



Amherst Island Wind Project **2021 Post-Construction Mortality** **Monitoring Report**

Prepared for:
Windlectric, Inc
354 Davis Road
Oakville, ON
L6J 2X1

Project No. 2121F

March 2022



NATURAL RESOURCE SOLUTIONS INC.

Aquatic, Terrestrial and Wetland Biologists

**Amherst Island Wind Project
2021 Post-Construction Mortality Monitoring Report**

Project Team:

Staff	Role
Andrew Ryckman	Project Advisor/Senior Biologist
Christy Humphrey	Project Manager/Senior Biologist
Shelby Hofstetter	Project Manager/Biologist
Daniel Riley	Biologist
Jaimie Bortolotti	Biologist
Jennifer Pedersen	Biologist
Karlee Belliveau	Biologist
Kathryn Hoo	Biologist
Lillian Knopf	Biologist
Matthew Tobey	Biologist
Michael Dungey	Biologist
Nathan Miller	Biologist
Monica Varga	GIS Technician

Report submitted on March 31, 2022



Shelby Hofstetter
Terrestrial and Wetland Biologist

Executive Summary

Natural Resource Solutions Inc. was retained to conduct three (3) years of post-construction monitoring at the operational Amherst Island Wind Project, located in Loyalist Township, Lennox and Addington County, Ontario. This wind energy facility has a generating capacity of 74.3MW and consists of 26 turbines in an agricultural landscape dominated by pasture. Occasional wooded habitats, wetlands, and aquatic features are also present in the areas surrounding the project infrastructure. This report provides the detailed methods and results from the third year of post-construction monitoring for bird and bat mortality conducted at the Amherst Island Wind Project in 2021.

During twice weekly searches from May 1 to October 31, 2021, a total of 47 bird mortalities were documented within the search areas around the subset of 10 turbines. Observed bird mortalities consisted mostly of landbird species that are considered common in the province. Using correction factors for searcher efficiency, scavenger removal, and proportion of area searched, an estimated bird mortality rate of 7.19 birds/turbine/year (2.51 birds/MW/year) was determined for the Amherst Island Wind Project. This is below the provincial threshold of 14 birds/turbine/year. No significant bird mortality events were documented.

A total of nine (9) raptor mortalities were documented in the search areas around the regularly searched turbines. Three (3) additional raptor mortalities were documented at once-monthly monitored turbines searched between May and October. Raptor mortalities were comprised of four (4) Red-tailed Hawks (*Buteo jamaicensis*), three (3) Rough-legged Hawks (*Buteo lagopus*), one (1) Osprey (*Pandion haliaetus*) and one (1) Peregrine Falcon (*Falco peregrinus*). The estimated raptor mortality rate for the Amherst Island Wind Project is 0.65 raptors/turbine/year (0.24 raptors/MW/year). This is above the provincial threshold of 0.2 raptors/turbine/year.

During twice weekly searches from May 1 to October 31, 2021, a total of 66 bat mortalities were documented within the search areas around the subset of 10 turbines. Bat mortalities of both migratory and resident species were documented, including Hoary Bat (*Lasiurus cinereus*), Silver-haired Bat (*Lasionycteris noctivagans*), Eastern Red Bat (*Lasiurus borealis*), and Big Brown Bat (*Eptesicus fuscus*). The first three (3) species above are considered long-distance migratory species which over-winter outside of Ontario, and accounted for 80% of the total bat mortality observations at the Amherst Island Wind Project in 2021. Using correction factors for searcher efficiency, scavenger removal, and proportion of area searched, an estimated bat mortality rate of 9.77 bats/turbine/year (3.41 bats/MW/year) was determined for the Amherst Island Wind Project. This is below the provincial threshold of 10 bats/turbine/year.

TABLE OF CONTENTS

1.0	Introduction	1
2.0	Mortality Monitoring Methodology	2
2.1	Mortality Monitoring	2
2.1.1	Sample Locations	2
2.1.2	Monitoring Period and Search Frequency	2
2.1.3	Sample Area and Survey Duration	3
2.1.4	Data Collection	3
2.2	Scavenger Removal Trials	4
2.2.1	Small Bird and Bat Trials	4
2.2.2	Raptor Trials	5
2.3	Searcher Efficiency Trials	6
2.4	Proportion of Area Searched	8
3.0	Scavenger Removal Trial Results	10
3.1	Small Bird and Bat Trial Results	10
3.2	Raptor Trial Results	12
4.0	Searcher Efficiency Trial Results	14
5.0	Proportion of Area Searched	16
6.0	Avian Mortality Results	17
6.1	Avian Mortalities	17
6.2	Temporal Distribution of Avian Mortalities	17
6.3	Spatial Distribution of Avian Mortalities	18
6.4	Corrected (Estimated) Avian Mortality	19
6.5	Mortalities Documented Near Significant Bird Habitats	21
7.0	Raptor Mortality Results	23
7.1	Raptor Mortalities	23
7.2	Corrected (Estimated) Raptor Mortality	23
7.3	Monthly Raptor Surveys	24
7.4	Mortalities Documented Near Significant Raptor Habitats	25
8.0	Bat Mortality Results	27
8.1	Bat Mortalities	27
8.2	Temporal Distribution of Bat Mortalities	27
8.3	Spatial Distribution of Bat Mortalities	28
8.4	Corrected (Estimated) Bat Mortality	30
9.0	Comparative Annual Results	32
9.1	Avian Mortality Results	32
9.2	Raptor Mortality Results	32
9.3	Bat Mortality Results	33
9.4	Summary	33
10.0	Mortality Thresholds and Notifications	34
10.1	Annual Bird Mortality	34
10.2	Annual Raptor Mortality	34
10.3	Annual Bat Mortality	34

10.4 Significant Bird Mortality Event	35
10.5 Bird Mortality Documented Near Significant Bird Habitats.....	35
10.6 Species at Risk Mortality Event	37
11.0 Summary and Conclusions	38
12.0 References.....	40

List of Tables

Table 1. Summary of Regular Search Days When Turbines Could Not Be Searched (2021)	3
Table 2. Number of Carcasses Remaining During Scavenger Removal Trials for Small Birds and Bats at the Amherst Island WP (2021)	10
Table 3. Number of Carcasses Remaining During Scavenger Removal Trials for Raptors at the Amherst Island WP (2021)	12
Table 4. Results of Searcher Efficiency Trials at the Amherst Island WP (2021)	14
Table 5. Proportion of Area Searched at the Amherst Island WP (2021)	16
Table 6. Corrected Bird Mortality Rates Based on Mortality Monitoring at the Amherst Island WP (2021)	20
Table 7. Bird Mortalities Documented at Turbines within 120m of Significant Bird Habitat	21
Table 8. Raptor Mortalities Documented at Turbines within 120m of Significant Raptor Habitat	25
Table 9. Corrected Bat Mortality Rates Based on Mortality Monitoring at the Amherst Island WP (2021)	31
Table 10. Comparative Results of Avian Mortality Monitoring Seasons (2019-2021)	32
Table 11. Comparative Results of Raptor Mortality Monitoring Seasons (2019-2021)	32
Table 12. Comparative Results of Bat Mortality Monitoring Seasons (2019-2021)	33

List of Figures

Figure 1. Bird Mortalities Observed by Date at the Amherst Island WP (2021)	18
Figure 2. Bird Mortalities Observed by Turbine at the Amherst Island WP (2021)	19
Figure 3. Bat Mortalities Observed by Date at the Amherst Island WP (2021)	28
Figure 4. Bat Mortalities Observed by Turbine at the Amherst Island WP (2021)	29
Figure 5. Bat Mortalities Observed by Distance from Turbine at the Amherst Island WP (2021)	30

List of Maps

Map 1	Mortality Monitoring Turbines
Map 2	Significant Bird Habitats

List of Appendices

Appendix I	Post-Construction Monitoring Data Sheets
Appendix II	Scavenger Removal Trial Results
Appendix III	Searcher Efficiency Trial Results
Appendix IV	Avian Mortalities
Appendix V	Bat Mortalities
Appendix VI	Locations of Bird and Bat Mortalities
Appendix VII	Visibility Class Mapping

1.0 Introduction

Natural Resource Solutions Inc. (NRSI) was retained to conduct the third year of post-construction monitoring at the operational Amherst Island Wind Project (Amherst Island WP), located in Loyalist Township in Lennox and Addington County, Ontario. The Amherst Island WP consists of 26 wind energy generating turbines with a total nameplate capacity of 74.3MW. The project area and turbine locations can be seen on Map 1.

Post-construction mortality monitoring at the Amherst Island WP in 2021 included bird, raptor, and bat mortality monitoring, searcher efficiency trials, scavenger removal trials, and visibility class mapping of substrates searched. These surveys were conducted in accordance with provincial guidelines and project approval conditions to assess the potential impacts of this wind energy generating facility on local and migratory birds, raptors, and bats.

The purpose of this report is to provide the detailed methods and results from the third year of post-construction mortality monitoring conducted at the Amherst Island WP. It also reflects the first year of effectiveness monitoring, specific to bats, as a result of the Amherst Island WP exceeding the provincial threshold of 10 bats/turbine/year in 2020.

For the purposes of this report, NRSI will frequently use the terms 'mortality' and 'carcass'. The term 'mortality' will refer to dead birds and bats that were found in the vicinity of turbines at the Amherst Island WP. The term 'carcass' will refer to dead birds and bats that have been placed beneath wind turbines by NRSI staff for the purposes of searcher efficiency and/or scavenger removal trials.

2.0 Mortality Monitoring Methodology

2.1 Mortality Monitoring

2.1.1 Sample Locations

Since the Amherst Island WP consists of more than 10 turbines, a subset of at least 30% of turbines (minimum 10 turbines) is required to be monitored (OMNR 2011a, OMNR 2011b). In accordance with these requirements, a subset of 10 turbines (38.5%) were selected by Stantec Consulting Ltd. in consultation with the Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNR; Stantec 2013). NRSI conducted mortality monitoring at the subset of 10 turbines in 2021, following the monitoring period and search frequency described below. The subset of turbines that were monitored at the Amherst Island WP in 2021 is shown on Map 1.

2.1.2 Monitoring Period and Search Frequency

NRSI biologists conducted twice weekly (three (3) and four (4) day intervals) mortality monitoring for birds and bats at the subset of 10 turbines during the entire monitoring period of May 1 to October 31, 2021. For the purposes of this monitoring program, searches in May and June are considered to have been completed in Spring, July and August in Summer, and September and October in Fall.

In addition to the baseline monitoring requirements for birds and bats, outlined above, mortality monitoring specific to raptors occurred for the full duration of the year, as follows:

- Once weekly at all 26 turbines in January, February, and March (Winter 1),
- Once weekly at the 10 subset turbines in April (Winter 1),
- Twice weekly (three (3) and four (4) day intervals) at the 10 subset turbines in May through October (Spring, Summer, and Fall, as defined above),
- Once weekly at the 10 subset turbines in November (Winter 2), and
- Once weekly at all 26 turbines in December (Winter 2).

In addition, raptor mortality monitoring was conducted once per month from May to November (inclusive) at the 16 turbines that are not part of the defined subset.

As a result of inclement weather, some turbines could not be searched on particular scheduled dates. This relatively minor adjustment to the monitoring protocol is not expected to impact the results or conclusions presented in this report. The dates when turbines were not able to be searched are listed in Table 1.

Table 1. Summary of Regular Search Days When Turbines Could Not Be Searched (2021)

Date (2021)	Date Turbine Next Searched (2021) ¹	Turbine(s)	Rationale
July 1	July 5	S18	Inclement Weather (Lightning)

¹ Due to a variety of factors which may include weather conditions, the location of the project, and/or staff availability, some turbines could not be searched again until the next regularly scheduled search day.

2.1.3 Sample Area and Survey Duration

NRSI biologists conducted mortality searches within a 50m radius of each turbine base. Mortality searches were conducted using linear transects, spaced approximately 5m apart. Any mortality that was incidentally observed beyond the formal search parameters was still documented, photographed, and collected, but is not included in formal calculations of estimated mortality rates and is not discussed further in this report. In order to maintain a consistent search effort, mortality searches followed a consistent search time throughout each month of searching. When searching all 26 turbines during January to March and December for raptor mortalities, a search time of 20 minutes per turbine was used. At the subset of 10 turbines, a search time of 20 minutes per turbine was used during the months of April and November for raptor mortalities, and 30 minutes per turbine during the months of May to October for bat, bird and raptor mortalities. At the remaining 16 turbines, a search time of 20 minutes per turbine was used during the month of November for raptor mortalities. Shorter search times were implemented when the focus of the search was on raptors since raptors typically represent large carcasses that are more easily observed, relative to other bird and bat carcasses.

2.1.4 Data Collection

During each visit to conduct mortality searches, all appropriate information was documented, including weather conditions, date, time, and observer. The mortality monitoring data collection sheet has been provided in Appendix I.

In addition to general information collected on each visit, a variety of specific information was recorded upon encountering any mortality. This detailed information collected for each mortality, as shown on the data sheet provided in Appendix I, included species (if identifiable), sex of the individual (if identifiable), condition, estimated time since death, any apparent injuries, direction and distance from turbine base, substrate type and visibility class, and a unique mortality identification number for future reference. Specific UTM coordinates and photographs were also taken for each specimen to allow for further analysis, if necessary.

2.2 Scavenger Removal Trials

As per the *Environmental Effects Monitoring Plan for Wildlife* (EEMP, Stantec 2013) carcasses for small birds, bats and raptors were used for scavenger removal trials to determine scavenging rate. Carcasses of small birds and bats were combined into one trial applicable to both. A separate trial was conducted for raptor carcasses. Due to the difficulty in obtaining a sufficient number of fresh raptor carcasses, waterfowl and Common Raven (*Corvus corax*) carcasses were occasionally used in place of raptors as they represent similarly-sized surrogates. These minor substitutions are not expected to have a material result on the annual corrected mortality rate for raptors. The monitoring program for each trial type (small birds/bats and raptors) are detailed in the sections below.

2.2.1 Small Bird and Bat Trials

Scavenger removal trials for small birds and bats were conducted in each of the Spring, Summer, and Fall seasons of mortality monitoring. A minimum of 10 carcasses were placed in each monitoring season, with no more than five (5) carcasses placed at one time. Carcasses were placed throughout the range of habitats and substrate types being searched during each season. Species, UTM coordinates, direction and distance from turbine base, substrate, and visibility class were all noted on a data sheet during the placement of each specimen. The scavenger removal data sheet has been provided in Appendix I.

Carcasses placed included bird and bat specimens, with each trial consisting of at least one-third representation of each of bird and bat carcasses. Bird carcasses included species commonly encountered in this region of the province and ranged in size from very small to moderate-sized carcasses. Migratory bat carcasses were used in each seasonal scavenger removal trial and included Hoary Bat (*Lasiurus cinereus*), Eastern Red Bat (*Lasiurus borealis*), and Silver-haired Bat (*Lasionycteris noctivagans*). One exception was a Big Brown Bat (*Eptesicus fuscus*) carcass that was used during the August scavenger removal trial. Carcasses used in scavenger removal trials were obtained from the Royal Ontario Museum and/or were collected from operational wind energy facilities within Ontario. A list of the bird and bat species used during scavenger removal trials has been provided in Appendix II.

During each scavenger removal trial, the bird and bat carcasses were left for up to 14 days and were checked at the same frequency as mortality searches, or approximately twice per week, to note any scavenging or signs of scavenger presence. Following completion of the scavenger removal trials after 14 days, all remaining test carcasses were picked up and disposed of appropriately.

2.2.2 Raptor Trials

Scavenger removal trials for raptors were conducted in three (3) grouped seasons: a) Winter 1, from January through April; b) combined Spring/Summer/Fall, from May through October; and c) Winter 2, November and December. Due to an insufficient supply of fresh large bird carcasses, a minimum of 10 carcasses could not be placed in each of the defined grouped seasons. This relatively minor adjustment to the monitoring protocol is not expected to impact the results or conclusions presented in this report. Additionally, given the short duration of the Winter 2 season, the placement of only four (4) carcasses is expected to help avoid bias in the trial resulting from saturation of large carcasses being available to scavengers. This same rationale was used to combine the Spring/Summer/Fall seasons for the raptor scavenger removal trial, particularly given that large bird mortality rates are typically low and thus the availability of large bird carcasses on the landscape would typically be low.

No more than two (2) raptor carcasses were placed at one time, and no more than one (1) carcass was placed at any single turbine during each seasonal trial. These measures were also taken to avoid bias in the trial resulting from saturation of carcasses available to scavengers. Carcasses were placed throughout the range of habitats and substrate types being searched during each season. Species, UTM coordinates, direction and distance from turbine base, substrate, and visibility class were all noted on a data sheet during the placement of each specimen. The scavenger removal data sheet has been provided in Appendix I. A list of the large bird species used during scavenger removal trials has been provided in Appendix II.

During each scavenger removal trial, the large bird carcasses were left for up to four (4) search events during each season (four (4) weeks in Winter 1 and Winter 2, and 14 days in the Spring/Summer/Fall). Carcasses were checked at the same frequency as mortality searches, or approximately once per week in the Winter seasons and twice per week in the Spring/Summer/Fall season, to note any scavenging or signs of scavenger presence.

2.3 Searcher Efficiency Trials

In conjunction with mortality searches, NRSI conducted searcher efficiency trials on staff that conducted mortality searches at the Amherst Island WP. Similar to scavenger removal trials, searcher efficiency trials must be conducted at least once per season (Spring, Summer, and Fall), and on each searcher and in each visibility class that was searched during that season. In accordance with the EEMP (Stantec 2013), searcher efficiency trials were not conducted for raptor mortalities, as large birds are highly visible, and therefore searcher efficiency values of 1.0 have been assumed.

During each trial, searchers were tested without their knowledge through the placement of a minimum of 10 test carcasses per visibility class searched by the searcher, with no more than three (3) carcasses placed on any one date. During one season, the searcher was tested with nine (9) carcasses in one visibility class searched and 12 carcasses in the other visibility class searched, instead of a minimum of 10 in each. In the summer season, two (2) of the searchers were not able to be tested with 10 carcasses in each visibility class due to the number of their search days being less than

the number of days required for a full trial sample, considering that no more than three (3) carcasses can be placed on any one search date. Therefore, each searcher was tested on almost each day they searched (May 24 to July 8 and May 31 to July 8, respectively), with results combined and considered to represent each searcher's efficiency for the duration of that period, and is applicable to their searches in both the Spring and Summer seasons. These very minor deviations are not expected to have any material result on the annual corrected mortality rate for birds or bats.

Carcasses were placed randomly within the search radius throughout the subset of 10 turbines at the Amherst Island WP. Distance and direction from turbine base, visibility class and substrate type, and UTM coordinates were recorded for each test carcass placed. Trial carcasses were unmarked to avoid introducing bias by alerting the searcher to the trial. Each found specimen was later compared to the total number of carcasses placed within the project area and the locations of their placement. The data sheet used for searcher efficiency trials has been provided in Appendix I.

In order to meet the understood intent of the NDMNRF guidelines (OMNR 2011a, OMNR 2011b) to limit searcher bias, NRSI has not physically marked carcasses at this project, as it could influence the results of the trial and alert the searcher to an ongoing searcher efficiency trial. Instead, NRSI biologists collect detailed location information of the trial carcass with date placed, UTM coordinates, distance and direction from the turbine, and mapped location of the carcass. All collected carcasses are compared to these detailed date, location and species information to distinguish between trial carcasses and actual turbine mortalities. These steps have been taken to ensure that the location of the carcass, along with species information, is well-documented for future reference if there is uncertainty about whether or not an observed carcass is a turbine-related fatality or a trial carcass.

Searcher efficiency carcasses included both bird and bat specimens, with each trial consisting of at least one-third representation of each of bird and bat carcasses. Bird carcasses used in the searcher efficiency trials included species commonly encountered in this region of the province and varied in size from very small to moderate-sized carcasses. Bat carcasses used during searcher efficiency trials consisted of the three

(3) migratory species known to occur within Ontario, including Hoary Bat, Eastern Red Bat, and Silver-haired Bat. Carcasses used in searcher efficiency trials were obtained from the Royal Ontario Museum and/or were collected from operational wind energy facilities within Ontario. A list of the bird and bat species used during searcher efficiency trials has been provided in Appendix III.

2.4 Proportion of Area Searched

Following NDMNRF guidelines, visibility class maps were completed by searchers at a minimum frequency of once per season (OMNR 2011a, OMNR 2011b). Due to the potential for changing conditions, NRSI completed visibility class maps once per month from May to October to provide additional information to increase the accuracy of the estimated mortality rates. Visibility class maps were completed once per season in each of Winter 1 and Winter 2 due to the lack of vegetation growth and relatively consistent search substrates.

Visibility class mapping was completed for the 50m search radius at each turbine. This mapping categorized habitats according to visibility classes recommended by the NDMNRF (OMNR 2011a, OMNR 2011b). These include visibility classes 1 through 4, in addition to areas which may be deemed “unsearchable”, such as aquatic features, areas deemed safety hazards, or other areas where searching was not possible. Mapping of these visibility classes within each search radius was conducted and calculated as per a repeatable methodology using a combination of these visibility class field maps, review of aerial photographs, and use of Geographic Information System (GIS) software. The data sheet used to record visibility class mapping has been provided in Appendix I.

In order to help increase the accuracy of searcher efficiency rates and minimize the influence of the proportion of area searched on the bird and bat mortality estimates, the majority of the search radii at the subset of 10 turbines were maintained at visibility class 1 and 2 through occasional mowing, as needed, for the duration of the growing season (May through October), wherever possible. When small and temporary areas of other visibility classes were present, they were searched thoroughly until scheduled vegetation maintenance could occur. As a result, the majority of the 50m radius at each turbine was searched for the duration of the 2021 monitoring period. Some areas were

determined to be visibility classes that were not searched as part of this monitoring program (i.e. visibility classes 3 and 4), such as hedgerows. In these cases, the appropriate proportion of area searched was calculated and used for final mortality estimates. Visibility class maps of each turbine in each month are provided in Appendix VII.

Maintenance of the 50m search radius was only completed when necessary to maintain appropriate visibility and it also followed a strict schedule developed by NRSI that ensured the maintenance activities were completed in a manner to minimize or eliminate any potential negative influence on the mortality monitoring, searcher efficiency trials and scavenger removal trials. The maintenance of the search areas is expected to increase the accuracy of the final estimated mortality rates at the Amherst Island WP.

3.0 Scavenger Removal Trial Results

Scavenging activity at the Amherst Island WP was generally moderate throughout the monitoring seasons for small birds and bats, with low scavenging activity noted in Spring/Summer/Fall and Winter 2, specific to raptors. Details on the date placed, species, distance and direction from turbine, visibility class, dates checked and by whom, UTM coordinates, and whether the carcass was scavenged have been provided in Appendix II.

3.1 Small Bird and Bat Trial Results

Table 2 shows the results from the seasonal scavenger removal trials conducted for small birds and bats at the Amherst Island WP.

Table 2. Number of Carcasses Remaining During Scavenger Removal Trials for Small Birds and Bats at the Amherst Island WP (2021)

Number of Carcasses Remaining					
Spring Trial (May/June)					
Turbine	Visit 0	Visit 1	Visit 2	Visit 3	Visit 4
S01	1	0	0	0	0
S02	1	1	1	1	1
S03	1	0	0	0	0
S05	1	1	1	1	1
S07	1	0	0	0	0
S14	1	1	0	0	0
S18	1	1	1	0	0
S22	1	0	0	0	0
S28	1	1	1	1	1
S36	1	1	1	1	1
Total	10	6	5	4	4
Summer Trial (July/August)					
Turbine	Visit 0	Visit 1	Visit 2	Visit 3	Visit 4
S01	1	1	0	0	0
S02	1	1	1	1	0
S03	2	2	1	0	0
S05	1	1	1	1	1
S07	1	1	1	1	0
S14	1	1	1	1	1
S18	1	0	0	0	0
S28	1	1	1	1	0
S36	1	1	1	0	0

Number of Carcasses Remaining					
Total	10	9	7	5	2
Fall Trial (September/October)					
Turbine	Visit 0	Visit 1	Visit 2	Visit 3	Visit 4
S01	1	0	0	0	0
S02	1	0	0	0	0
S03	1	1	1	1	0
S05	1	1	1	1	1
S07	1	1	1	0	0
S14	1	0	0	0	0
S18	1	1	1	1	1
S22	1	0	0	0	0
S28	1	1	0	0	0
S36	1	1	1	1	1
Total	10	6	5	4	3

To address the small bird and bat scavenger removal rates for each of the specific monitoring periods, NRSI has used the following equation recommended by the NDMNRF:

$$Sc = \frac{n_{\text{visit1}} + n_{\text{visit2}} + n_{\text{visit3}} \dots}{n_{\text{visit0}} + n_{\text{visit1}} + n_{\text{visit2}} \dots}$$

Sc: proportion of carcasses not removed by scavengers

n_{visit0} : total number of carcasses placed

$n_{\text{visit1}} - n_{\text{visit3}} \dots$: numbers of carcasses remaining on visits 1 through 3 etc.

Using the scavenger removal results presented in Table 2, and the equation provided by the NDMNRF, the seasonal scavenger removal rates for small birds and bats have been determined as follows:

$$\begin{aligned} SC_{\text{Spring}} &= (6 + 5 + 4 + 4) / (10 + 6 + 5 + 4) \\ &= 19 / 25 \\ &= \mathbf{0.76} \end{aligned}$$

$$\begin{aligned} SC_{\text{Summer}} &= (9 + 7 + 5 + 2) / (10 + 9 + 7 + 5) \\ &= 23 / 31 \\ &= \mathbf{0.74} \end{aligned}$$

$$\begin{aligned} SC_{\text{Fall}} &= (6 + 5 + 4 + 3) / (10 + 6 + 5 + 4) \\ &= 18 / 25 \\ &= \mathbf{0.72} \end{aligned}$$

The above scavenger removal rates represent the proportion of carcasses still remaining from one visit to the next. These values generally represent moderate scavenging activity for small birds and bats throughout the year. The above scavenger removal rates for small birds and bats will be used to calculate the estimated small bird and bat mortality rates in Sections 6.0 and 8.0.

3.2 Raptor Trial Results

Table 3 shows the results from the seasonal scavenger removal trials conducted for raptors at the Amherst Island WP.

Table 3. Number of Carcasses Remaining During Scavenger Removal Trials for Raptors at the Amherst Island WP (2021)

Number of Carcasses Remaining					
Winter 1 Trial (January-April)					
Turbine	Visit 0	Visit 1	Visit 2	Visit 3	Visit 4
S09	1	1	1	1	0
S27	1	1	1	1	1
S33	1	0	0	0	0
S36	1	1	1	1	0
Total	4	3	3	3	1
Spring/Summer/Fall Trial (May-October)					
Turbine	Visit 0	Visit 1	Visit 2	Visit 3	Visit 4
S02	1	1	1	1	1
S03	1	1	1	1	1
S05	1	1	1	0	0
S14	1	1	1	1	1
S18	1	1	1	1	1
S28	1	1	1	1	1
Total	6	6	6	5	5
Winter 2 Trial (November-December)					
Turbine	Visit 0	Visit 1	Visit 2	Visit 3	Visit 4
S01	1	1	1	0	0
S07	1	1	1	0	0
S11	1	1	1	1	1
S19	1	1	1	1	1
Total	4	4	4	2	2

Using the scavenger removal results presented in Table 3, and the equation provided by the NDMNRF, the seasonal scavenger removal rates for raptors have been determined as follows:

$$\begin{aligned} SC_{\text{Winter1}} &= (3 + 3 + 3 + 1) / (4 + 3 + 3 + 3) \\ &= 10 / 13 \\ &= \mathbf{0.77} \end{aligned}$$

$$\begin{aligned} SC_{\text{Spring/}} &= (6 + 6 + 5 + 5) / (6 + 6 + 6 + 5) \\ \text{Summer/Fall} &= 22 / 23 \\ &= \mathbf{0.96} \end{aligned}$$

$$\begin{aligned} SC_{\text{Winter2}} &= (4 + 4 + 2 + 2) / (4 + 4 + 4 + 2) \\ &= 12 / 14 \\ &= \mathbf{0.86} \end{aligned}$$

The above scavenger removal rates represent the proportion of raptor carcasses still remaining from one visit to the next. These values generally represent low to moderate scavenging activity for raptors throughout the year. The above raptor scavenging removal rates will be used to calculate the estimated raptor mortality rates in Section 7.0.

4.0 Searcher Efficiency Trial Results

Searcher efficiency rates at the Amherst Island WP during the 2021 monitoring season were high in each of the Spring, Summer, and Fall. Results of the seasonal searcher efficiency trials are summarized in Table 4. Details on the searcher and tester, species, distance and direction from turbine, habitat, substrate, visibility class, UTM coordinates, and whether the carcass was found or scavenged have been provided in Appendix III.

Table 4. Results of Searcher Efficiency Trials at the Amherst Island WP (2021)

Searcher	Carcasses Found	Carcasses Placed	Carcasses Scavenged	Searcher Efficiency	Proportion of Turbines Searched
Spring 2021					
Searcher A ¹	N/A	N/A	N/A	0.83	0.06
Searcher B	12	21	5	0.75	0.35
Searcher C ²	25	32	2	0.83	0.32
Searcher D ³	29	32	0	0.91	0.27
Summer 2021					
Searcher B	15	20	4	0.94	0.84
Searcher C ²	25	32	2	0.83	0.08
Searcher D ³	29	32	0	0.91	0.08
Fall 2021					
Searcher B	16	20	2	0.89	1.0

¹ This searcher searched on no more than two (2) dates in the identified season and therefore could not be properly tested for searcher efficiency following NDMNRF guidelines (i.e. seven (7) search days are required for proper testing in two (2) visibility classes as no more than three (3) carcasses can be placed at a time). In these circumstances, the average result obtained by the other regular searchers in each season was used for this searcher.

² This searcher completed searches between May 24 to July 8. As they could not be properly tested for searcher efficiency in the Summer season following NDMNRF guidelines as described above, the searcher was tested on almost every search date and the resulting combined value used for this searcher in both the Spring and Summer seasons.

³ This searcher completed searches between May 31 and July 8. As they could not be properly tested for searcher efficiency in the Summer season following NDMNRF guidelines as described above, this searcher was tested on almost every search date and the resulting combined value used for this searcher in both the Spring and Summer seasons.

Based on the information collected during detailed searcher efficiency trials and the equations recommended by the NDMNRF, overall searcher efficiency (SeO) was calculated for each of the monitoring seasons as follows:

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

$$SeO = Se_A(\text{proportion of turbines searched}) + Se_B(\text{proportion of turbines searched})...$$

$$SeO_{\text{Spring}} = 0.83 (0.06) + 0.75 (0.35) + 0.83 (0.32) + 0.91 (0.27) = \mathbf{0.82}$$

$$\text{SeO}_{\text{Summer}} = 0.94 (0.84) + 0.83 (0.08) + 0.91 (0.08) = \mathbf{0.93}$$

$$\text{SeO}_{\text{Fall}} = 0.89 (1.0) = \mathbf{0.89}$$

These searcher efficiency values represent high efficiency rates, likely due to the steps taken to keep the search areas in low visibility classes (i.e. clear and more easily searched) to increase the accuracy of the estimated mortality rate. These values will be used to calculate the estimated avian and bat mortality rates in Sections 6.0 and 8.0.

5.0 Proportion of Area Searched

Visibility class mapping was completed every month from May to October within the 50m search radius of each of the 10 subset turbines in order to reflect any changes in groundcover and resulting visibility classes. In addition, visibility class mapping was completed as often as necessary in the winter months to characterize the remaining turbines in the project which contributed to the estimate of raptor mortality, resulting in mapping completed once in Winter 1 and once in Winter 2 for all turbines. All visibility class maps have been provided in Appendix VII.

Visibility class mapping was used in combination with GIS software to determine the specific area and sizes of each of the applicable visibility classes identified with the turbine search areas. During the 2021 monitoring program, NRSI biologists searched all areas of visibility class 1 and 2 during the months of May through October, which is reflected in the proportion of area searched (Ps) calculated for all 10 turbines during each of those monitoring months, as shown in Table 5. During the winter months, all visibility classes were searched. These values will be used to calculate the estimated avian, raptor and bat mortality rates in Sections 6.0, 7.0, and 8.0, respectively.

Table 5. Proportion of Area Searched at the Amherst Island WP (2021)

Month	Total Searched Area (m ²)	Number of Turbines Searched Regularly	Total Search Radius (m ²)	Proportion of Area Searched (Ps)
January	204,100	26	204,100	1.00
February	204,100	26	204,100	1.00
March	204,100	26	204,100	1.00
April	78,500	10	78,500	1.00
May	78,167	10	78,500	1.00
June	78,167	10	78,500	1.00
July	78,167	10	78,500	1.00
August	78,167	10	78,500	1.00
September	78,167	10	78,500	1.00
October	78,167	10	78,500	1.00
November	78,500	10	78,500	1.00
December	204,100	26	204,100	1.00

6.0 Avian Mortality Results

6.1 Avian Mortalities

During the 2021 mortality monitoring period at the Amherst Island WP, NRSI biologists found 47 bird mortalities within the 50m radius of the subset of 10 turbines between May and October. The majority of the mortalities that could be identified to the species level were confirmed to be small landbirds, generally representing a variety of common species for this area of the province. The most commonly observed mortalities were of Tree Swallow (*Tachycineta bicolor*, n=11), Golden-crowned Kinglet (*Regulus satrapa*; n=4), and European Starling (*Sturnis vulgaris*, n=4). Four (4) bird mortalities could not be identified to the species level due to advanced decomposition and/or scavenging activity, but were identified as thrush species, kinglet species, or passerine species (i.e. non-raptors).

A list of avian mortalities observed during the carcass searches has been provided in Appendix IV.

6.2 Temporal Distribution of Avian Mortalities

Bird mortalities were generally observed throughout the year, although the greatest number of mortalities were observed during the months of June (n=10) and July (n=18), which combined to represent 60% of all documented bird mortalities. The distribution of avian mortalities by date can be seen in Figure 1.

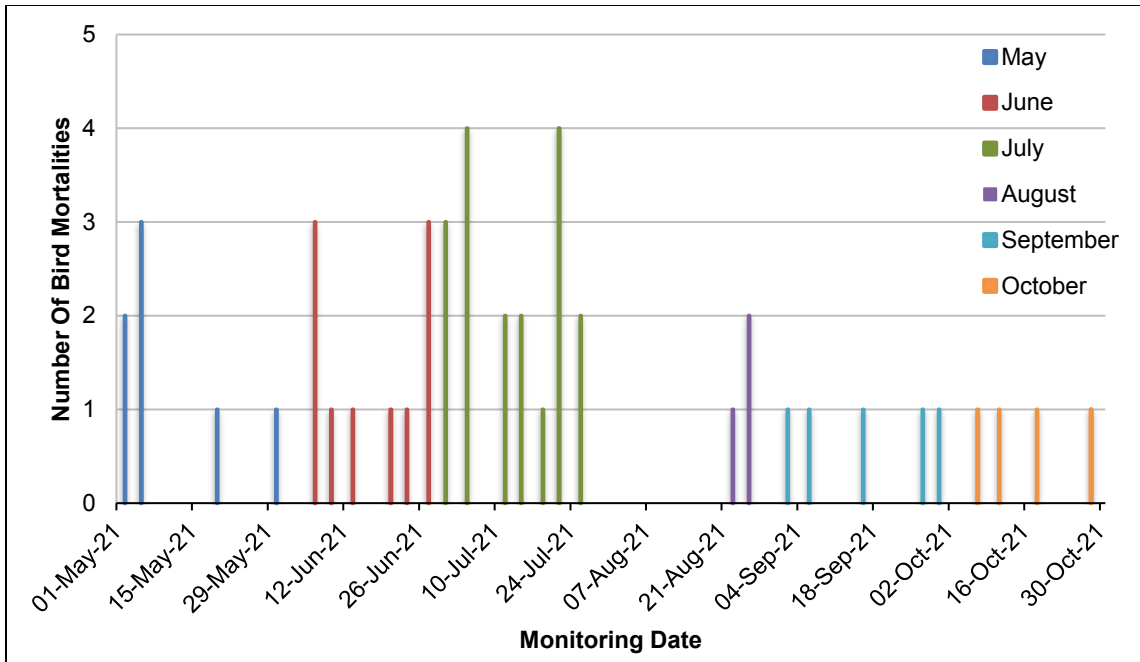


Figure 1. Bird Mortalities Observed by Date at the Amherst Island WP (2021)

6.3 Spatial Distribution of Avian Mortalities

Avian mortalities were observed at all 10 of the subset turbines, ranging from one (1) mortality at turbines S14 and S18 to eight (8) at each of turbines S28 and S36 (Figure 2). Details regarding each avian mortality, including date, time, location, and species, are summarized in Appendix IV and turbine maps identifying the location of each observed mortality have been provided in Appendix VI.

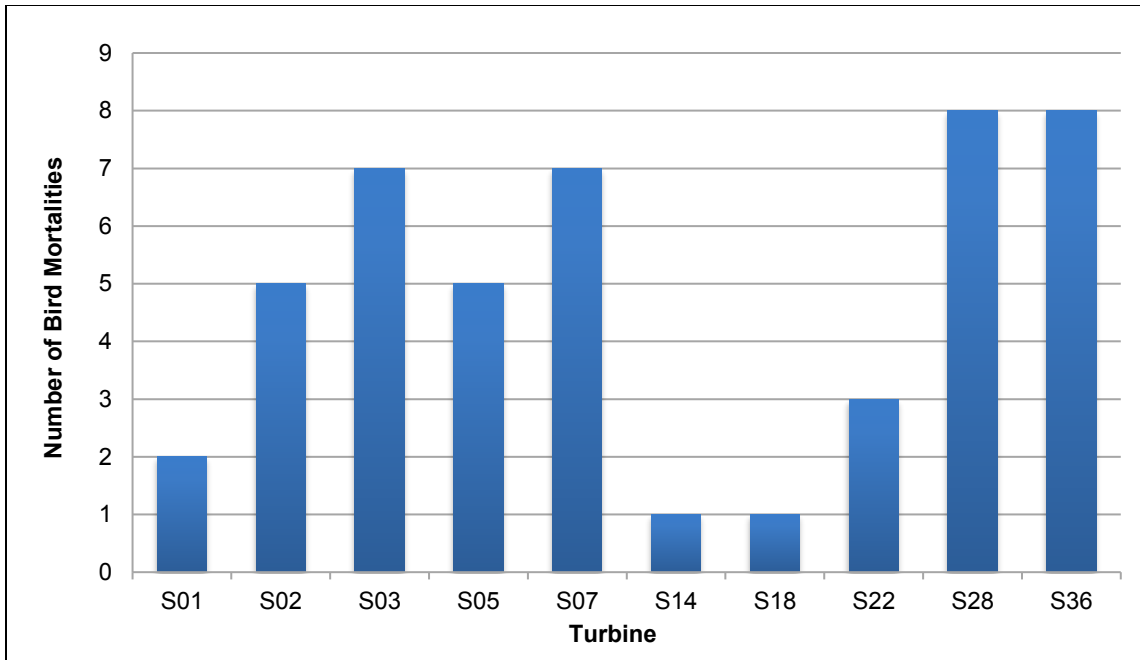


Figure 2. Bird Mortalities Observed by Turbine at the Amherst Island WP (2021)

6.4 Corrected (Estimated) Avian Mortality

In accordance with the *Bird and Bird Habitats: Guidelines for Wind Power Projects* (OMNR 2011b), estimated avian mortality rates have been presented by individual turbines or turbine group. Since searcher efficiency and scavenger removal rates have been collected specifically for the 10-turbine subset for birds, NRSI is presenting estimated mortality rates by this same turbine group.

Based on the field observations at the Amherst Island WP, NRSI biologists have compiled the searcher efficiency trial results, scavenger removal trial results, proportion of area searched, and direct mortality observations into an equation that will be used to estimate the total avian mortality at the Amherst Island WP in 2021. The equation recommended by the NDMNRF is found below:

$$C = c / (Se * Sc * Ps)$$

- C: Corrected (Estimated) Mortality Rate
- c: actual observed mortalities
- Se: overall searcher efficiency
- Sc: proportion of remaining carcasses
- Ps: proportion of area searched

Using the equation and variables described above, the estimated avian mortality rates by month have been presented below:

$$C_{\text{May}} = 7 / (0.82 \times 0.76 \times 1.00) = 7 / 0.6232 = \mathbf{11.23 \text{ birds}}$$

$$= \mathbf{1.12 \text{ birds/turbine}} \text{ (0.39 birds/MW)}$$

$$C_{\text{June}} = 10 / (0.82 \times 0.76 \times 1.00) = 10 / 0.6232 = \mathbf{16.05 \text{ birds}}$$

$$= \mathbf{1.61 \text{ birds/turbine}} \text{ (0.56 birds/MW)}$$

$$C_{\text{July}} = 18 / (0.93 \times 0.74 \times 1.00) = 18 / 0.6882 = \mathbf{26.16 \text{ birds}}$$

$$= \mathbf{2.62 \text{ birds/turbine}} \text{ (0.92 birds/MW)}$$

$$C_{\text{August}} = 3 / (0.93 \times 0.74 \times 1.00) = 3 / 0.6882 = \mathbf{4.36 \text{ birds}}$$

$$= \mathbf{0.44/turbine} \text{ (0.15 birds/MW)}$$

$$C_{\text{September}} = 5 / (0.89 \times 0.72 \times 1.00) = 5 / 0.6408 = \mathbf{7.80 \text{ birds}}$$

$$= \mathbf{0.78 \text{ birds/turbine}} \text{ (0.27 birds/MW)}$$

$$C_{\text{October}} = 4 / (0.89 \times 0.72 \times 1.00) = 4 / 0.6408 = \mathbf{6.24 \text{ birds}}$$

$$= \mathbf{0.62 \text{ birds/turbine}} \text{ (0.22 birds/MW)}$$

$$\mathbf{Total} = \mathbf{7.19 \text{ birds/turbine}} \text{ (2.51 birds/MW)}$$

Using the appropriate variables and equations recommended by the NDMNRF, the corrected (estimated) avian mortality at the Amherst Island WP in 2021 was calculated. Table 6 shows the monthly estimated mortality rates as well as the overall estimated avian mortality rate at the Amherst Island WP, as calculated by turbine group.

Table 6. Corrected Bird Mortality Rates Based on Mortality Monitoring at the Amherst Island WP (2021)

Month (2021)	Observed Avian Mortalities	Corrected Mortality (birds/turbine)	Corrected Mortality (birds/MW)
May	7	1.12	0.39
June	10	1.61	0.56
July	18	2.62	0.92
August	3	0.44	0.15
September	5	0.78	0.27
October	4	0.62	0.22
TOTAL	47	7.19	2.51

Based on the information collected during the 2021 post-construction monitoring period, the anticipated impact of this facility on birds is characterized by an estimated mortality rate of **7.19 birds/turbine/year** (2.51 birds/MW/year), as calculated by turbine group.

6.5 Mortalities Documented Near Significant Bird Habitats

Based on the proximity of the project to several significant bird habitats, additional consideration is required for turbines within 120m of any significant bird habitat to evaluate potential effects to nearby habitats. Table 7 below outlines the turbines located within 120m of significant bird habitats, the number of total bird mortalities documented at those turbines, and the total number of habitat-specific bird mortalities documented. Bird Significant Wildlife Habitats within 120m of the Amherst Island WP are shown on Map 2.

Table 7. Bird Mortalities Documented at Turbines within 120m of Significant Bird Habitat

Habitat Name	Turbines Within 120m ¹	Total Bird Mortalities	Target Bird Mortalities ²
Landbird Migratory Stopover Area <i>Migratory Songbirds and Raptors, April-May, August-October</i>			
ML1	S03, S09	12	3
ML2	S05	8	1
ML3	S36	11	4
ML4	S02, S07, S14, S18, S26	22	8
ML5	S26	2	1
Marsh Bird Breeding Habitat <i>Marsh Bird Indicator Species, May-June</i>			
MBB1	S36	11	0
Woodland Area-sensitive Bird Breeding Habitat <i>Woodland Area-sensitive Indicator Species, Breeding Bird Period, Late May – Early July</i>			
ABB1	S03, S09	12	0
Open Country Bird Breeding Habitat <i>Open Country Indicator Species, Breeding Bird Period, Late May – Early July</i>			
OCB2	S03, S05, S09, S11, S16, S20, S34	22	0
OCB3	S01, S22, S04, S29, S31	10	0
OCB4	S31	2	0
OCB5	S36, S19, S21, S37	12	0
OCB6	S02, S07, S14, S27, S37	23	1
OCB7	S18, S13, S26, S30	4	0
OCB8	S28, S33	9	0
Shrub/Early Successional Bird Breeding Habitat <i>Shrub/Early Successional Indicator Species, Breeding Bird Period, Late May – Early July</i>			
SSB4	S07, S18, S13	9	0
SSB5	S22	4	0

1: Turbines in bold font are those searched twice-weekly from May to October for bird mortalities.

2: Target species are indicator species that are found during the appropriate seasons, as defined by the DRAFT Significant Wildlife Habitat Ecoregion 6E Criterion Schedule (OMNR 2012), which have been used to determine significance of habitats during pre-construction surveys.

No target species (i.e. indicator species during the appropriate significant seasonality for the Significant Wildlife Habitat) mortalities were documented at any turbines within 120m of significant Marsh Bird Breeding Habitat, Woodland Area-Sensitive Bird Breeding Habitat, or Shrub/Early Successional Bird Breeding Habitat. However, some mortalities of target species were documented during the habitat-appropriate season at turbines located within 120m of significant bird habitats, including:

- ML1: Three (3) migratory songbird mortalities during the fall migration period across the two (2) turbines located within 120m of the habitat (Cedar Waxwing, *Bombycilla cedrorum*, August 26; Blue-headed Vireo, *Vireo solitarius*, September 27; and Golden-crowned Kinglet, October 18);
- ML2: One (1) migratory songbird mortality during the spring migration period at the one (1) turbine located within 120m of the habitat (Kinglet sp., May 3);
- ML3: Three (3) migratory songbird mortalities and one (1) migratory raptor mortality during the fall migration period at the one (1) turbine located within 120m of the habitat (Barn Swallow, *Hirundo rustica*, September 6; Red-eyed Vireo, *Vireo olivaceus*, September 30; Golden-crowned Kinglet, October 11; and Peregrine Falcon, *Falco peregrinus*, October 11);
- ML4: Four (4) migratory songbird mortalities and four (4) migratory raptor mortalities, combined across spring and fall migration periods, and across the five (5) turbines located within 120m of the habitat (Golden-crowned Kinglet, May 3; Yellow-rumped Warbler, *Setophaga coronata*, May 6; Northern Parula, *Setophaga americana*, May 6; Kinglet sp., May 20; Red-tailed Hawk, *Buteo jamaicensis*, May 24; Osprey, *Pandion haliaetus*, August 23; Osprey, September 15; Red-tailed Hawk, October 21);
- ML5: One (1) migratory raptor mortality during the fall migration period at the one (1) turbine located within 120m of the habitat (Osprey, September 15);
- OCB6: One (1) potential open country bird species mortality across the five (5) turbines located within 120m of the habitat (Passerine sp., not able to be confirmed to species level, June 28).

