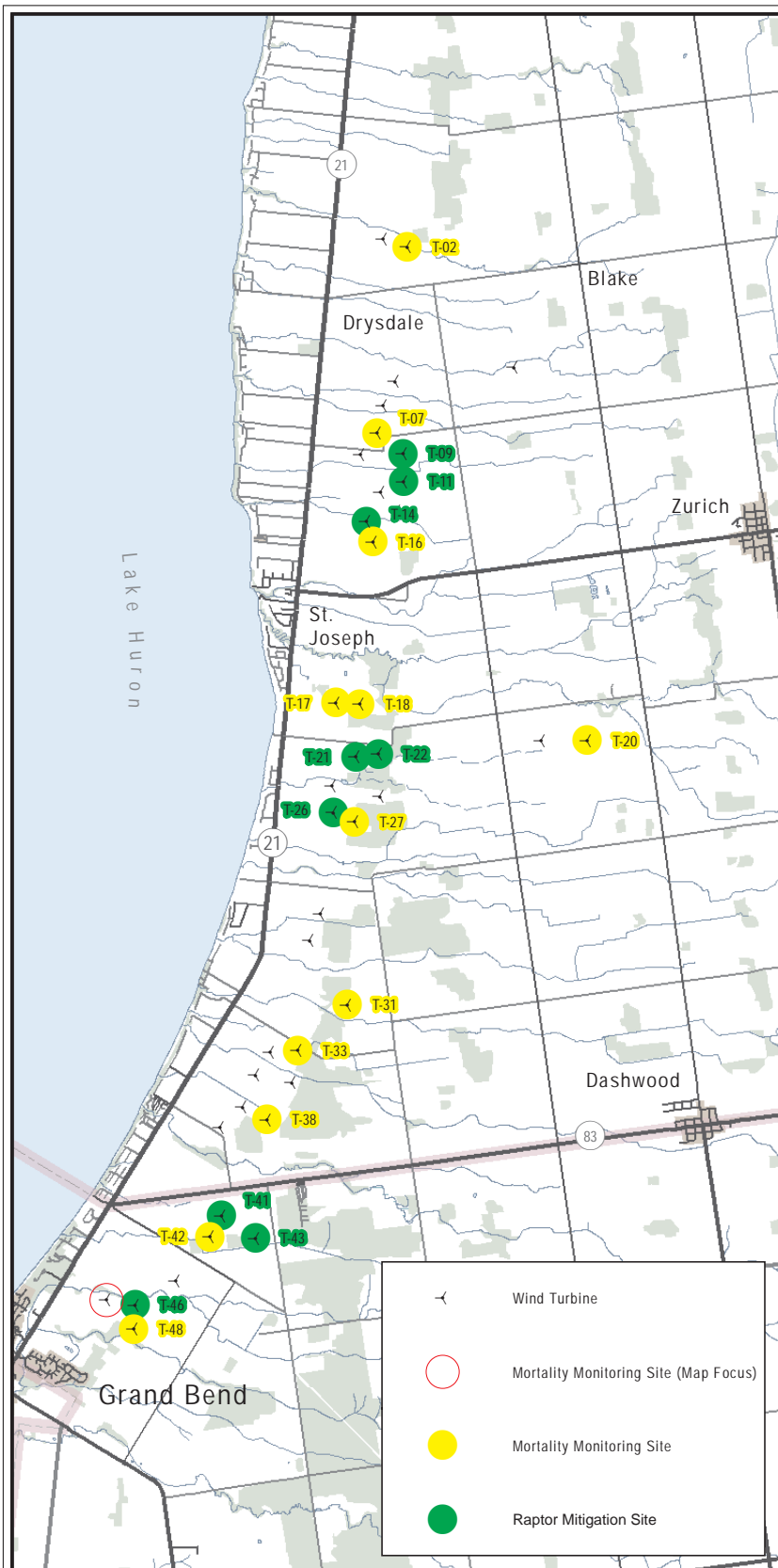
Notes:

1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.

Grand Bend Wind GP Inc.

Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-43
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-24
PS	HM	2020/03/16	
Scale	Project No. PIA019991		
H 1:1,000			



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m False Northing: 0m
 Rotation: 0 Scale Factor: 0.99960

Grid North

Search Radius (50m) Approach to Turbine

Turbine Base Footprint

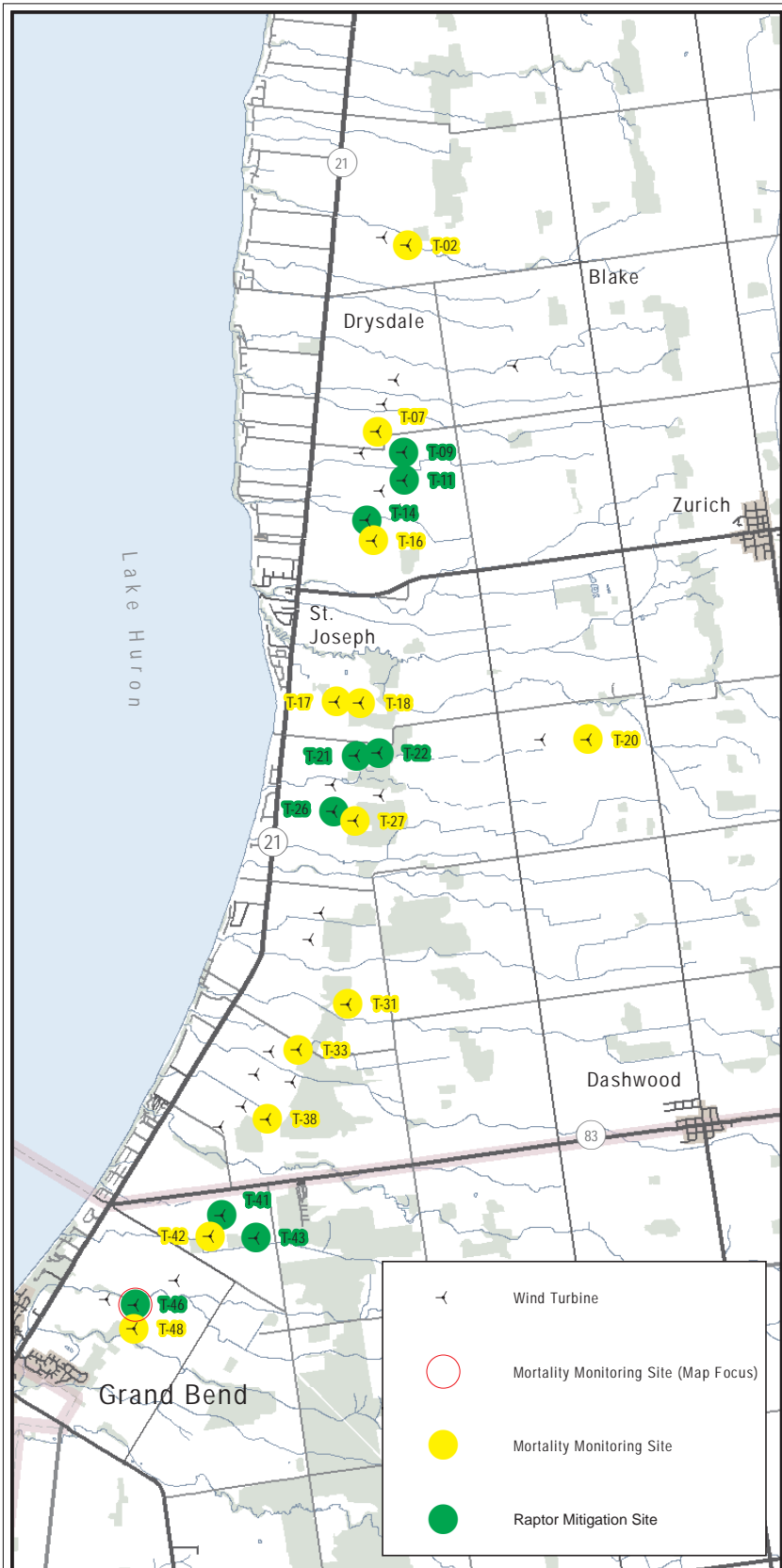
Sources:
 1. Ministry of Natural Resources, © Queen's Printer for Ontario
 2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
 3. Huron County
 4. R.J. Burnside & Associates Limited

Notes:
 1. Imagery reflects ground conditions in 2015.
 2. This map shows results for the 2019 monitoring year.