Overall, no more than seven (7) target bird mortalities were observed at any single turbine within 120m of a Significant Wildlife Habitat.

7.0 Raptor Mortality Results

7.1 Raptor Mortalities

Mortality searches for raptors were conducted once weekly in January, February, March, and December at all 26 turbines. In addition, searches were conducted twice weekly in conjunction with other avian and bat mortality searches from May through October and once weekly in April and November at the subset of 10 turbines. These surveys resulted in the observation of nine (9) raptor mortalities at the Amherst Island WP, including four (4) mortalities of Red-tailed Hawk, three (3) mortalities of Rough-legged Hawk (*Buteo lagopus*), one (1) mortality each of Osprey and Peregrine Falcon.

Raptor mortalities were documented generally throughout the year, with the greatest number (n=4) found during the month of March. Raptor mortalities were found at seven (7) different turbines. The greatest number of mortalities was found at S02 (n=3), with no other turbine having more than one (1) mortality.

Four (4) mortalities of provincially-tracked raptor species were documented during raptor mortality monitoring in 2021, including three (3) Rough-legged Hawks and one (1) Peregrine Falcon. The Natural Heritage Information Centre (NHIC) specifically notes that only breeding occurrences of these species are to be tracked (NDMNR 2021). Since all mortalities of these species were documented outside the breeding season and/or well outside of their expected breeding range, these occurrences have been considered to represent untracked records of these species.

A list of raptor mortalities observed during the carcass searches has been provided in Appendix IV, and turbine maps identifying the location of each observed mortality have been provided in Appendix VI.

7.2 Corrected (Estimated) Raptor Mortality

Using an assumed searcher efficiency value of 1.00 along with the compiled seasonal scavenger removal trial results for raptors, the applicable proportion of area searched, and direct mortality observations, the estimated raptor mortality rate is as follows:

C_{March}	$= 4 / (1.00 * 0.77 * 1.00) = 4 / 0.7700 = \mathbf{5.19 \text{ raptors}}$ $= 5.19 \text{ raptors} / 26 \text{ turbines} = \mathbf{0.20 \text{ raptors/turbine}}$ $= 5.19 \text{ raptors} / 74.3\text{MW} = 0.07 \text{ raptors/MW}$
C_{May}	$= 1 / (1.00 * 0.96 * 1.00) = 1 / 0.9600 = \mathbf{1.04 \text{ raptors}}$ $= 1.04 \text{ raptors} / 10 \text{ turbines} = \mathbf{0.10 \text{ raptors/turbine}}$ $= 1.04 \text{ raptors} / 28.58\text{MW} = 0.04 \text{ raptors/MW}$
C_{August}	$= 1 / (1.00 * 0.96 * 1.00) = 1 / 0.9600 = \mathbf{1.04 \text{ raptors}}$ $= 1.04 \text{ raptors} / 10 \text{ turbines} = \mathbf{0.10 \text{ raptors/turbine}}$ $= 1.04 \text{ raptors} / 28.58\text{MW} = 0.04 \text{ raptors/MW}$
C_{October}	$= 2 / (1.00 * 0.96 * 1.00) = 2 / 0.9600 = \mathbf{2.08 \text{ raptors}}$ $= 2.08 \text{ raptors} / 10 \text{ turbines} = \mathbf{0.21 \text{ raptors/turbine}}$ $= 2.08 \text{ raptors} / 28.58\text{MW} = 0.07 \text{ raptors/MW}$
C_{December}	$= 1 / (1.00 * 0.86 * 1.00) = 1 / 0.8600 = \mathbf{1.16 \text{ raptors}}$ $= 1.16 \text{ raptors} / 26 \text{ turbines} = \mathbf{0.04 \text{ raptors/turbine}}$ $= 1.16 \text{ raptors} / 74.3\text{MW} = 0.02 \text{ raptors/MW}$
Total	= 0.65 raptors/turbine (0.24 raptors/MW)

Based on the information collected during the 2021 post-construction monitoring period, the anticipated impact of this facility on raptors is characterized by an estimated mortality rate of **0.65 raptors/turbine/year** (0.24 raptors/MW/year).

7.3 Monthly Raptor Surveys

Monthly mortality searches for raptors were conducted from May to November at the turbines which are not included in the subset of 10 turbines regularly monitored during that period. These monthly searches resulted in three (3) additional raptor mortalities documented at the Amherst Island WP, including one (1) mortality each of Turkey Vulture (*Cathartes aura*), Rough-legged Hawk, and Osprey.

These raptor mortalities were documented in the Spring and Fall seasons, with the greatest number of mortalities specifically documented during the month of September (n=2). Each mortality was found at a different turbine, with one (1) mortality observed at each of turbines S16, S26, and S27.

7.4 Mortalities Documented Near Significant Raptor Habitats

Based on the proximity of the project to significant raptor wintering area habitat, additional consideration is required for turbines within 120m of any significant bird habitat to evaluate potential effects to nearby habitats. Table 8 outlines the number of raptor mortalities documented at each turbine found within 120m of significant raptor habitat at the Amherst Island WP in 2021.

Table 8. Raptor Mortalities Documented at Turbines within 120m of Significant Raptor Habitat

Habitat Name	Turbines Within 120m ¹	Total Documented Raptor Mortalities	Target Raptor Mortalities ²
Raptor Wintering Area Habitat			
<i>Overwintering Raptors, January-March, November-December</i>			
RWA2	S03, S05 , S09, S11, S16, S20, S34	3	1
RWA3	S01, S22 , S04, S29, S31	1	1
RWA4	S31	1	1
RWA5	S36 , S19, S21, S37	2	1
RWA6	S02, S07, S14, S18 , S13, S26, S27, S30, S37	9	3
RWA7	S28 , S26, S33	2	1

1: Turbines in bold font are those searched once-weekly in April, twice-weekly from May to October, and once-weekly in November for raptor mortalities.

2: Target species are indicator species that are found during the appropriate seasons, as defined by the DRAFT Significant Wildlife Habitat Ecoregion 6E Criterion Schedule (OMNR 2012), which have been used to determine significance of habitats during pre-construction surveys.

Target raptor mortalities (i.e. indicator species during the appropriate season) were documented at turbines located within 120m of significant Raptor Wintering Area Habitat at the Amherst Island WP in 2021, as follows:

- RWA2: One (1) target raptor mortality during the overwintering period across the seven (7) turbines located within 120m of the habitat (Rough-legged Hawk, March 17).
- RWA3: One (1) target raptor mortality during the overwintering period across the fives (5) turbines located within 120m of the habitat (Red-tailed Hawk, March 1).
- RWA4: One (1) target raptor mortality during the overwintering period at the one (1) turbine located within 120m of the habitat (Red-tailed Hawk, March 1).
- RWA5: One (1) target raptor mortality during the overwintering period across the four (4) turbines located within 120m of the habitat (Rough-legged Hawk, March 16).
- RWA6: Three (3) target raptor mortalities during the overwintering period across the nine (9) turbines located within 120m of the habitat (Rough-legged Hawk, March 16; Red-tailed Hawk, March 25; and Rough-legged Hawk, December 15).

- RWA7: One (1) target raptor mortality during the overwintering period across the three (3) turbines located within 120m of the habitat (Rough-legged Hawk, December 15).

Overall, no more than one (1) target raptor mortality was observed at any single turbine within 120m of a Significant Wildlife Habitat for raptors.

Despite the summary of raptor mortalities during the generalized overwintering period (described generically as November to March), there is considerable overlap, and variability, between the overwintering period and the migratory periods for raptors. In consideration of the particular species mortalities encountered during the generalized overwintering period, Red-tailed Hawk has been documented to have a mean migration departure date of March 17 (i.e. mid-March) at a location in Wyoming with a similar, if not more northern, latitude than Amherst Island WP (Craighead et al. 2016) and Rough-legged Hawk has a general spring migration period of February to May (Hawkwatch International 2022).

Based on an observed cluster of individual raptor mortalities in the second half of March, including Rough-legged Hawk mortalities on each of March 16 and March 17 and a Red-tailed Hawk mortality on March 25, NRSI is considering these three (3) mortalities to be consistent with spring migration movements, rather than overwintering individuals. As such, these mortalities are not being included in the consideration of the effects to raptor overwintering habitat, nor are they being included in the discussion of the associated mortality threshold.

8.0 Bat Mortality Results

8.1 Bat Mortalities

During the 2021 mortality monitoring period at the Amherst Island WP, NRSI biologists documented 66 bat mortalities within the 50m radius of the subset of 10 turbines searched. Bat mortalities observed by NRSI biologists represented four (4) different species, including the resident species Big Brown Bat, as well as all three (3) long-distance migratory species; Hoary Bat, Eastern Red Bat, and Silver-haired Bat. The most abundant species observed was Silver-haired Bat (n=24), followed by Eastern Red Bat (n=19), Big Brown Bat (n=13), and Hoary Bat (n=10). Observed mortalities of the three (3) migratory bat species combine to represent 80% of all documented mortalities.

A detailed examination of bat mortalities at the Amherst Island WP is included in the following sections. Detailed information regarding each bat mortality observed during carcass searches has been provided in Appendix V.

8.2 Temporal Distribution of Bat Mortalities

Bat mortalities were observed throughout the monitoring period between early May and early October, but were most commonly observed during the month of August (n=49) which accounted for 74% of all bat mortalities. The greatest number of bat mortalities documented on a single search date was 12, observed on August 9, 2021 (see Figure 3).

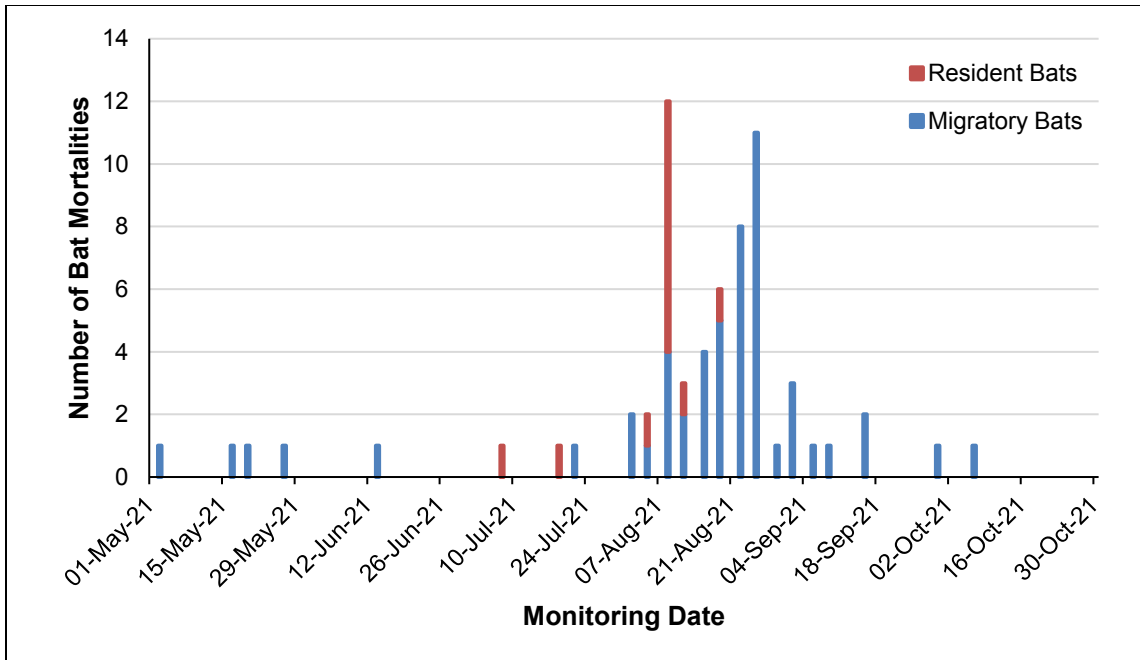


Figure 3. Bat Mortalities Observed by Date at the Amherst Island WP (2021)

Patterns of migratory bat mortalities appear to be generally consistent with the expected migratory time periods for these species, with increases in migratory bat mortalities during the mid- to late-summer. Overall, bat mortality was most commonly observed during the month of August, corresponding to the fall dispersal and migration period for bats.

8.3 Spatial Distribution of Bat Mortalities

Bat mortalities were observed at nine (9) of the subset turbines at the Amherst Island WP in 2021. The number of mortalities observed at each of the 10 turbines ranged from zero (0) mortalities at S18 to 13 mortalities at S36 (Figure 4).

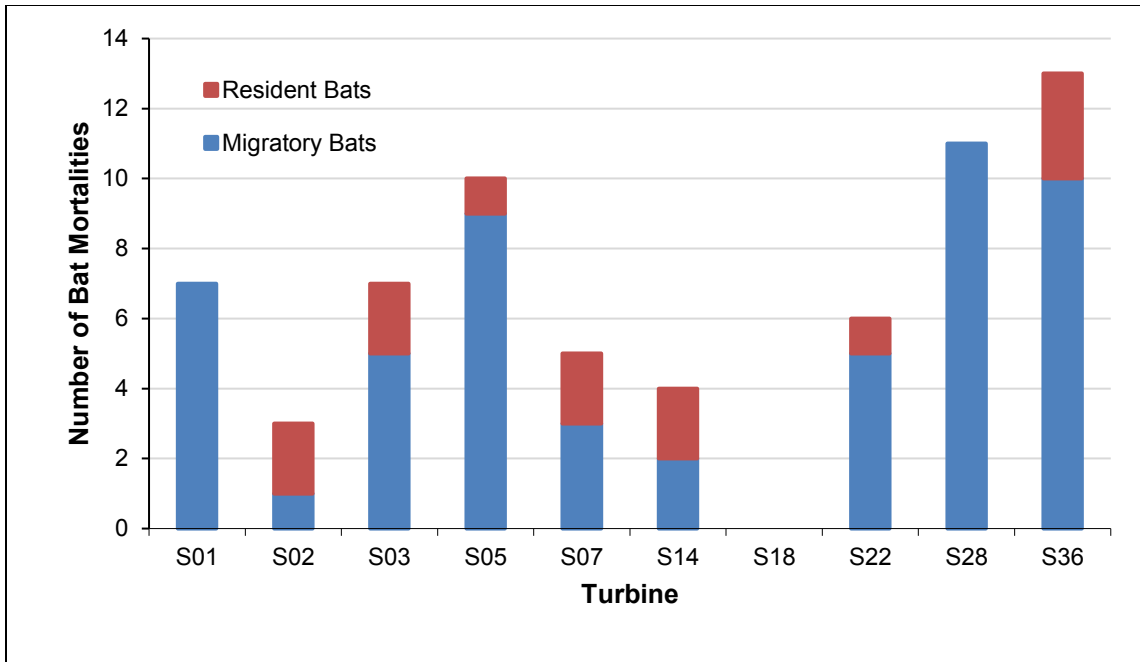


Figure 4. Bat Mortalities Observed by Turbine at the Amherst Island WP (2021)

Distance and direction of bat mortalities from each of the turbine bases were also documented for each observed mortality. Bat mortalities were found throughout the area searched by NRSI biologists, ranging in distance from 2m to 50m from the turbine base, and averaging a distance of approximately 27m from the turbine base. The overall distribution of mortalities by distance class can be seen in Figure 5. Maps identifying the locations of each observed mortality by turbine are included in Appendix VI.

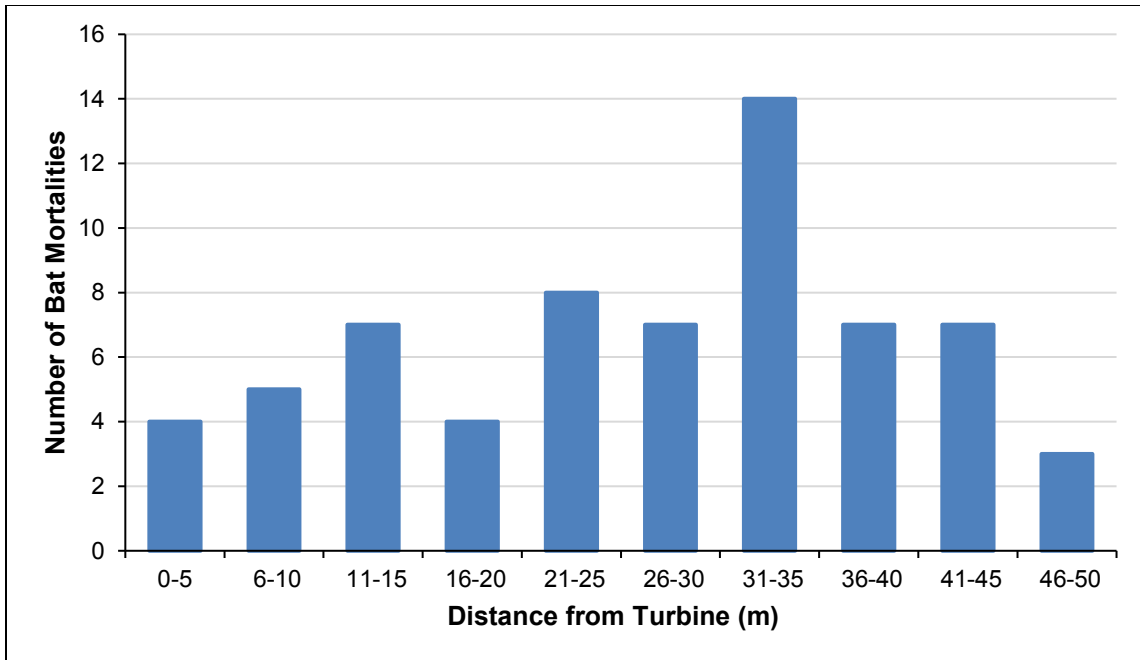


Figure 5. Bat Mortalities Observed by Distance from Turbine at the Amherst Island WP (2021)

8.4 Corrected (Estimated) Bat Mortality

Based on the field observations at the Amherst Island WP, NRSI biologists have compiled the appropriate searcher efficiency trials, scavenger removal trials, proportion of area searched, and direct mortality values in an equation that will be used to estimate the total bat mortality at the Amherst Island WP in 2021. The equation recommended by the NDMNRF is found below:

$$C = c / (Se * Sc * Ps)$$

- C: Corrected (Estimated) Mortality Rate
- c: actual observed mortalities
- Se: overall searcher efficiency
- Sc: proportion of remaining carcasses
- Ps: proportion of area searched

Using the equation and variables described above, the estimated bat mortality rates by month have been presented below:

$$C_{\text{May}} = 4 / (0.82 * 0.76 * 1.00) = 4 / 0.6232 = \mathbf{6.42 \text{ bats}}$$

$$= \mathbf{0.64 \text{ bats/turbine}} \text{ (0.22 bats/MW)}$$

$$C_{\text{June}} = 1 / (0.82 * 0.76 * 1.00) = 1 / 0.6232 = \mathbf{1.60 \text{ bats}}$$

$$= \mathbf{0.16 \text{ bats/turbine}} \text{ (0.06 bats/MW)}$$

$$C_{\text{July}} = 3 / (0.93 * 0.74 * 1.00) = 3 / 0.6882 = \mathbf{4.36 \text{ bats}}$$

$$= \mathbf{0.44 \text{ bats/turbine}} \text{ (0.15 bats/MW)}$$

$$C_{\text{August}} = 49 / (0.93 * 0.74 * 1.00) = 49 / 0.6882 = \mathbf{71.20 \text{ bats}}$$

$$= \mathbf{7.12 \text{ bats/turbine}} \text{ (2.49 bats/MW)}$$

$$C_{\text{September}} = 8 / (0.89 * 0.72 * 1.00) = 8 / 0.6408 = \mathbf{12.48 \text{ bats}}$$

$$= \mathbf{1.25 \text{ bats/turbine}} \text{ (0.44 bats/MW)}$$

$$C_{\text{October}} = 1 / (0.89 * 0.72 * 1.00) = 1 / 0.6408 = \mathbf{1.56 \text{ bats}}$$

$$= \mathbf{0.16 \text{ bats/turbine}} \text{ (0.05 bats/MW)}$$

$$\mathbf{Total} = \mathbf{9.77 \text{ bats/turbine}} \text{ (3.41 bats/MW)}$$

Using the appropriate variables and recommended equations provided by the NDMNRF, NRSI has determined the corrected (estimated) bat mortality of the Amherst Island WP in 2021. Each of the corrected monthly rates and the corrected annual mortality rate for the Amherst Island WP can be seen in Table 9.

Table 9. Corrected Bat Mortality Rates Based on Mortality Monitoring at the Amherst Island WP (2021)

Month (2021)	Observed Bat Mortalities	Corrected Mortality (bats/turbine)	Corrected Mortality (bats/MW)
May	4	0.64	0.22
June	1	0.16	0.06
July	3	0.44	0.15
August	49	7.12	2.49
September	8	1.25	0.44
October	1	0.16	0.05
TOTAL	66	9.77	3.41

Based on the information collected during the 2021 post-construction monitoring period, the anticipated impact of this facility on bats is characterized by a corrected mortality rate of **9.77 bats/turbine/year** (3.41 bats/MW/year).

9.0 Comparative Annual Results

Mortality monitoring conducted by NRSI in 2021 represents the third year of post-construction monitoring conducted at the Amherst Island WP. The following section provides a comparison of the 2019, 2020, and 2021 post-construction mortality monitoring results.

9.1 Avian Mortality Results

Table 10 below provides an abbreviated summary of total bird mortalities, monitoring periods, and corrected (estimated) mortality rates for each of the three (3) years of mortality monitoring conducted to-date at the Amherst Island WP.

Table 10. Comparative Results of Avian Mortality Monitoring Seasons (2019-2021)

Year	Total Mortalities	Monitoring Period	Corrected Mortality Rates	
			Birds/Turbine/Year	Birds/MW/Year
2019	28	May 1 – October 31	4.77	1.66
2020	39	May 1 – October 31	8.14	2.85
2021	47	May 1 – October 31	7.19	2.51

Further details of the 2021 avian mortality results can be found in Section 6.0 of this report.

9.2 Raptor Mortality Results

Table 11 below provides an abbreviated summary of total raptor mortalities, monitoring periods, and corrected (estimated) mortality rates for each of the three (3) years of mortality monitoring conducted to-date at the Amherst Island WP.

Table 11. Comparative Results of Raptor Mortality Monitoring Seasons (2019-2021)

Year	Total Mortalities	Monitoring Period	Corrected Mortality Rates	
			Raptors/Turbine/Year	Raptors/MW/Year
2019	3	January 1 – December 31	0.19	0.07
2020	3	January 1 – December 31	0.32	0.11
2021	9	January 1 – December 31	0.65	0.24

Further details of the 2021 raptor mortality results can be found in Section 7.0 of this report.

9.3 Bat Mortality Results

Table 12 below provides an abbreviated summary of total bat mortalities, monitoring periods, and corrected (estimated) mortality rates for each of the three (3) years of mortality monitoring conducted to-date at the Amherst Island WP.

Table 12. Comparative Results of Bat Mortality Monitoring Seasons (2019-2021)

Year	Total Mortalities	Monitoring Period	Estimated Mortality Rates	
			Bats/Turbine/Year	Bats/MW/Year
2019	35	May 1 – October 31	5.36	1.88
2020	45	May 1 – October 31	10.15	3.59
2021	66	May 1 – October 31	9.77	3.41

Further details of the 2021 bat mortality results can be found in Section 8.0 of this report.

9.4 Summary

Although a general comparison between the three (3) years of post-construction monitoring data is possible, the differences in searcher efficiency rates, scavenger removal rates, and proportion area searched over these three (3) monitoring years do not necessarily allow for a direct comparative analysis of observed mortalities. Local bird and bat abundance and behaviour will also change annually based on other variables, such as weather conditions, adjacent land uses, food availability, or general variations in population numbers, further adding to the challenges of making direct comparisons between monitoring years.

Despite these comparative challenges, general comparisons between the monitoring years have been made. Overall, an increase in the number of bird, bat, and raptor mortalities was observed in 2021, relative to the 2019 and 2020 monitoring results. Despite these increases, differences in searcher efficiency, scavenger removal rates, and proportion of area searched resulted in lower estimates of bird and bat mortalities in 2021 compared to the 2019 and 2020 monitoring results.

10.0 Mortality Thresholds and Notifications

In accordance with the appropriate NDMNRF guidelines, project approval conditions, and other commitments made as part of the monitoring program, several mortality thresholds and notification requirements for the Amherst Island WP have been established. The status of each threshold and confirmation of notifications, where applicable, have been described in the following sections.

10.1 Annual Bird Mortality

The annual bird mortality threshold for the Amherst Island WP is 14 birds/turbine/year, calculated by individual turbine or turbine group. Based on an estimated rate of **7.19 birds/turbine/year**, as calculated by turbine group, the Amherst Island WP remains below this threshold. Since the results are below the established threshold, no notification is required.

10.2 Annual Raptor Mortality

The annual raptor mortality threshold for the Amherst Island WP is 0.2 raptors/turbine/year (or 0.1 raptors/turbine/year for provincially tracked raptors). Based on an estimated rate of **0.65 raptors/turbine/year**, the Amherst Island WP has exceeded this threshold. The submission of this report to the NDMNRF and Ministry of Environment, Conservation and Parks (MECP) will satisfy the requirement to notify the NDMNRF within three (3) months of the end of the calendar year in which monitoring activities occurred that the threshold has been exceeded.

As no mortalities of provincially tracked raptors were observed, the Amherst Island WP remains below the threshold of 0.1 raptors/turbine/year for provincially tracked raptors.

10.3 Annual Bat Mortality

The annual bat mortality threshold for the Amherst Island WP is 10 bats/turbine/year. Based on an estimated rate of **9.77 bats/turbine/year**, the Amherst Island WP remains below this threshold. Since the results are below the established threshold, no notification is required.

10.4 Significant Bird Mortality Event

Significant bird mortality events have been defined by the NDMNRF as single-day mortality events with 10 or more birds at any one turbine or 33 or more birds (including raptors) at multiple turbines. Neither of these single-day mortality events were noted at the Amherst Island WP during the 2021 monitoring year. As no significant bird mortality event occurred, no notification is required.

10.5 Bird Mortality Documented Near Significant Bird Habitats

As identified in the EEMP for the Amherst Island WP (Stantec 2013), bird mortality at turbines located within 120m of significant bird habitats should also be considered separately from project-wide mortality rates. No target bird mortalities (i.e. indicator species during the appropriate seasons within 120m of identified habitats) were documented at turbines within 120m of significant Marsh Bird Breeding Habitat, Woodland Area-Sensitive Bird Breeding Habitat, or Shrub/Early Successional Bird Breeding Habitat.

At the significant Landbird Migratory Stopover Area habitats, target bird mortality was not documented to be greater than eight (8) target birds at turbines within 120m of any individual significant habitat in 2021. Target bird mortality ranged from one (1) target bird at the single turbine within 120m of each of ML2 and ML5, to a combined eight (8) target bird mortalities at the five (5) turbines within 120m of ML4, which is less than the understood threshold of 14 target birds/turbine group and therefore does not represent significant mortality.

In consideration of significant Raptor Wintering Area habitats, all but one (1) habitat had no more than one (1) target raptor mortality during the generalized overwintering period of November to March, which is less than the understood threshold of 2 target raptors, when considering that each turbine cluster has fewer than 10 turbines. One (1) habitat, RWA6, had three (3) target raptors at turbines within 120m of the habitat during the generalized overwintering period, which exceeds the understood threshold of 2 target raptors. However, the timing of several individual raptor mortalities, including two (2) that were observed near RWA6 in late March, suggests that at least three (3) raptor

mortalities are likely to represent migratory individuals, rather than overwintering individuals.

Based on a literal interpretation of project approval conditions, the observed results within 120m of RWA6 during the combined period of January to March and November to December 2021 could be interpreted as an exceedance of the understood threshold of two (2) target raptors. Although it is likely that several of the individual mortalities within 120m of this habitat were migratory individuals, the project took a conservative approach, in consideration of the potential interpretation of approval condition K8, and immediate mitigation actions were implemented on March 26 to reduce the potential for further mortalities until the end of the generalized overwintering period. As the observed mortalities in late March were considered to be migratory individuals, the immediate mitigation measures were designed to minimize potential impacts to migrating raptors, and included feathering turbine blades under the following conditions:

- Southerly winds (from 120 to 250 degrees), below speeds of 57km/hr at ground-level;
- No precipitation; and
- During morning and afternoon, from 0800-1700hrs.

The above mitigation measures were implemented at all nine (9) turbines that are located within 120m of RWA6, including S02, S07, S13, S14, S18, S26, S27, S30, and S37, until March 31 (inclusive) which represents the end of the generalized overwintering period.

Despite the conservative approach taken at the project, described above, NRSI has determined that the three (3) raptor mortalities observed at the project on March 16, March 17, and March 25 all represent migratory individuals, and not overwintering individuals (see Section 7.4). It is therefore NRSI's technical recommendation that only one (1) overwintering raptor mortality occurred within 120m of RWA6 (Rough-legged Hawk; December 15 at S26), and therefore the project has not exceeded the raptor threshold specific to overwintering individuals. As such, NRSI similarly concludes that the corresponding requirements of a threshold exceedance within 120m of a significant bird habitat, including three (3) years of effectiveness monitoring, are similarly not required.

Based on the observed results within 120m of the applicable Significant Wildlife Habitats, NRSI has concluded that there has not been significant mortality of target birds at turbines within 120m of any Significant Wildlife Habitat, and therefore no specific notification is required.

10.6 Species at Risk Mortality Event

Any Species at Risk (SAR; MECP 2022) mortality documented during post-construction mortality monitoring at the Amherst Island WP requires formal notification to the NDMNRF and MECP within 24 hours (or next business day) of a confirmed species identification. In accordance with this requirement, a notification was sent to the NDMNRF and MECP within 24 hours (or next business day), following a confirmed identification of any SAR mortality at the Amherst Island WP.

11.0 Summary and Conclusions

NRSI was retained to conduct the third year of post-construction monitoring at the operational Amherst Island WP. The Amherst Island WP consists of 26 wind energy generating turbines, with a total nameplate capacity of 74.3MW.

Post-construction monitoring at the Amherst Island WP in 2021 included bird, bat, and raptor mortality monitoring, and the corresponding searcher efficiency trials, scavenger removal trials, and visibility class mapping required to calculate estimated mortality rates. These surveys were conducted to assess the potential impacts of this wind energy generating facility on local and migratory birds and bats. Monitoring in 2021 also represents the first year of effectiveness monitoring, specific to bats, which is required as a result of exceeding the provincial threshold in 2020.

A total of 47 avian mortalities were documented at the Amherst Island WP during the 2021 monitoring period. Based on the observed avian mortalities in 2021, the potential impact of this facility was largely associated with common migratory songbirds. Given the number of observed avian mortalities, searcher efficiency rates, scavenger removal rates, proportion of area searched, and the equation recommended by the NDMNRF, a corrected (estimated) avian mortality rate of **7.19 birds/turbine/year** (2.51 birds/MW/year), as calculated by turbine group, has been determined for the Amherst Island WP. This estimated mortality rate is below the provincial threshold level of 14 birds/turbine/year established by the NDMNRF guidelines. No significant bird mortality events of 10 or more birds at any one turbine or 33 or more birds (including raptors) at multiple turbines on a single survey date were observed during the monitoring program in 2021. In addition, no significant mortality of target individuals was documented within 120m of significant bird habitat.

Nine (9) raptor mortalities were documented during the 2021 monitoring period for raptor mortality estimation at the Amherst Island WP. Based on the observed raptor mortalities, a corrected (estimated) raptor mortality rate of **0.65 raptors/turbine/year** (0.24 raptors/MW/year) has been determined for the Amherst Island WP. This raptor mortality rate is above the provincial threshold level of 0.2 raptors/turbine/year

established by the NDMNRF guidelines. No mortalities of provincially tracked raptors were observed during applicable seasons in which observations are tracked. In addition, it was determined that no significant mortality of target individuals was documented within 120m of significant raptor habitat.

A total of 66 bat mortalities were documented during the 2021 mortality monitoring period at the Amherst Island WP. Migratory bat species were the most commonly observed mortalities at the project. Based on the observed bat mortalities, searcher efficiency rates, scavenger removal rates, proportion of area searched, and equations recommended by the NDMNRF, a corrected (estimated) bat mortality rate of **9.77 bats/turbine/year** (3.41 bats/MW/year) has been determined for the Amherst Island WP. This estimated bat mortality rate is below the provincial threshold level of 10 bats/turbine/year established by the NDMNRF guidelines.

12.0 References

- Craighhead D., R.H. Crandall, R.N. Smith, and S.L. Cain. 2016. Migration of Red-tailed Hawks (*Buteo jamaicensis*) from northwest Wyoming. *The Wilson Journal of Ornithology*. 128(1): 150-158.
- Hawkwatch International. 2022. Rough-legged Hawk. Available at: <https://hawkwatch.org/learn/factsheets/item/375-roughlegged-hawk>
- Ministry of Environment, Conservation and Parks (MECP). 2022. Species at Risk in Ontario. Available at: <https://www.ontario.ca/page/species-risk-ontario>.
- Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNR). 2022. All Species List. Natural Heritage Information Centre (NHIC). Queen's Printer for Ontario. Available at: <https://www.ontario.ca/page/get-natural-heritage-information>
- Ontario Ministry of Natural Resources (OMNR). 2012. Significant Wildlife Habitat Ecoregion 6E Criterion Schedule. DRAFT February 2012. 42 pp.
- Ontario Ministry of Natural Resources (OMNR). 2011a. Bats and Bat Habitats: Guidelines for Wind Power Projects. First Edition. July 2011.
- Ontario Ministry of Natural Resources (OMNR). 2011b. Bird and Bird Habitats: Guidelines for Wind Power Projects. First Edition. December 2011.
- Stantec Consulting Ltd. (Stantec). 2013. Amherst Island Wind Energy Project Design and Operations Report, Appendix D Environmental Effects Monitoring Plan (EEMP) for Wildlife. April 2013.

Maps

Amherst Island Wind Project Mortality Monitoring Turbines



Legend

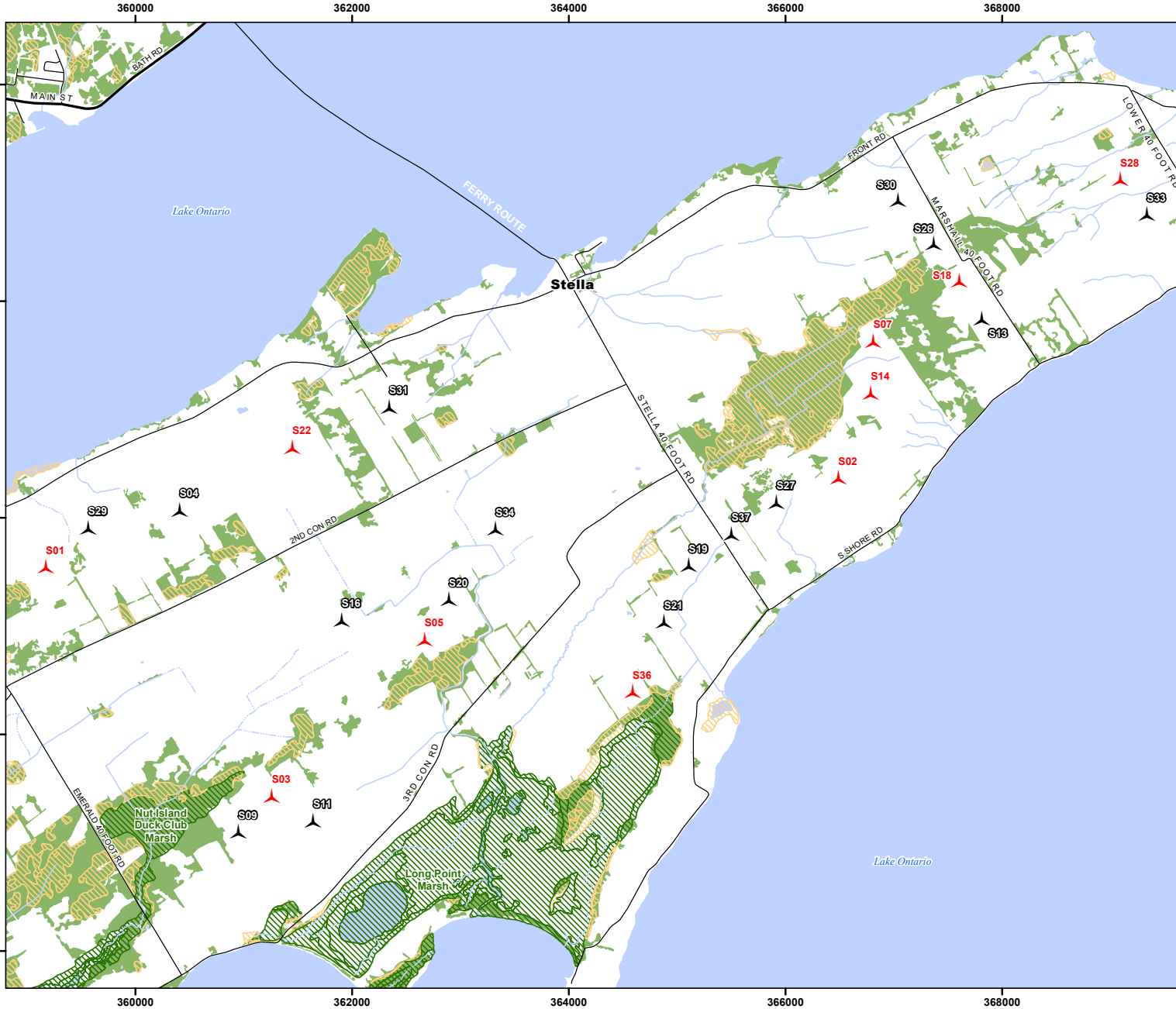
- Turbine
- Twice-weekly Monitored Turbine (May-October)
- Highway
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse
- Water Body
- Provincially Significant Wetland (PSW) (LIO)
- Unevaluated Wetland (LIO)
- Wooded Area

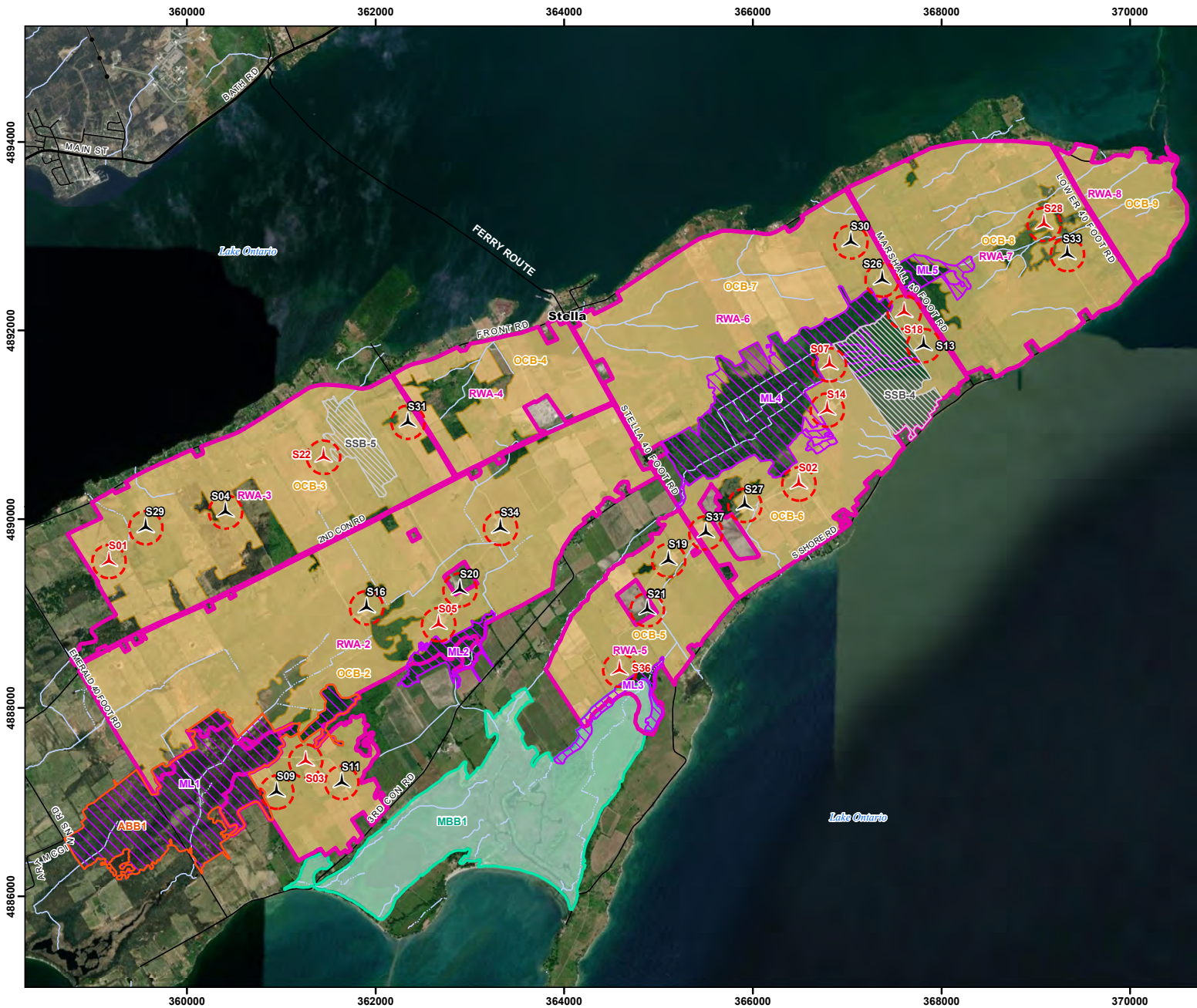


Map Produced by Natural Resource Solutions Inc. This map is proprietary and confidential and must not be duplicated or distributed by any means without express written permission of NRSI. Data provided by MNRFC. Copyright: Queen's Printer Ontario.

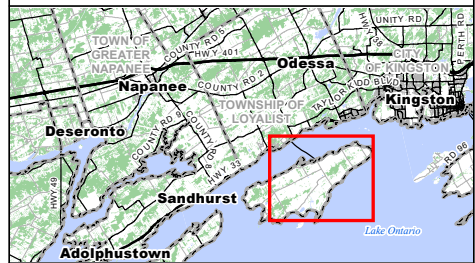
Project: 2121F Date: January 24, 2022	NAD83 - UTM Zone 18 Size: 11x17 1:35,000
--	--

0 500 1,000 1,500 2,000 Meters





Amherst Island Wind Project Significant Bird Habitats



Legend

- Turbine¹
- Subset Turbine¹
- 120m from Blade Tip
- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse
- Raptor Wintering Area (RWA)
- Landbird Migratory Stopover Area (ML)
- Marsh Breeding Bird Habitat (MBB)
- Woodland Area-sensitive Breeding Bird Habitat (ABB)
- Open Country Breeding Bird Habitat (OCB)
- Shrub/Early Successional Bird Breeding Habitat (SSB)

¹The search frequency of all turbines is described in Section 2.1.2 of the Post-Construction Mortality Monitoring Report

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

Map Produced by Natural Resource Solutions Inc. This map is proprietary and confidential and must not be duplicated or distributed by any means without express written permission of NRSI. Data provided by MNRFO Copyright: Queen's Printer Ontario. Airphoto: ESRI (2018, 2020, 2021).

Project: 2121F Date: January 24, 2022	NAD83 - UTM Zone 18 Size: 11x17 1:40,000
--	--

0 0.5 1 1.5 2 2.5 Kilometers

Appendix I
Post-construction Monitoring Data Sheets

Bird and Bat Mortality Search Summary

Date (dd/mm/yy): ____/____/____ Observer(s): _____ Project Name: _____ Project No: _____
 Start Time (24hrs): _____ hrs Dog Used? Y N Days Since Last Search (i.e. Mon to Thurs = 3 days): _____ days

WEATHER
 Temp: _____ °C Cloud Cover: _____ % Wind Speed: _____ Wind Direction (from): _____ (use N,SW, etc.)
 Visibility: High Medium Low Precip: None Rain Fog Weather Comments: _____
 Significant Weather before visit? _____

COMMENTS (ex. wildlife notes, landowner interactions, turbine maintenance, unsearchable areas, etc.)

SEARCH RESULTS																
Scheduled Search			Mortality Results. Enter "None" if no mortalities found.													
Turbine #	Start Time (24hr)	End Time (24hr)	Sample ID (PROJ#-DDMMYY-TXX-Mortality No.)	Species Found	Bat FA (mm)	Sex (M/F)	UTM		Dist. from Turbine (m)	Dir. from Turbine (°)	CC	Est. Time Since Death (hrs)	Injuries	Substrate/Habitat	VC	Photo No.(s)
							Easting	Northing								

CC = Condition Codes: I: Injured or Dying, F: Fresh, E: Early Decomposition, M: Moderate Decomposition, A: Advanced Decomposition, C: Complete Decomposition, S: Scavenged
Injuries: Describe any injuries to the bird carcass (e.g. none observed, broken neck, broken left wing, decapitated, laceration etc.)
Substrate/Habitat Types: The material upon which the carcass was found (ex. gravel, soy, corn, open soil, mud, standing water, concrete etc.)
VC = Visibility Class Codes: Class 1: >90% bare ground, <15cm tall Class 2: >25% bare ground, <15cm tall Class 3: < 25% bare ground, <25% >30cm tall Class 4: little or no bare ground, >25% >30cm tall
FA (mm) = Forearm Length (mm): Measure the length of the leading edge of the wing between the wrist and the elbow (mm)

Searcher Efficiency Data Form

Project Name: _____ Project #: _____

Date: _____ Time: _____ hrs

Searcher: _____ Placed By: _____

Condition of Carcasses: Fresh Thawed Carcasses marked (and how)? _____

WEATHER

Temp: _____ °C *Wind Speed: _____ Wind Direction (from): _____ Visibility: High Medium Low

Cloud Cover (%): _____ Cloud Height: High Medium Low Precipitation: Rain Fog Snow None _____

Additional Weather or Other Comments: _____

	Time Placed (24hr)	Turbine #	Species	Distance From Turbine	Direction from Turbine	Habitat/Substrate	Visibility Class	UTM	Found By Searcher (Y/N)	Scavenged (Y/N)
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

*Beaufort Wind Scale: 0 calm; 1 smoke drifts; 2 wind felt on face; 3 leaves in motion; 4 small branches move; 5 small trees sway; 6 large branches move; 7 whole trees in motion; 8 twigs break off and hard to walk; 9 light structural damage; 10 tree uprooted

Placement Location Sketches (Draw access road for each sketch)

N ↑

1	2	3	4	5	6	7	8	9	10
X	X	X	X	X	X	X	X	X	X
T#__	T#__	T#__	T#__	T#__	T#__	T#__	T#__	T#__	T#__

Visibility Class Map

Project Name: _____ Project #: _____ Turbine #: _____ Degree of Slope _____ degrees Slope Orientation _____ (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: _____
 Facing East: _____
 Facing South: _____
 Facing West: _____
 (sketch habitat and visibility classes)

Date (DD/MM/YY): ___/___/___ ↑
 Observer: _____
 Monthly/Seasonal
 Linear Transect Width: _____ m

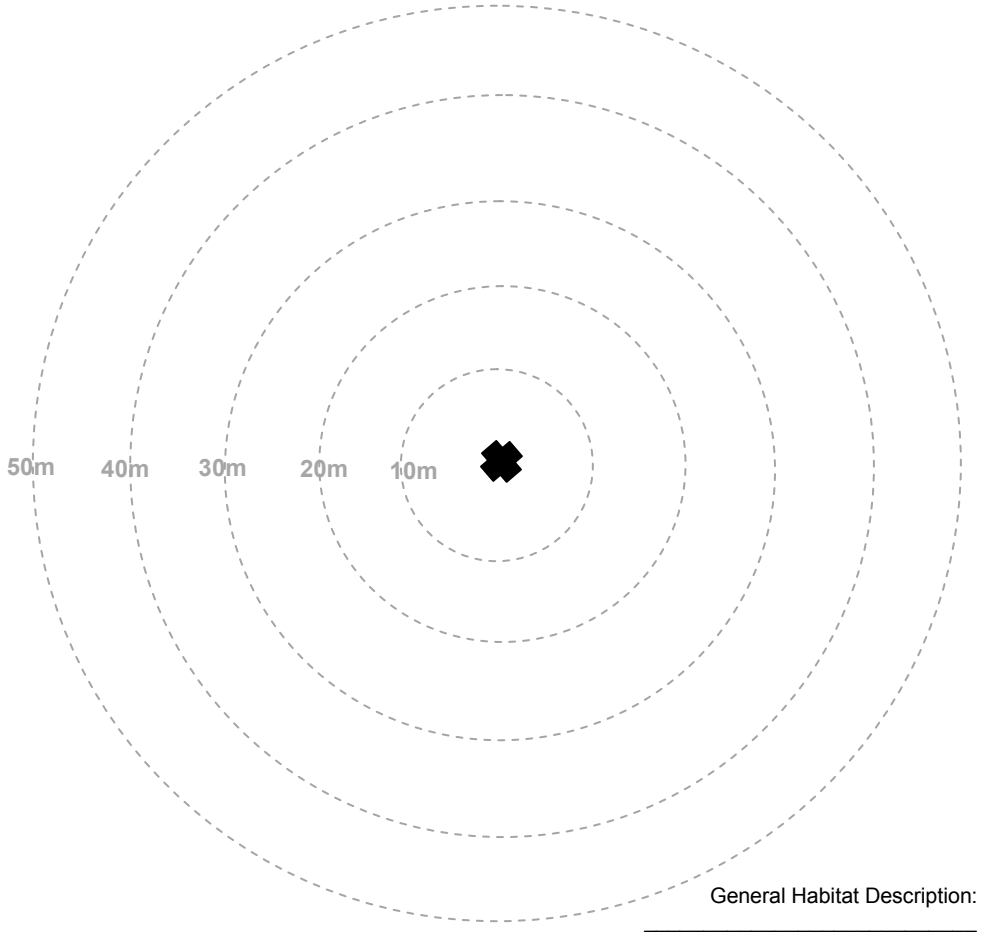
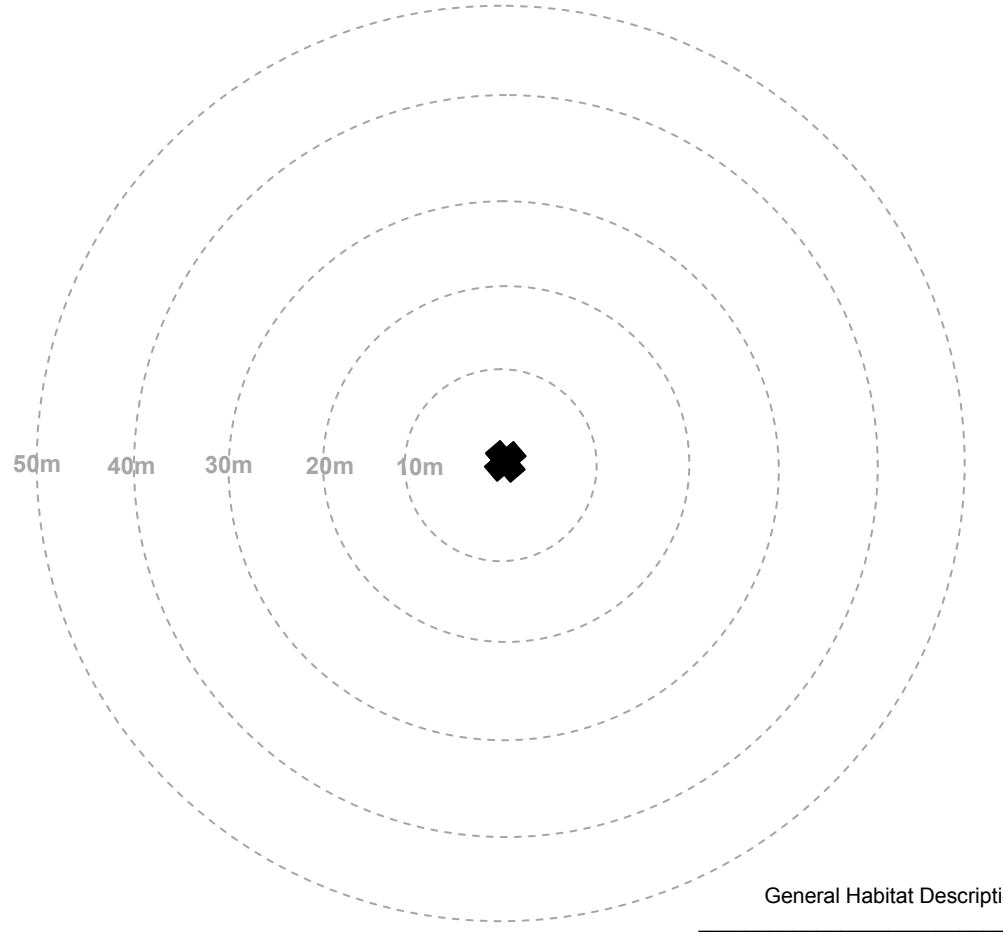


Photo Numbers (from turbine base)
 Facing North: _____
 Facing East: _____
 Facing South: _____
 Facing West: _____
 (sketch habitat and visibility classes)

Date (DD/MM/YY): ___/___/___ ↑
 Observer: _____
 Monthly/Seasonal
 Linear Transect Width: _____ m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Appendix II
Scavenger Removal Trial Results

Appendix II
 2121F Amherst Island WP
 2021 Scavenger Removal Trial Results

Small Birds and Bats Trials

Spring (May/June)

Carcass Number	Turbine	Species	Distance from Turbine Base (m)	Direction from Turbine Base (°)	UTM (Zone 18T)		Visibility Class	Test Day	Date	Carcass Present	Signs of Scavenging	Tester
					Easting	Northing						
1	S02	Red-eyed Vireo	6	100	366497	4890372	1	Day 0	03-May-21	Y	Carcass placed	Searcher A
								Day 3	06-May-21	Y	None	Searcher B
								Day 7	10-May-21	Y	None	Searcher B
								Day 10	13-May-21	Y	None	Searcher B
								Day 14	17-May-21	Y	None	Searcher B
2	S03	Tree Swallow	28	260	361262	4887465	2	Day 0	03-May-21	Y	Carcass placed	Searcher A
								Day 3	06-May-21	N	Carcass removed	Searcher A
								Day 7	10-May-21	N	-	Searcher B
								Day 10	13-May-21	N	-	Searcher B
								Day 14	17-May-21	N	-	Searcher B
3	S07	Killdeer	38	40	366810	4891676	2	Day 0	03-May-21	Y	Carcass placed	Searcher A
								Day 3	06-May-21	N	Carcass removed	Searcher B
								Day 7	10-May-21	N	-	Searcher B
								Day 10	13-May-21	N	-	Searcher B
								Day 14	17-May-21	N	-	Searcher B
4	S28	Hoary Bat	45	280	369047	4893121	2	Day 0	03-May-21	Y	Carcass placed	Searcher A
								Day 3	06-May-21	Y	None	Searcher B
								Day 7	10-May-21	Y	None	Searcher B
								Day 10	13-May-21	Y	None	Searcher B
								Day 14	17-May-21	Y	None	Searcher B
5	S36	Silver-haired Bat	50	25	364600	4888446	1	Day 0	03-May-21	Y	Carcass placed	Searcher A
								Day 3	06-May-21	Y	None	Searcher A
								Day 7	10-May-21	Y	None	Searcher B
								Day 10	13-May-21	Y	None	Searcher B
								Day 14	17-May-21	Y	None	Searcher B
6	S01	Magnolia Warbler	15	205	359216	4889509	1	Day 0	03-Jun-21	Y	Carcass placed	Searcher D
								Day 4	07-Jun-21	N	Carcass removed	Searcher D
								Day 7	10-Jun-21	N	-	Searcher D
								Day 11	14-Jun-21	N	-	Searcher D
								Day 14	17-Jun-21	N	-	Searcher D
7	S05	Hoary Bat	20	4	362663	4888906	1	Day 0	03-Jun-21	Y	Carcass placed	Searcher D
								Day 4	07-Jun-21	Y	None	Searcher D
								Day 7	10-Jun-21	Y	None	Searcher D
								Day 11	14-Jun-21	Y	None	Searcher D
								Day 14	17-Jun-21	Y	None	Searcher D
8	S14	Ovenbird	49	83	366826	4891185	1	Day 0	03-Jun-21	Y	Carcass placed	Searcher C
								Day 4	07-Jun-21	Y	Portion of one wing and some feathers remaining	Searcher C
								Day 7	10-Jun-21	N	Carcass removed	Searcher C
								Day 11	14-Jun-21	N	-	Searcher C
								Day 14	17-Jun-21	N	-	Searcher C
9	S18	Silver-haired Bat	31	42	367633	4892221	2	Day 0	03-Jun-21	Y	Carcass placed	Searcher C
								Day 4	07-Jun-21	Y	Carcass moved approximately 16m northeast	Searcher C
								Day 7	10-Jun-21	Y	Large portion of skin and fur remaining	Searcher C
								Day 11	14-Jun-21	N	Carcass removed	Searcher C
								Day 14	17-Jun-21	N	-	Searcher C
10	S22	Cliff Swallow	42	248	361437	4890615	2	Day 0	03-Jun-21	Y	Carcass placed	Searcher D
								Day 4	07-Jun-21	N	Carcass removed	Searcher D
								Day 7	10-Jun-21	N	-	Searcher D
								Day 11	14-Jun-21	N	-	Searcher D
								Day 14	17-Jun-21	N	-	Searcher D

Summer (July/August)

Carcass Number	Turbine	Species	Distance from Turbine Base (m)	Direction from Turbine Base (°)	UTM (Zone 18T)		Visibility Class	Test Day	Date	Carcass Present	Signs of Scavenging	Tester
					Easting	Northing						
1	S03	American Robin	33	50	361286	4887454	2	Day 0	01-Jul-21	Y	Carcass placed	Searcher D
								Day 4	05-Jul-21	Y	Feathers scattered around; body removed	Searcher D
								Day 7	08-Jul-21	Y	No further signs; feathers remaining	Searcher D
								Day 11	12-Jul-21	N	Carcass removed; very few feathers remaining	Searcher B
								Day 14	15-Jul-21	N	-	Searcher B
2	S14	American Robin	42	99	366829	4891134	2	Day 0	01-Jul-21	Y	Carcass placed	Searcher C
								Day 4	05-Jul-21	Y	Carcass moved approximately 5m west	Searcher C
								Day 7	08-Jul-21	Y	No further signs	Searcher C
								Day 11	12-Jul-21	Y	No further signs	Searcher B
								Day 14	15-Jul-21	Y	No further signs	Searcher B
3	S28	Black-and-white Warbler	10	245	369085	4893115	1	Day 0	01-Jul-21	Y	Carcass placed	Searcher C
								Day 4	05-Jul-21	Y	None	Searcher C
								Day 7	08-Jul-21	Y	None	Searcher C
								Day 11	12-Jul-21	Y	None	Searcher B
								Day 14	15-Jul-21	N	Carcass removed	Searcher B
4	S36	Eastern Red Bat	37	347	364567	4888434	2	Day 0	01-Jul-21	Y	Carcass placed	Searcher D
								Day 4	05-Jul-21	Y	None	Searcher D
								Day 7	08-Jul-21	Y	None	Searcher D
								Day 11	12-Jul-21	N	Carcass removed	Searcher B
								Day 14	15-Jul-21	N	-	Searcher B
5	S07	Hoary Bat	23	167	366815	4891617	1	Day 0	05-Jul-21	Y	Carcass placed	Searcher C
								Day 3	08-Jul-21	Y	None	Searcher C
								Day 7	12-Jul-21	Y	None	Searcher B
								Day 10	15-Jul-21	Y	None	Searcher B
								Day 14	19-Jul-21	N	Carcass removed	Searcher B
6	S01	Big Brown Bat	26	70	359198	4889559	2	Day 0	02-Aug-21	Y	Carcass placed	Searcher B
								Day 3	05-Aug-21	Y	None	Searcher B
								Day 7	09-Aug-21	N	Carcass removed	Searcher B
								Day 10	12-Aug-21	N	-	Searcher B
								Day 14	16-Aug-21	N	-	Searcher B
7	S02	Killdeer	29	60	368515	4890380	2	Day 0	02-Aug-21	Y	Carcass placed	Searcher B
								Day 3	05-Aug-21	Y	Feathers scattered everywhere; portion of wing remaining	Searcher B
								Day 7	09-Aug-21	Y	No further signs	Searcher B
								Day 10	12-Aug-21	Y	No further signs	Searcher B
								Day 14	16-Aug-21	N	Carcass removed; very few feathers remaining	Searcher B
8	S03	Tree Swallow	14	160	361201	4887421	1	Day 0	02-Aug-21	Y	Carcass placed	Searcher B
								Day 3	05-Aug-21	Y	None	Searcher B
								Day 7	09-Aug-21	N	Carcass removed	Searcher B
								Day 10	12-Aug-21	N	-	Searcher B
								Day 14	16-Aug-21	N	-	Searcher B
9	S05	Blue Jay	47	36	362690	4888925	1	Day 0	02-Aug-21	Y	Carcass placed	Searcher B
								Day 3	05-Aug-21	Y	None	Searcher B
								Day 7	09-Aug-21	Y	None	Searcher B
								Day 10	12-Aug-21	Y	None	Searcher B
								Day 14	16-Aug-21	Y	None	Searcher B
10	S18	Silver-haired Bat	5	320	367591	4892197	1	Day 0	02-Aug-21	Y	Carcass placed	Searcher B
								Day 3	05-Aug-21	N	Carcass removed	Searcher B
								Day 7	09-Aug-21	N	-	Searcher B
								Day 10	12-Aug-21	N	-	Searcher B
								Day 14	16-Aug-21	N	-	Searcher B

Fall (September/October)

Carcass Number	Turbine	Species	Distance from Turbine Base (m)	Direction from Turbine Base (°)	UTM (Zone 18T)		Visibility Class	Test Day	Date	Carcass Present	Signs of Scavenging	Tester
					Easting	Northing						
1	S03	Silver-haired Bat	46	65	361299	4887458	2	Day 0	02-Sep-21	Y	Carcass placed	Searcher B
								Day 4	06-Sep-21	Y	Carcass moved approximately 50m	Searcher B
								Day 7	09-Sep-21	Y	No further signs	Searcher B
								Day 11	13-Sep-21	Y	No further signs	Searcher B
								Day 14	16-Sep-21	N	Carcass removed	Searcher B
2	S14	Black-throated Blue Warbler	36	50	366815	4891187	1	Day 0	02-Sep-21	Y	Carcass placed	Searcher B
								Day 4	06-Sep-21	N	Carcass removed	Searcher B
								Day 7	09-Sep-21	N	-	Searcher B
								Day 11	13-Sep-21	N	-	Searcher B
								Day 14	16-Sep-21	N	-	Searcher B
3	S18	Silver-haired Bat	4	300	367601	4892189	1	Day 0	02-Sep-21	Y	Carcass placed	Searcher B
								Day 4	06-Sep-21	Y	None	Searcher B
								Day 7	09-Sep-21	Y	None	Searcher B
								Day 11	13-Sep-21	Y	None	Searcher B
								Day 14	16-Sep-21	Y	None	Searcher B
4	S22	Red-eyed Vireo	10	5	361448	4890670	2	Day 0	02-Sep-21	Y	Carcass placed	Searcher B
								Day 4	06-Sep-21	N	Carcass removed	Searcher B
								Day 7	09-Sep-21	N	-	Searcher B
								Day 11	13-Sep-21	N	-	Searcher B
								Day 14	16-Sep-21	N	-	Searcher B
5	S36	Killdeer	21	10	364608	4888411	2	Day 0	02-Sep-21	Y	Carcass placed	Searcher B
								Day 4	06-Sep-21	Y	Carcass moved; only wings remaining	Searcher B
								Day 7	09-Sep-21	Y	No further signs	Searcher B
								Day 11	13-Sep-21	Y	No further signs	Searcher B
								Day 14	16-Sep-21	Y	Wings removed but a number of feathers remaining	Searcher B
6	S01	Red-eyed Vireo	45	210	358147	4889513	2	Day 0	04-Oct-21	Y	Carcass placed	Searcher B
								Day 3	07-Oct-21	N	Carcass removed	Searcher B
								Day 7	11-Oct-21	N	-	Searcher B
								Day 10	14-Oct-21	N	-	Searcher B
								Day 14	18-Oct-21	N	-	Searcher B
7	S02	Eastern Red Bat	21	280	366467	4890371	1	Day 0	04-Oct-21	Y	Carcass placed	Searcher B
								Day 3	07-Oct-21	N	Carcass removed	Searcher B
								Day 7	11-Oct-21	N	-	Searcher B
								Day 10	14-Oct-21	N	-	Searcher B
								Day 14	18-Oct-21	N	-	Searcher B
8	S05	Yellow-rumped Warbler	10	320	362658	4888888	1	Day 0	04-Oct-21	Y	Carcass placed	Searcher B
								Day 3	07-Oct-21	Y	None	Searcher B
								Day 7	11-Oct-21	Y	None	Searcher B
								Day 10	14-Oct-21	Y	None	Searcher B
								Day 14	18-Oct-21	Y	None	Searcher B
9	S07	Black-throated Blue Warbler	30	240	366786	4891620	1	Day 0	04-Oct-21	Y	Carcass placed	Searcher B
								Day 3	07-Oct-21	Y	None	Searcher B
								Day 7	11-Oct-21	Y	A wing and some ribs remaining	Searcher B
								Day 10	14-Oct-21	N	Carcass removed; very few feathers remaining	Searcher B
								Day 14	18-Oct-21	N	-	Searcher B
10	S28	Hoary Bat	48	120	369132	4893103	2	Day 0	04-Oct-21	Y	Carcass placed	Searcher B
								Day 3	07-Oct-21	Y	None	Searcher B
								Day 7	11-Oct-21	N	Carcass removed	Searcher B
								Day 10	14-Oct-21	N	-	Searcher B
								Day 14	18-Oct-21	N	-	Searcher B

Raptor Trials

Winter 1 (January-April)

Carcass Number	Turbine	Species	Distance from Turbine Base (m)	Direction from Turbine Base (°)	UTM (Zone 18T)		Visibility Class	Test Day	Date	Carcass Present	Signs of Scavenging	Tester
					Easting	Northing						
1	S36	Mallard	17	40	364596	4888413	1	0	05-Jan-21	Y	Carcass placed	Searcher A
								8	13-Jan-21	Y	None	Searcher A
								13	18-Jan-21	Y	None	Searcher A
								23	28-Jan-21	Y	Carcass moved approximately 30m	Searcher A
								29	03-Feb-21	N	Carcass removed	Searcher A
2	S27	Red-tailed Hawk	50	270	365868	4890131	3	0	04-Feb-21	Y	Carcass placed	Searcher A
								6	10-Feb-21	Y	None	Searcher A
								14	18-Feb-21	Y	None	Searcher A
								20	24-Feb-21	Y	None	Searcher A
								27	03-Mar-21	Y	Only feathers remaining	Searcher A
3	S09	Red-tailed Hawk	30	100	360975	4887105	1	0	04-Mar-21	Y	Carcass placed	Searcher A
								5	09-Mar-21	Y	None	Searcher A
								13	17-Mar-21	Y	None	Searcher A
								19	23-Mar-21	Y	Carcass moved approximately 25m	Searcher A
								28	01-Apr-21	N	Carcass removed; very few feathers remaining	Searcher A
4	S33	Red-tailed Hawk	50	200	369337	4892750	3	0	01-Apr-21	Y	Carcass placed	Searcher A
								7	08-Apr-21	N	Carcass removed	Searcher A

Spring/Summer/Fall (May-October)

Carcass Number	Turbine	Species	Distance from Turbine Base (m)	Direction from Turbine Base (°)	UTM (Zone 18T)		Visibility Class	Test Day	Date	Carcass Present	Signs of Scavenging	Tester
					Easting	Northing						
1	S18	Rough-legged Hawk	45	30	367626	4892241	1	0	03-May-21	Y	Carcass placed	Searcher B
								3	06-May-21	Y	None	Searcher B
								7	10-May-21	Y	None	Searcher B
								10	13-May-21	Y	None	Searcher B
								14	17-May-21	Y	None	Searcher B
2	S02	Red-tailed Hawk	38	25	366500	4890418	2	0	03-Jun-21	Y	Carcass placed	Searcher C
								4	07-Jun-21	Y	Carcass partially scavenged; feathers scattered everywhere	Searcher C
								7	10-Jun-21	Y	No further signs	Searcher C
								11	14-Jun-21	Y	No further signs	Searcher C
3	S05	Canada Goose	44	62	362710	4888913	1	0	01-Jul-21	Y	Carcass placed	Searcher D
								4	05-Jul-21	Y	None	Searcher D
								7	08-Jul-21	Y	None	Searcher D
								11	12-Jul-21	N	Carcass removed	Searcher B
								14	15-Jul-21	N	-	Searcher B
4	S14	Rough-legged Hawk	38	10	366795	4891197	2	0	02-Aug-21	Y	Carcass placed	Searcher B
								3	05-Aug-21	Y	Carcass partially scavenged; feathers scattered everywhere	Searcher B
								7	09-Aug-21	Y	No further signs	Searcher B
								10	12-Aug-21	Y	No further signs	Searcher B
5	S28	Osprey	46	160	369111	4893085	1	14	16-Aug-21	Y	No further signs	Searcher B
								0	02-Sep-21	Y	Carcass placed	Searcher B
								4	06-Sep-21	Y	None	Searcher B
								7	09-Sep-21	Y	None	Searcher B
								11	13-Sep-21	Y	None	Searcher B
6	S03	Turkey Vulture	34	15	361257	4887471	2	14	16-Sep-21	Y	None	Searcher B
								0	04-Oct-21	Y	Carcass placed	Searcher B
								3	07-Oct-21	Y	None	Searcher B
								7	11-Oct-21	Y	None	Searcher B
								10	14-Oct-21	Y	None	Searcher B
14	18-Oct-21	Y	None	Searcher B								

Winter 2 (November-December)

Carcass Number	Turbine	Species	Distance from Turbine Base (m)	Direction from Turbine Base (°)	UTM (Zone 18T)		Visibility Class	Test Day	Date	Carcass Present	Signs of Scavenging	Tester
					Easting	Northing						
1	S01	Red-tailed Hawk	38	210	359165	4889513	2	0	01-Nov-21	Y	Carcass placed	Searcher B
								7	08-Nov-21	Y	None	Searcher B
								14	15-Nov-21	Y	None	Searcher B
								21	22-Nov-21	N	Carcass removed; very few feathers remaining	Searcher B
								28	29-Nov-21	N	-	Searcher B
2	S07	Peregrine Falcon	14	300	366796	4891642	1	0	01-Nov-21	Y	Carcass placed	Searcher B
								7	08-Nov-21	Y	None	Searcher B
								14	15-Nov-21	Y	None	Searcher B
								21	22-Nov-21	N	Carcass removed	Searcher B
								28	29-Nov-21	N	-	Searcher B
3	S11	Common Raven	46	285	361600	4887233	2	0	29-Nov-21	Y	Carcass placed	Searcher B
								7	06-Dec-21	Y	Carcass moved approximately 1m	Searcher B
								14	13-Dec-21	Y	No further signs	Searcher B
								21	20-Dec-21	Y	No further signs	Searcher B
								29	28-Dec-21	Y	Wing removed and feathers scattered	Searcher B
4	S19	Rough-legged Hawk	16	90	365124	4889566	1	0	29-Nov-21	Y	Carcass placed	Searcher B
								7	06-Dec-21	Y	None	Searcher B
								14	13-Dec-21	Y	None	Searcher B
								21	20-Dec-21	Y	None	Searcher B
								29	28-Dec-21	Y	None	Searcher B

Appendix III
Searcher Efficiency Trial Results

**Appendix III
2121F Amherst Island Wind Project
2021 Searcher Efficiency Trial Results**

Spring 2021 Searcher Efficiency Trial - Searcher B

Date	Searcher	No.	Turbine	Species	Distance (m)	Direction (°)	General Habitat	Visibility Class	UTM (18T)		Found (Y/N)	Scavenged (Y/N)
									Easting	Northing		
06-May-21	Searcher B	1	S14	Cedar Waxwing	48	50	Gravel	1	366833	4891191	Y	-
		2	S18	Purple Martin	36	185	Mowed Grass	2	367604	4892160	Y	-
		3	S28	Silver-haired Bat	8	110	Gravel	1	369096	4893126	Y	-
07-May-21	Searcher B	4	S01	Red-eyed Vireo	7	10	Gravel	1	359170	4889560	Y	-
		5	S05	Blue-headed Vireo	29	150	Mowed Grass	2	362698	4888860	N	Y
		6	S22	Hoary Bat	33	20	Mowed Grass	2	361466	4890688	N	Y
13-May-21	Searcher B	7	S02	Wilson's Warbler	25	90	Mowed Grass	2	366515	4890379	N	N
		8	S14	Hoary Bat	14	80	Gravel	1	366799	4891153	N	Y
		9	S18	European Starling	10	50	Gravel	1	367613	4892192	Y	-
13-May-21	Searcher B	10	S01	Eastern Red Bat	14	270	Mowed Grass	2	359163	4889545	N	Y
		11	S03	Golden-crowned Kinglet	33	160	Mowed Grass	2	361277	4887406	Y	-
		12	S22	Tree Swallow	17	210	Gravel	1	361446	4890640	N	Y
20-May-21	Searcher B	13	S02	Hoary Bat	30	254	Bare Ground	1	366466	4890353	Y	-
		14	S07	Ovenbird	46	270	Bare Ground	1	366788	4891602	Y	-
		15	S28	Magnolia Warbler	43	15	Mowed Grass	2	369082	4893171	N	N
24-May-21	Searcher B	16	S05	Blue Jay	25	184	Bare Ground	1	362673	4888856	Y	-
		17	S22	Silver-haired Bat	15	307	Mowed Grass	2	361435	4890668	Y	-
		18	S36	Black-throated Blue Warbler	39	280	Mowed Grass	2	364546	4888403	N	N
27-May-21	Searcher B	19	S01	Eastern Red Bat	9	320	Mowed Grass	2	359146	4889555	Y	-
		20	S03	Hoary Bat	45	170	Mowed Grass	2	361273	4887392	N	N
		21	S36	Silver-haired Bat	46	40	Mowed Grass	2	364623	4888430	Y	-

Spring/Summer 2021 Searcher Efficiency Trial - Searcher C

Date	Searcher	No.	Turbine	Species	Distance (m)	Direction (°)	General Habitat	Visibility Class	UTM (18T)		Found (Y/N)	Scavenged (Y/N)
									Easting	Northing		
27-May-21	Searcher C	1	S14	Golden-crowned Kinglet	27	25	Gravel	1	366806	4891182	N	N
		2	S18	Yellow-rumped Warbler	48	40	Gravel	1	367265	4892240	Y	-
		3	S28	Silver-haired Bat	9	230	Gravel	1	369087	4893121	Y	-
03-Jun-21	Searcher C	4	S07	Red-eyed Vireo	21	208	Gravel	1	366805	4891618	Y	-
		5	S14	Eastern Red Bat	45	25	Mowed Grass	2	366791	4891153	N	Y
		6	S18	Ovenbird	14	36	Gravel	1	367616	4892208	Y	-
07-Jun-21	Searcher C	7	S02	American Robin	5	6	Mowed Grass	2	366489	4890384	Y	-
		8	S07	White-throated Sparrow	39	230	Mowed Grass	2	366786	4891611	Y	-
		9	S14	Hoary Bat	33	102	Mowed Grass	2	366854	4891163	Y	-
10-Jun-21	Searcher C	10	S02	White-throated Sparrow	31	233	Gravel	1	364577	4888458	N	N
		11	S07	American Robin	4	41	Gravel	1	366816	4891637	N	N
		12	S18	Hoary Bat	30	175	Mowed Grass	2	366804	4891619	Y	-

Spring/Summer 2021 Searcher Efficiency Trial - Searcher C Continued

Date	Searcher	No.	Turbine	Species	Distance (m)	Direction (°)	General Habitat	Visibility Class	UTM (18T)		Found (Y/N)	Scavenged (Y/N)
									Easting	Northing		
14-Jun-21	Searcher C	13	S02	Silver-haired Bat	43	125	Gravel	1	366496	4890357	Y	-
		14	S18	Black-throated Blue Warbler	43	316	Mowed Grass	2	367569	4892217	Y	-
		15	S28	White-throated Sparrow	14	55	Mowed Grass	2	369104	4893135	N	N
17-Jun-21	Searcher C	16	S02	Tree Swallow	43	247	Mowed Grass	2	366437	4890401	Y	-
		17	S07	American Robin	26	323	Mowed Grass	2	366785	4891691	Y	-
		18	S28	Hoary Bat	48	133	Gravel	1	369133	4893131	Y	-
21-Jun-21	Searcher C	19	S02	Hoary Bat	34	166	Mowed Grass	2	364572	4888452	Y	-
		20	S14	Silver-haired Bat	10	152	Mowed Grass	2	366795	4891148	Y	-
		21	S28	Eastern Red Bat	45	172	Gravel	1	369114	4893086	Y	-
28-Jun-21	Searcher C	22	S07	Ovenbird	6	35	Mowed Grass	2	366814	4891644	Y	-
		23	S14	Eastern Red Bat	21	123	Mowed Grass	2	364572	4888452	N	N
		24	S18	American Robin	33	348	Mowed Grass	2	367586	4892222	Y	-
01-Jul-21	Searcher C	25	S02	Yellow-rumped Warbler	43	105	Mowed Grass	2	366534	4890358	N	Y
		26	S28	White-throated Sparrow	46	95	Mowed Grass	2	369137	4893127	Y	-
05-Jul-21	Searcher C	27	S02	Silver-haired Bat	20	93	Mowed Grass	2	366509	4890367	Y	-
		28	S07	Hermit Thrush	1	25	Concrete Turbine Base	1	366805	4891635	Y	-
		29	S14	Blue Jay	47	45	Gravel	1	366830	4891185	Y	-
08-Jul-21	Searcher C	30	S02	Magnolia Warbler	13	235	Gravel	1	366851	4890357	Y	-
		31	S07	Hoary Bat	7	300	Gravel	1	366809	4891630	Y	-
		32	S14	Yellow-rumped Warbler	46	50	Gravel	1	366826	4891195	Y	-

Spring/Summer 2021 Searcher Efficiency Trial - Searcher D

Date	Searcher	No.	Turbine	Species	Distance (m)	Direction (°)	General Habitat	Visibility Class	UTM (18T)		Found (Y/N)	Scavenged (Y/N)
									Easting	Northing		
03-Jun-21	Searcher D	1	S01	Blue Jay	9	28	Gravel	1	359167	4889558	Y	-
		2	S03	Eastern Red Bat	36	131	Gravel	1	361285	4887420	N	N
		3	S36	Black-and-white Warbler	42	0	Gravel	1	364581	4888440	Y	-
07-Jun-21	Searcher D	4	S03	Black-and-white Warbler	43	51	Mowed Grass	2	361290	4887468	Y	-
		5	S05	Eastern Red Bat	27	92	Mowed Grass	2	362700	4888879	Y	-
		6	S22	American Robin	36	13	Mowed Grass	2	361452	4890696	Y	-
10-Jun-21	Searcher D	7	S01	Silver-haired Bat	27	203	Mowed Grass	2	359166	4889523	Y	-
		8	S03	White-throated Sparrow	37	315	Gravel	1	361232	4887458	Y	-
		9	S22	Black-throated Blue Warbler	14	143	Gravel	1	361452	4890640	N	N
14-Jun-21	Searcher D	10	S03	American Robin	33	266	Mowed Grass	2	361231	4887418	Y	-
		11	S05	Hoary Bat	47	44	Gravel	1	362704	4888917	Y	-
		12	S36	Tree Swallow	26	20	Mowed Grass	2	364608	4888412	Y	-
17-Jun-21	Searcher D	13	S05	Silver-haired Bat	41	340	Mowed Grass	2	362644	4888917	Y	-
		14	S22	American Robin	5	224	Gravel	1	361444	4890646	Y	-
		15	S36	White-throated Sparrow	38	40	Gravel	1	364597	4888436	Y	-

Spring/Summer 2021 Searcher Efficiency Trial - Searcher D Continued

Date	Searcher	No.	Turbine	Species	Distance (m)	Direction (°)	General Habitat	Visibility Class	UTM (18T)		Found (Y/N)	Scavenged (Y/N)
									Easting	Northing		
21-Jun-21	Searcher D	16	S01	Silver-haired Bat	17	128	Gravel	1	361482	4890662	Y	-
		17	S03	American Robin	15	51	Mowed Grass	2	361258	4887449	Y	-
		18	S22	Ovenbird	31	148	Mowed Grass	2	361482	4890662	Y	-
24-Jun-21	Searcher D	19	S22	Eastern Red Bat	16	321	Mowed Grass	2	361433	4890669	Y	-
		20	S36	Hoary Bat	24	336	Gravel	1	364572	4888419	Y	-
28-Jun-21	Searcher D	21	S01	American Robin	41	100	Gravel	1	359201	4889513	Y	-
		22	S22	White-throated Sparrow	22	116	Gravel	1	361458	4890634	Y	-
		23	S36	Silver-haired Bat	12	94	Mowed Grass	2	364603	4888391	N	N
01-Jul-21	Searcher D	24	S03	Ovenbird	24	18	Gravel	1	361268	4887453	Y	-
		25	S05	Blue Jay	34	195	Mowed Grass	2	362664	4888841	Y	-
		26	S36	Hoary Bat	12	356	Gravel	1	364580	4888402	Y	-
05-Jul-21	Searcher D	27	S01	Yellow-rumped Warbler	41	265	Mowed Grass	2	359128	4889546	Y	-
		28	S22	Magnolia Warbler	8	10	Mowed Grass	2	361448	4890661	Y	-
		29	S36	Silver-haired Bat	42	235	Mowed Grass	2	364566	4888354	Y	-
08-Jul-21	Searcher D	30	S01	Hermit Thrush	12	61	Gravel	1	359184	4889552	Y	-
		31	S03	Blue Jay	3	45	Concrete Turbine Base	1	361260	4887434	Y	-
		32	S22	Silver-haired Bat	37	185	Gravel	1	361445	4890620	Y	-

Summer 2021 Searcher Efficiency Trial- Searcher B

Date	Searcher	No.	Turbine	Species	Distance (m)	Direction (°)	General Habitat	Visibility Class	UTM (18T)		Found (Y/N)	Scavenged (Y/N)
									Easting	Northing		
09-Jul-21	Searcher B	1	S01	Hoary Bat	21	121	Gravel	1	359186	4889538	Y	-
		2	S05	Black-throated Blue Warbler	16	19	Gravel	1	362671	4888897	Y	-
		3	S22	Blue Jay	40	193	Mowed Grass	2	361446	4890618	Y	-
21-Jul-21	Searcher B	4	S02	Hermit Thrush	13	290	Mowed Grass	2	366477	4890377	N	N
		5	S03	Silver-haired Bat	50	30	Mowed Grass	2	361288	4887476	Y	-
		6	S36	White-throated Sparrow	27	10	Gravel	1	364592	4888427	N	Y
23-Jul-21	Searcher B	7	S07	Eastern Red Bat	29	200	Gravel	1	366808	4891613	N	Y
		8	S14	Red-breasted Nuthatch	3	350	Concrete Turbine Base	1	366788	4891165	N	Y
		9	S18	Veery	41	110	Mowed Grass	2	367649	4892193	Y	-
29-Jul-21	Searcher B	10	S28	White-throated Sparrow	23	155	Gravel	1	369101	4893108	Y	-
		11	S36	Silver-haired Bat	11	105	Gravel	1	364586	4888409	Y	-
08-Aug-20	Searcher B	12	S01	Magnolia Warbler	28	190	Mowed Grass	2	359156	4889529	Y	-
		13	S05	Black-throated Blue Warbler	38	110	Mowed Grass	2	369094	4893114	Y	-
		14	S22	Silver-haired Bat	13	0	Mowed Grass	2	361447	4890670	N	Y
11-Aug-21	Searcher B	15	S03	Black-throated Blue Warbler	8	10	Gravel	1	361265	4887442	Y	-
		16	S18	Silver-haired Bat	22	310	Mowed Grass	2	367583	4892204	Y	-
		17	S28	Red-eyed Vireo	45	150	Mowed Grass	2	369132	4893106	Y	-
26-Aug-21	Searcher B	18	S02	Silver-haired Bat	29	230	Gravel	1	366470	4890349	Y	-
		19	S07	Hoary Bat	18	345	Mowed Grass	2	366801	4891654	Y	-
		20	S14	Northern Flicker	46	60	Gravel	1	366828	4891189	Y	-

Fall 2021 Searcher Efficiency Trial- Searcher B

Date	Searcher	No.	Turbine	Species	Distance (m)	Direction (°)	General Habitat	Visibility Class	UTM (18T)		Found (Y/N)	Scavenged (Y/N)
									Easting	Northing		
09-Sep-21	Searcher B	1	S02	Silver-haired Bat	22	240	Gravel	1	366467	4890362	Y	-
		2	S18	Magnolia Warbler	34	10	Gravel	1	367616	4892228	Y	-
		3	S28	Red-eyed Vireo	36	210	Mowed Grass	2	369073	4893095	Y	-
16-Sep-21	Searcher B	4	S07	Silver-haired Bat	28	275	Mowed Grass	2	366782	4891633	Y	-
		5	S14	Red-eyed Vireo	10	70	Gravel	1	366801	4891161	Y	-
		6	S36	Black-capped Chickadee	40	230	Mowed Grass	2	364567	4888370	Y	-
23-Sep-21	Searcher B	7	S01	Magnolia Warbler	11	15	Mowed Grass	2	359172	4889564	N	N
		8	S03	Eastern Red Bat	25	120	Bare Ground	1	361277	4887422	Y	-
		9	S22	Red-eyed Vireo	29	185	Bare Ground	1	361442	4890630	Y	-
30-Sep-21	Searcher B	10	S02	Eastern Red Bat	44	160	Mowed Grass	2	366506	4890336	Y	-
		11	S07	Cedar Waxwing	11	285	Gravel	1	366791	4891644	Y	-
		12	S18	Golden-crowned Kinglet	48	90	Mowed Grass	2	367654	4892208	Y	-
07-Oct-21	Searcher B	13	S03	Hoary Bat	45	160	Mowed Grass	2	361271	4887394	N	N
		14	S28	Black-and-white Warbler	9	60	Gravel	1	369103	4893124	Y	-
		15	S36	Hoary Bat	6	15	Gravel	1	364589	4888402	N	Y
13-Oct-21	Searcher B	16	S01	Silver-haired Bat	7	90	Gravel	1	359177	4889558	N	Y
		17	S05	Black-capped Chickadee	35	170	Mowed Grass	2	362676	4888858	Y	-
		18	S22	Eastern Red Bat	15	50	Mowed Grass	2	361456	4890671	Y	-
18-Oct-21	Searcher B	19	S01	Red-winged Blackbird	42	280	Mowed Grass	2	359137	4889555	Y	-
		20	S05	Hermit Thrush	6	150	Gravel	1	362669	4888879	Y	-

Appendix IV
Avian Mortalities

2021 Avian Mortalities Continued

Date	Turbine	Start Time	End Time	Dog Used (Y/N)	Days Since Last Search	Temp.	Cloud Cover (%)	Precipitation	Wind Speed (Beaufort Scale)	Wind Direction	Species	Sample ID	Sex (M/F/U)	Easting	Northing	Distance from Turbine (m)	Direction from Turbine (°)	Condition Code	Estimated Time Since Death (hrs)	Observed Injuries	Substrate/Habitat	Visibility Class
30-Sep-21	S36	12:30	13:00	N	3	10	100	None	2	N	Red-eyed Vireo	2121F-300921-S36-02	U	364596	4888397	7	110	F	24	Broken neck	Gravel	1
7-Oct-21	S28	15:40	16:10	N	3	10	95	None	1	NE	Thrush sp.	2121F-071021-S28-01	U	369121	4893098	40	130	S	100	Partially scavenged	Gravel	1
11-Oct-21	S36	10:20	10:50	N	4	17	60	None	3	S	Golden-crowned Kinglet	2121F-111021-S36-01	U	364567	4888435	44	330	F	24	Broken neck	Gravel	1
18-Oct-21	S03	10:40	11:10	N	4	8	90	None	3	N	Golden-crowned Kinglet	2121F-181021-S03-01	U	361293	4887429	35	130	F	24	None apparent	Gravel	1
28-Oct-21	S22	11:10	11:40	N	3	6	80	None	3	E	Golden-crowned Kinglet	2121F-281021-S22-01	U	361400	4890642	49	260	F	24	Broken neck	Mowed Grass	2

2021 Raptor Mortalities

Date	Turbine	Start Time	End Time	Dog Used (Y/N)	Days Since Last Search	Temp.	Cloud Cover (%)	Precipitation	Wind Speed (Beaufort Scale)	Wind Direction	Species	Sample ID	Sex (M/F/U)	Easting	Northing	Distance from Turbine (m)	Direction from Turbine (°)	Condition Code	Estimated Time Since Death (hrs)	Observed Injuries	Substrate/Habitat	Visibility Class
1-Mar-21	S31	9:30	9:50	N	3	0	90	None	4	NW	Red-tailed Hawk	2121F-010321-S31-01	U	362322	4891059	39	330	F	48	None apparent	Grass	3
16-Mar-21	S37	14:50	15:10	N	6	-4	80	None	2	E	Rough-legged Hawk	2121F-160321-S37-01	U	365479	4889849	26	260	F	24	None apparent	Gravel	1
17-Mar-21	S03	11:35	11:55	N	8	1	90	None	1	S	Rough-legged Hawk	2121F-170321-S03-01	U	361219	4887455	40	305	F	48	Both wings broken; decapitated	Grass	2
25-Mar-21	S14	12:20	12:40	N	8	7	0	None	3	W	Red-tailed Hawk	2121F-250321-S14-01	U	366762	4891195	42	345	F	24	Broken neck	Grass	2
24-May-21	S02	9:30	10:00	N	4	13	0	None	2	E	Red-tailed Hawk	2121F-240521-S02-01	U	366504	4890412	49	40	I	-	Broken wing; euthanized due to severity of injuries	Mowed Grass	2
23-Aug-21	S02	11:45	12:15	N	4	25	20	None	3	N	Osprey	2121F-230821-S02-01	U	366526	4890371	35	105	E	48	Broken neck	Mowed Grass	2
11-Oct-21	S36	10:20	10:50	N	4	17	60	None	3	S	Peregrine Falcon	2121F-111021-S36-02	U	364586	4888392	8	230	E	48	Broken neck; abdominal laceration	Gravel	1
21-Oct-21	S02	14:20	14:50	N	3	16	100	Rain	2	SW	Red-tailed Hawk	2121F-211021-S02-01	U	366501	4890396	25	30	F	24	Broken neck	Mowed Grass	2
15-Dec-21	S26	9:50	10:10	N	7	-2	90	None	3	N	Rough-legged Hawk	2121F-151221-S26-01	U	367408	4892505	48	130	S	100	Scavenged; only wing remaining	Grass	3

2021 Avian Mortalities Outside the Estimation Parameters

Date	Turbine	Start Time	End Time	Dog Used (Y/N)	Days Since Last Search	Temp.	Cloud Cover (%)	Precipitation	Wind Speed (Beaufort Scale)	Wind Direction	Species	Sample ID	Sex (M/F/U)	Easting	Northing	Distance from Turbine (m)	Direction from Turbine (°)	Condition Code	Estimated Time Since Death (hrs)	Observed Injuries	Substrate/Habitat	Visibility Class
22-Mar-21	S05	10:30	10:50	N	7	6	5	None	2	S	Killdeer	2121F-220321-S05-01	U	362677	4888885	10	65	F	24	Abdominal laceration	Gravel	1
22-Mar-21	S05	10:30	10:50	N	7	6	5	None	2	S	Killdeer	2121F-220321-S05-02	U	362680	4888878	15	105	F	24	Broken neck	Gravel	1
23-Mar-21	S03	12:10	12:30	N	6	8	10	None	3	SW	Killdeer	2121F-230321-S03-01	U	361254	4887449	16	355	F	24	Broken neck and left wing	Grass	2
8-Apr-21	S03	13:35	13:55	N	7	12	0	None	5	E	Killdeer	2121F-080421-S03-01	U	361274	4887406	22	150	E	72	Partially decapitated	Grass	2
8-Apr-21	S22	8:50	9:10	N	7	12	0	None	3	E	Wilson's Snipe	2121F-080421-S22-01	U	361450	4890685	26	15	S	96	Only right wing remaining	Grass	2
8-Apr-21	S28	12:15	12:35	N	7	12	0	None	4	E	Killdeer	2121F-080421-S28-01	U	369107	4893170	46	25	S	120	Only right wing and leg remaining	Grass	2
22-Apr-21	S07	12:40	13:00	N	7	1	70	None	4	NW	Killdeer	2121F-220421-S07-01	U	366845	4891648	31	65	S	72	Scavenged; only feathers remaining	Grass	2
11-Jun-21	S29	10:00	10:30	N	31	14	100	None	3	E	Bobolink	2121F-110621-S29-01	F	359559	4889880	30	186	F	24	Decapitated	Mowed Grass	2
9-Jul-21	S27	N/A	9:00	N	N/A	16	100	Rain	3	NE	American Woodcock	2121F-090721-S27-01	U	365919	4890149	1	85	A	168	Heavily decomposed	Concrete Turbine Base	1
26-Jul-21	S09	N/A	10:30	N	N/A	24	40	None	1	NW	Bobolink	2121F-260721-S09-01	U	360951	4887101	1	220	F	24	Broken neck	Concrete Turbine Base	1
17-Aug-21	S30	12:15	12:45	N	21	13	100	Rain	2	SE	Cedar Waxwing	2121F-170821-S30-01	U	367056	4892945	17	40	A	336	Heavily decomposed	Gravel	1
8-Sep-21	S04	12:30	13:00	N	28	15	100	Rain	3	SW	Eastern Kingbird	2121F-080921-S04-01	U	360403	4890074	2	225	A	336	Heavily decomposed	Concrete Turbine Base	1
1-Nov-21	S36	11:30	11:50	N	4	8	10	None	3	NW	Golden-crowned Kinglet	2121F-011121-S36-01	U	364627	4888420	41	70	F	24	Broken neck	Mowed Grass	2
10-Nov-21	S31	11:35	11:55	N	35	8	5	None	3	NW	Passerine sp.	2121F-101121-S31-01	U	362356	4891036	14	60	S	100	Scavenged; only wing remaining	Gravel	1
15-Nov-21	S03	9:55	10:15	N	7	0	95	None	3	NW	American Woodcock	2121F-151121-S03-01	U	361292	4887741	34	90	E	48	Decapitated; scavenged	Gravel	1
15-Nov-21	S36	10:40	11:00	N	7	0	95	None	3	NW	Golden-crowned Kinglet	2121F-151121-S36-01	U	364569	4888376	29	230	E	72	None apparent	Mowed Grass	2
21-Dec-21	S05	10:45	11:05	N	7	-2	10	None	2	NE	European Starling	2121F-211221-S05-01	U	362673	4888874	10	135	E	48	Broken neck	Grass	2
22-Dec-21	S14	9:20	9:40	N	7	-2	70	None	3	W	European Starling	2121F-221221-S14-01	U	366767	4891141	29	250	F	24	Broken neck	Grass	2

Appendix V
Bat Mortalities

2021 Bat Mortalities Continued

Date	Turbine	Start Time	End Time	Dog Used (Y/N)	Days Since Last Search	Temp.	Cloud Cover (%)	Precipitation	Wind Speed (Beaufort Scale)	Wind Direction	Species	Sample ID	Bat FA (mm)	Sex (M/F/U)	Easting	Northing	Distance from Turbine (m)	Direction from Turbine (°)	Condition Code	Estimated Time Since Death (hrs)	Observed Injuries	Substrate/Habitat	Visibility Class
23-Aug-21	S36	11:05	11:35	N	4	25	20	None	3	N	Silver-haired Bat	2121F-230821-S36-01	40	M	364594	488434	36	25	E	36	None apparent	Gravel	1
26-Aug-21	S01	9:35	10:05	N	3	25	40	None	2	E	Silver-haired Bat	2121F-260821-S01-01	39	U	359185	4889546	12	105	E	36	Broken wing	Gravel	1
26-Aug-21	S14	15:20	15:50	N	3	25	40	None	2	E	Eastern Red Bat	2121F-260821-S14-01	41	U	366807	4891121	38	150	F	12	None apparent	Mowed Grass	2
26-Aug-21	S28	14:00	14:30	N	3	25	40	None	2	E	Silver-haired Bat	2121F-260821-S28-01	39	U	369106	4893123	17	40	F	12	Broken wing	Gravel	1
26-Aug-21	S28	14:00	14:30	N	3	25	40	None	2	E	Silver-haired Bat	2121F-260821-S28-02	41	U	369114	4893090	44	155	F	12	Broken wing	Gravel	1
26-Aug-21	S28	14:00	14:30	N	3	25	40	None	2	E	Silver-haired Bat	2121F-260821-S28-03	41	U	369091	4893087	39	180	F	12	Broken wing	Gravel	1
26-Aug-21	S28	14:00	14:30	N	3	25	40	None	2	E	Silver-haired Bat	2121F-260821-S28-04	42	U	369100	4893092	37	175	F	12	None apparent	Gravel	1
26-Aug-21	S28	14:00	14:30	N	3	25	40	None	2	E	Silver-haired Bat	2121F-260821-S28-05	38	U	369084	4893128	5	270	S	36	Highly scavenged	Gravel	1
26-Aug-21	S28	14:00	14:30	N	3	25	40	None	2	E	Silver-haired Bat	2121F-260821-S28-06	40	U	369073	4893144	21	320	F	12	None apparent	Mowed Grass	2
26-Aug-21	S28	14:00	14:30	N	3	25	40	None	2	E	Hoary Bat	2121F-260821-S28-08	52	U	369126	4893129	33	90	F	12	None apparent	Mowed Grass	2
26-Aug-21	S36	11:40	12:10	N	3	25	40	None	2	E	Hoary Bat	2121F-260821-S36-01	52	U	364585	4888428	29	10	F	12	None apparent	Gravel	1
26-Aug-21	S36	11:40	12:10	N	3	25	40	None	2	E	Silver-haired Bat	2121F-260821-S36-02	36	U	364594	4888395	6	180	S	60	Highly scavenged; broken wing	Gravel	1
30-Aug-21	S01	9:30	10:00	N	4	25	25	None	3	W	Silver-haired Bat	2121F-300821-S01-01	38	U	359182	4889561	14	45	E	36	None apparent	Gravel	1
2-Sep-21	S05	9:15	9:45	N	4	17	10	None	3	NE	Silver-haired Bat	2121F-020921-S05-01	41	U	362627	4888860	45	260	F	12	Broken wing	Mowed Grass	2
2-Sep-21	S14	13:45	14:15	N	4	17	40	None	3	NE	Eastern Red Bat	2121F-020921-S14-01	38	U	366810	4891128	34	120	F	12	None apparent	Mowed Grass	2
2-Sep-21	S36	12:25	12:55	N	4	17	40	None	3	NE	Eastern Red Bat	2121F-020921-S36-01	40	U	364593	4888376	23	175	F	12	None apparent	Mowed Grass	2
6-Sep-21	S05	10:00	10:30	N	4	16	100	Rain	3	W	Eastern Red Bat	2121F-060921-S05-01	39	U	362634	4888872	30	270	F	12	Broken wing	Mowed Grass	2
9-Sep-21	S03	12:10	12:40	N	3	20	15	None	3	NW	Silver-haired Bat	2121F-090921-S03-01	38	U	361297	4887459	46	85	E	36	None apparent (decomposed)	Mowed Grass	2
16-Sep-21	S01	9:35	10:05	N	3	12	100	Fog	2	NE	Eastern Red Bat	2121F-160921-S01-02	38	U	359199	4889590	47	35	F	12	None apparent	Mowed Grass	2
16-Sep-21	S28	13:30	14:00	N	3	12	100	Fog	2	NE	Eastern Red Bat	2121F-160921-S28-01	38	U	369114	4893111	26	135	F	12	Broken right wing	Gravel	1
30-Sep-21	S36	12:30	13:00	N	3	10	100	None	2	N	Hoary Bat	2121F-300921-S36-01	52	M	364571	4888425	31	330	M	60	Skull fracture	Gravel	1
7-Oct-21	S03	12:15	12:45	N	3	15	95	None	1	NE	Hoary Bat	2121F-071021-S03-01	53	U	361242	4887428	15	300	E	36	None apparent	Mowed Grass	2

Appendix VI
Locations of Bird and Bat Mortalities

359125

359150

359175

359200

359225

4889600

4889600

4889575

4889575

4889550

4889550

4889525

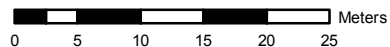
4889525

4889500

4889500



This map is proprietary and confidential and must not be duplicated or distributed by any means without express written permission of Natural Resource Solutions Inc. (NRSI).