Client
Grand Bend Wind GP Inc.

Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-45
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-25
PS	HM	2020/03/16	
Scale	Project No.		
H 1:1,000			PIA019991



- Bats (with Count)**
- ER Eastern Red Bat (1)
 - HB Hoary Bat (1)
- Birds (with Count)**
- YW Yellow-rumped Warbler (1)



Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m False Northing: 0m
 Rotation: 0 Scale Factor: 0.99960

Grid North

0 10 20 30 40 50 60 70 80
 Metres

Search Radius (50m) Approach to Turbine

Turbine Base Footprint

Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.

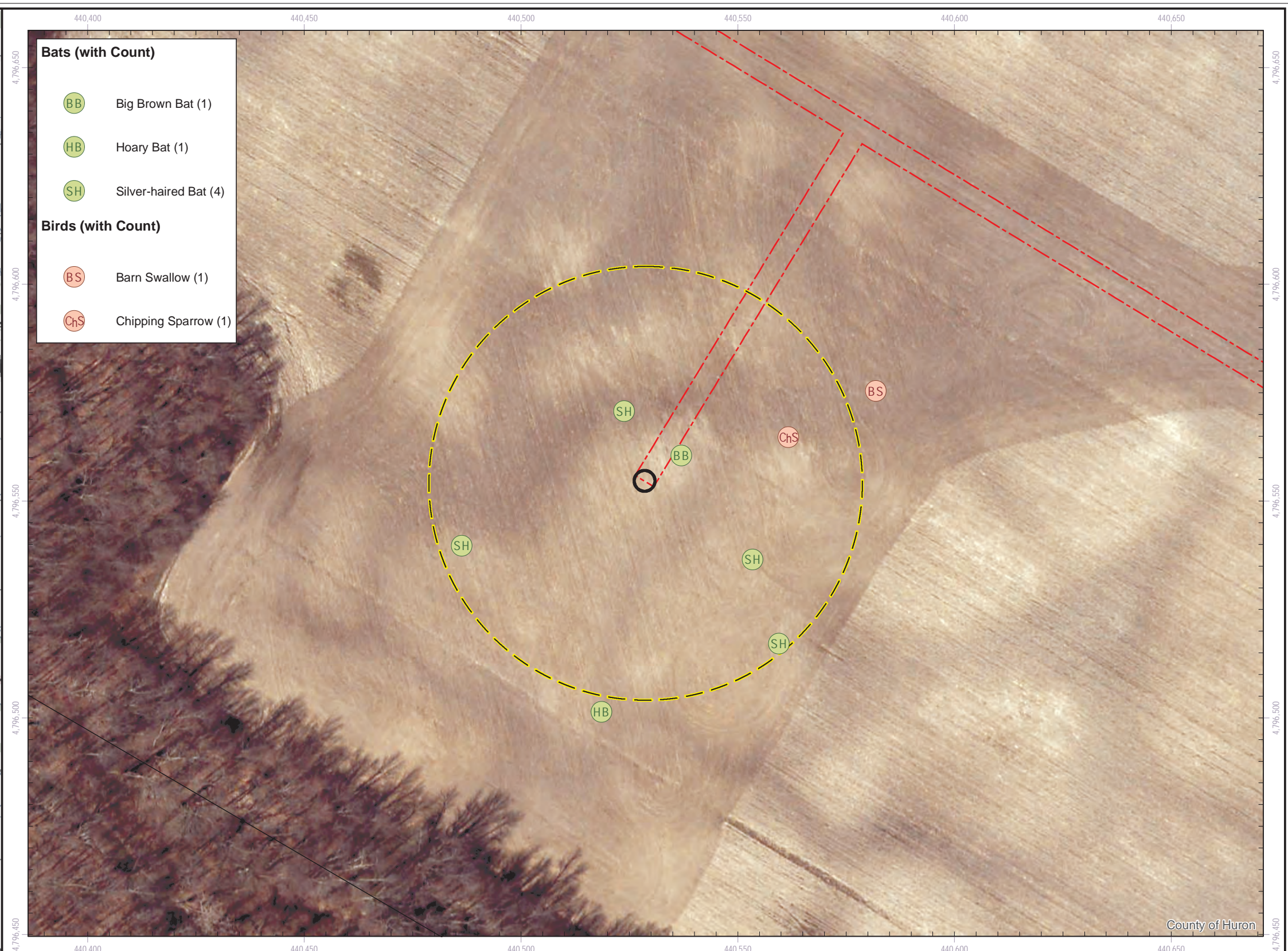
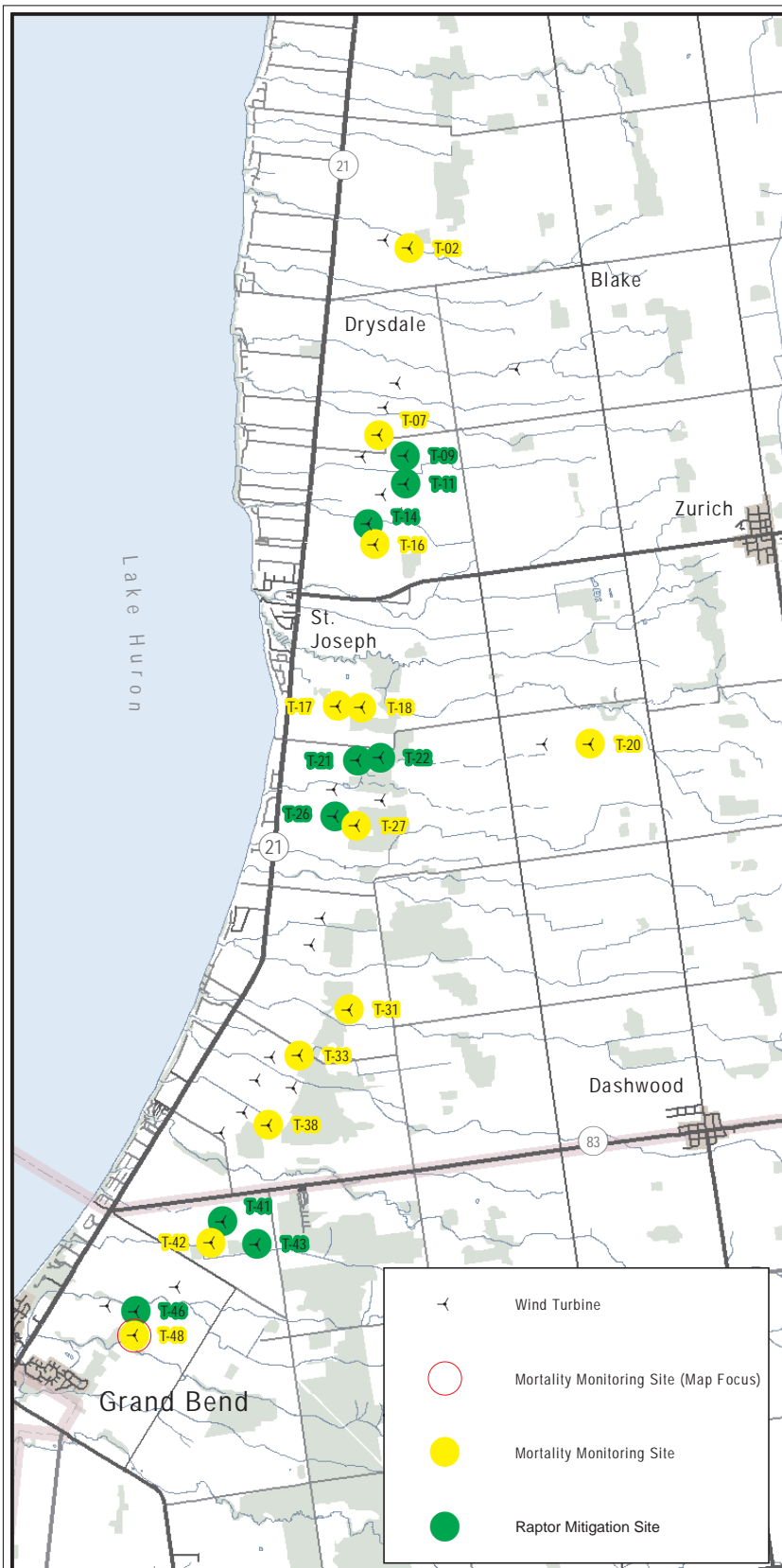
BURNSIDE

Client
Grand Bend Wind GP Inc.

Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-46
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-26
PS	HM	2020/03/16	
Scale	Project No. PIA019991		

H 1:1,000

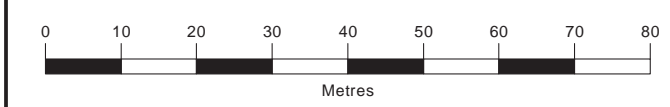


- Bats (with Count)**
- BB Big Brown Bat (1)
 - HB Hoary Bat (1)
 - SH Silver-haired Bat (4)
- Birds (with Count)**
- BS Barn Swallow (1)
 - ChS Chipping Sparrow (1)

- Wind Turbine
- Mortality Monitoring Site (Map Focus)
- Mortality Monitoring Site
- Raptor Mitigation Site

- Search Radius (50m)
- Approach to Turbine
- Turbine Base Footprint

Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m False Northing: 0m
 Rotation: 0 Scale Factor: 0.99960



Sources:

1. Ministry of Natural Resources, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.
3. Huron County
4. R.J. Burnside & Associates Limited

Notes:

1. Imagery reflects ground conditions in 2015.
2. This map shows results for the 2019 monitoring year.



Client
Grand Bend Wind GP Inc.

Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Windfarm
 Turbine T-48
 Carcass Search Results (2019)

Drawn	Checked	Date	Figure No. E-27
PS	HM	2020/03/16	
Scale	Project No. PIA019991		
H 1:1,000			



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[THE DIFFERENCE IS OUR PEOPLE]

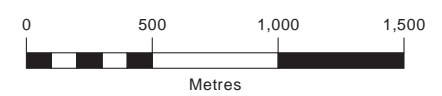
Appendix F

Raptor Mortalities per Turbine (Map Book)



SWH Code	Description
ABH	Amphibian Breeding Habitat (Woodland)
ABH (WE)	Amphibian Breeding Habitat (Wetland)
BMC	Bat Maternal Colony
SCC	Species of Conservation Concern
SS	Seeps & Springs
TNA	Turtle Nesting Area
TWA	Turtle Wintering Area
WASBB	Woodland Area Sensitive Breeding Birds
WRN	Woodland Raptor Nesting
WSSA	Waterfowl Stopover Staging Aquatic
WNA	Waterfowl Nesting Area
SESBB	Shrub/Early Successional Bird Breeding Habitat

Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m | False Northing: 0m
 Page Orientation: 0° | Scale Factor: 0.99960



	Wind Turbine		Raptor Mortality 2018, 2019		Original 2013 Project: Area of Responsibility		Open Water
	Raptor Mortality 2017		Raptor Mortality 2017, 2018, and 2019		Agriculture		Wetland: Marsh
	Raptor Mortality 2018		Transformer Station		Cultural (Old ELC)		Wetland: Swamp
	Raptor Mortality 2019		Original 2013 Project Location (120m Natural Heritage)		Forest		



Client
**GRAND BEND WIND
 GP INC.**

Figure Title
**Post-Construction Environmental
 Monitoring for The Grand Bend Wind Farm
 Turbines with Raptor
 Mortalities 2017, 2018, & 2019**

Drawn	Checked	Date	Figure No. F-1
PS	HM	2020/03/16	
Scale	Project No.		
H 1:30,000	PIA019991		



SWH Code	Description
ABH	Amphibian Breeding Habitat (Woodland)
ABH (WE)	Amphibian Breeding Habitat (Wetland)
BMC	Bat Maternal Colony
SCC	Species of Conservation Concern
SS	Seeps & Springs
TNA	Turtle Nesting Area
TWA	Turtle Wintering Area
WASBB	Woodland Area Sensitive Breeding Birds
WRN	Woodland Raptor Nesting
WSSA	Waterfowl Stopover Staging Aquatic
WNA	Waterfowl Nesting Area
SESBB	Shrub/Early Successional Bird Breeding Habitat

Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m | False Northing: 0m
 Page Orientation: 0° | Scale Factor: 0.99960

	Wind Turbine		Raptor Mortality 2018, 2019		Original 2013 Project: Area of Responsibility		Open Water
	Raptor Mortality 2017		Raptor Mortality 2017, 2018, and 2019		Agriculture		Wetland: Marsh
	Raptor Mortality 2018		Transformer Station		Cultural (Old ELC)		Wetland: Swamp
	Raptor Mortality 2019		Original 2013 Project Location (120m Natural Heritage)		Forest		

Client
GRAND BEND WIND GP INC.