359125

359150

359175

359200

359225

Legend

-  Turbine
-  Eastern Red Bat
-  Yellow-rumped Warbler
-  Search Radius
-  Hoary Bat
-  Silver-haired Bat
-  American Robin

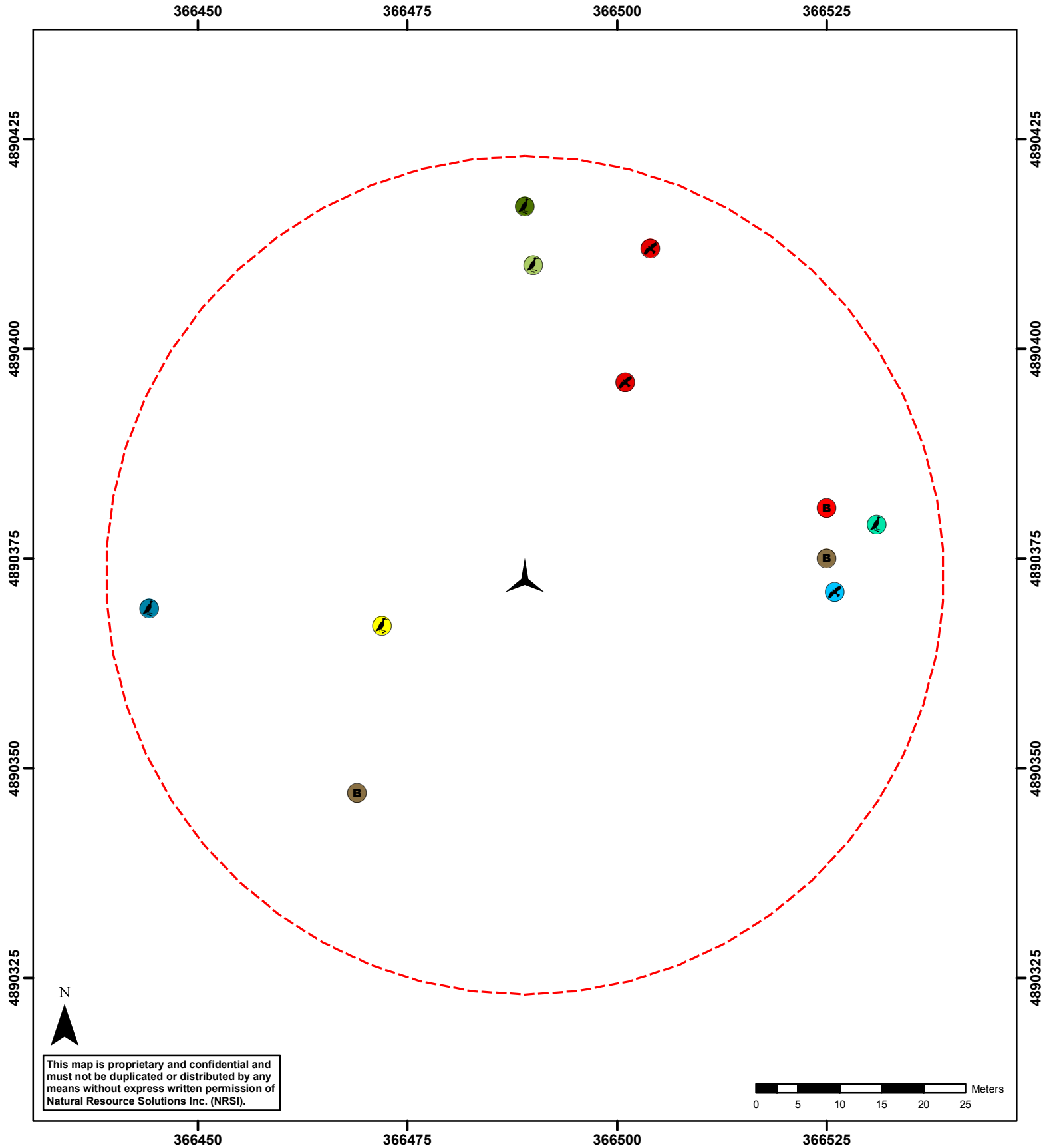
Appendix VI

Amherst Island WP
Turbine S01 Mortalities 2021

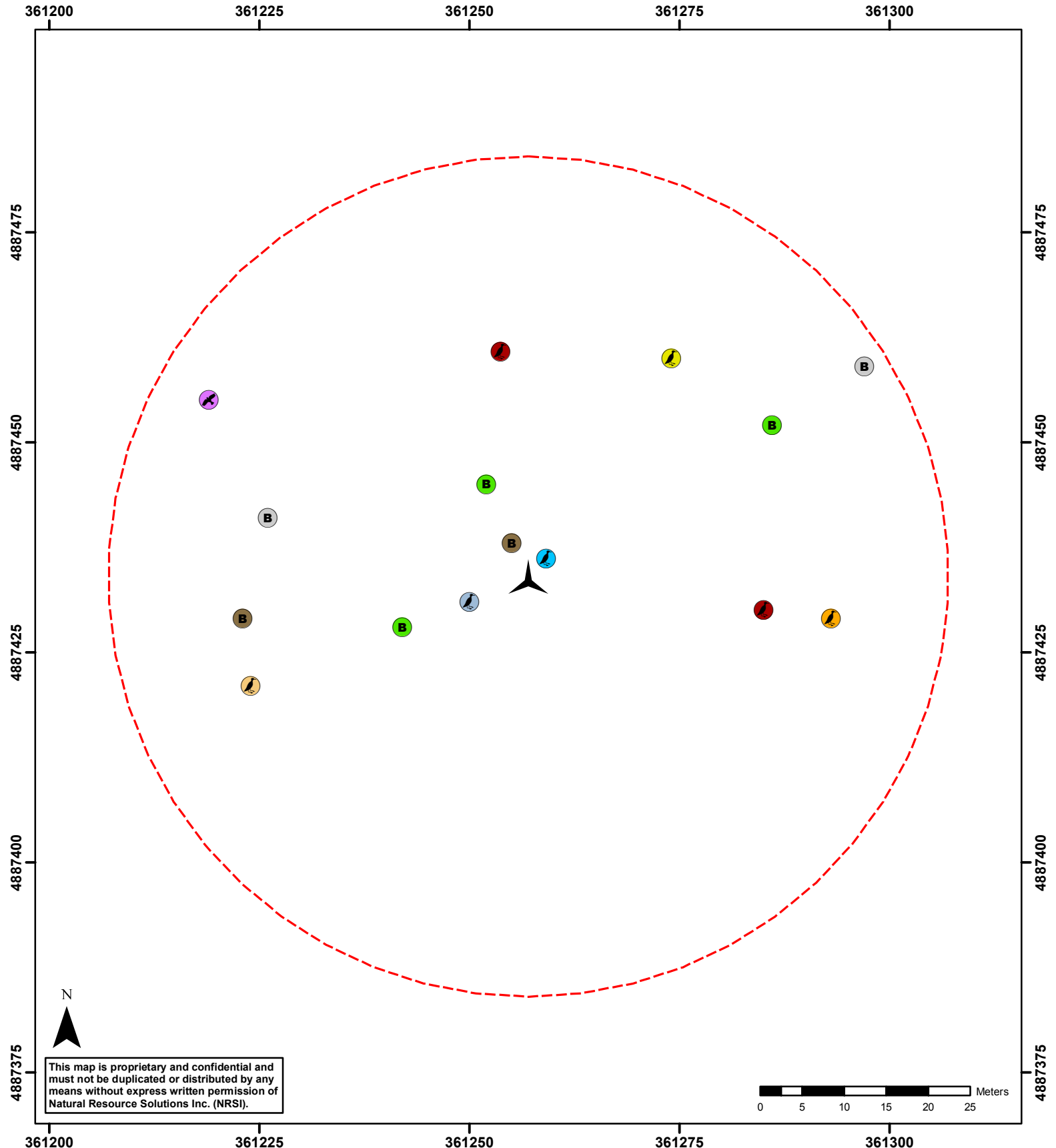
NAD83 - UTM Zone 18
Scale: 1:600 (8.5x11")

Date: February 4, 2022
Project: 2121F





Legend				Appendix VI	
Turbine	Big Brown Bat	Northern Parula	Red-tailed Hawk	Amherst Island WP Turbine S02 Mortalities 2021	
Search Radius	Eastern Red Bat	Passerine sp.			
Eastern Kingbird	Yellow-rumped Warbler	Kinglet sp.	Osprey	NAD83 - UTM Zone 18 Scale: 1:600 (8.5x11")	
				Date: February 4, 2022 Project: 2121F	
				NATURAL RESOURCE SOLUTIONS INC. Aquatic, Terrestrial and Wetland Biologists	



This map is proprietary and confidential and must not be duplicated or distributed by any means without express written permission of Natural Resource Solutions Inc. (NRSI).



- Legend**
- Turbine
 - Big Brown Bat
 - Cedar Waxwing
 - Tree Swallow
 - Search Radius
 - Hoary Bat
 - European Starling
 - Rough-legged Hawk
 - Silver-haired Bat
 - Golden-crowned Kinglet
 - Blue-headed Vireo
 - Mallard

Appendix VI

Amherst Island WP

Turbine S03 Mortalities 2021

NAD83 - UTM Zone 18 Scale: 1:600 (8.5x11")	Date: February 4, 2022 Project: 2121F
---	--



362625

362650

362675

362700

362725

4888925

4888925

4888900

4888900

4888875

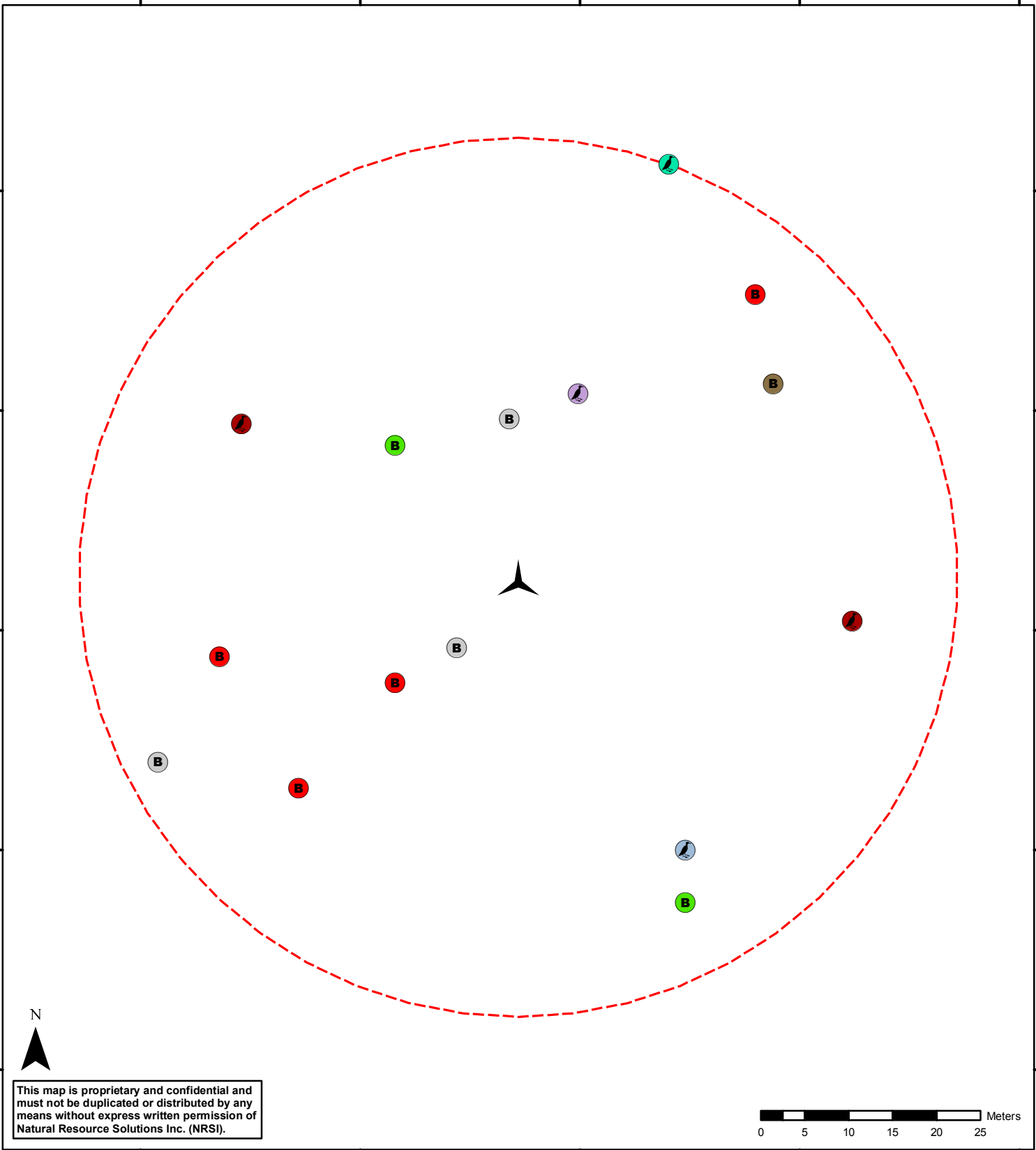
4888875

4888850

4888850

4888825

4888825



This map is proprietary and confidential and must not be duplicated or distributed by any means without express written permission of Natural Resource Solutions Inc. (NRSI).



Legend

- Turbine
- Search Radius
- Big Brown Bat
- Eastern Red Bat
- Hoary Bat
- Silver-haired Bat
- Cedar Waxwing
- Killdeer
- Kinglet sp.
- Tree Swallow

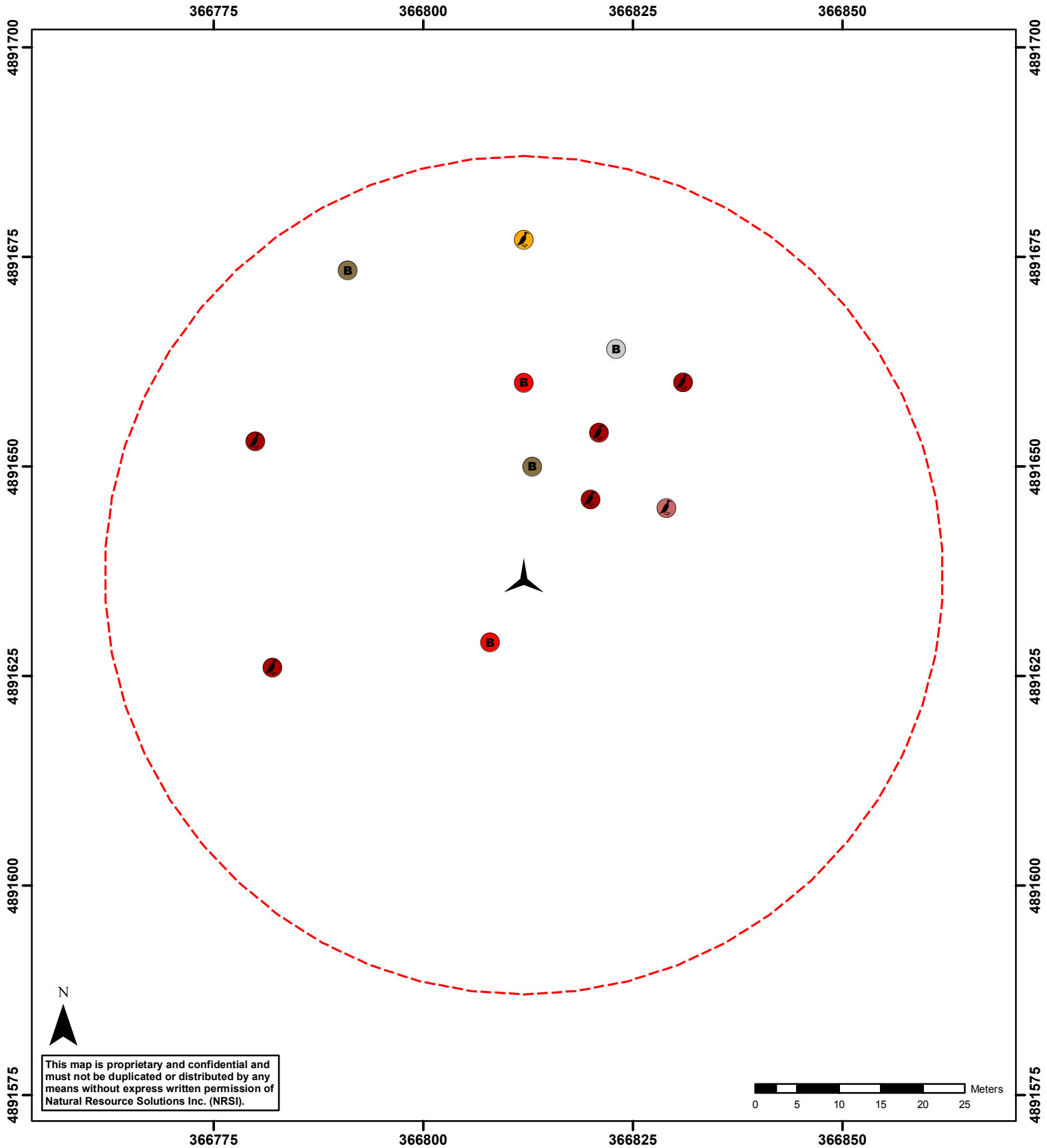
Appendix VI

Amherst Island WP
Turbine S05 Mortalities 2021

NAD83 - UTM Zone 18
Scale: 1:600 (8.5x11")

Date: February 4, 2022
Project: 2121F





This map is proprietary and confidential and must not be duplicated or distributed by any means without express written permission of Natural Resource Solutions Inc. (NRSI).



- Legend**
- Turbine
 - Search Radius
 - Big Brown Bat
 - Eastern Red Bat
 - Silver-haired Bat
 - Golden-crowned Kinglet
 - Purple Martin
 - Tree Swallow

Appendix VI

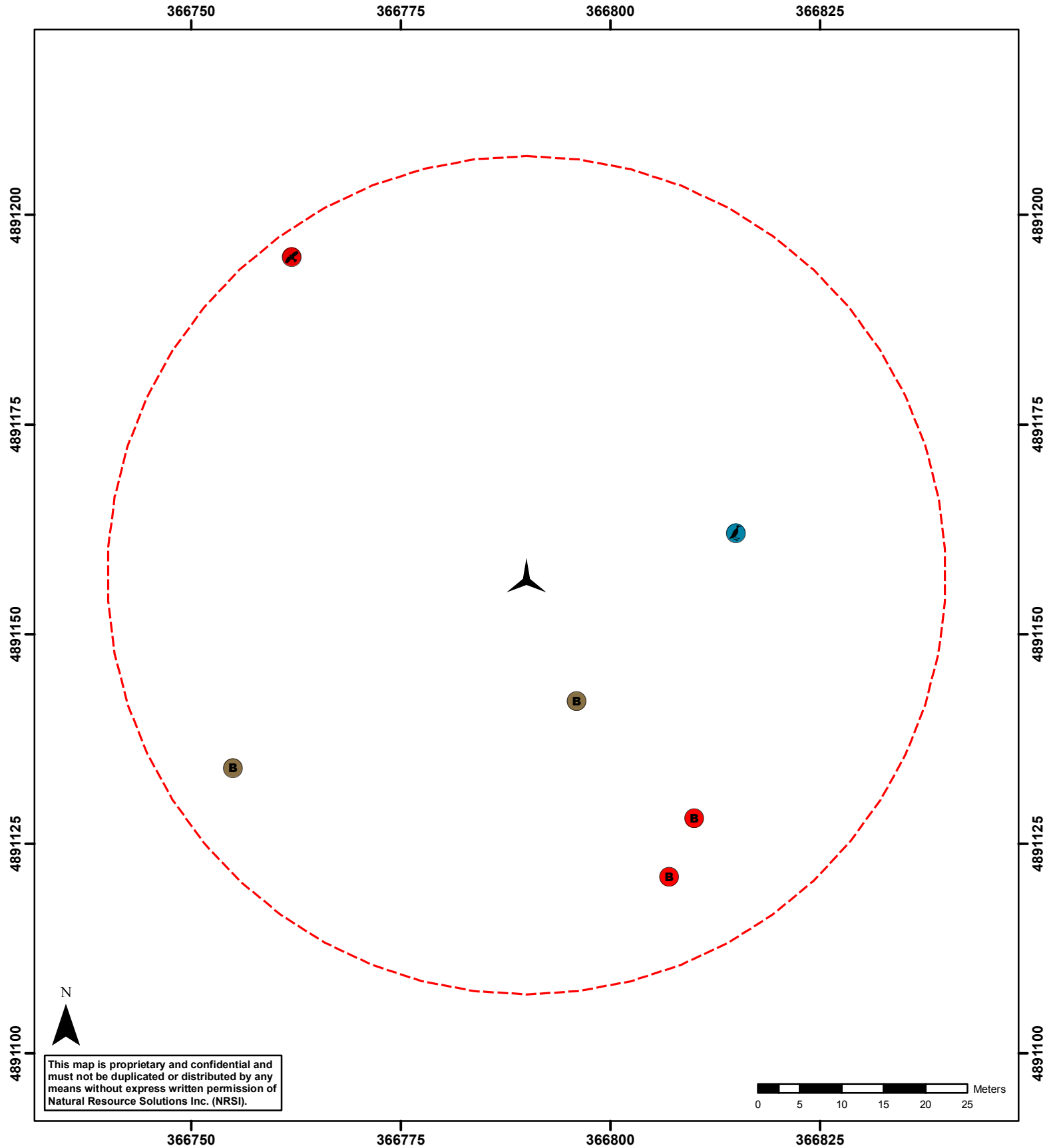
Amherst Island WP

Turbine S07 Mortalities 2021

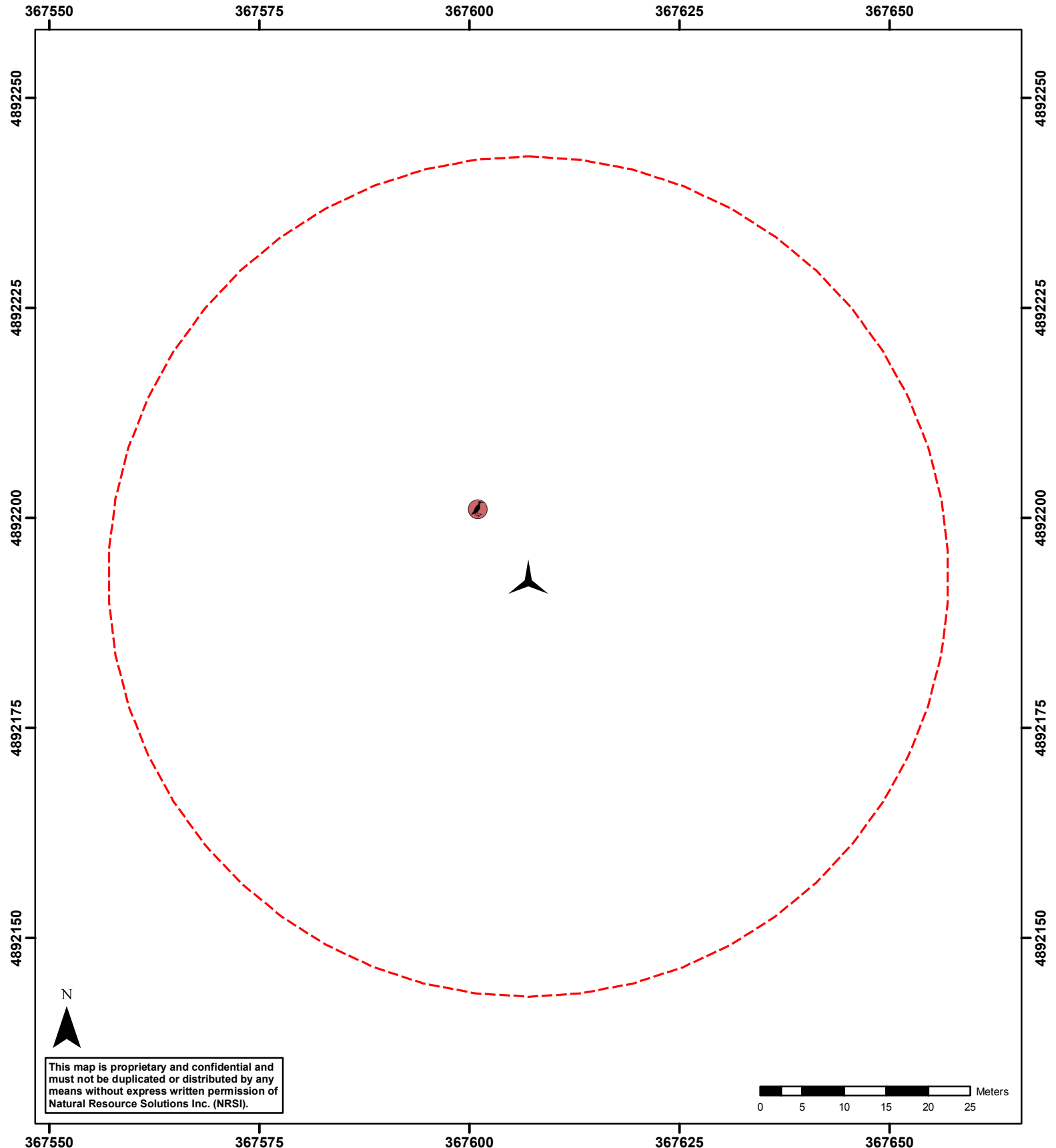
NAD83 - UTM Zone 18
Scale: 1:600 (8.5x11")

Date: February 4, 2022
Project: 2121F








Legend Turbine Search Radius Big Brown Bat Eastern Red Bat Eastern Kingbird Red-tailed Hawk		Appendix VI <h3>Amherst Island WP</h3> <h3>Turbine S14 Mortalities 2021</h3>	
NAD83 - UTM Zone 18 Scale: 1:600 (8.5x11")		Date: February 4, 2022 Project: 2121F	
NATURAL RESOURCE SOLUTIONS INC. <small>Aquatic, Terrestrial and Wetland Biologists</small>			



This map is proprietary and confidential and must not be duplicated or distributed by any means without express written permission of Natural Resource Solutions Inc. (NRSI).




- Legend**
-  Turbine
 -  Purple Martin
 -  Search Radius

Appendix VI

Amherst Island WP

Turbine S18 Mortalities 2021

NAD83 - UTM Zone 18 Scale: 1:600 (8.5x11")	Date: February 4, 2022 Project: 2121F
---	--

 **NATURAL RESOURCE SOLUTIONS INC.**
Aquatic, Terrestrial and Wetland Biologists

361400

361425

361450

361475

361500

4890700

4890700

4890675

4890675

4890650

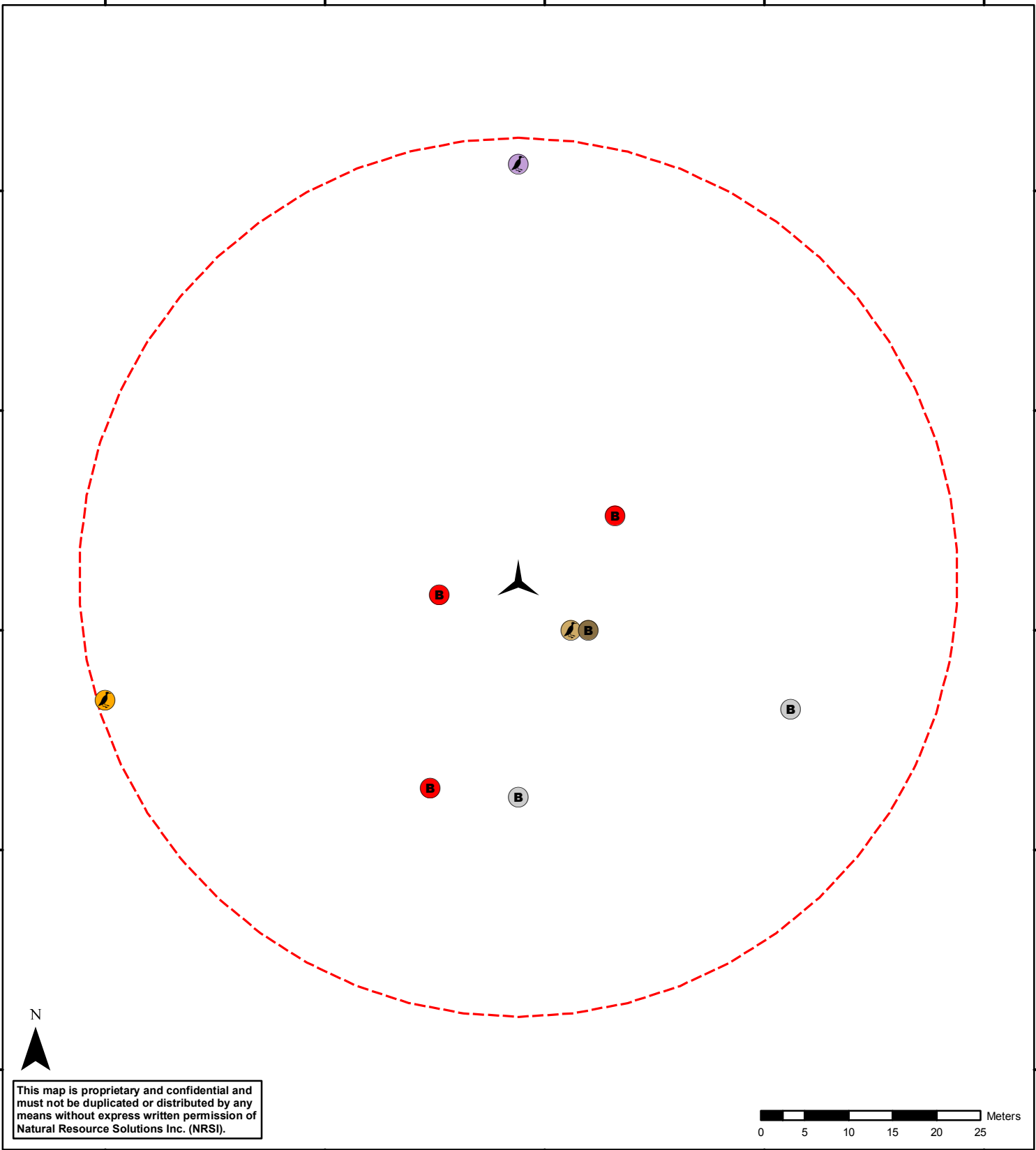
4890650

4890625

4890625

4890600

4890600



This map is proprietary and confidential and must not be duplicated or distributed by any means without express written permission of Natural Resource Solutions Inc. (NRSI).



Legend

- Turbine
- Big Brown Bat
- Golden-crowned Kinglet
- Eastern Red Bat
- Killdeer
- Silver-haired Bat
- Brown Creeper
- Search Radius

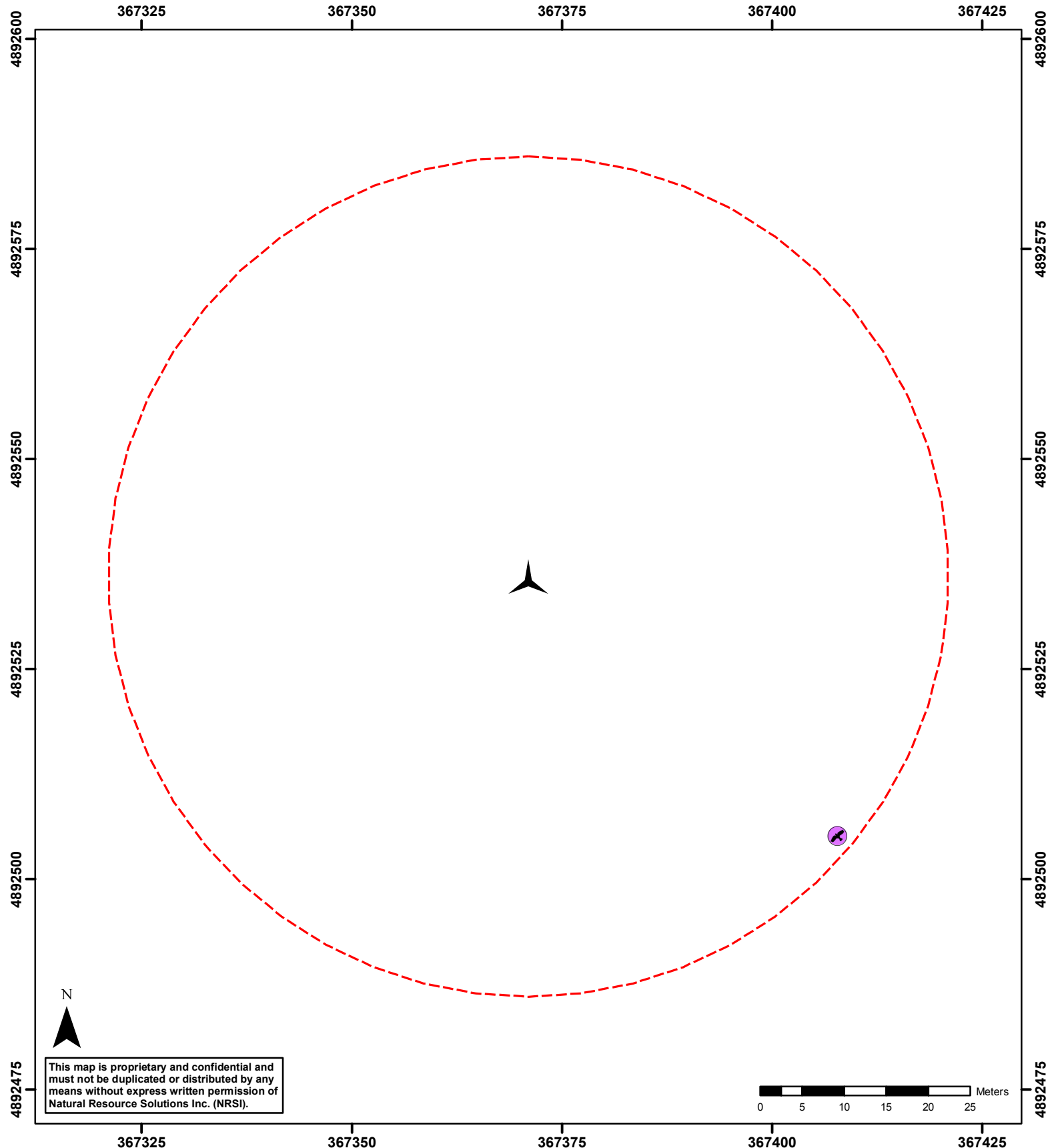
Appendix VI

Amherst Island WP
Turbine S22 Mortalities 2021

NAD83 - UTM Zone 18
Scale: 1:600 (8.5x11")





Date: February 4, 2022
Project: 2121F

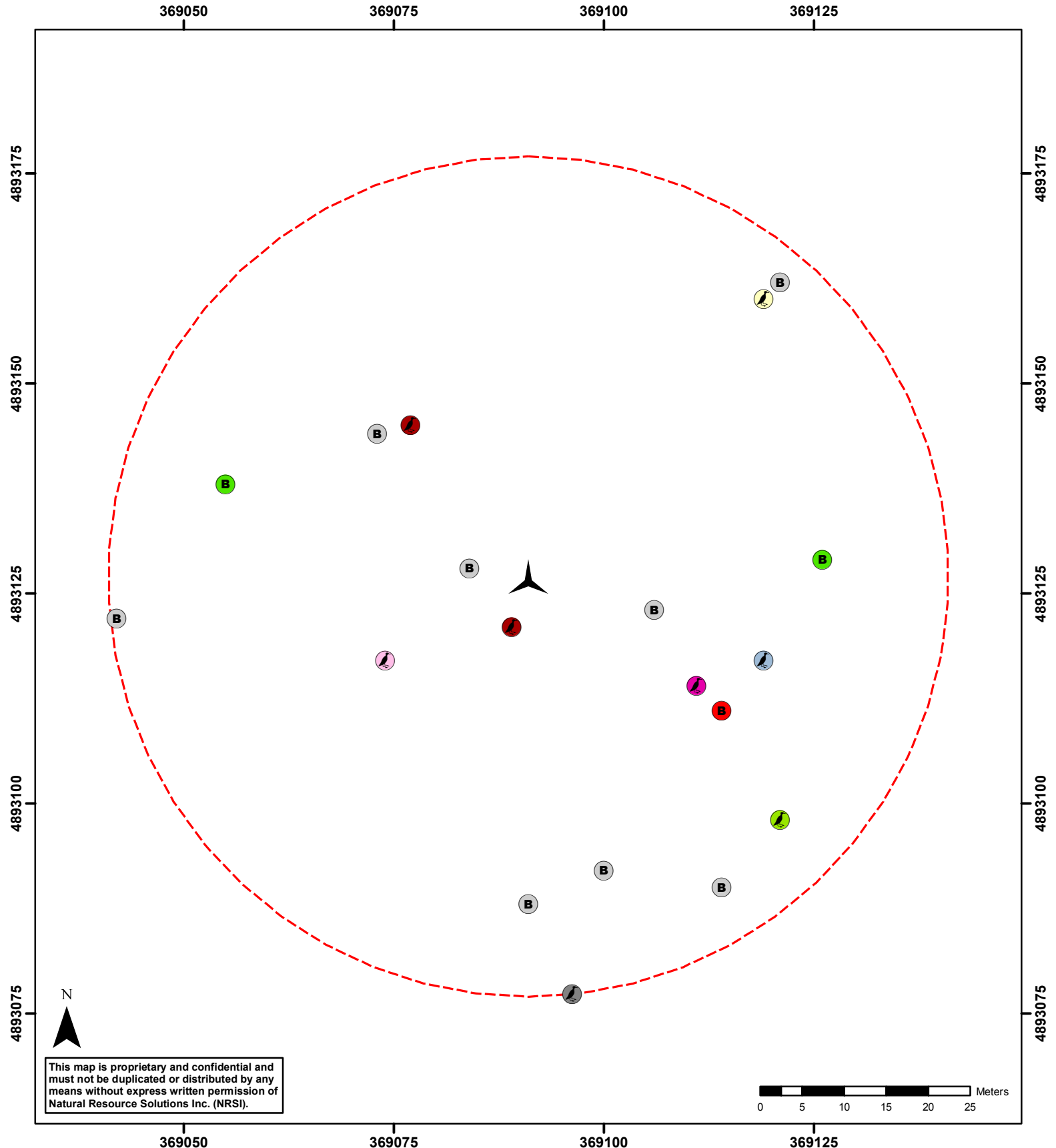




This map is proprietary and confidential and must not be duplicated or distributed by any means without express written permission of Natural Resource Solutions Inc. (NRSI).



Legend  Turbine  Rough-legged Hawk  Search Radius		Appendix VI Amherst Island WP Turbine S26 Mortalities 2021	
NAD83 - UTM Zone 18 Scale: 1:600 (8.5x11")		Date: February 4, 2022 Project: 2121F	
 NATURAL RESOURCE SOLUTIONS INC. <small>Aquatic, Terrestrial and Wetland Biologists</small>			



This map is proprietary and confidential and must not be duplicated or distributed by any means without express written permission of Natural Resource Solutions Inc. (NRSI).



- Legend**
- Turbine
 - Eastern Red Bat
 - Cedar Waxwing
 - Wilson's Snipe
 - Search Radius
 - Hoary Bat
 - Red-eyed Vireo
 - Yellow-bellied Flycatcher
 - Silver-haired Bat
 - Thrush sp.
 - Black-billed Cuckoo
 - Tree Swallow

Appendix VI

Amherst Island WP

Turbine S28 Mortalities 2021

NAD83 - UTM Zone 18 Scale: 1:600 (8.5x11")	Date: February 4, 2022 Project: 2121F
---	--

362300

362325

362350

362375

362400

4891075

4891075

4891050

4891050

4891025

4891025

4891000

4891000

4890975

4890975



This map is proprietary and confidential and must not be duplicated or distributed by any means without express written permission of Natural Resource Solutions Inc. (NRSI).



362300

362325

362350

362375

362400

Legend

-  Turbine
-  Red-tailed Hawk
-  Search Radius


Appendix VI

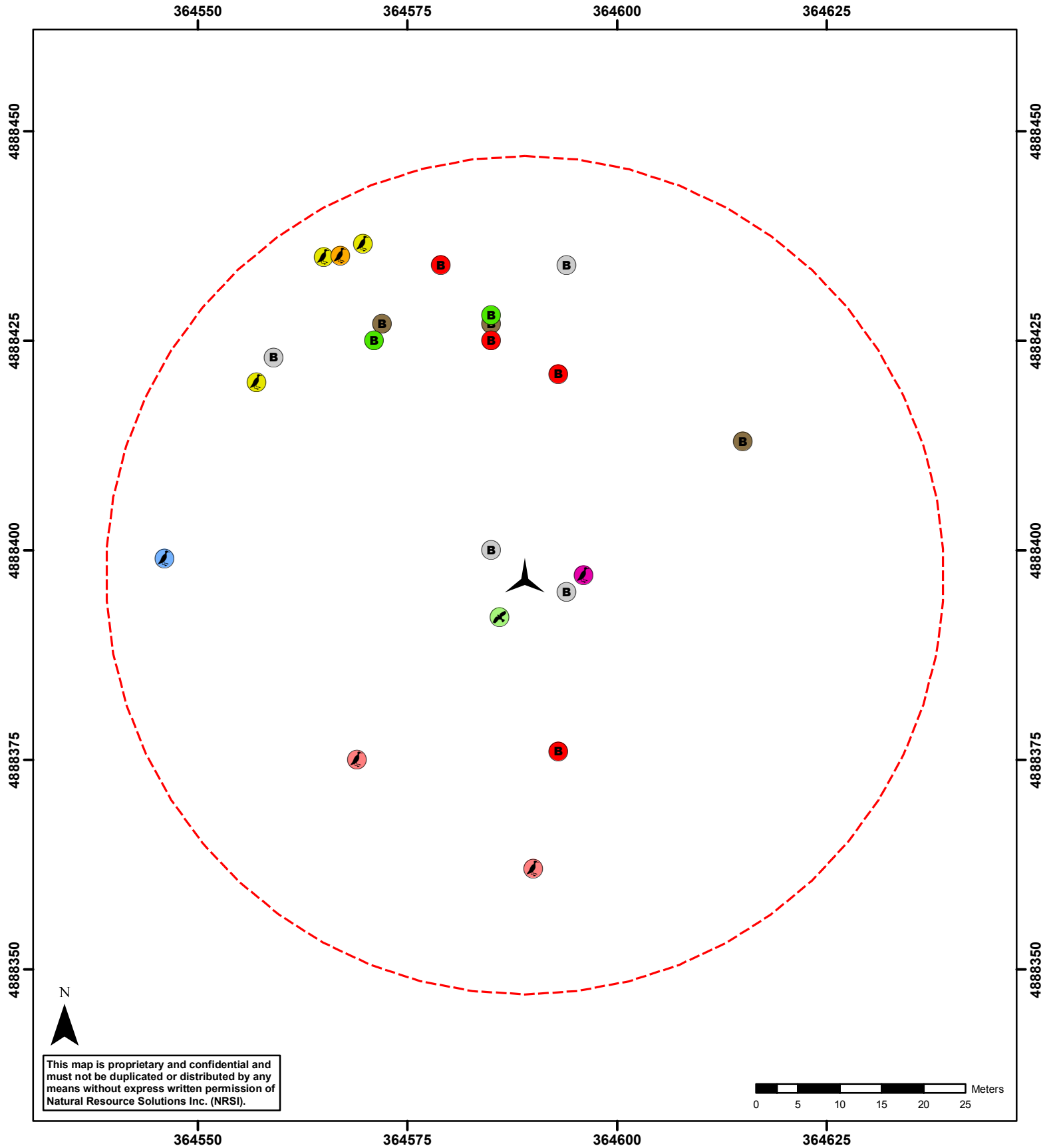
Amherst Island WP

Turbine S31 Mortalities 2021

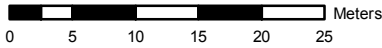
NAD83 - UTM Zone 18
Scale: 1:600 (8.5x11")

Date: February 4, 2022
Project: 2121F

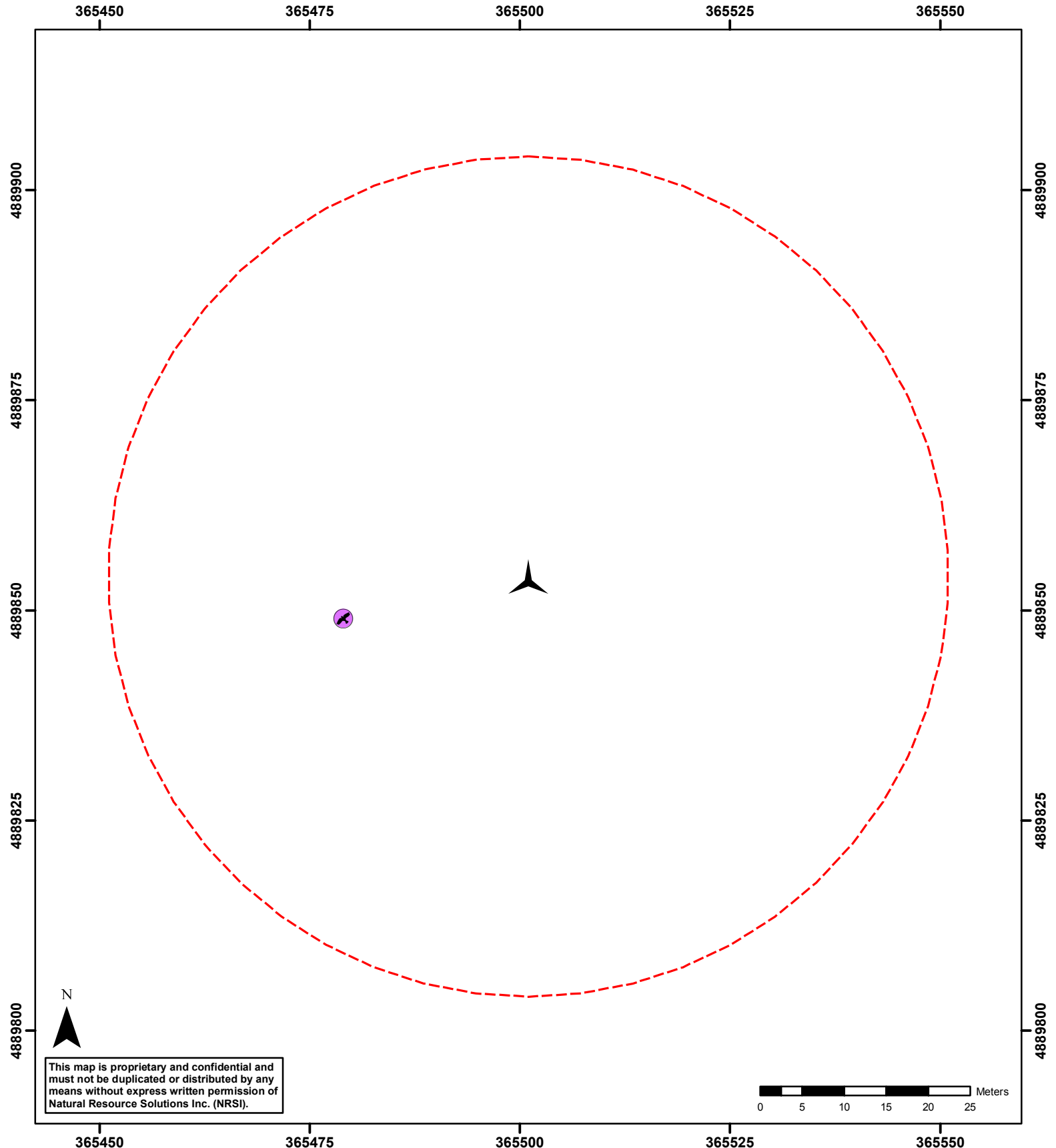
 **NATURAL RESOURCE SOLUTIONS INC.**
Aquatic, Terrestrial and Wetland Biologists



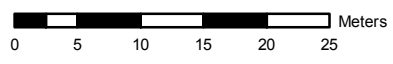
This map is proprietary and confidential and must not be duplicated or distributed by any means without express written permission of Natural Resource Solutions Inc. (NRSI).






Legend				Appendix VI	
Turbine	Big Brown Bat	Barn Swallow	Red-eyed Vireo	Amherst Island WP Turbine S36 Mortalities 2021	
Search Radius	Eastern Red Bat	Bobolink	Peregrine Falcon		
Hoary Bat	European Starling	Golden-crowned Kinglet		NAD83 - UTM Zone 18 Scale: 1:600 (8.5x11")	
Silver-haired Bat				Date: February 4, 2022 Project: 2121F	
				NATURAL RESOURCE SOLUTIONS INC. <small>Aquatic, Terrestrial and Wetland Biologists</small>	



This map is proprietary and confidential and must not be duplicated or distributed by any means without express written permission of Natural Resource Solutions Inc. (NRSI).



- Legend**
-  Turbine
 -  Rough-legged Hawk
 -  Search Radius

Appendix VI
Amherst Island WP
Turbine S37 Mortalities 2021

NAD83 - UTM Zone 18 Scale: 1:600 (8.5x11")	Date: February 4, 2022 Project: 2121F
---	--



Appendix VII
Visibility Class Mapping

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: SO1 Degree of Slope +0.5 degrees Slope Orientation N (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 226329
 Facing East: 220320
 Facing South: 220321
 Facing West: 220322
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 22/03/21
 Observer: JYB
 Monthly/Seasonal
 Linear Transect Width: 5 m

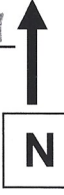
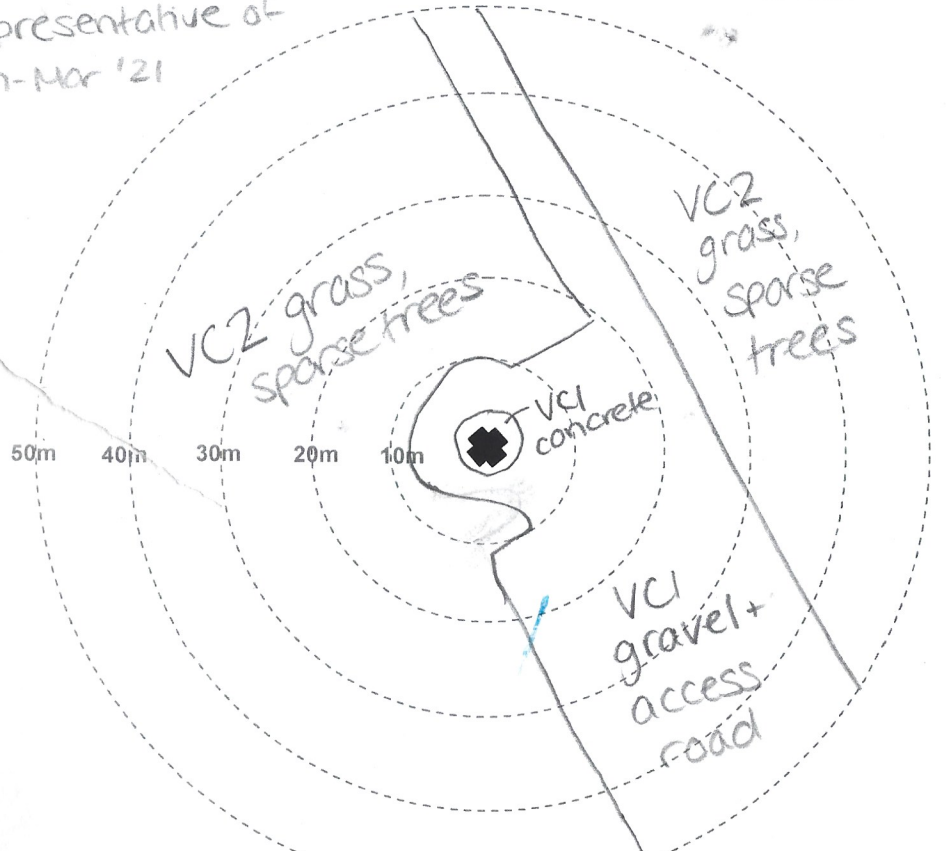


Photo Numbers (from turbine base)
 Facing North: 300409
 Facing East: 300410
 Facing South: 300411
 Facing West: 300412
 (sketch habitat and visibility classes)

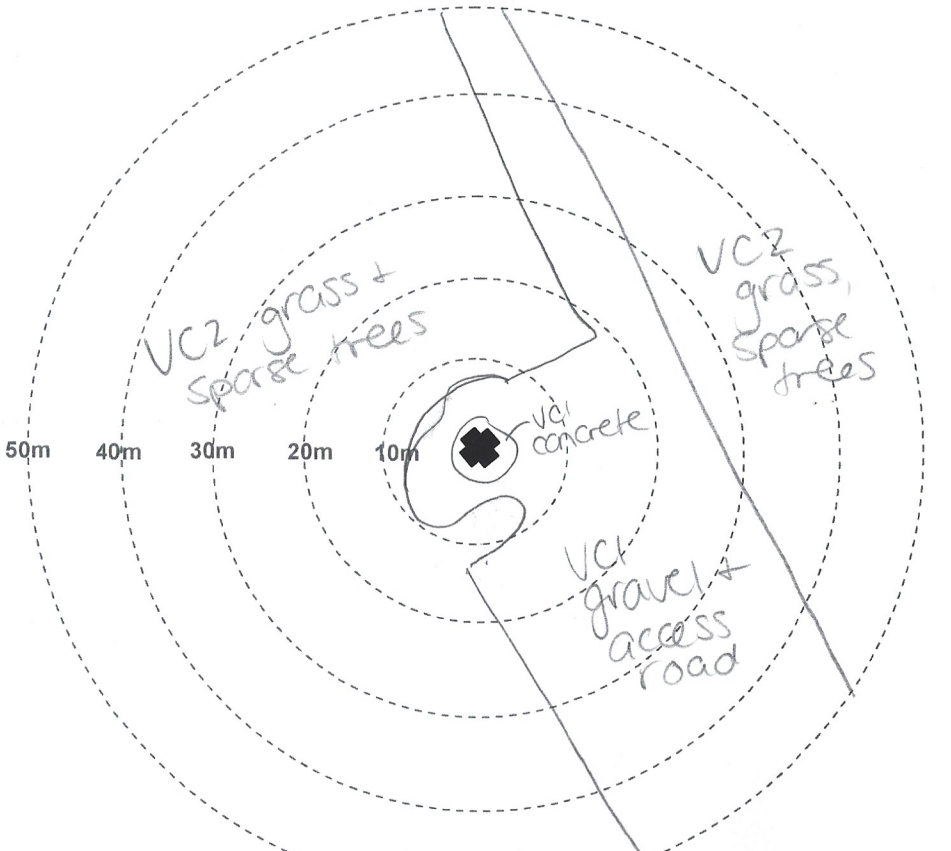
Date (DD/MM/YY): 30/04/21
 Observer: JYB
 Monthly/Seasonal
 Linear Transect Width: 5 m



Representative of
 Jan-Mar '21



General Habitat Description:
hayfield



General Habitat Description:
hayfield

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island W.P. Project #: 2121E Turbine #: 501 Degree of Slope +0.5 degrees Slope Orientation N (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 1
 Facing East: 2
 Facing South: 3
 Facing West: 4
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 27/05/21
 Observer: M.P.D
 Monthly/Seasonal
 Linear Transect Width: 5 m

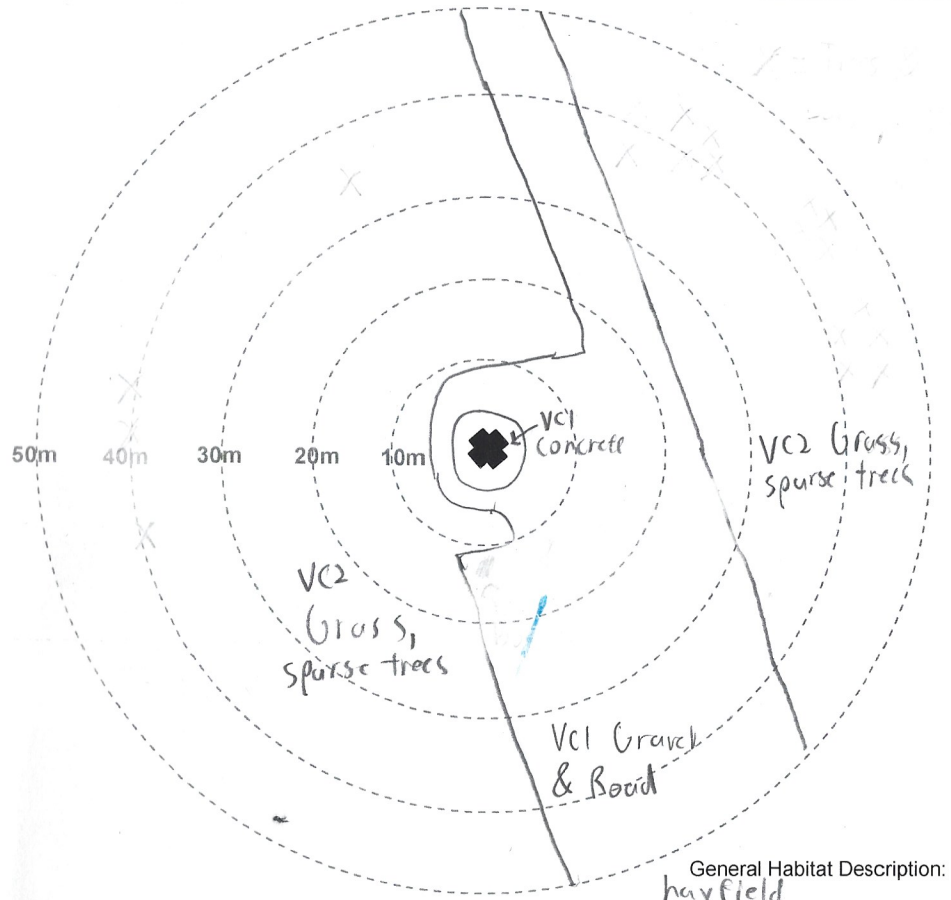
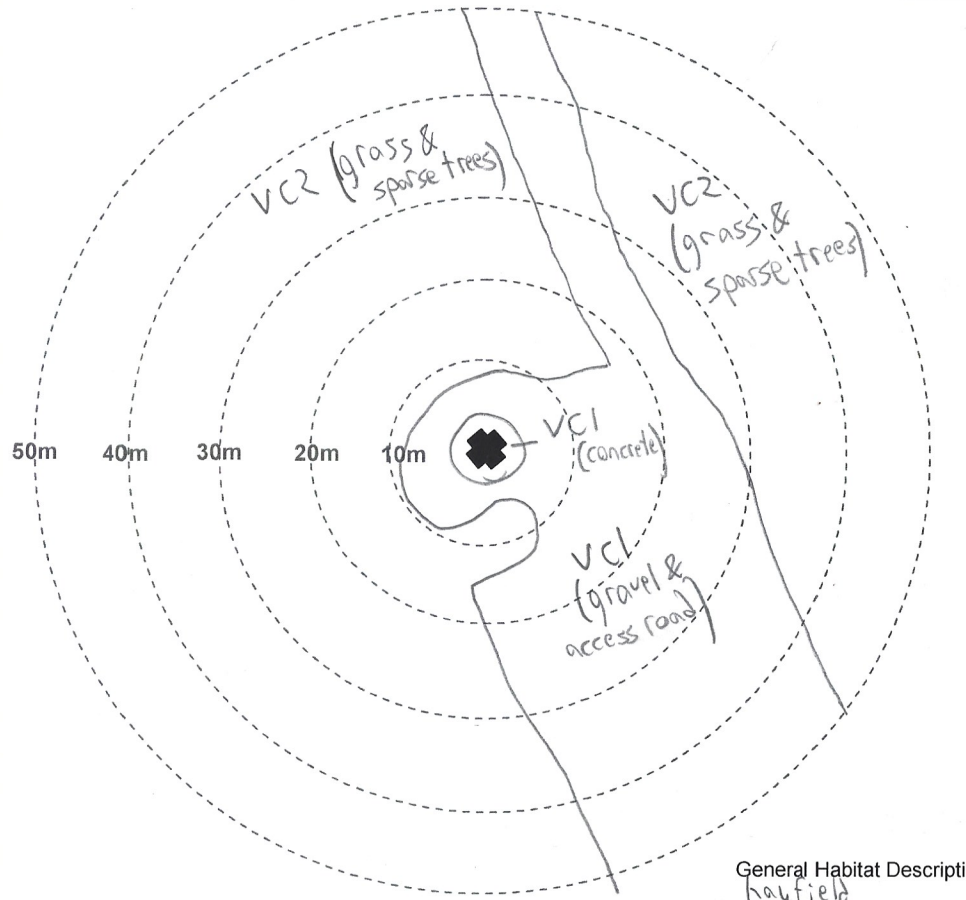
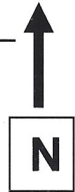


Photo Numbers (from turbine base)
 Facing North: 022
 Facing East: 023
 Facing South: 024
 Facing West: 025
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 07/06/21
 Observer: MCT
 Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: 501

Photo Numbers (from turbine base)
 Facing North: 192
 Facing East: 193
 Facing South: 194
 Facing West: 195
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 05/07/21
 Observer: MCT
 Monthly/Seasonal
 Linear Transect Width: 5 m

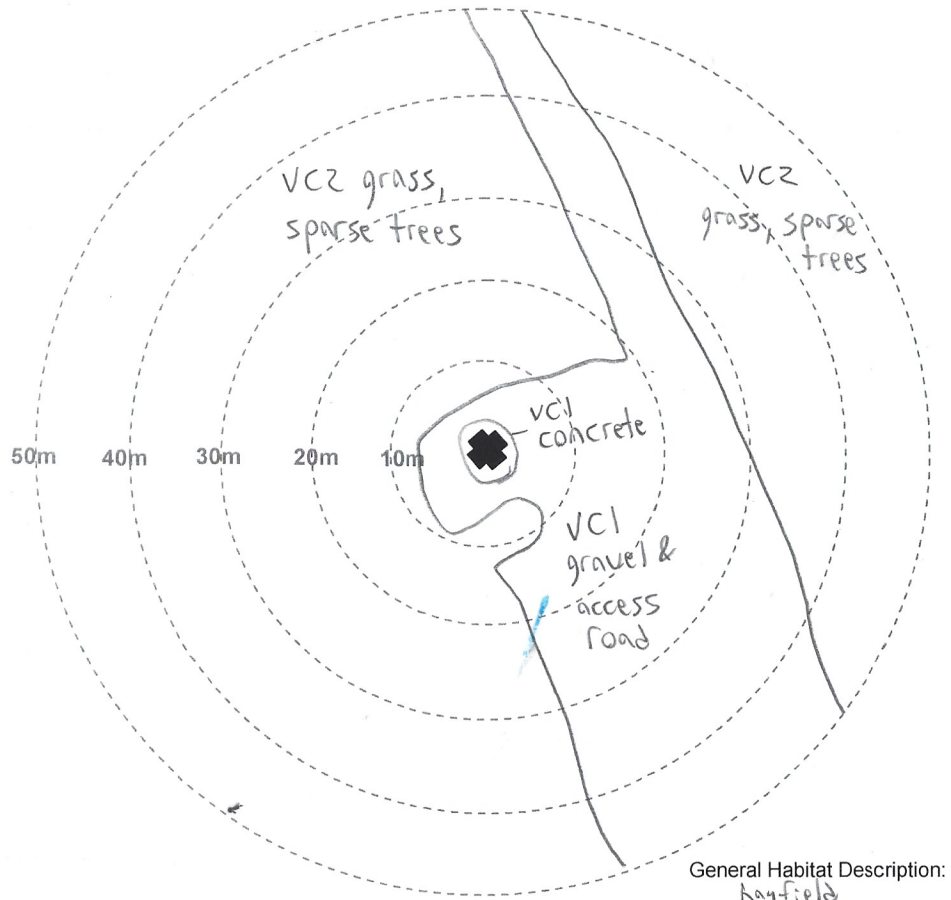
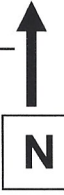
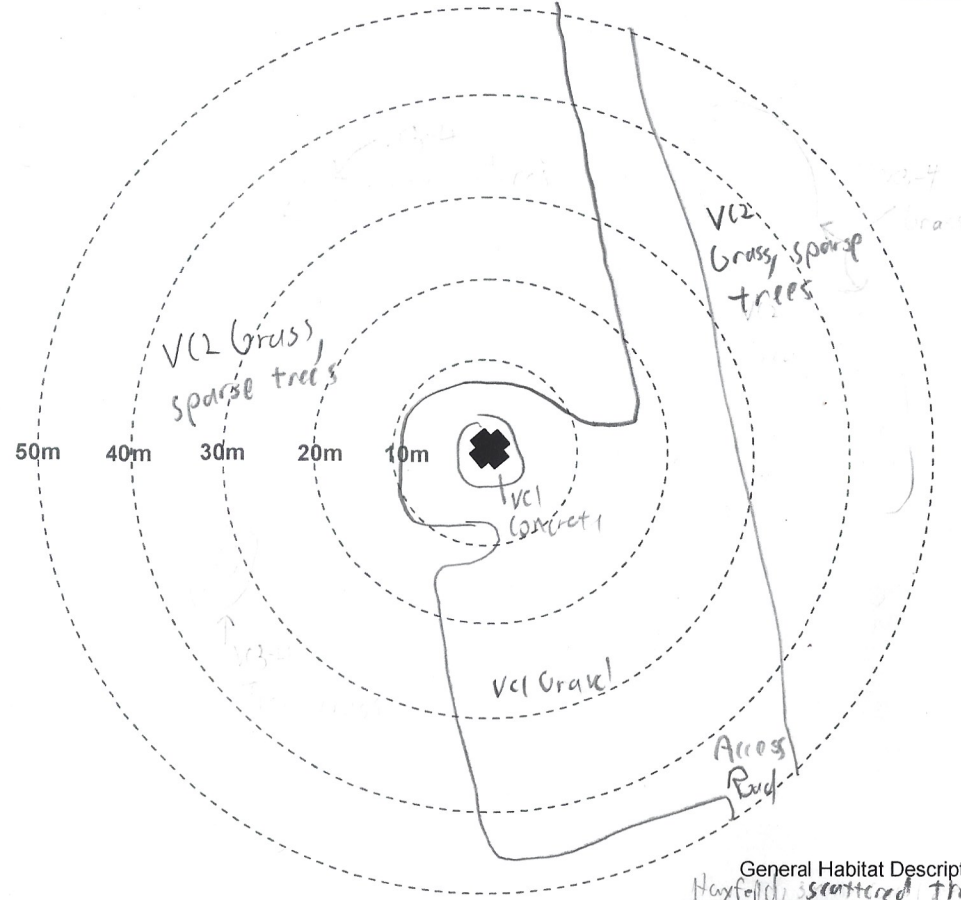


Photo Numbers (from turbine base)
 Facing North: 21
 Facing East: 22
 Facing South: 23
 Facing West: 24
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 12/08/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island W.P Project #: 2121D Turbine #: 501

Photo Numbers (from turbine base)
 Facing North: 09
 Facing East: 10
 Facing South: 11
 Facing West: 12
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 09/09/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m

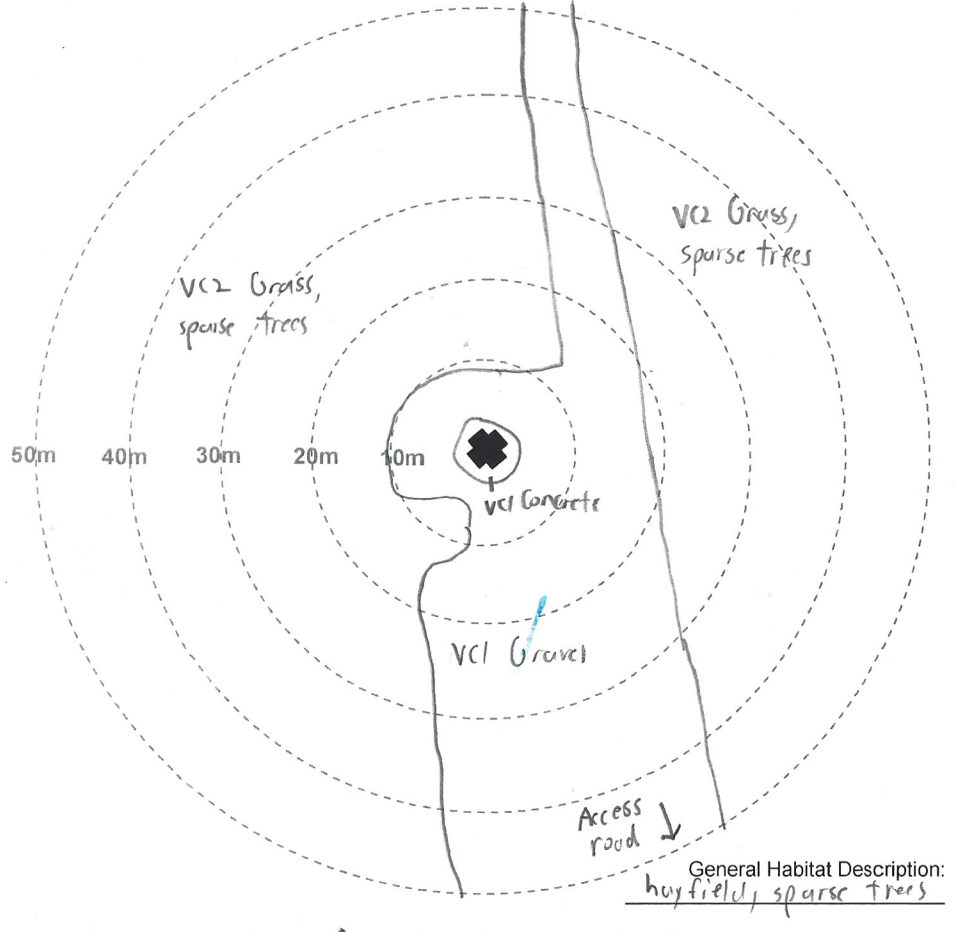
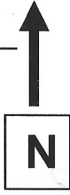
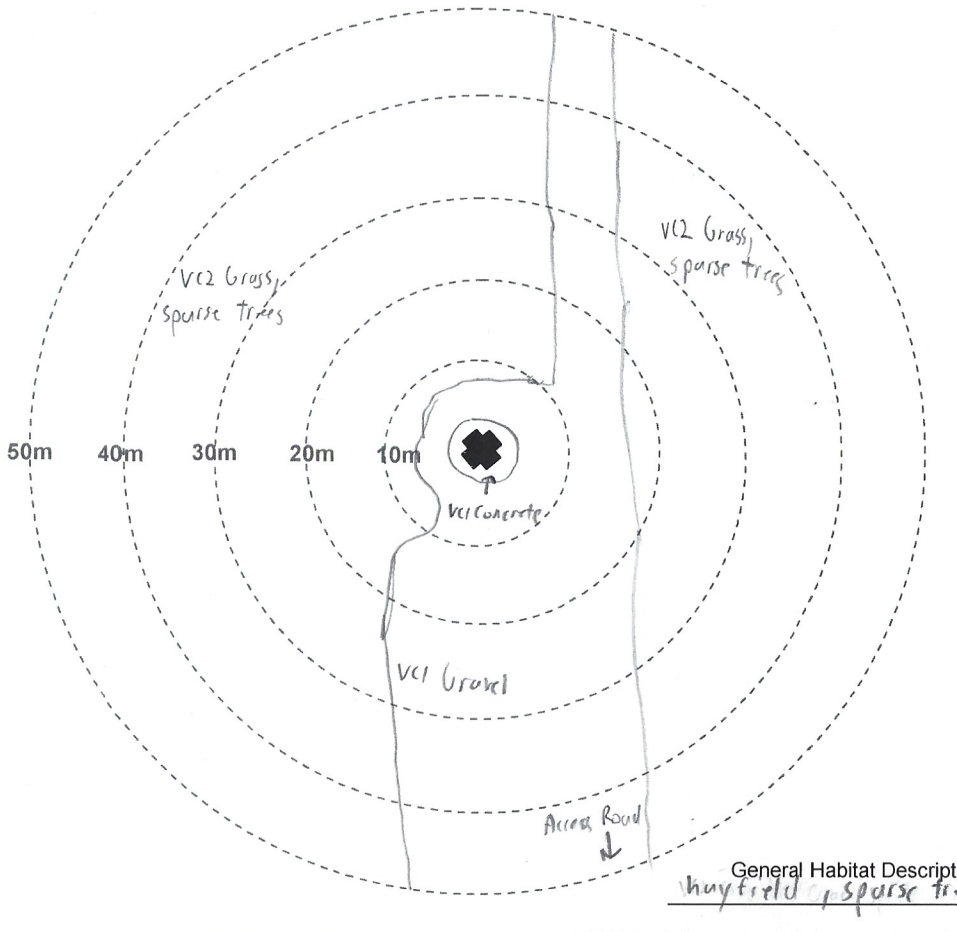


Photo Numbers (from turbine base)
 Facing North: 13
 Facing East: 14
 Facing South: 15
 Facing West: 16
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 07/10/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island W.P Project #: 2121E Turbine #: 501 Degree of Slope _____ degrees Slope Orientation _____ (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 09
 Facing East: 10
 Facing South: 11
 Facing West: 12
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 01/11/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m

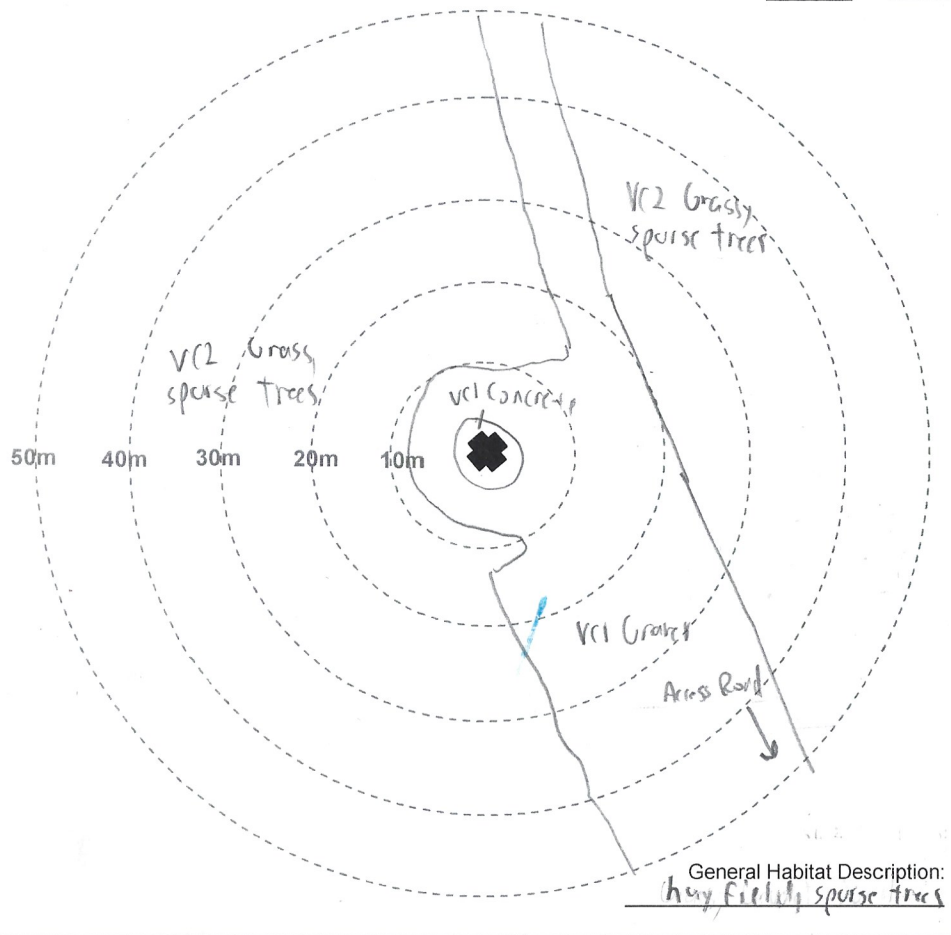
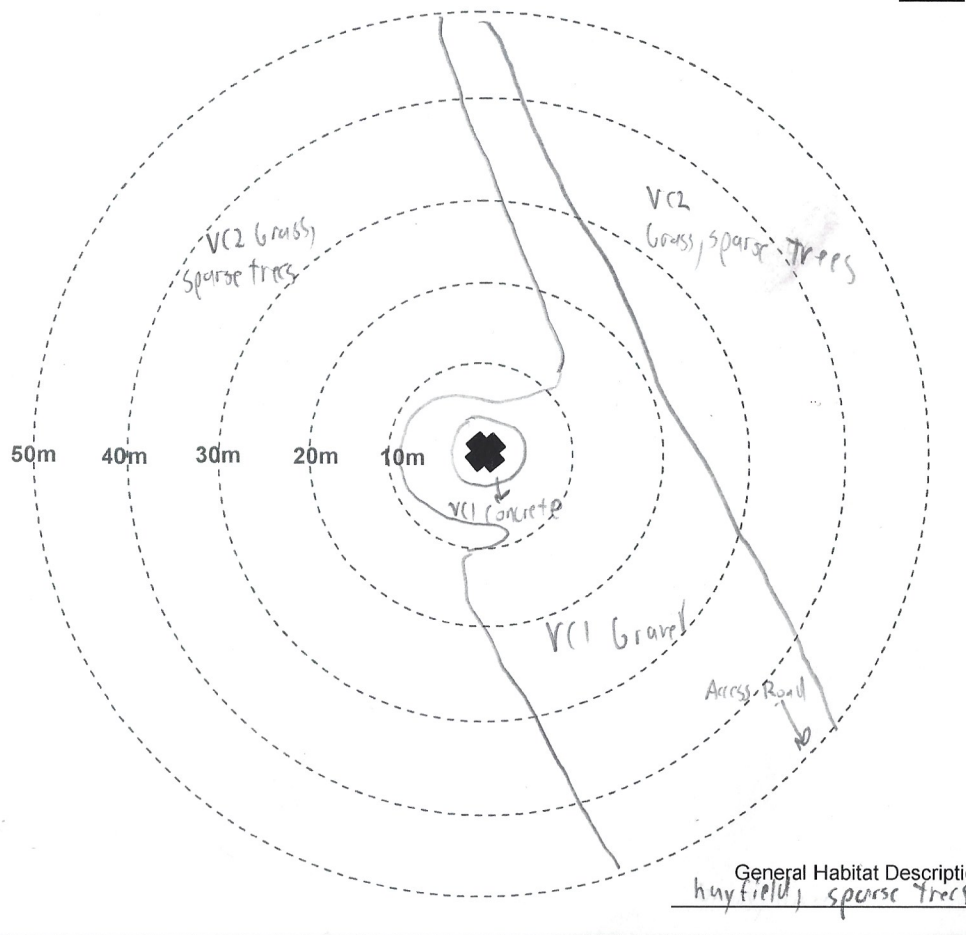
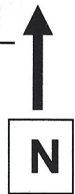


Photo Numbers (from turbine base)
 Facing North: 29
 Facing East: 30
 Facing South: 31
 Facing West: 32
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 14/12/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



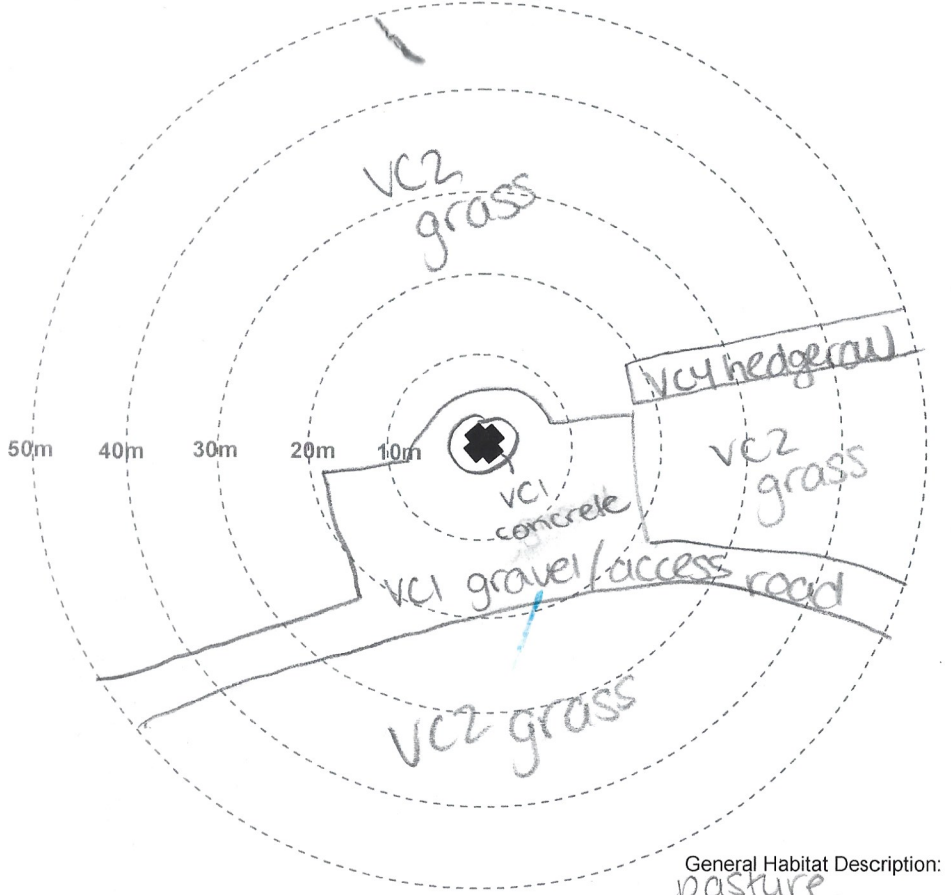
VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: 502 Degree of Slope +1.75 degrees Slope Orientation SE (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 230213
 Facing East: 230314
 Facing South: 230315
 Facing West: 230316
 (sketch habitat and visibility classes)

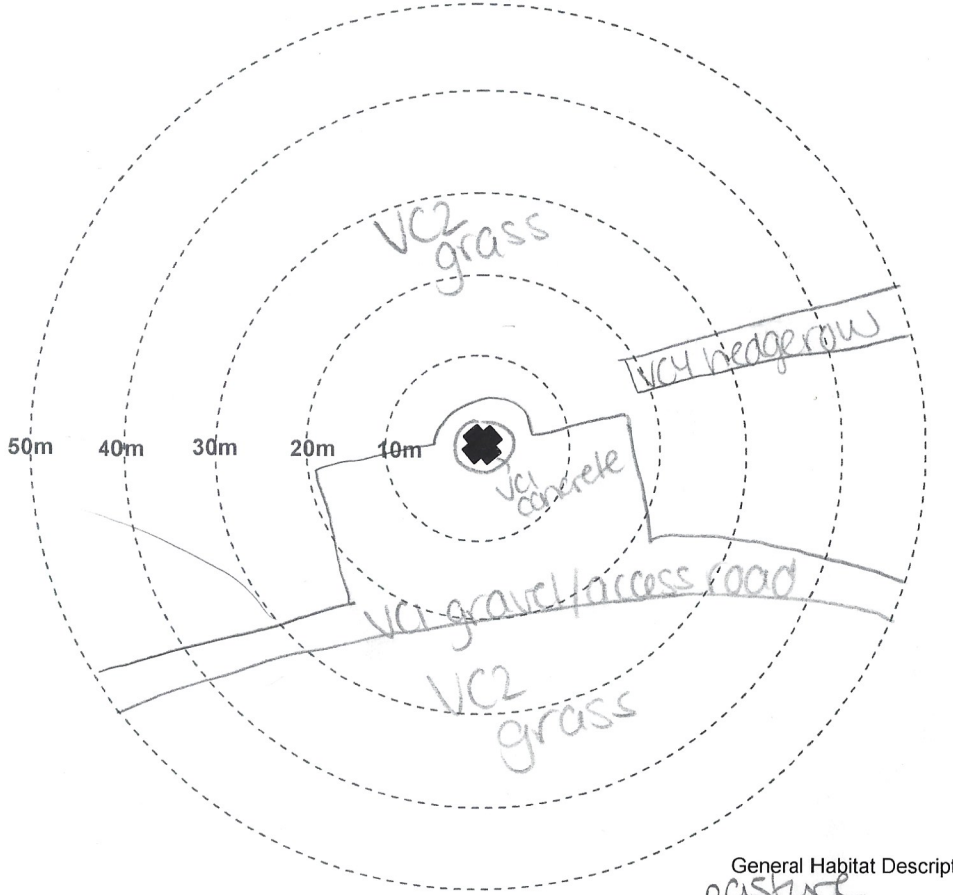
Date (DD/MM/YY): 23/03/21
 Observer: JJB
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
pasture

Photo Numbers (from turbine base)
 Facing North: 200421
 Facing East: 200422
 Facing South: 200423
 Facing West: 200424
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 30/04/21
 Observer: JJB
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
pasture

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island

Project #: 2121

Turbine #: 502

Photo Numbers (from turbine base)

Facing North: 8421

Facing East: 3850

Facing South: 3175

Facing West: 7134

(sketch habitat and visibility classes)

Date (DD/MM/YY): 27/05/21

Observer: KLB

Monthly/Seasonal

Linear Transect Width: 5 m

N

Photo Numbers (from turbine base)

Facing North: 5294

Facing East: 1750

Facing South: 3688

Facing West: 1168

(sketch habitat and visibility classes)