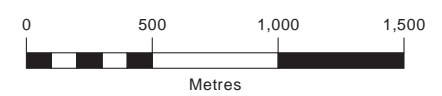
Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Wind Farm Turbines with Raptor Mortalities 2017, 2018, & 2019

Drawn	Checked	Date	Figure No.
PS	HM	2020/03/16	
Scale	Project No.		F-2
H 1:30,000	PIA019991		



SWH Code	Description
ABH	Amphibian Breeding Habitat (Woodland)
ABH (WE)	Amphibian Breeding Habitat (Wetland)
BMC	Bat Maternal Colony
SCC	Species of Conservation Concern
SS	Seeps & Springs
TNA	Turtle Nesting Area
TWA	Turtle Wintering Area
WASBB	Woodland Area Sensitive Breeding Birds
WRN	Woodland Raptor Nesting
WSSA	Waterfowl Stopover Staging Aquatic
WNA	Waterfowl Nesting Area
SESBB	Shrub/Early Successional Bird Breeding Habitat

Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m
 False Northing: 0m
 Page Orientation: 0°
 Scale Factor: 0.99960



- Wind Turbine
- Raptor Mortality 2017
- Raptor Mortality 2018
- Raptor Mortality 2018, 2019
- Raptor Mortality 2017, 2018, and 2019
- Transformer Station
- Original 2013 Project Location (120m Natural Heritage)
- Original 2013 Project Area of Responsibility
- Agriculture
- Cultural (Old ELC)
- Forest
- Open Water
- Wetland: Marsh
- Wetland: Swamp



Client
**GRAND BEND WIND
 GP INC.**

Figure Title
**Post-Construction Environmental
 Monitoring for The Grand Bend Wind Farm
 Turbines with Raptor
 Mortalities 2017, 2018, & 2019**

Drawn	Checked	Date	Figure No.
PS	HM	2020/03/16	
Scale	Project No.		F-3
H 1:30,000	PIA019991		



SWH Code	Description
ABH	Amphibian Breeding Habitat (Woodland)
ABH (WE)	Amphibian Breeding Habitat (Wetland)
BMC	Bat Maternal Colony
SCC	Species of Conservation Concern
SS	Seeps & Springs
TNA	Turtle Nesting Area
TWA	Turtle Wintering Area
WASBB	Woodland Area Sensitive Breeding Birds
WRN	Woodland Raptor Nesting
WSSA	Waterfowl Stopover Staging Aquatic
WNA	Waterfowl Nesting Area
SESBB	Shrub/Early Successional Bird Breeding Habitat

Datum: North American 1983
 Coord. System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Central Meridian: 81°0'0.00"W
 False Easting: 500,000m | False Northing: 0m
 Page Orientation: 0° | Scale Factor: 0.99960

	Wind Turbine		Raptor Mortality 2018, 2019		Original 2013 Project: Area of Responsibility		Open Water
	Raptor Mortality 2017		Raptor Mortality 2017, 2018, and 2019		Agriculture		Wetland: Marsh
	Raptor Mortality 2018		Transformer Station		Cultural (Old ELC)		Wetland: Swamp
	Raptor Mortality 2019		Original 2013 Project Location (120m Natural Heritage)		Forest		

Client
GRAND BEND WIND GP INC.

Figure Title
Post-Construction Environmental Monitoring for The Grand Bend Wind Farm
 Turbines with Raptor Mortalities 2017, 2018, & 2019

Drawn	Checked	Date	Figure No.
PS	HM	2020/03/16	
Scale	Project No.		F-4
H 1:30,000	PIA019991		