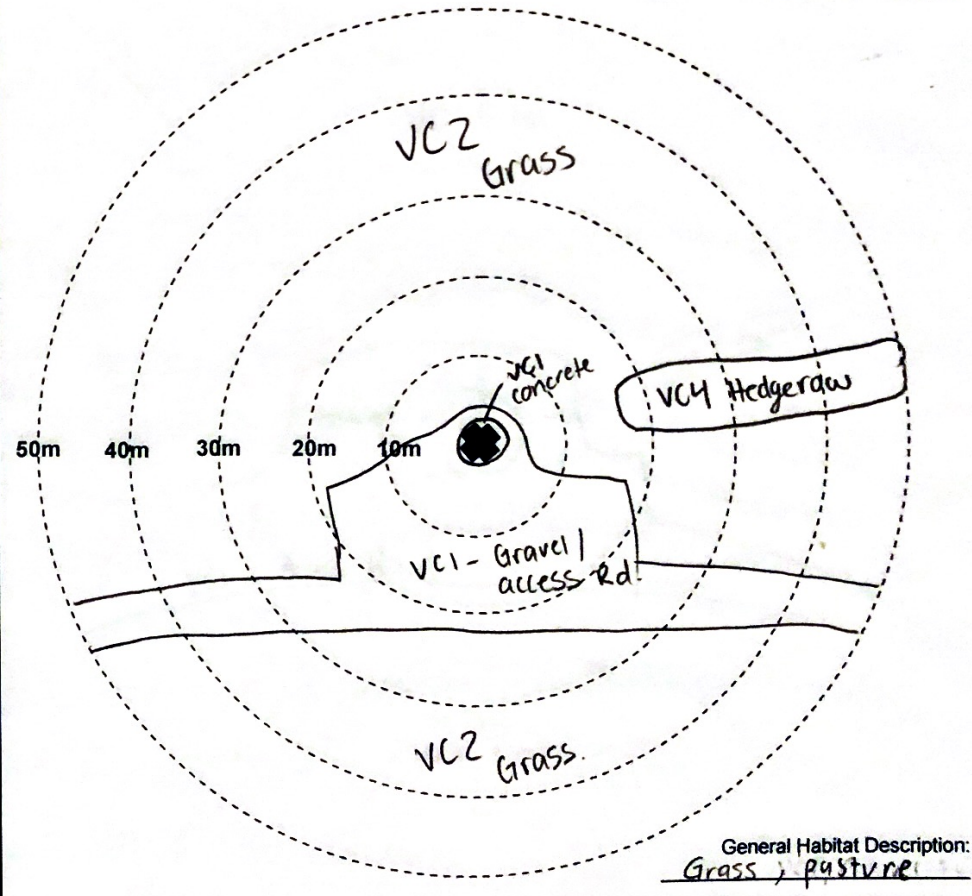
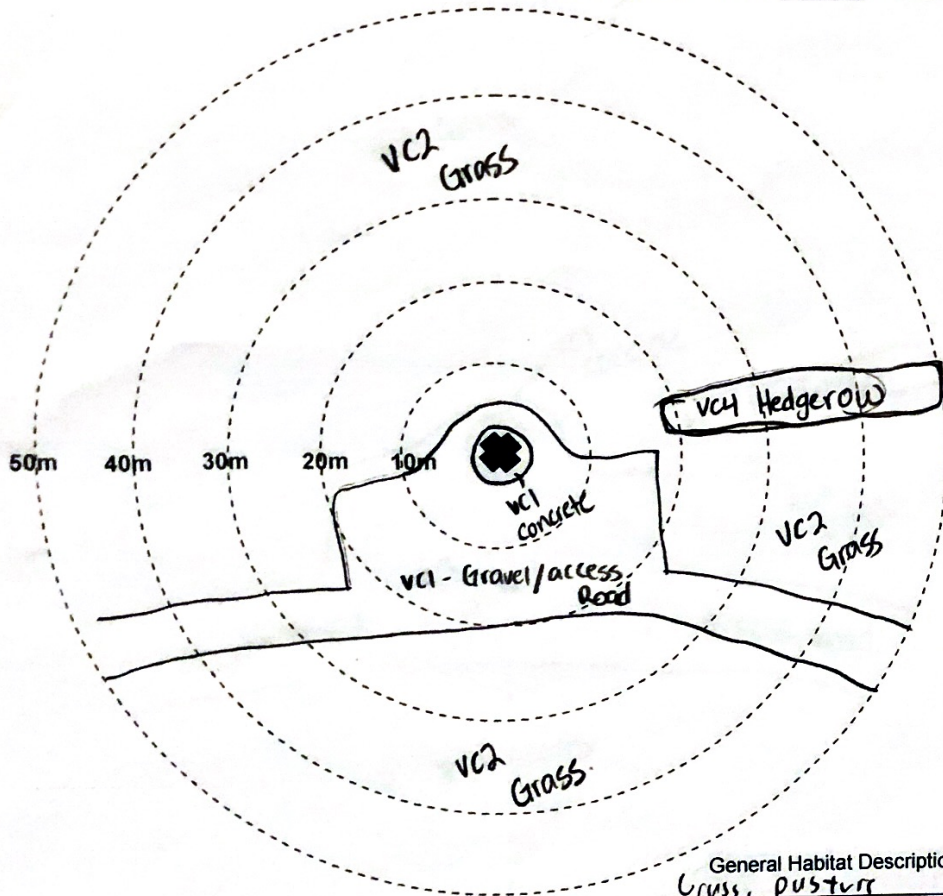
Date (DD/MM/YY): 07/06/21

Observer: KLB

Monthly/Seasonal

Linear Transect Width: 5 m

N



VISIBILITY CLASSES

Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island NP Project #: 2121F Turbine #: 502

Photo Numbers (from turbine base)
 Facing North: 5947
 Facing East: 0565
 Facing South: 9005
 Facing West: 7072
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 05/07/21
 Observer: KLB
 Monthly/Seasonal
 Linear Transect Width: 5 m

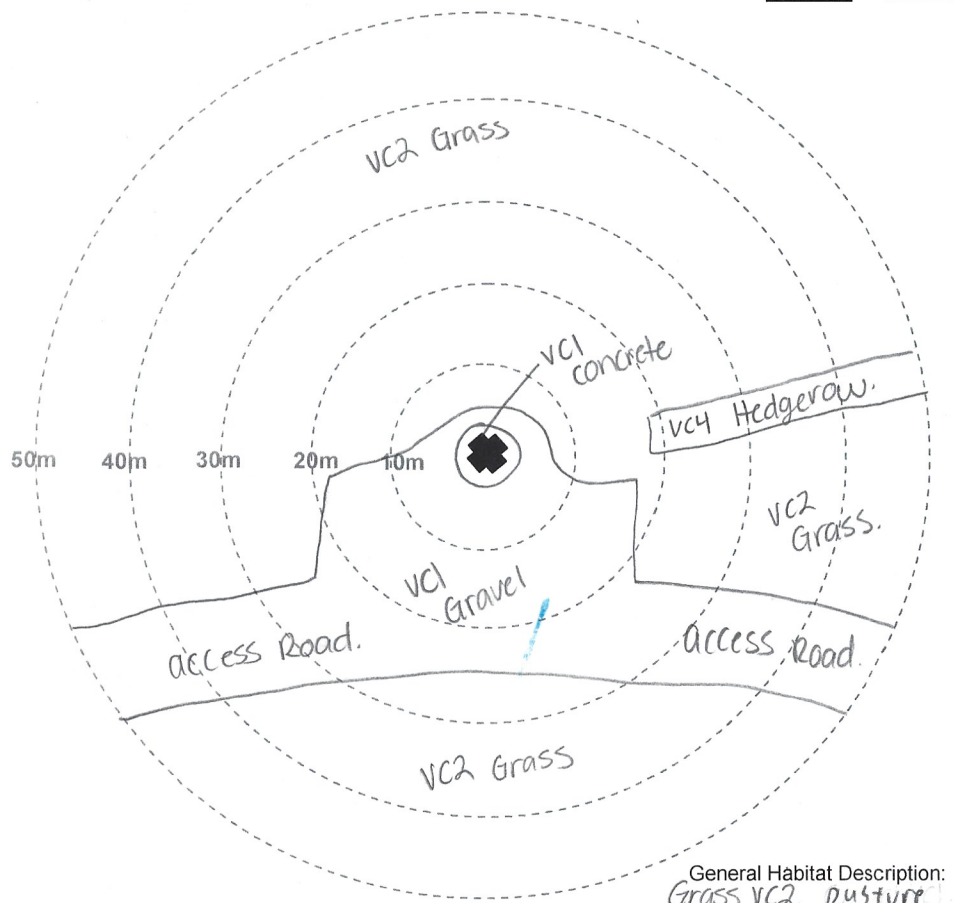
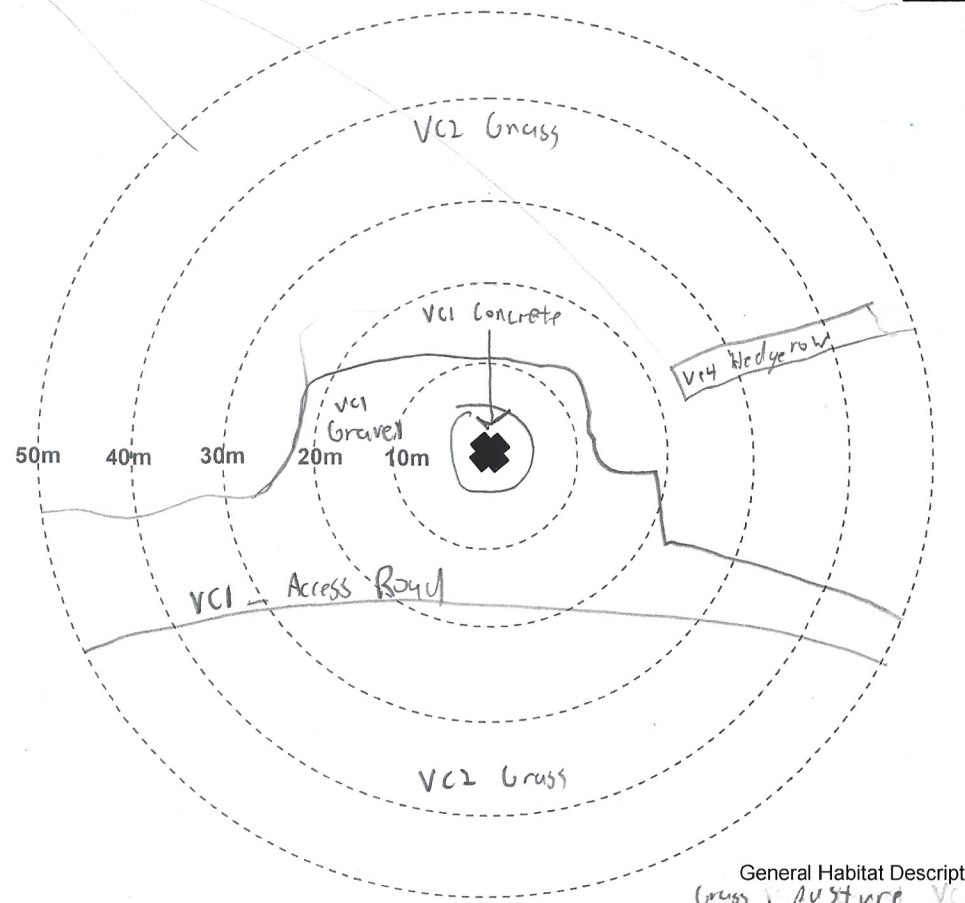


Photo Numbers (from turbine base)
 Facing North: 53
 Facing East: 54
 Facing South: 55
 Facing West: 56
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 09/08/21
 Observer: M.P.D
 Monthly/Seasonal
 Linear Transect Width: 5 m



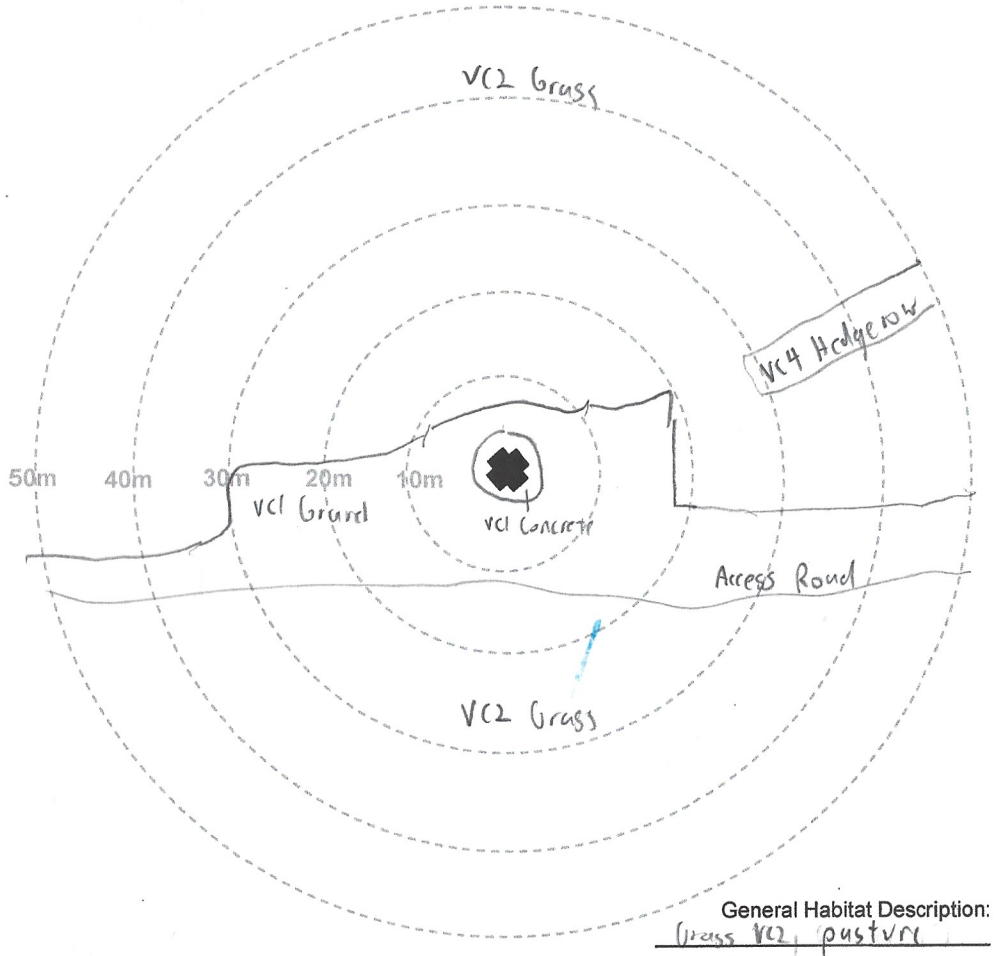
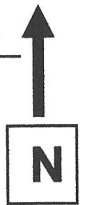
VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island W.P Project #: 2121F Turbine #: 502 Degree of Slope — degrees Slope Orientation — (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 14
 Facing East: 15
 Facing South: 16
 Facing West: 17
 (sketch habitat and visibility classes)

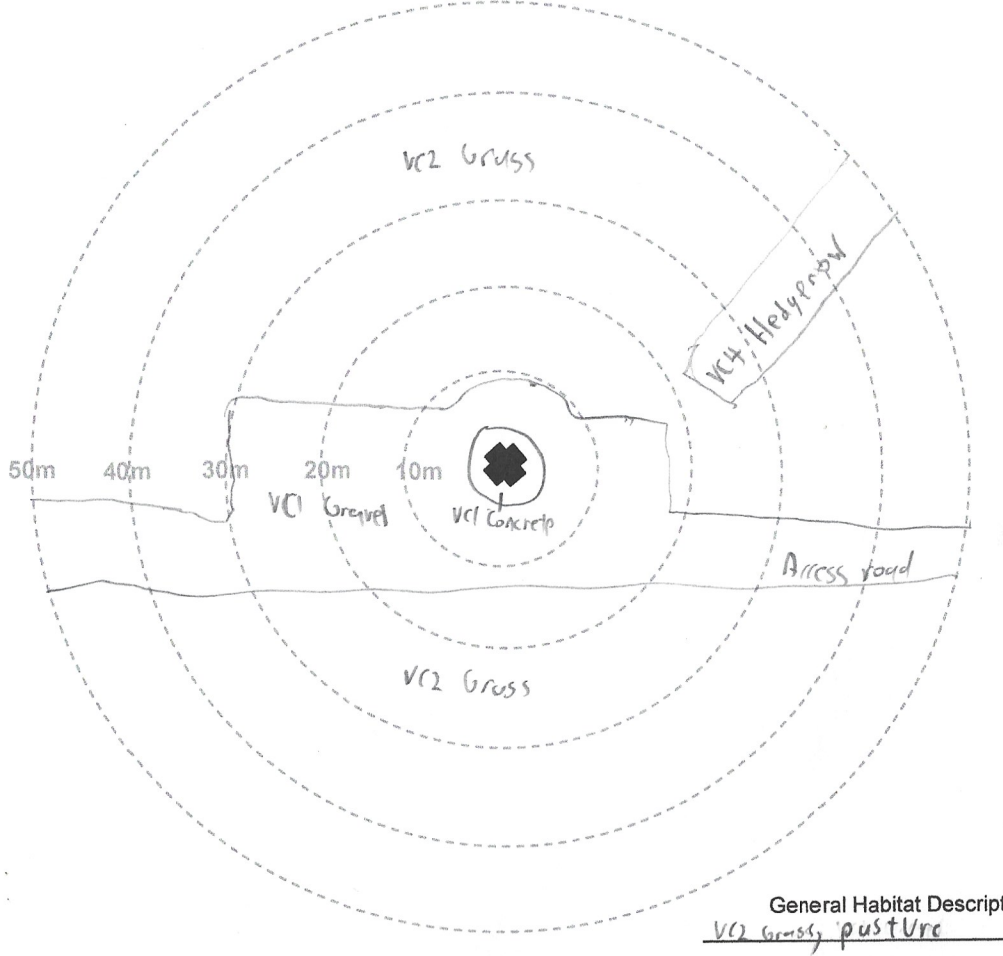
Date (DD/MM/YY): 06/09/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
Grass Vc2, pasture

Photo Numbers (from turbine base)
 Facing North: 09
 Facing East: 10
 Facing South: 11
 Facing West: 12
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 04/10/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
Vc2 Grass, pasture

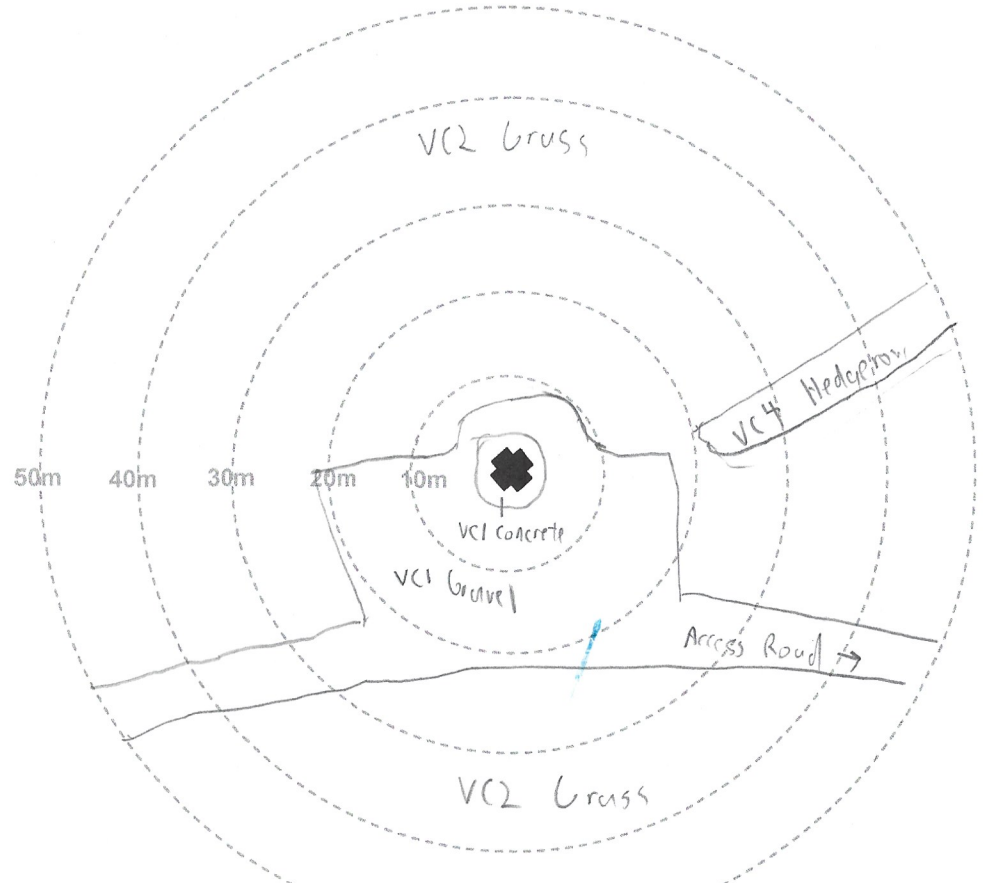
VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island W.P Project #: 2121R Turbine #: 502 Degree of Slope — degrees Slope Orientation — (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 03
 Facing East: 04
 Facing South: 05
 Facing West: 06
 (sketch habitat and visibility classes)

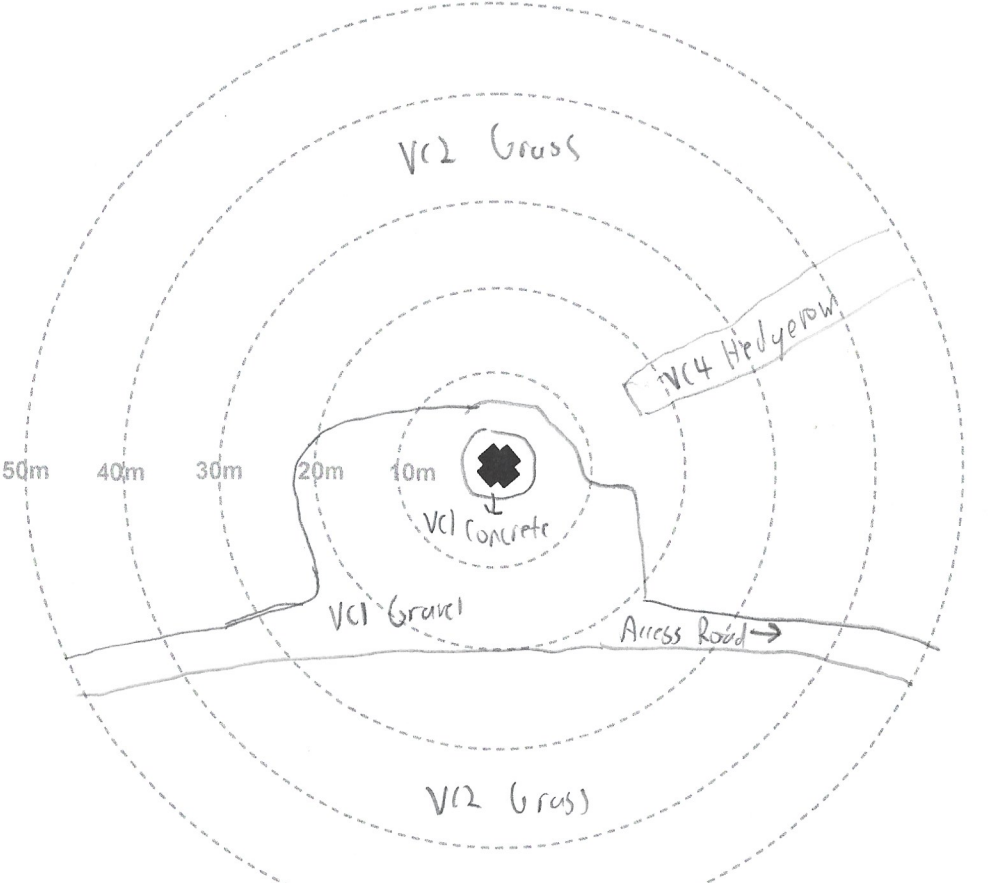
Date (DD/MM/YY): 08/11/21
 Observer: MPD
 Monthly/Seasonal Linear Transect Width: 5 m



General Habitat Description:
Grassy Pasture Gravel road

Photo Numbers (from turbine base)
 Facing North: 25
 Facing East: 26
 Facing South: 27
 Facing West: 28
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 07/12/21
 Observer: MPD
 Monthly/Seasonal Linear Transect Width: 5 m



General Habitat Description:
Grassy Pasture Gravel

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S03 Degree of Slope +2 degrees Slope Orientation SW (e.g. SSW)

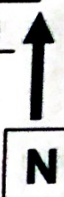
Photo Numbers (from turbine base)
 Facing North: 230329
 Facing East: 230330
 Facing South: 230331
 Facing West: 230332
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 23/03/24
 Observer: J4B
 Monthly/Seasonal
 Linear Transect Width: 5 m

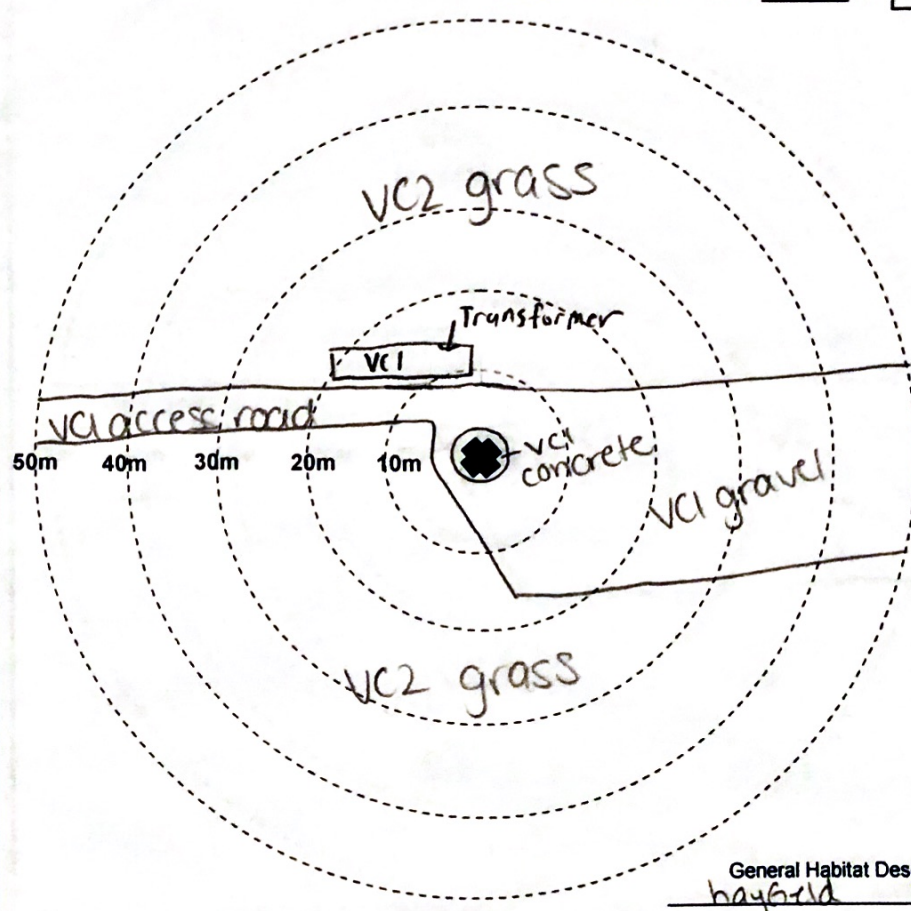
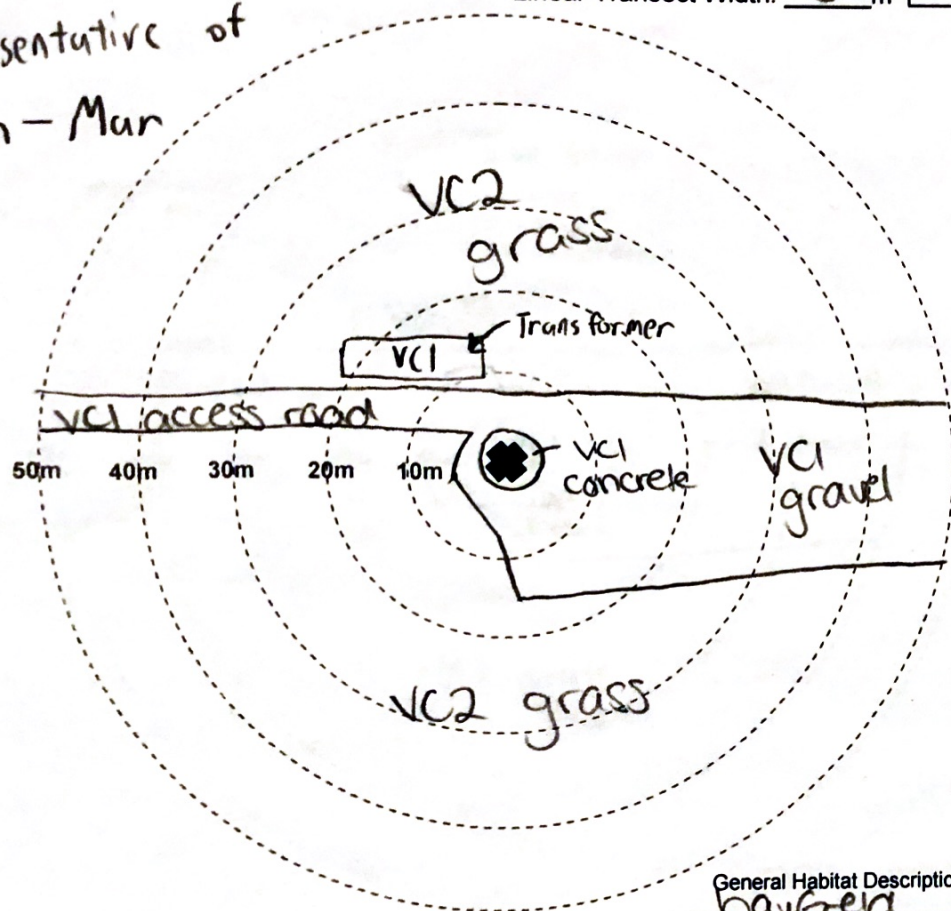


Photo Numbers (from turbine base)
 Facing North: 300413
 Facing East: 300414
 Facing South: 300415
 Facing West: 300416
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 30/04/21
 Observer: J4B
 Monthly/Seasonal
 Linear Transect Width: 5 m



representative of
 Jan - Mar



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Anherst Island W.P Project #: 2121F Turbine #: 503

Photo Numbers (from turbine base)
 Facing North: 5
 Facing East: 6
 Facing South: 7
 Facing West: 8
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 27/05/21

Observer: M.P.I

Monthly/Seasonal
 Linear Transect Width: 5 m

N

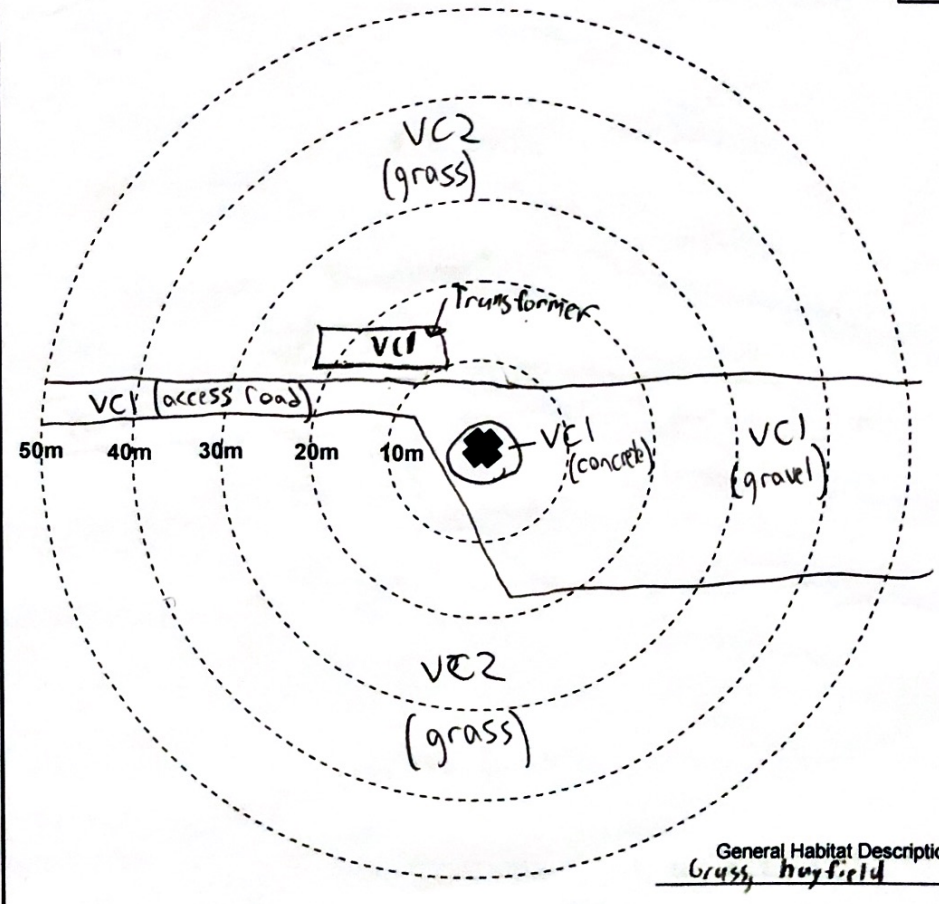
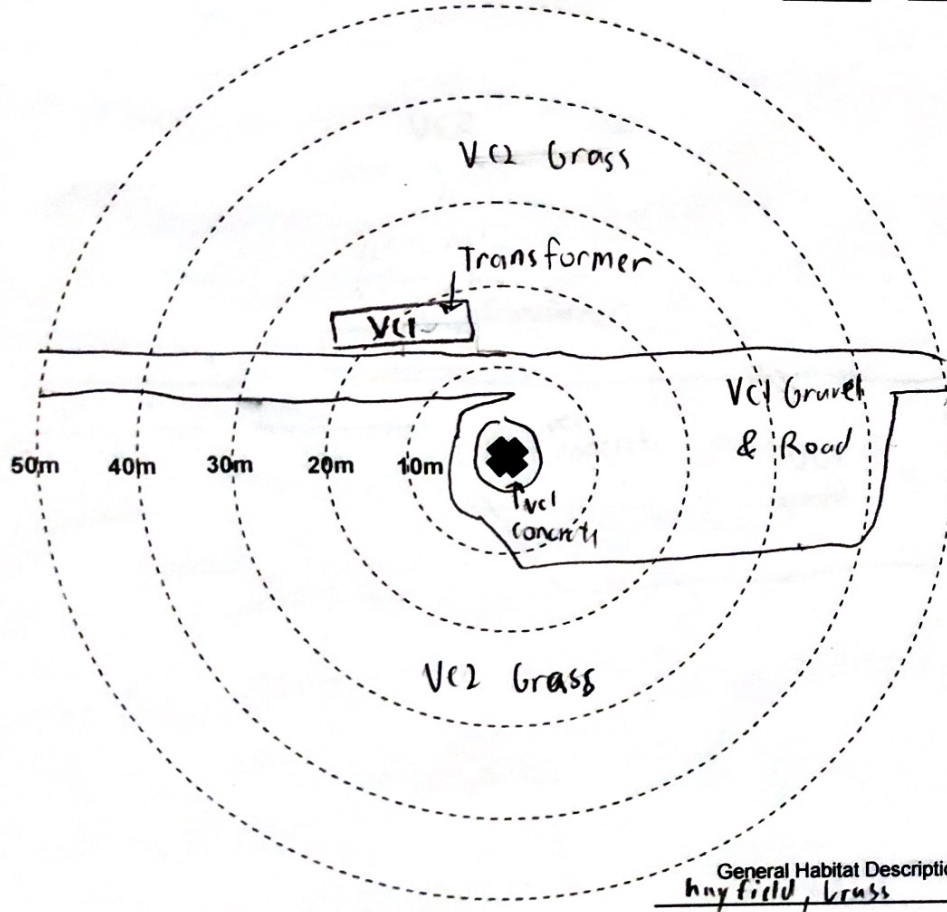
Photo Numbers (from turbine base)
 Facing North: 026
 Facing East: 027
 Facing South: 028
 Facing West: 029
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 07/06/21

Observer: MCT

Monthly/Seasonal
 Linear Transect Width: 5 m

N



VISIBILITY CLASSES

Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP

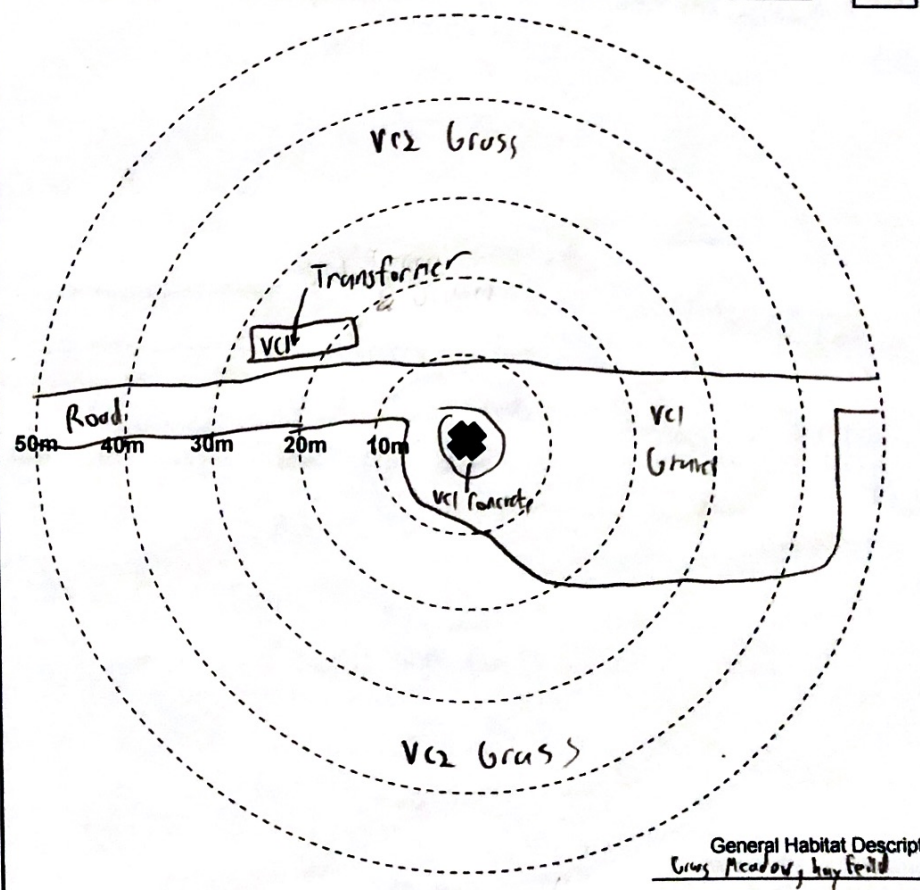
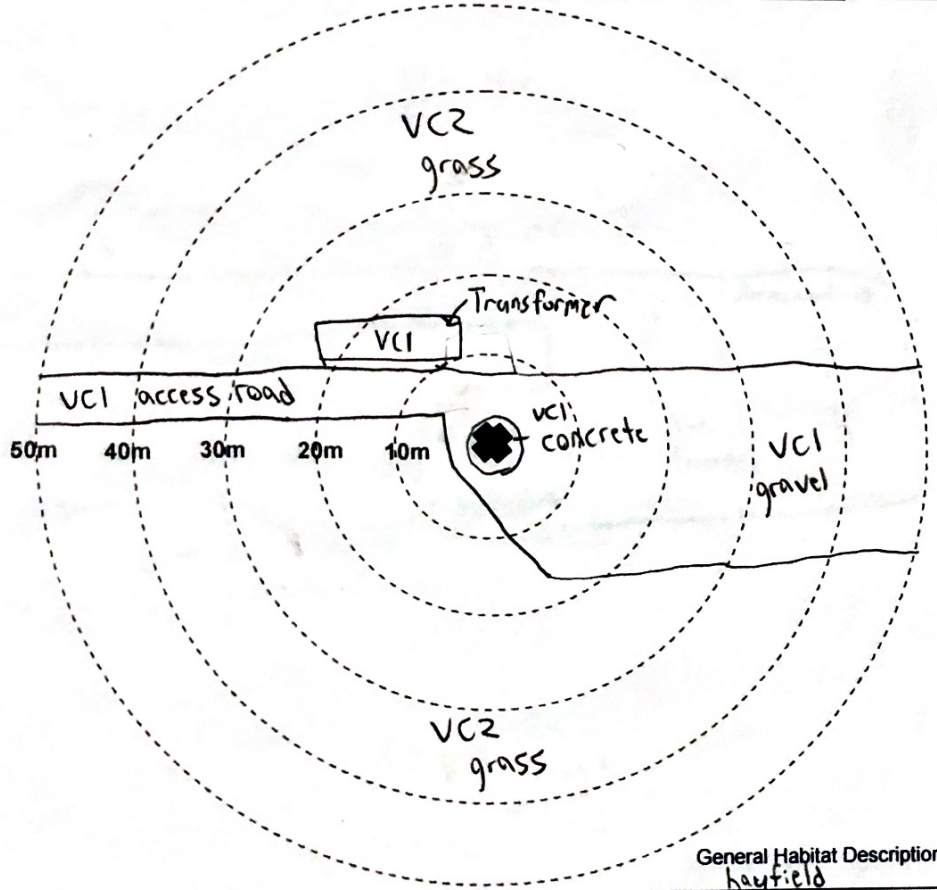
Project #: 2121F Turbine #: 503

Photo Numbers (from turbine base)
 Facing North: 198
 Facing East: 199
 Facing South: 200
 Facing West: 201
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 05/07/21 ↑
 Observer: MCT
 Monthly/Seasonal
 Linear Transect Width: 5 m **N**

Photo Numbers (from turbine base)
 Facing North: 30
 Facing East: 31
 Facing South: 32
 Facing West: 33
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 12/10/21 ↑
 Observer: MPI
 Monthly/Seasonal
 Linear Transect Width: 5 m **N**



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island V.P Project #: 2121E Turbine #: 503

Photo Numbers (from turbine base)

Facing North: 19
 Facing East: 20
 Facing South: 21
 Facing West: 22

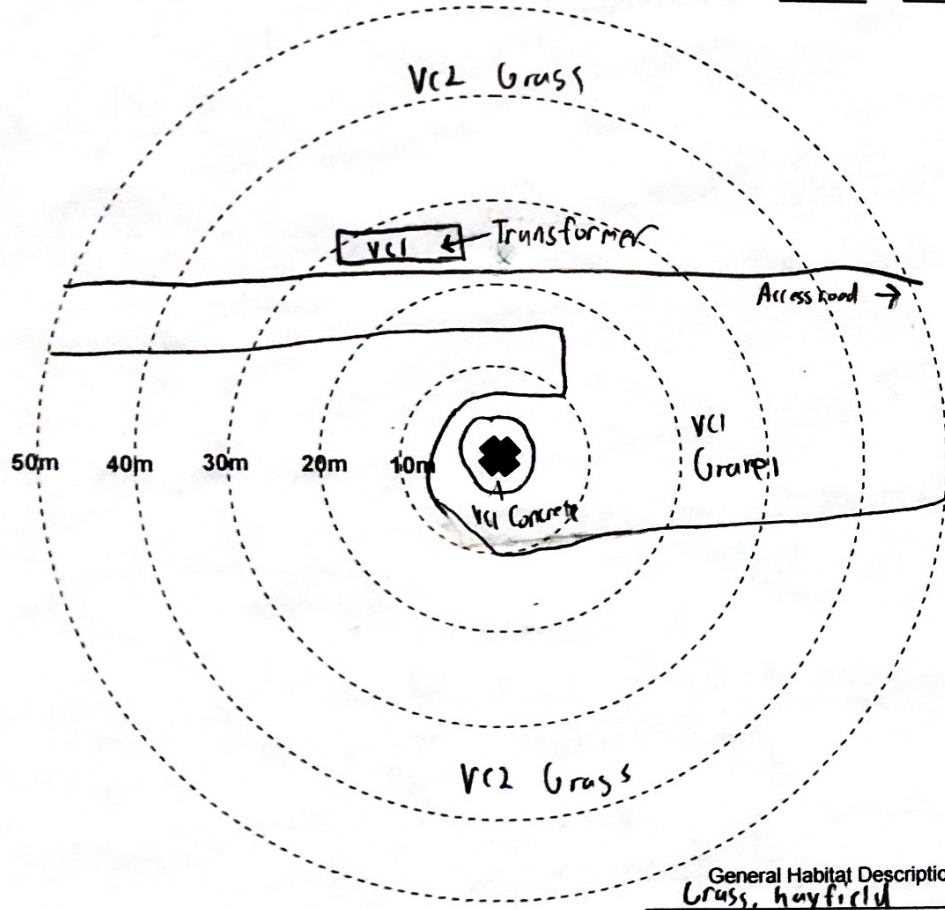
(sketch habitat and visibility classes)

Date (DD/MM/YY): 09/09/21

Observer: MPD

Monthly/Seasonal
 Linear Transect Width: 5 m

N



General Habitat Description:
Grass, hayfield

Photo Numbers (from turbine base)

Facing North: 19
 Facing East: 20
 Facing South: 21
 Facing West: 22

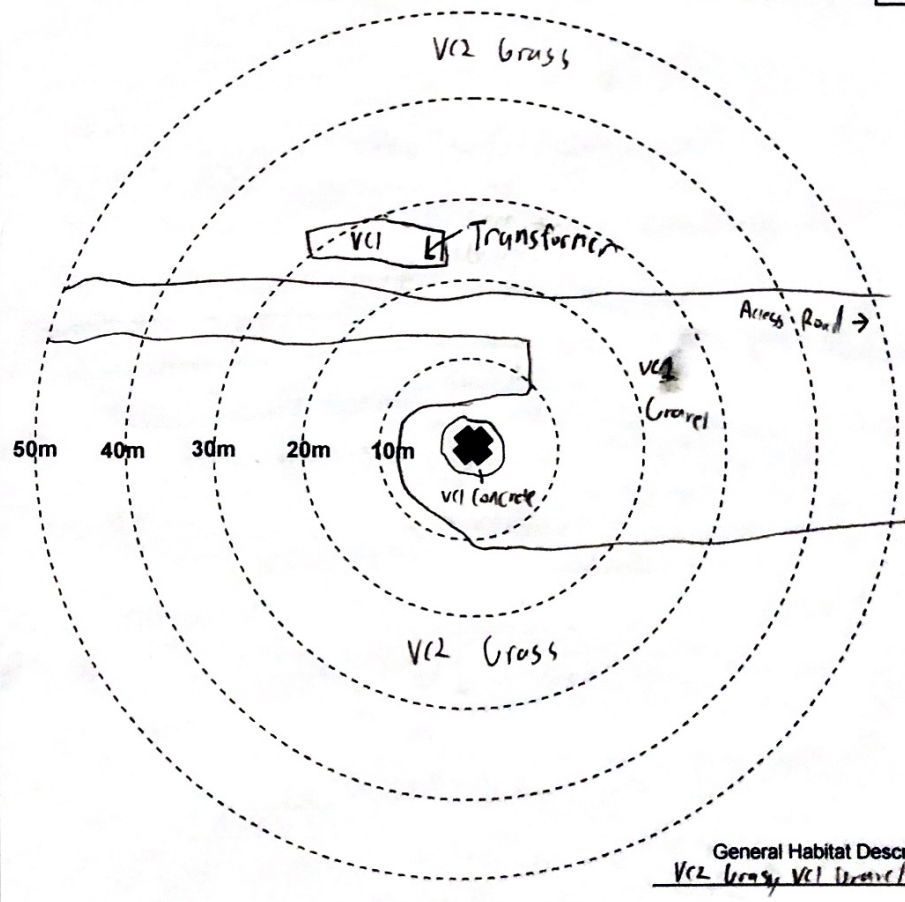
(sketch habitat and visibility classes)

Date (DD/MM/YY): 07/10/21

Observer: MPD

Monthly/Seasonal
 Linear Transect Width: 5 m

N



General Habitat Description:
V2 Grass, V1 Gravel

VISIBILITY CLASSES

Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island V.I.P Project #: 2121R Turbine #: 503

Photo Numbers (from turbine base)
 Facing North: 15
 Facing East: 16
 Facing South: 17
 Facing West: 18
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 01/11/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m

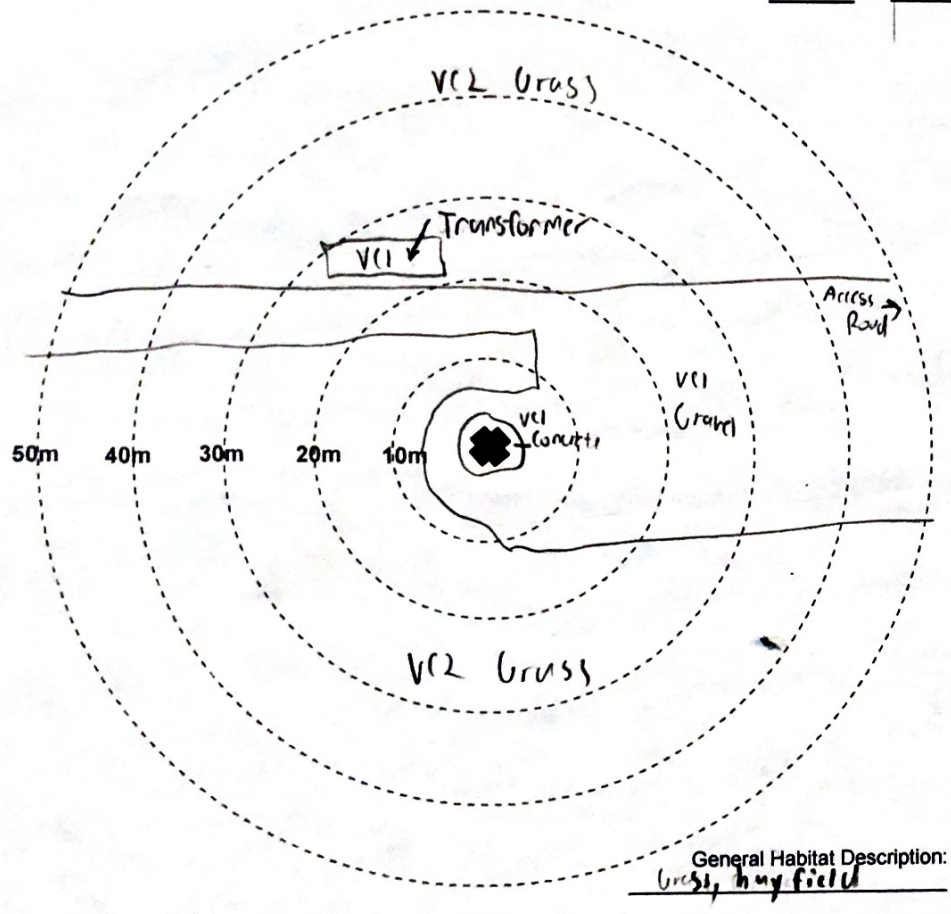
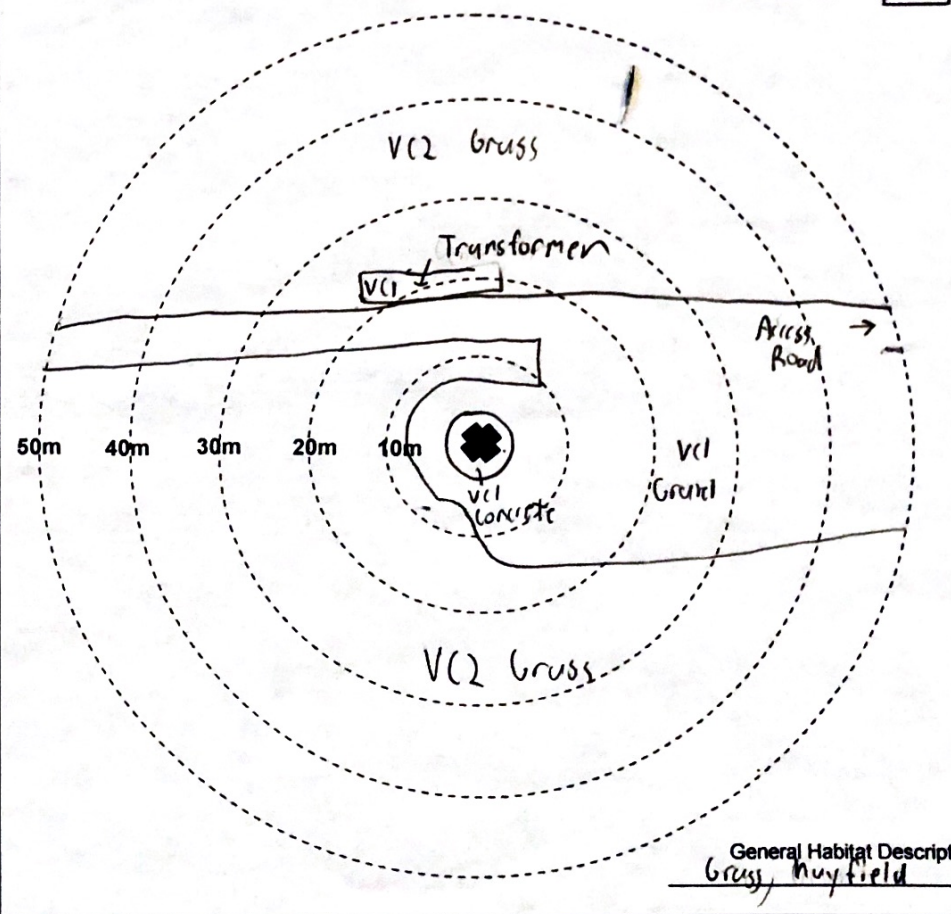
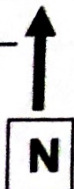


Photo Numbers (from turbine base)
 Facing North: 05
 Facing East: 06
 Facing South: 07
 Facing West: 08
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 07/12/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S04

Photo Numbers (from turbine base)
 Facing North: 220325
 Facing East: 220326
 Facing South: 220327
 Facing West: 220328
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 22/03/21
 Observer: JYB
 Monthly/Seasonal
 Linear Transect Width: 5 m

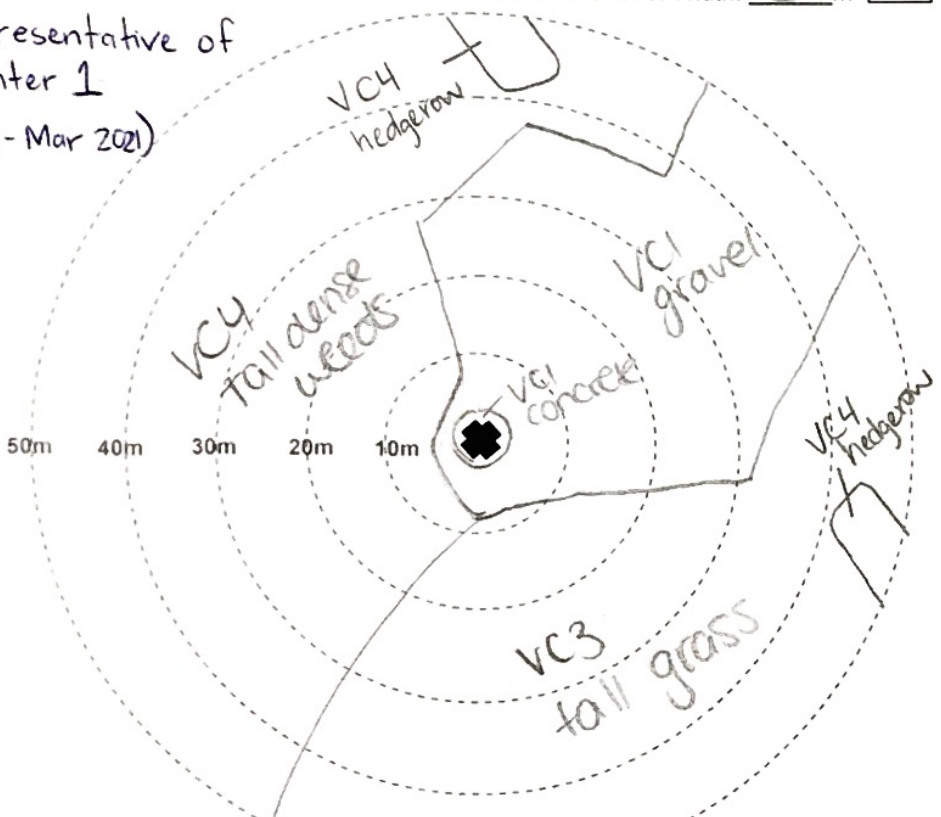


Photo Numbers (from turbine base)
 Facing North: 25
 Facing East: 26
 Facing South: 27
 Facing West: 28
 (sketch habitat and visibility classes)

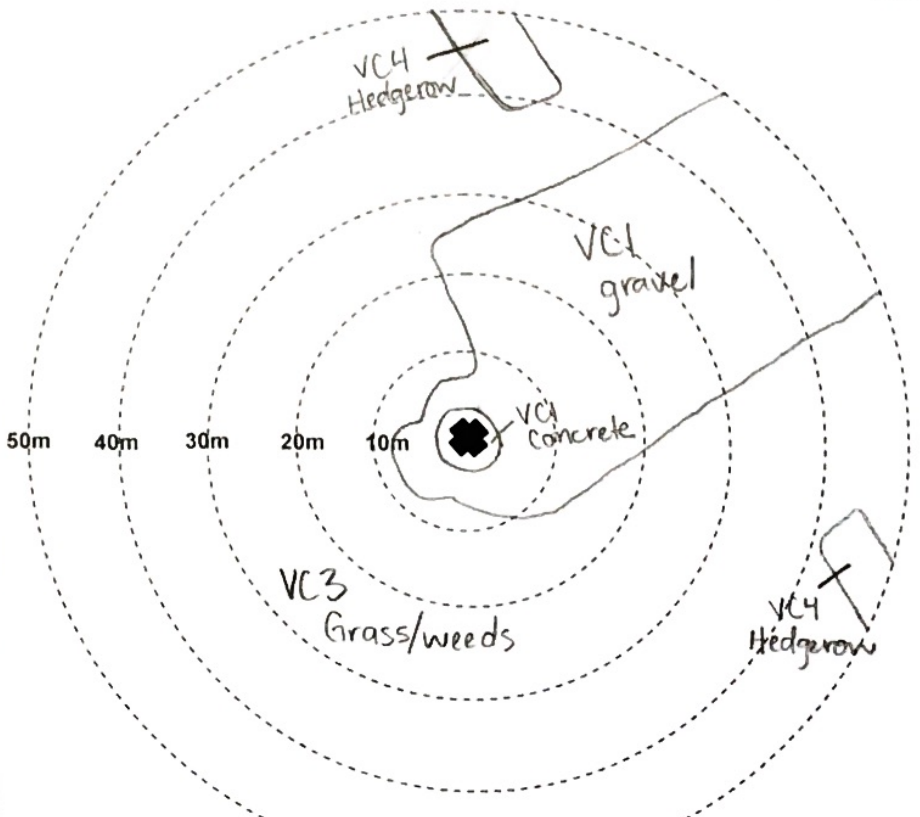
Date (DD/MM/YY): 14/12/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



Representative of
 Winter 1
 (Jan-Mar 2021)



General Habitat Description:
hayfield



General Habitat Description:
field, gravel, hedgerow

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S65 Degree of Slope +1.5 degrees Slope Orientation S (e.g. SSW)

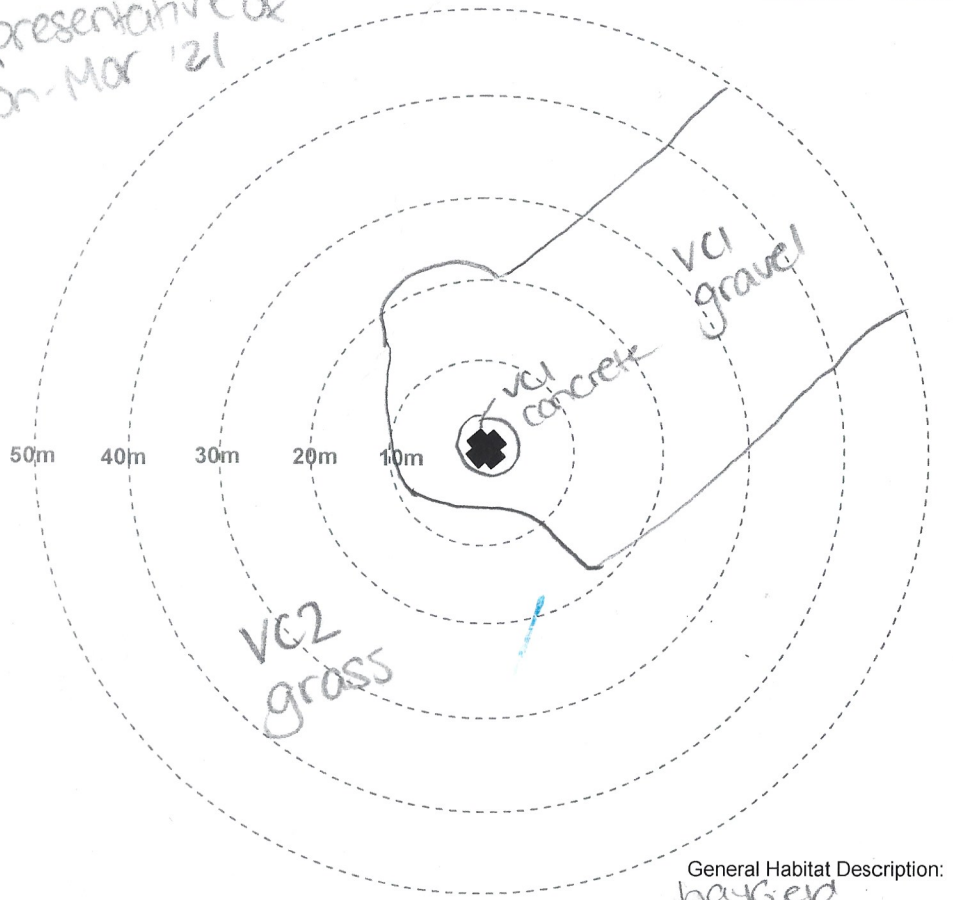
Photo Numbers (from turbine base)
 Facing North: 220313
 Facing East: 220314
 Facing South: 220315
 Facing West: 220316
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 22/03/21
 Observer: JYB
 Monthly/Seasonal
 Linear Transect Width: 5 m **N**

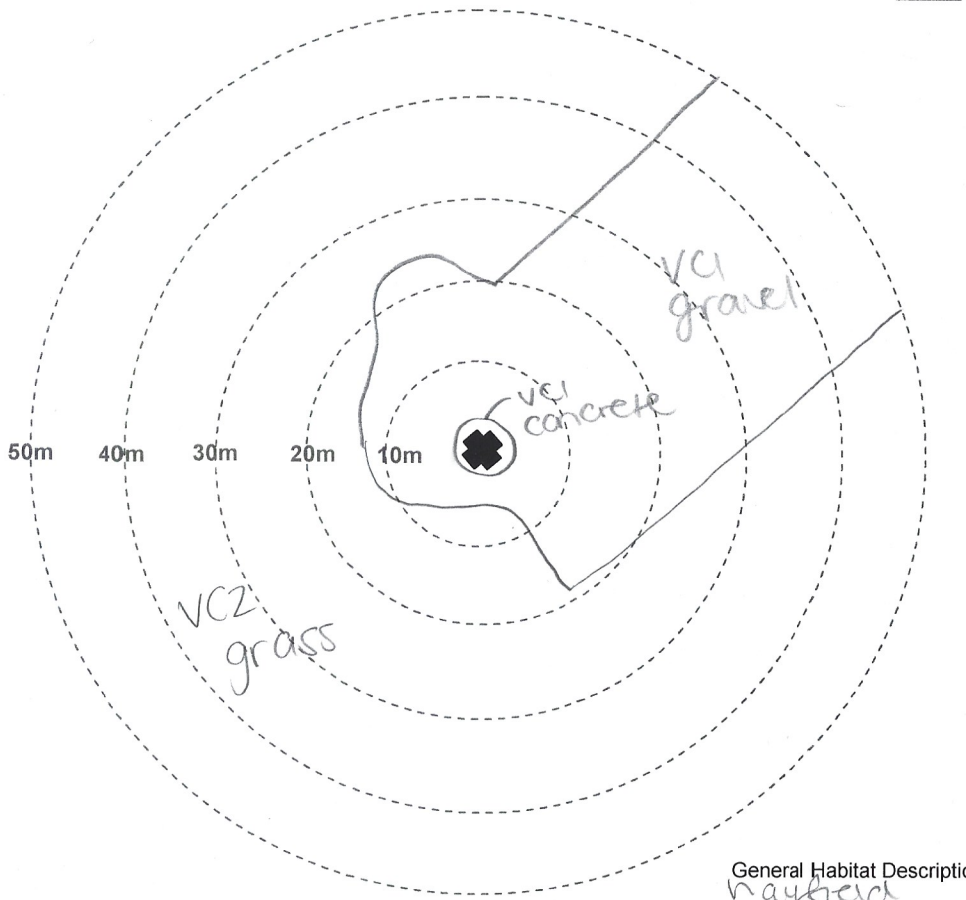
Photo Numbers (from turbine base)
 Facing North: 300401
 Facing East: 300402
 Facing South: 300403
 Facing West: 300404
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 30/04/21
 Observer: JYB
 Monthly/Seasonal
 Linear Transect Width: 5 m **N**

Representative of
 Jan-Mar '21



General Habitat Description:
hayfield



General Habitat Description:
hayfield

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island W.P Project #: 221F Turbine #: 505

Photo Numbers (from turbine base)
 Facing North: 13
 Facing East: 14
 Facing South: 15
 Facing West: 16
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 27/05/21
 Observer: M.P.D
 Monthly/Seasonal Linear Transect Width: 5 m

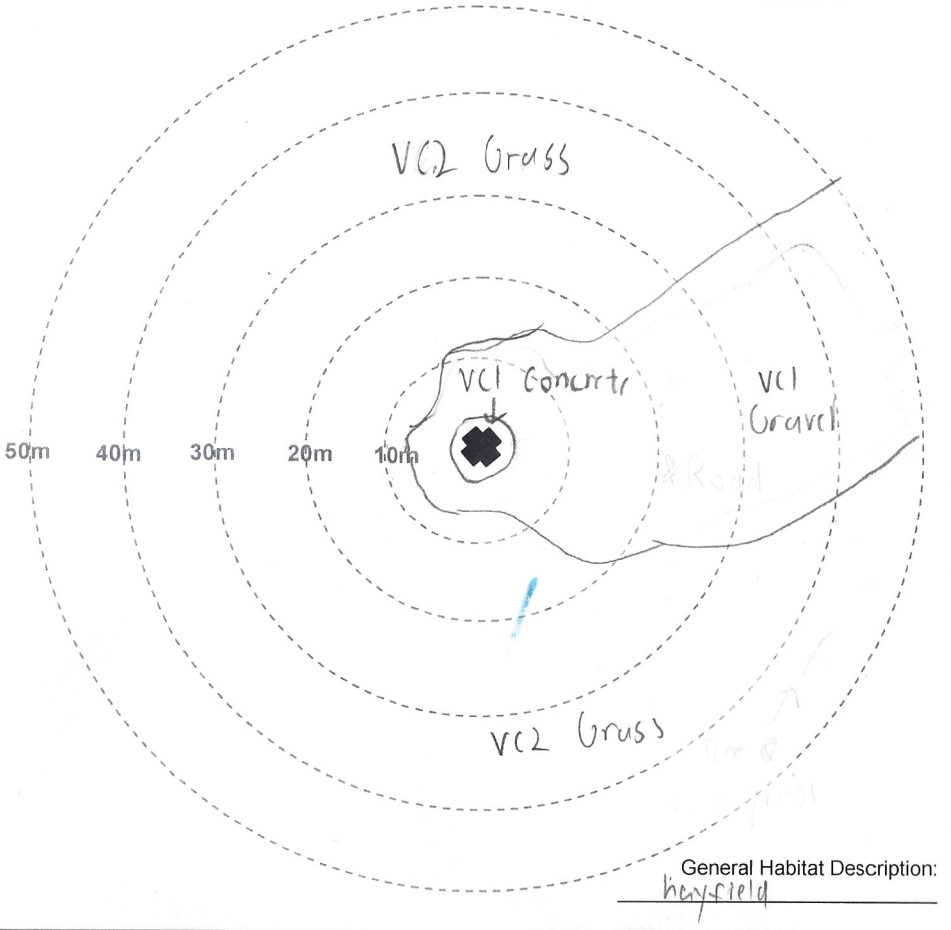
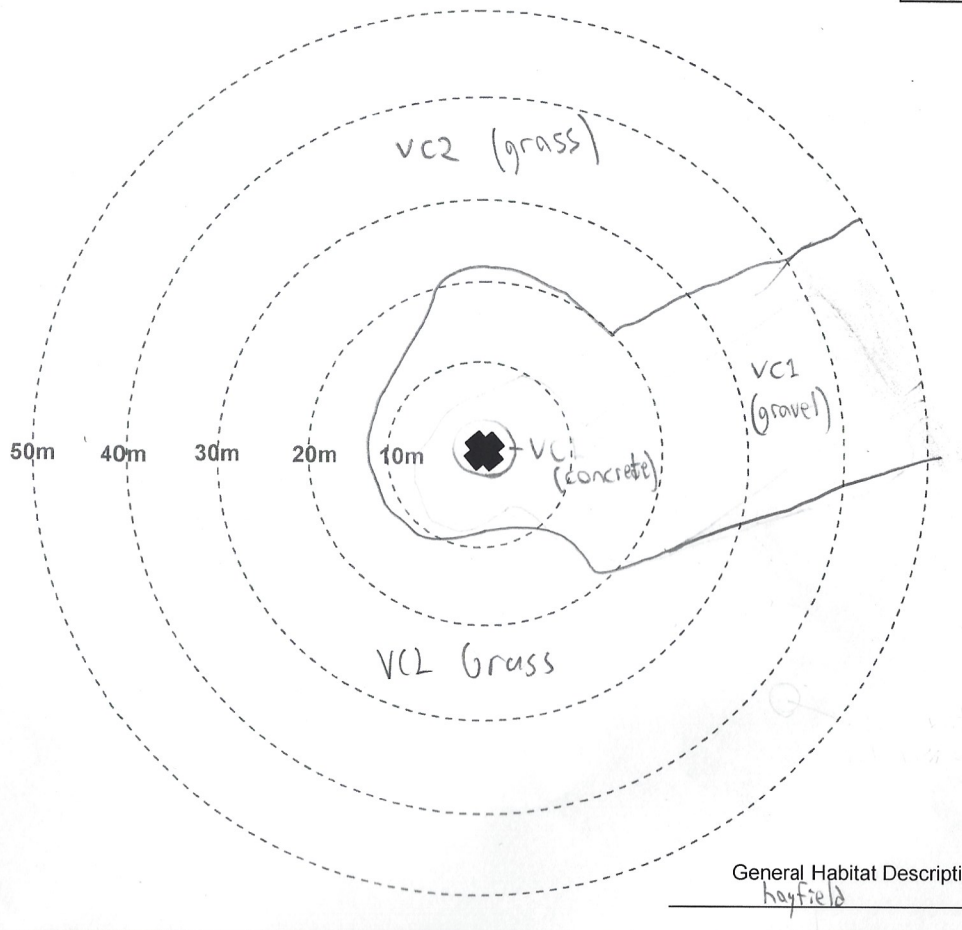


Photo Numbers (from turbine base)
 Facing North: 008
 Facing East: 009
 Facing South: 010
 Facing West: 011
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 07/06/21
 Observer: MCT
 Monthly/Seasonal Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121f Turbine #: 505

Photo Numbers (from turbine base)
 Facing North: 170
 Facing East: 171
 Facing South: 172
 Facing West: 173
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 05/07/21
 Observer: MCT
 Monthly/Seasonal
 Linear Transect Width: 5 m

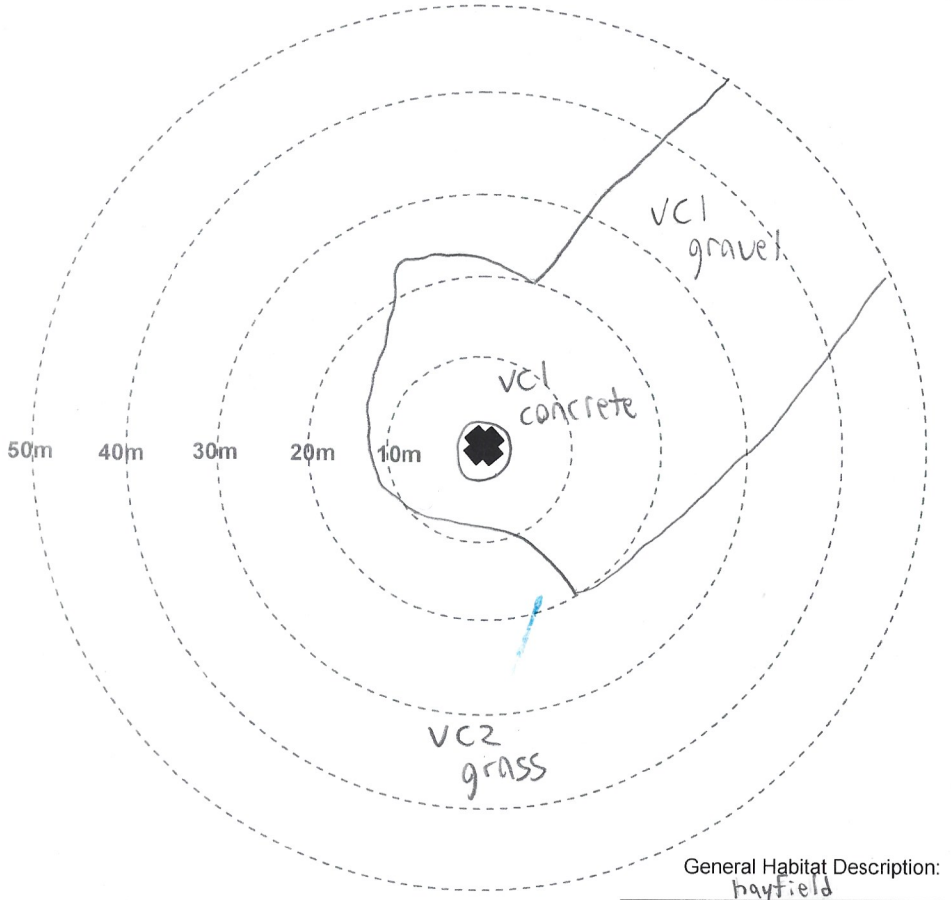
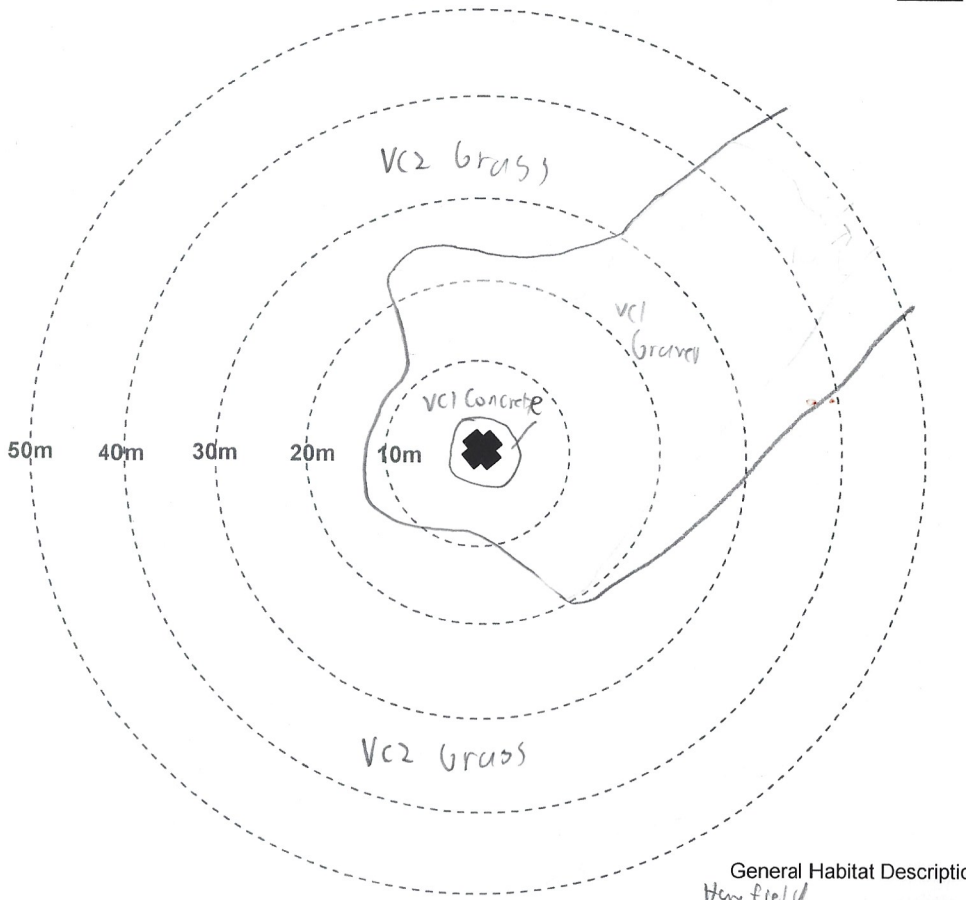
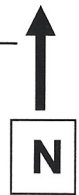


Photo Numbers (from turbine base)
 Facing North: 11
 Facing East: 12
 Facing South: 13
 Facing West: 14
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 12/08/21
 Observer: MPI
 Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island W.P Project #: 2121F Turbine #: 505

Photo Numbers (from turbine base)
 Facing North: 01
 Facing East: 02
 Facing South: 03
 Facing West: 04
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 09/09/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m

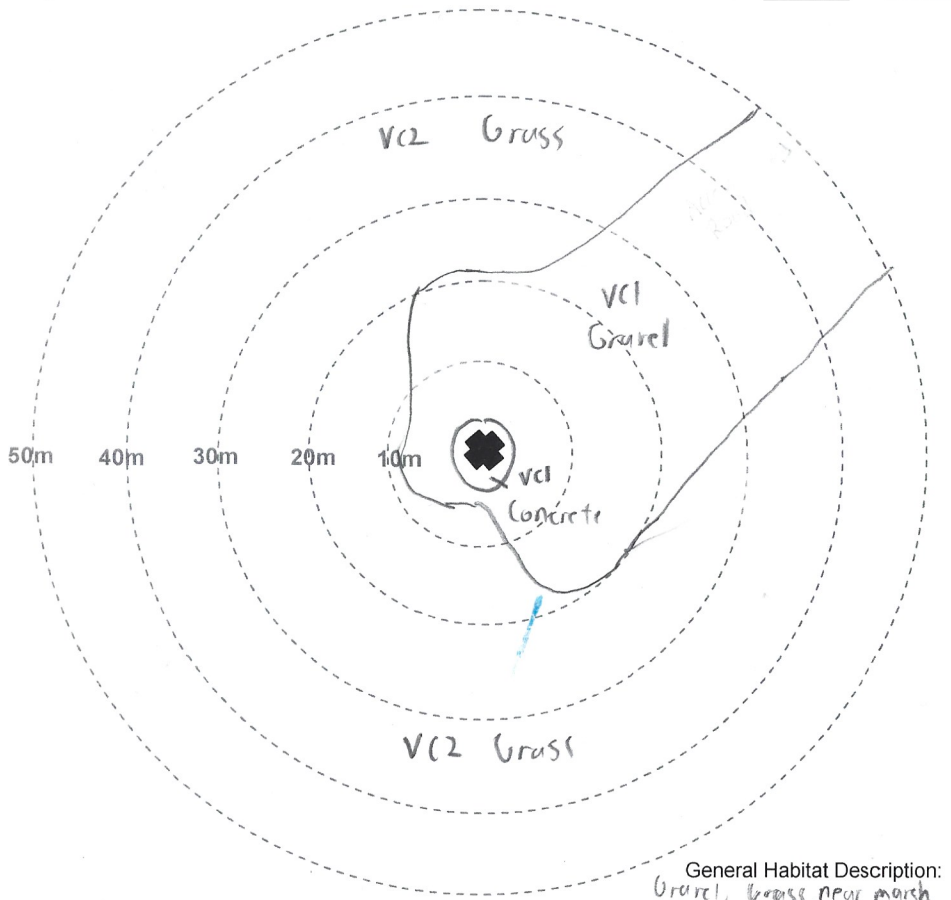
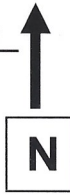
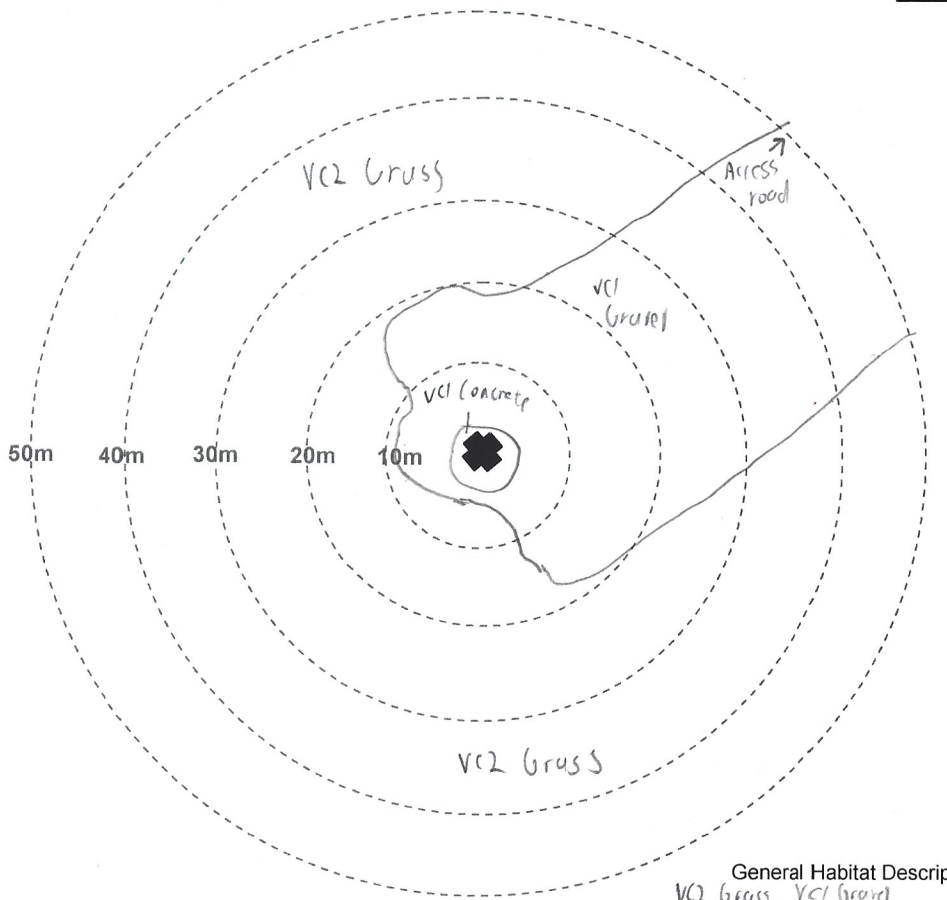


Photo Numbers (from turbine base)
 Facing North: 03
 Facing East: 04
 Facing South: 05
 Facing West: 06
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 07/10/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island W.P Project #: 221F Turbine #: 505

Photo Numbers (from turbine base)
 Facing North: 01
 Facing East: 02
 Facing South: 03
 Facing West: 04
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 01 / 11 / 21
 Observer: M PD
 Monthly/Seasonal
 Linear Transect Width: 5 m

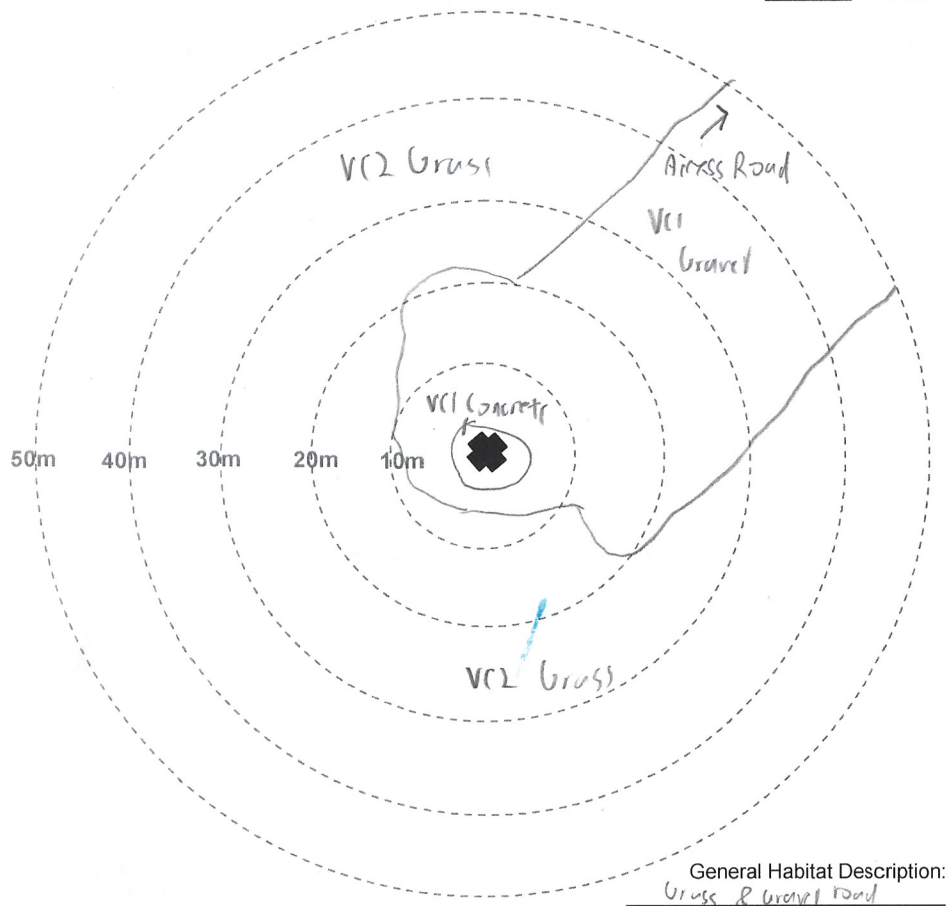
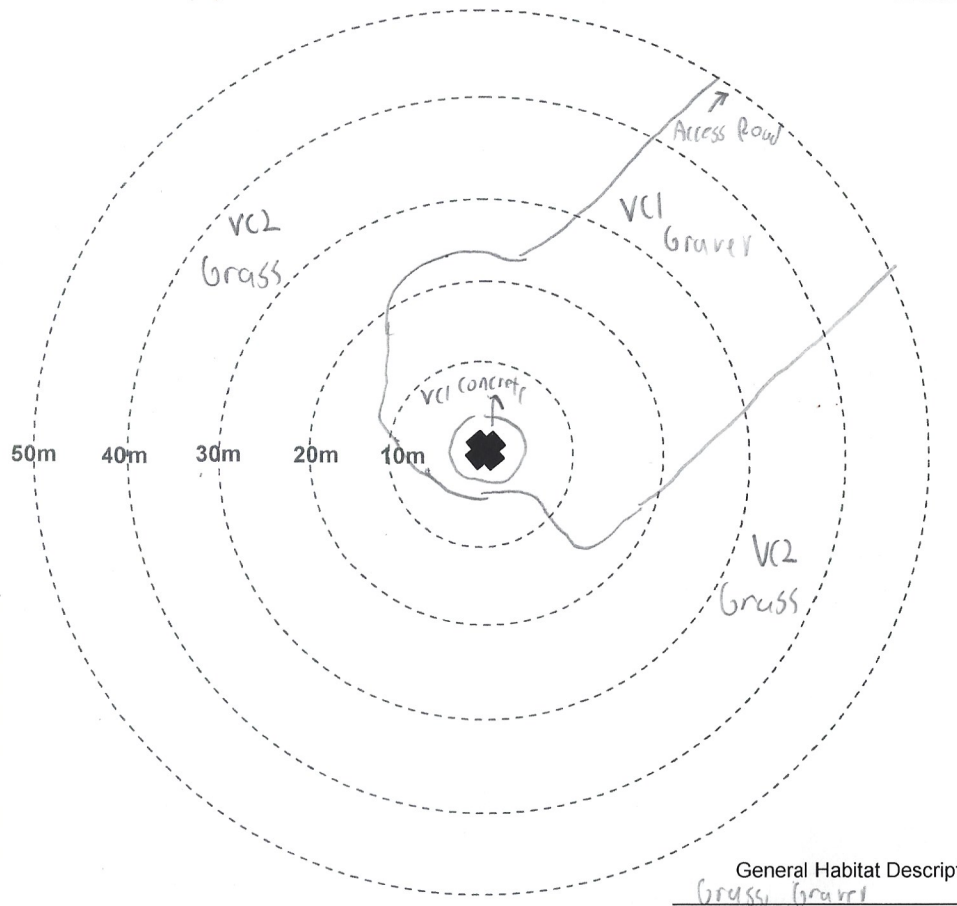


Photo Numbers (from turbine base)
 Facing North: 13
 Facing East: 14
 Facing South: 15
 Facing West: 16
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 14 / 12 / 21
 Observer: M PD
 Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island w/ Project #: 2121E Turbine #: 507 Degree of Slope + 2 degrees Slope Orientation NE (e.g. SSW)

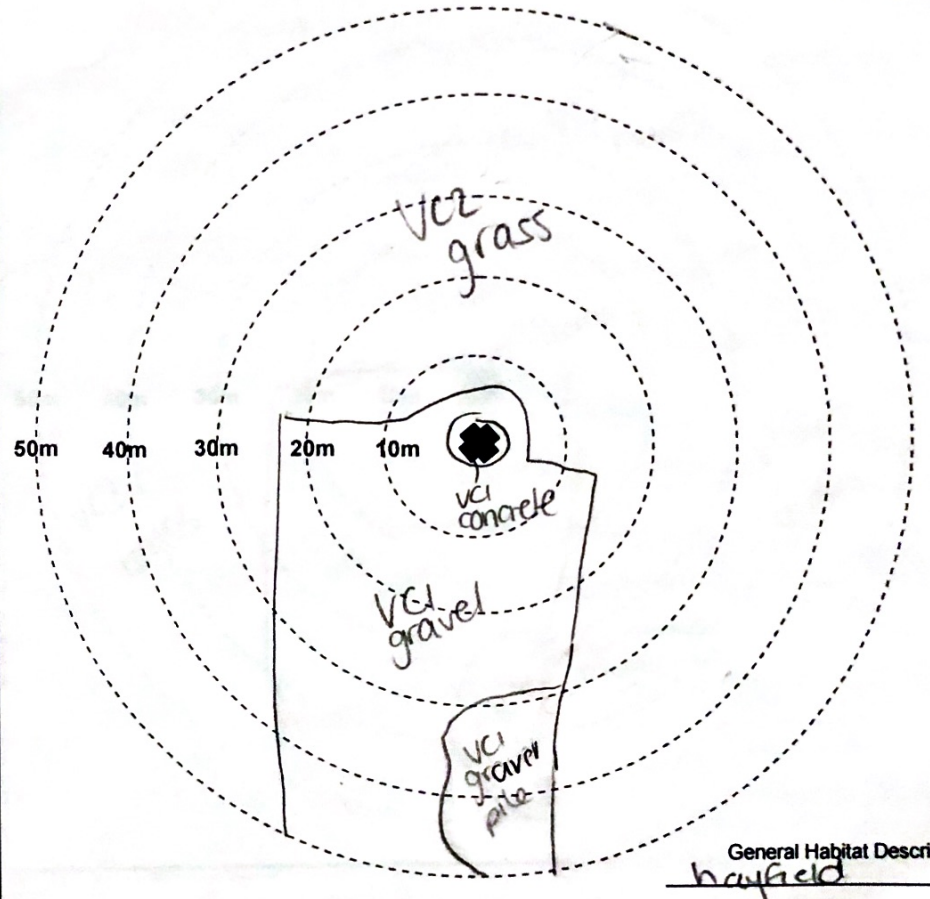
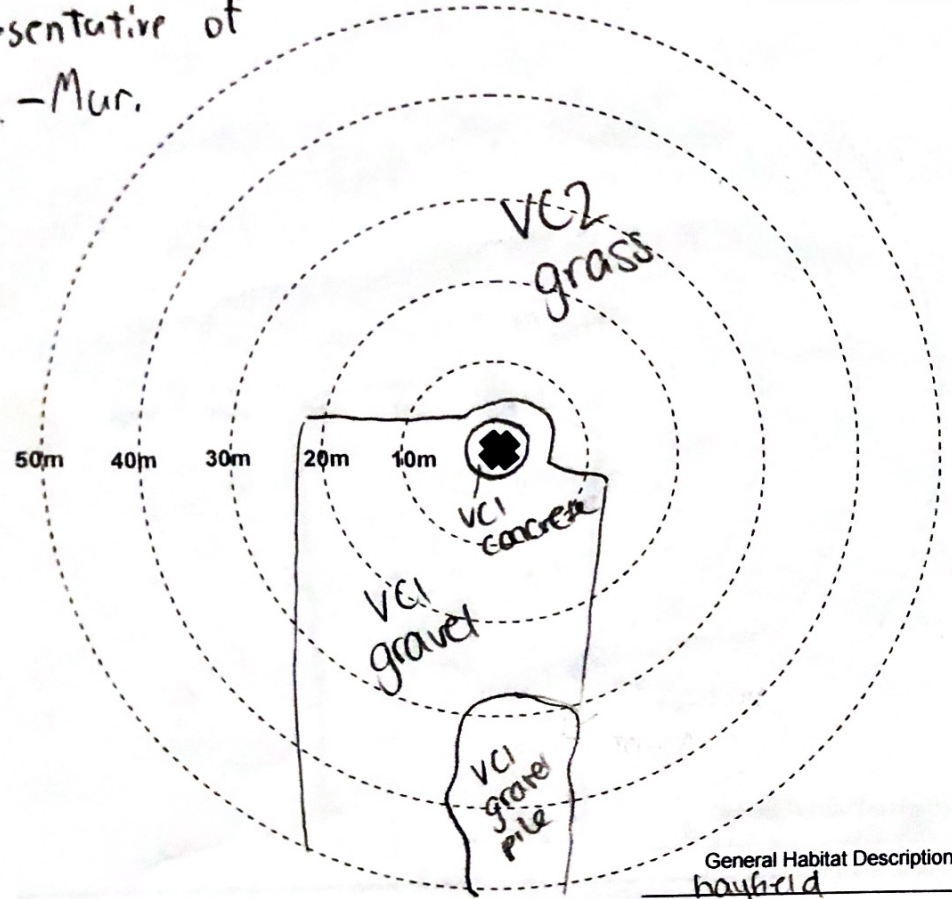
Photo Numbers (from turbine base)
 Facing North: 250325
 Facing East: 250326
 Facing South: 250327
 Facing West: 250328
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 25/03/21 ↑
 Observer: JMB
 Monthly/Seasonal Linear Transect Width: 5 m ↑
 N

Photo Numbers (from turbine base)
 Facing North: 300425
 Facing East: 300426
 Facing South: 300427
 Facing West: 300428
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 30/04/21 ↑
 Observer: JMB
 Monthly/Seasonal Linear Transect Width: 5 m ↑
 N

Representative of
 Jan. - Mar.



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island Project #: 2121F Turbine #: 507

Photo Numbers (from turbine base)
 Facing North: 1446
 Facing East: 9505
 Facing South: 7217
 Facing West: 3230
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 27/05/21

Observer: VLB

Monthly/Seasonal
 Linear Transect Width: 5 m



N

Photo Numbers (from turbine base)
 Facing North: 3311
 Facing East: 0366
 Facing South: 8869
 Facing West: 6981
 (sketch habitat and visibility classes)

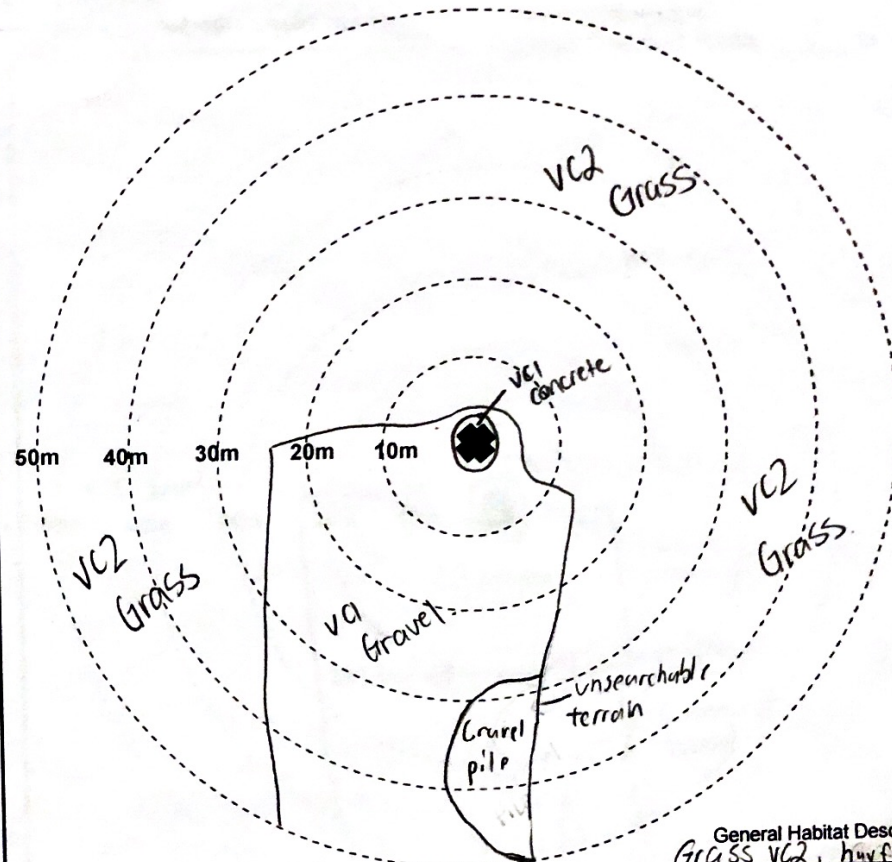
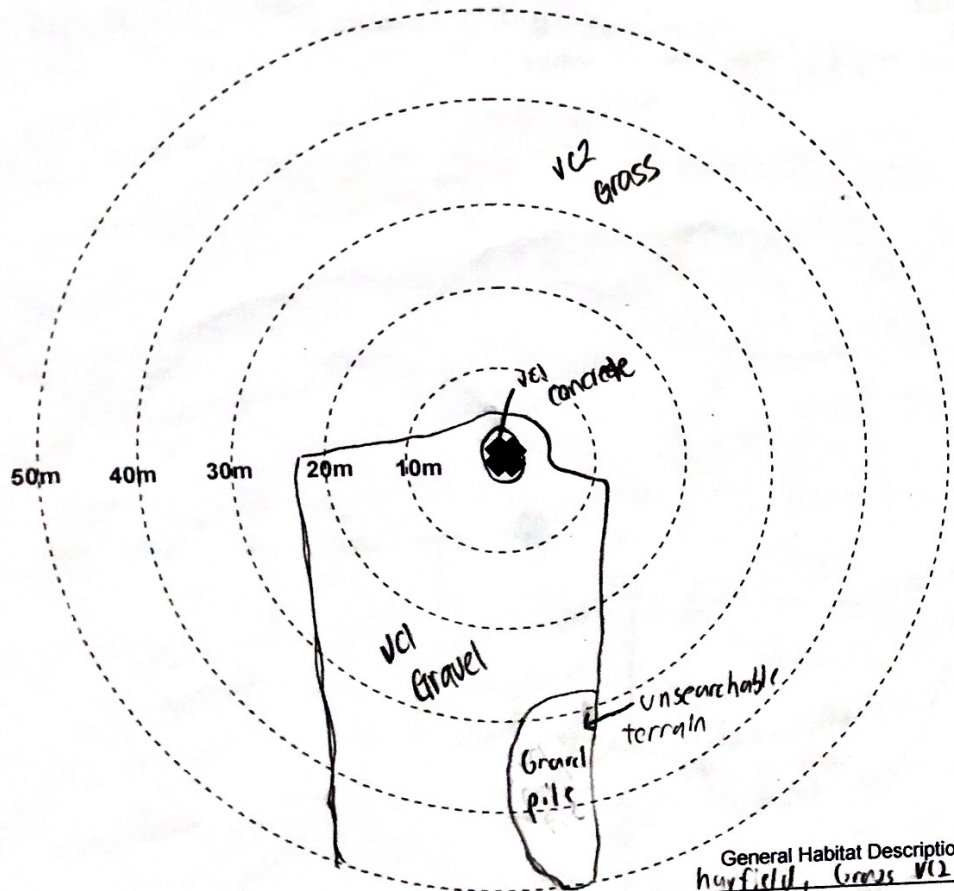
Date (DD/MM/YY): 07/06/21

Observer: VLB

Monthly/Seasonal
 Linear Transect Width: 5 m



N



VISIBILITY CLASSES

Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S07

Photo Numbers (from turbine base)
 Facing North: 2028
 Facing East: 3225
 Facing South: 2087
 Facing West: 0869
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 05/07/21
 Observer: KLB
 Monthly/Seasonal
 Linear Transect Width: 5 m **N**

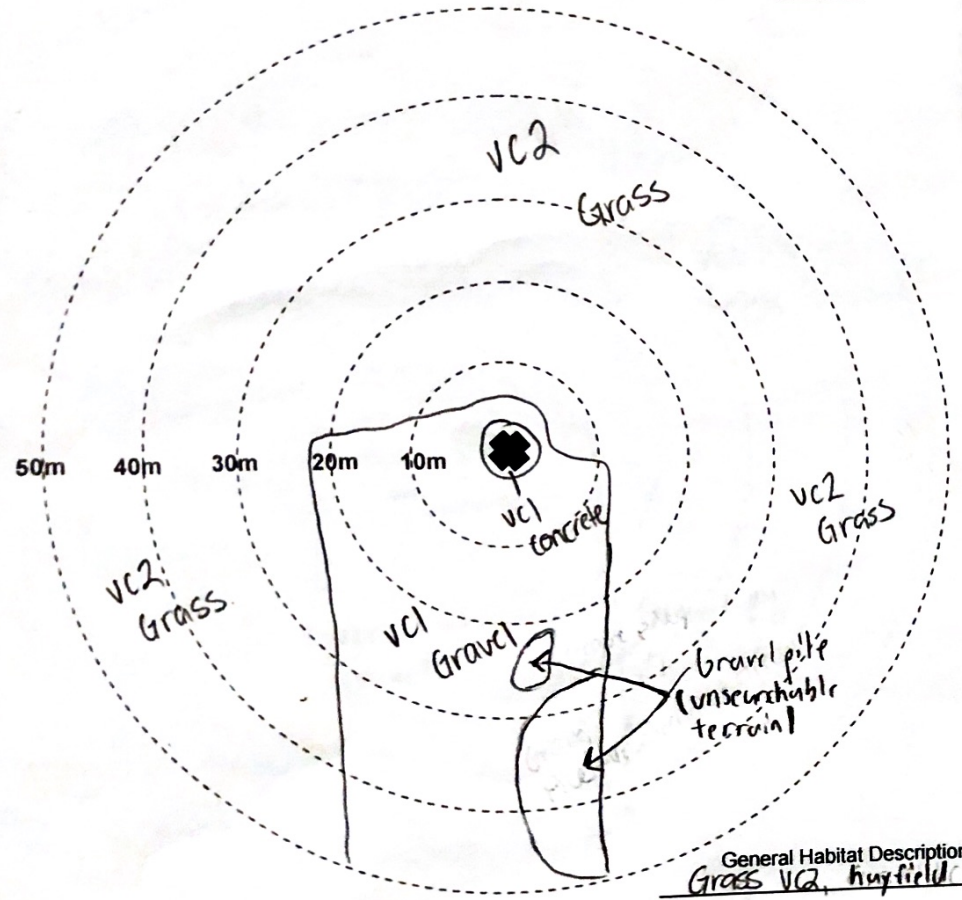
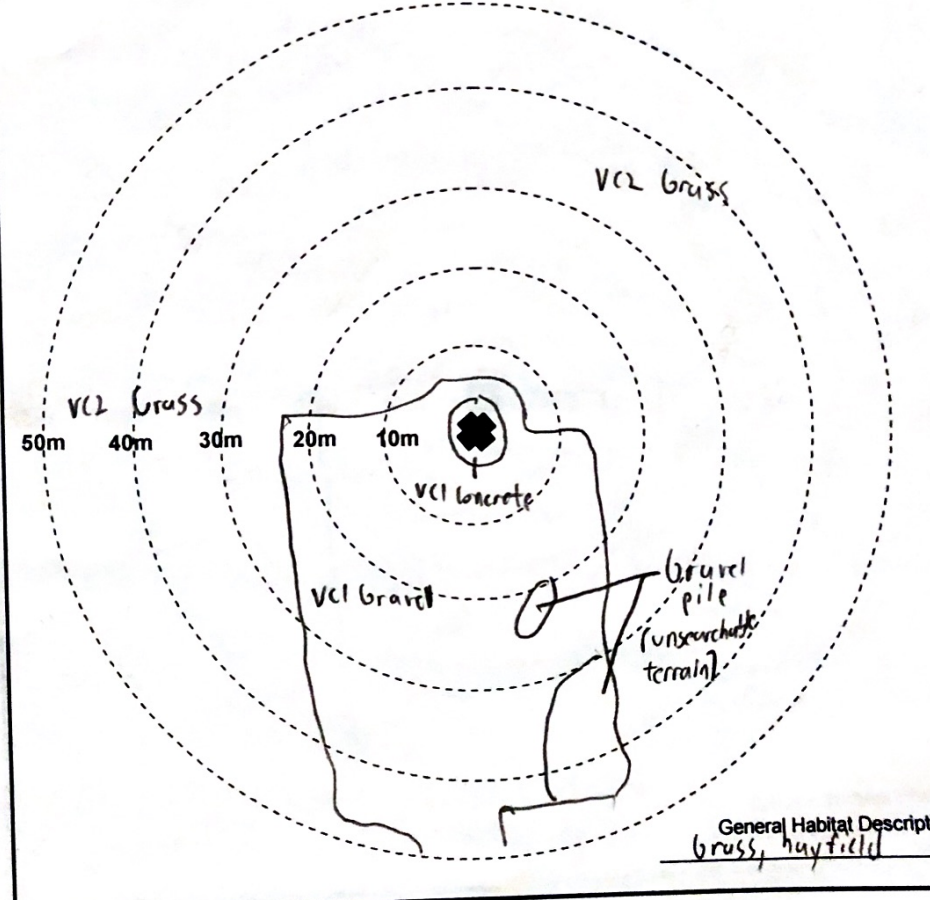


Photo Numbers (from turbine base)
 Facing North: 71
 Facing East: 72
 Facing South: 73
 Facing West: 74
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 09/08/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m **N**



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Class Map

Project Name: Amherst Island V.P Project #: 2121F Turbine #: 507 Degree of Slope degrees Slope Orientation (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 24
 Facing East: 25
 Facing South: 26
 Facing West: 27
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 06/09/21

Observer: MPII

Monthly/Seasonal
 Linear Transect Width: 5 m

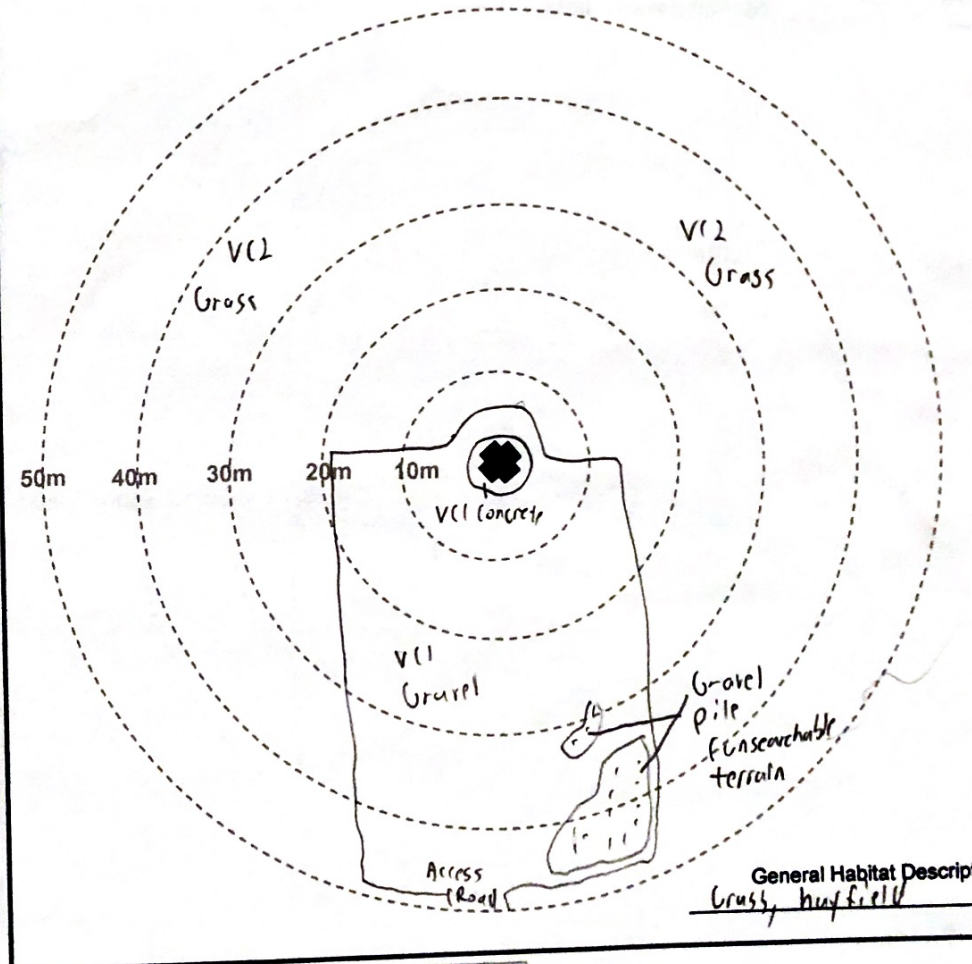
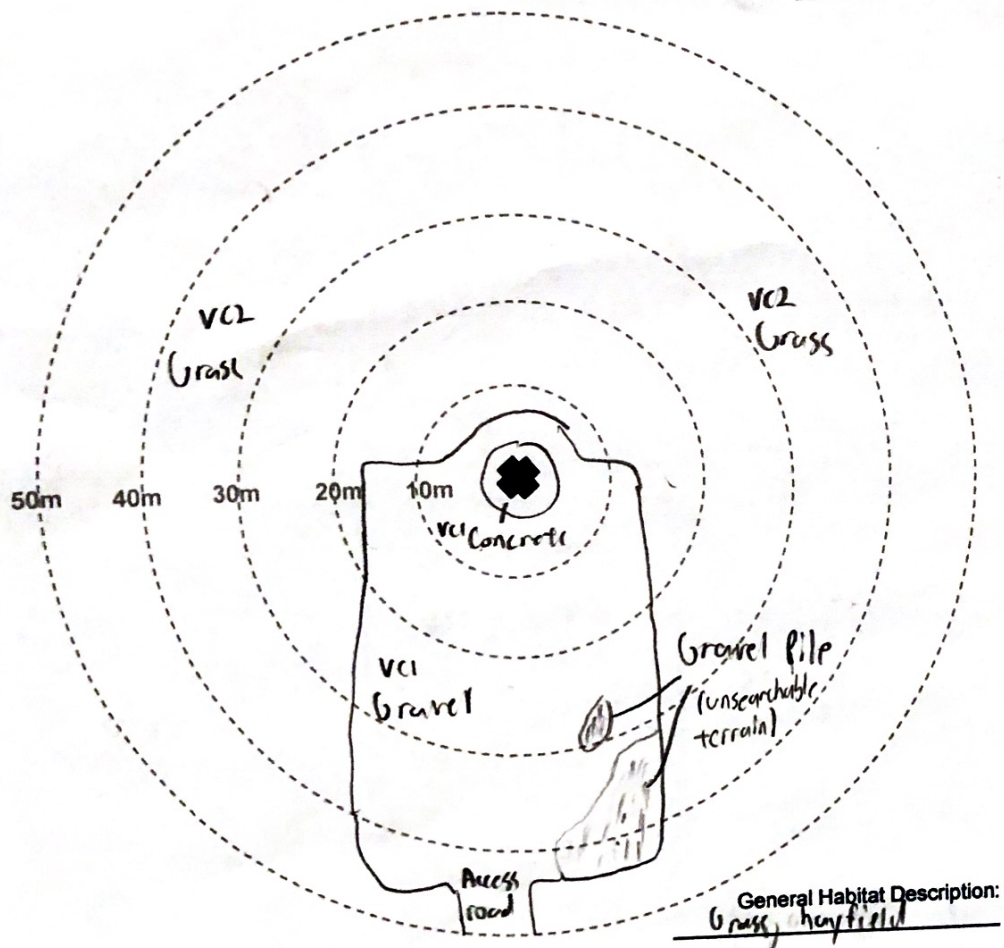
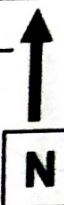


Photo Numbers (from turbine base)
 Facing North: 19
 Facing East: 20
 Facing South: 21
 Facing West: 22
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 04/10/21

Observer: MPII

Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Project Name: Amherst Island W.P Project #: 2121F Turbine #: 507 Degree of Slope — degrees Slope Orientation — (e.g. SSW)

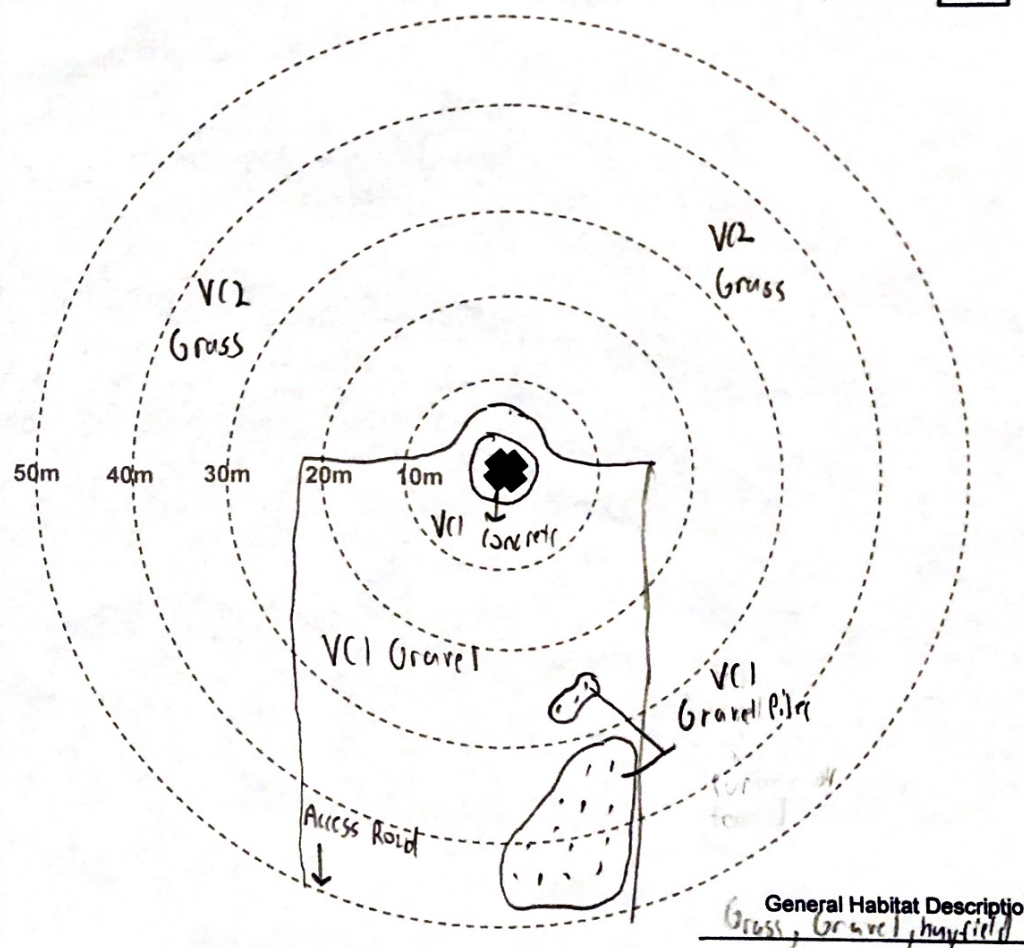
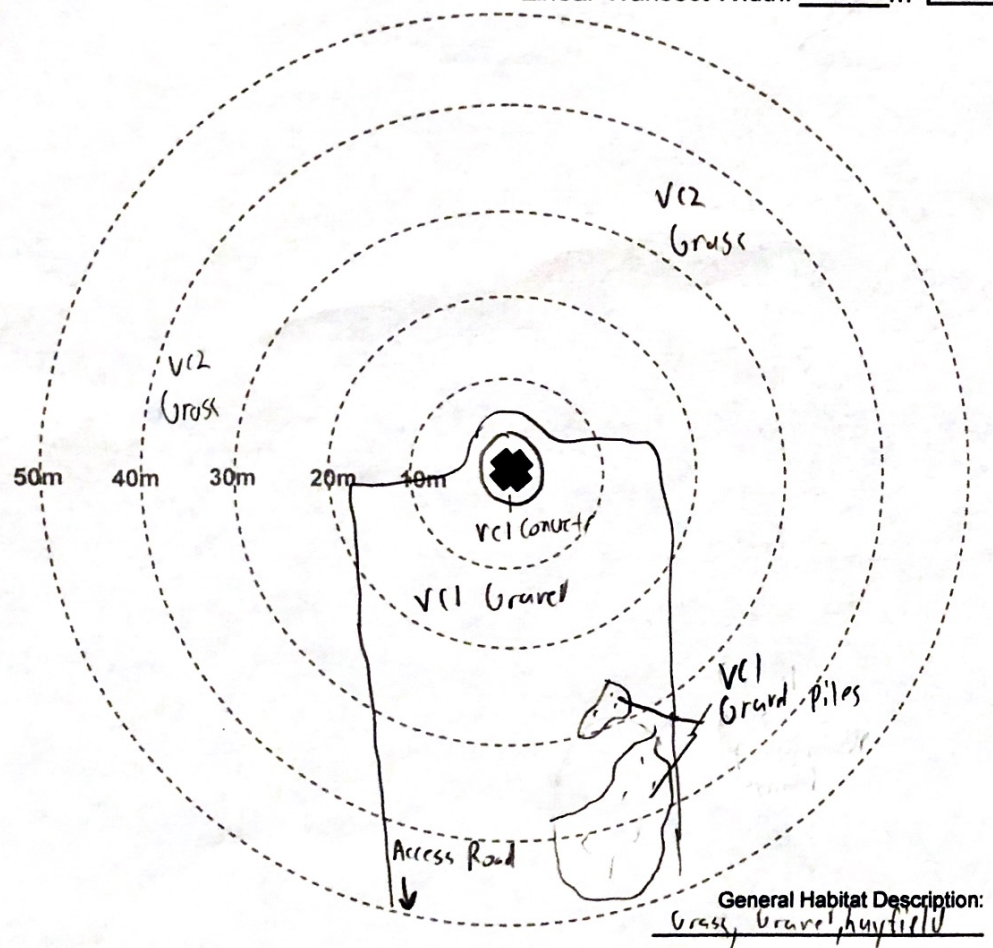
Photo Numbers (from turbine base)
 Facing North: 13
 Facing East: 14
 Facing South: 15
 Facing West: 16
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 08/11/21
 Observer: M.P.D
 Monthly/Seasonal
 Linear Transect Width: 5 m



Photo Numbers (from turbine base)
 Facing North: 05
 Facing East: 06
 Facing South: 07
 Facing West: 08
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 08/12/21
 Observer: M.P.D
 Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: 509

Photo Numbers (from turbine base)
 Facing North: 230333
 Facing East: 230334
 Facing South: 230335
 Facing West: 230336
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 23/03/21
 Observer: JUB
 Monthly/Seasonal
 Linear Transect Width: 5 m

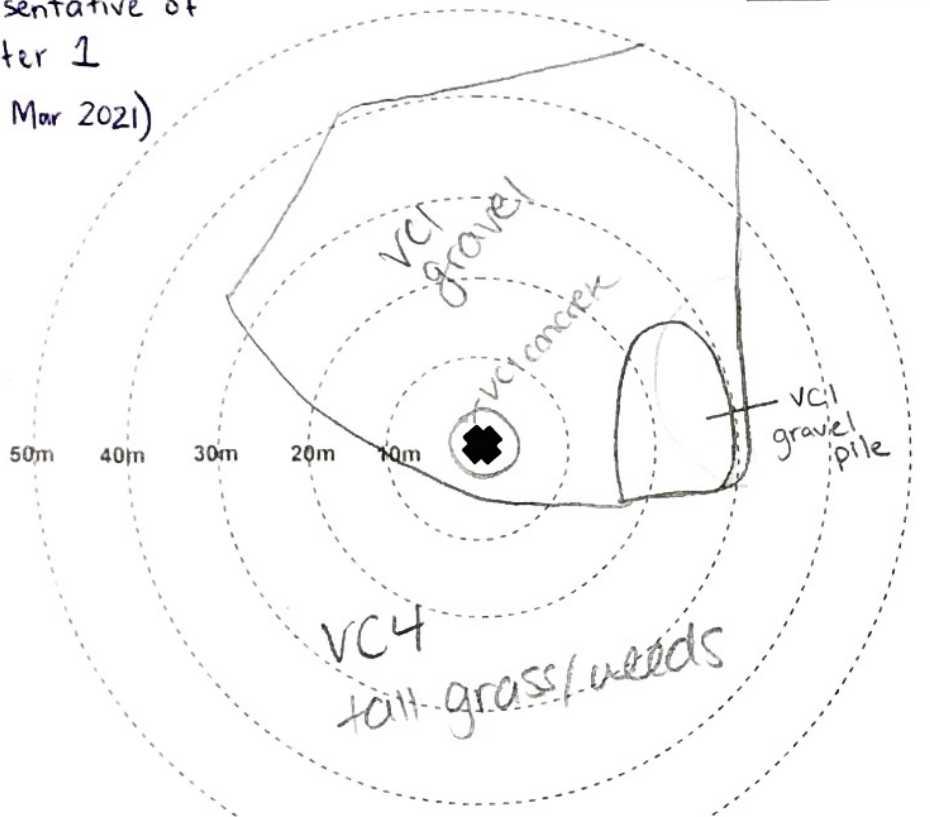


Photo Numbers (from turbine base)
 Facing North: 09
 Facing East: 10
 Facing South: 11
 Facing West: 12
 (sketch habitat and visibility classes)

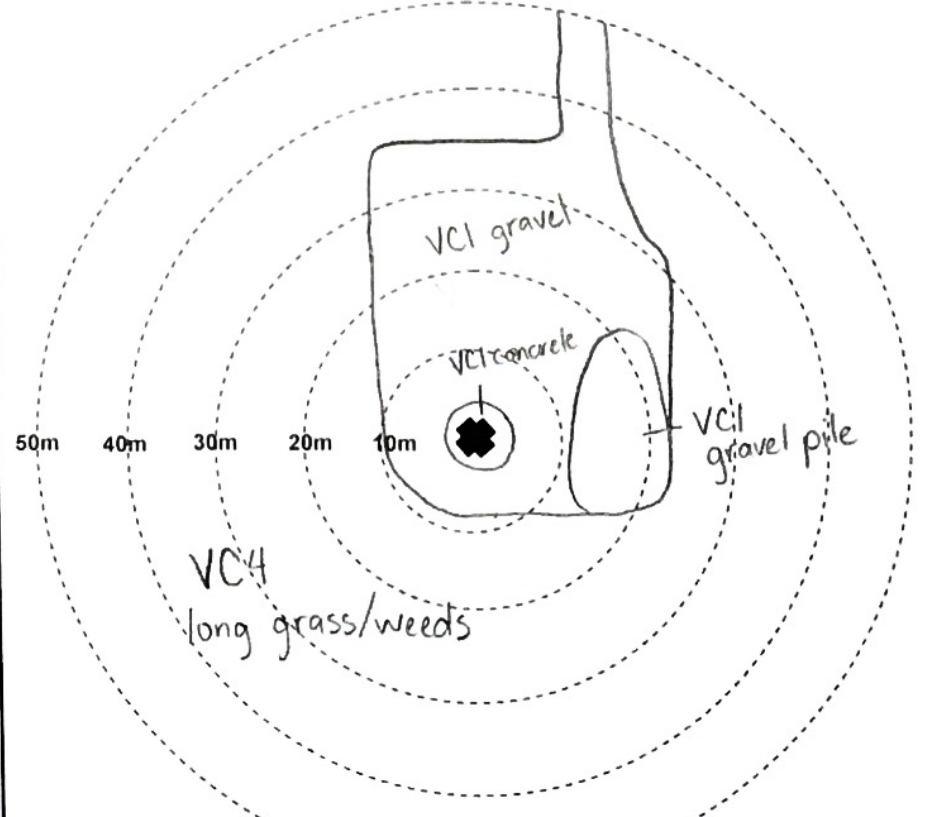
Date (DD/MM/YY): 07/12/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



Representative of
 Winter 1
 (Jan-Mar 2021)



General Habitat Description:
hay field



General Habitat Description:
fields, gravel

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S11

Photo Numbers (from turbine base)
 Facing North: 230325
 Facing East: 230326
 Facing South: 230327
 Facing West: 230328
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 23/03/21
 Observer: J4B
 Monthly/Seasonal
 Linear Transect Width: 5 m

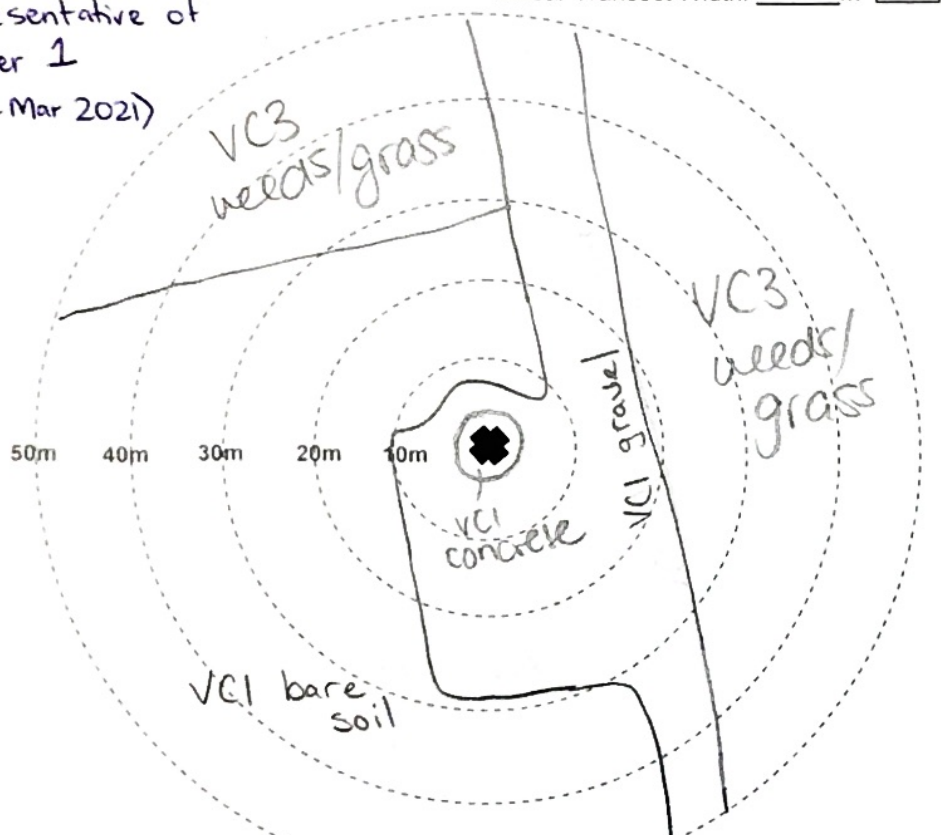


Photo Numbers (from turbine base)
 Facing North: 01
 Facing East: 02
 Facing South: 03
 Facing West: 04
 (sketch habitat and visibility classes)

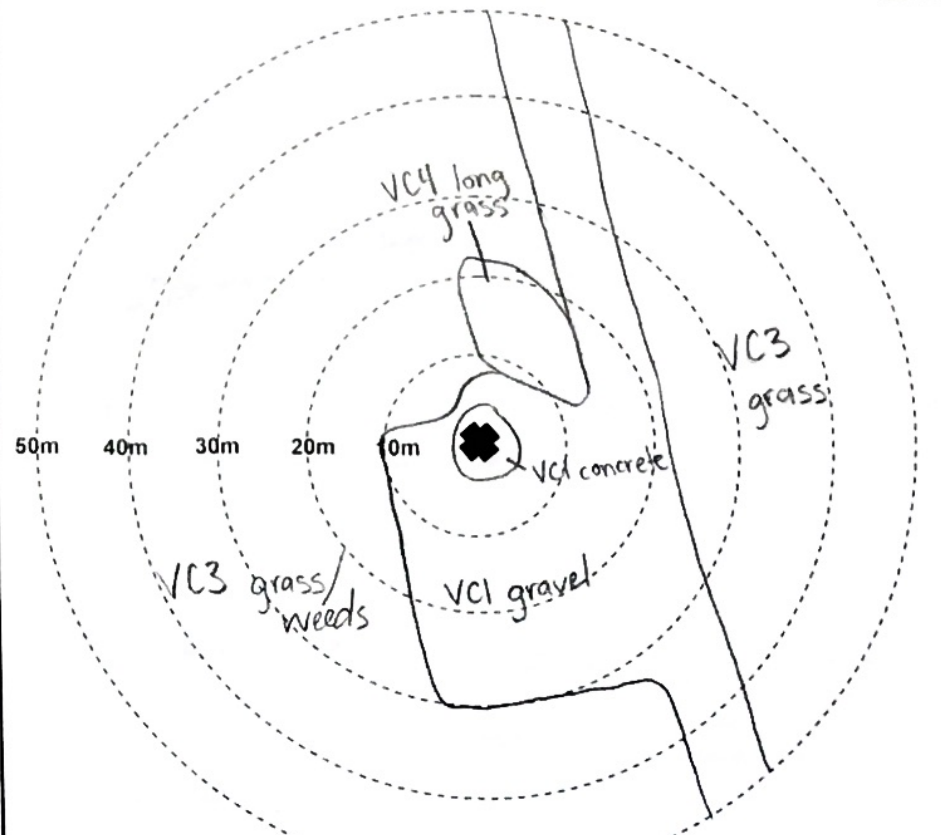
Date (DD/MM/YY): 07/12/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



Representative of
 Winter 1
 (Jan-Mar 2021)



General Habitat Description:
hayfield



General Habitat Description:
pasture fields

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S13

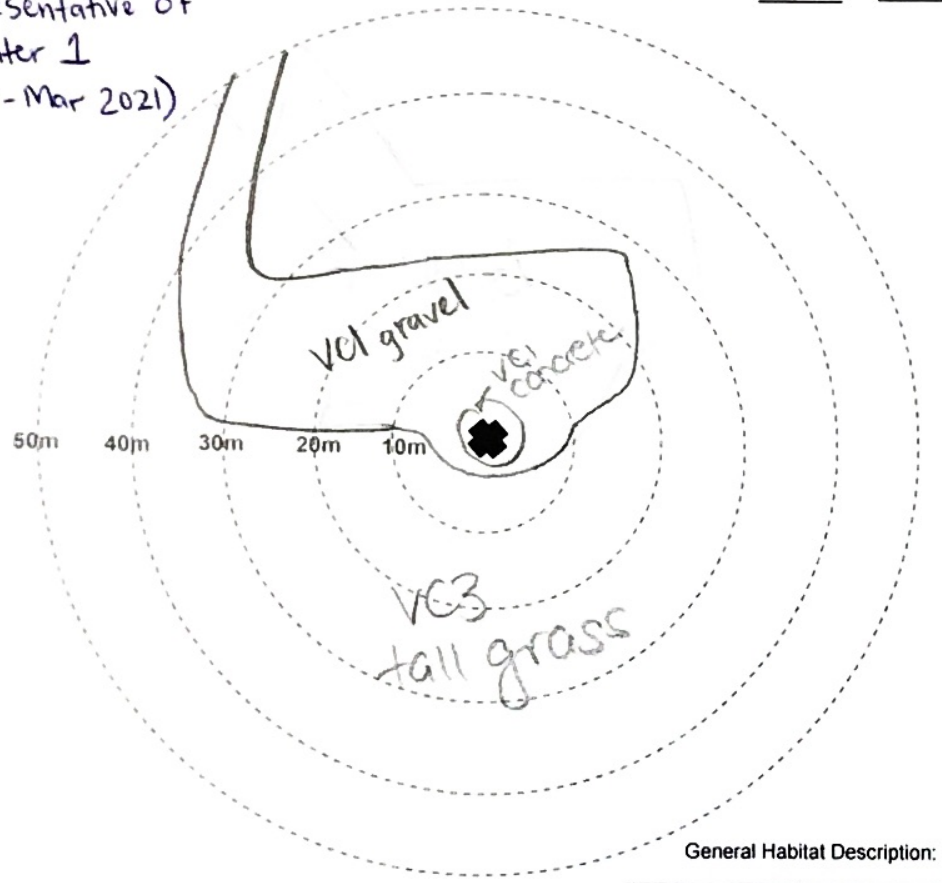
Photo Numbers (from turbine base)
 Facing North: 250301
 Facing East: 250302
 Facing South: 250303
 Facing West: 250304
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 25/03/21 ↑
 Observer: J4B
 Monthly/Seasonal
 Linear Transect Width: 5 m [N]

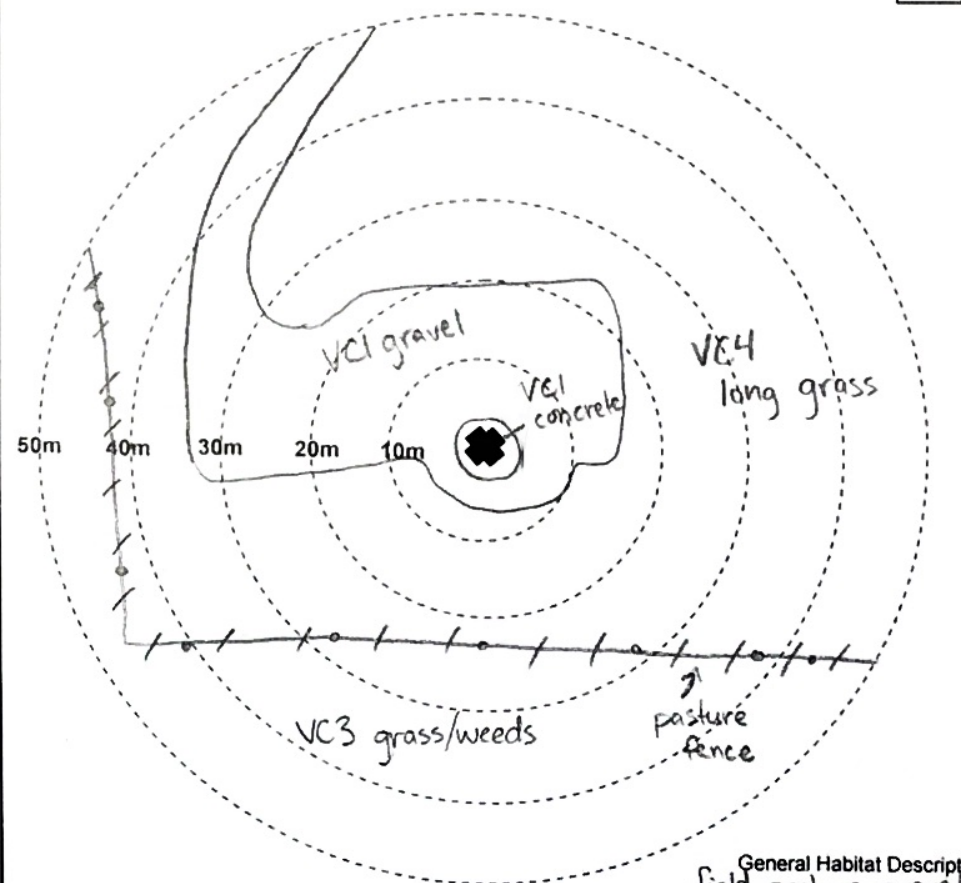
Photo Numbers (from turbine base)
 Facing North: 33
 Facing East: 34
 Facing South: 35
 Facing West: 36
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 08/12/21 ↑
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m [N]

Representative of
 Winter 1
 (Jan - Mar 2021)



General Habitat Description:



General Habitat Description:
field, pasture, gravel

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121E Turbine #: S14 Degree of Slope +1.5 degrees Slope Orientation NW (e.g. SSW)

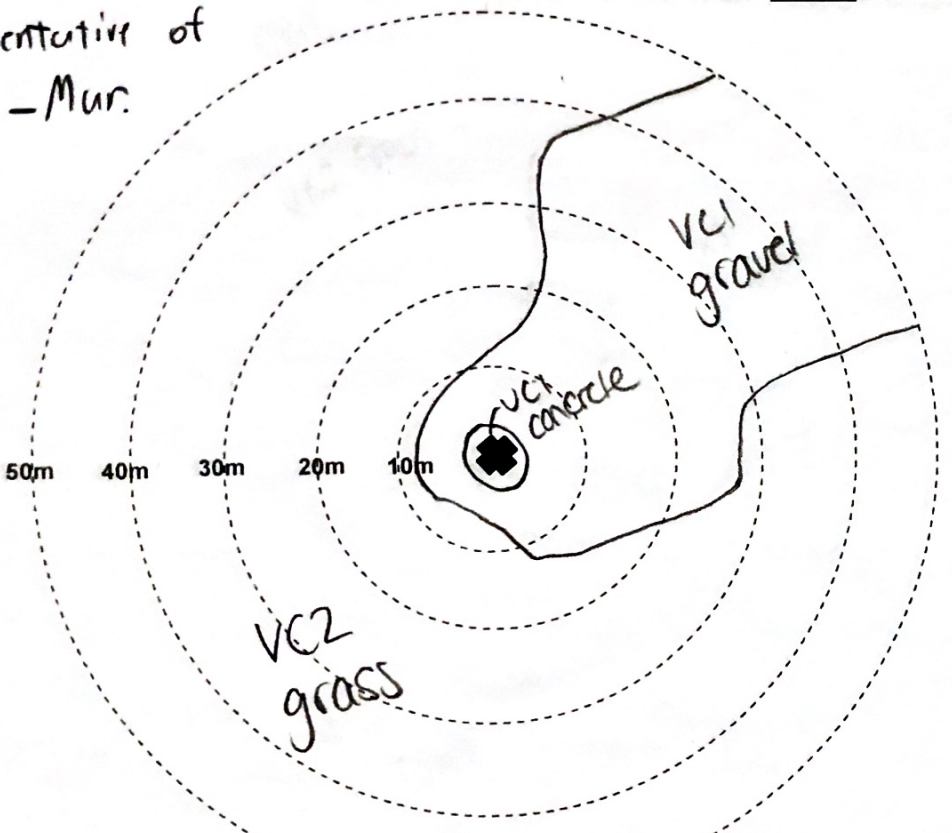
Photo Numbers (from turbine base)
 Facing North: 250329
 Facing East: 250330
 Facing South: 250331
 Facing West: 250332
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 25/03/21 ↑
 Observer: JHB
 Monthly/Seasonal
 Linear Transect Width: 5 m **N**

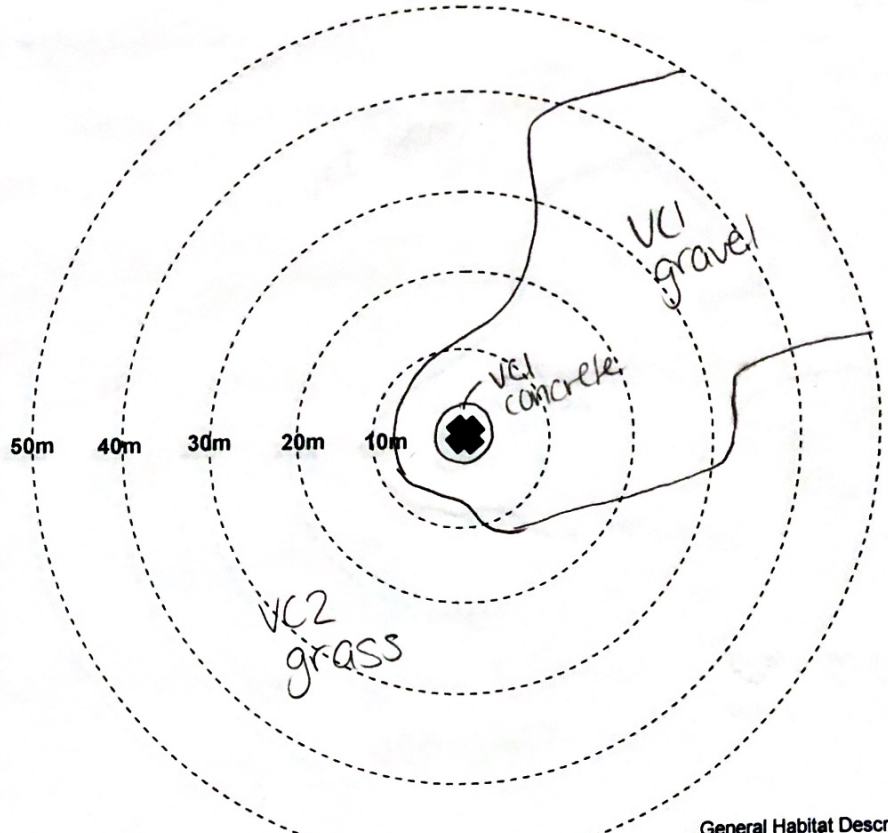
Photo Numbers (from turbine base)
 Facing North: 300429
 Facing East: 300430
 Facing South: 300431
 Facing West: 300432
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 30/04/21 ↑
 Observer: JHB
 Monthly/Seasonal
 Linear Transect Width: 5 m **N**

Representative of
 Jun. - Mar.



General Habitat Description:
hayfield



General Habitat Description:
hayfield

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island Project #: 2121F Turbine #: 514

Photo Numbers (from turbine base)
 Facing North: 0813
 Facing East: 0242
 Facing South: 6382
 Facing West: 4362
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 27/05/21
 Observer: KB
 Monthly/Seasonal
 Linear Transect Width: 5 m

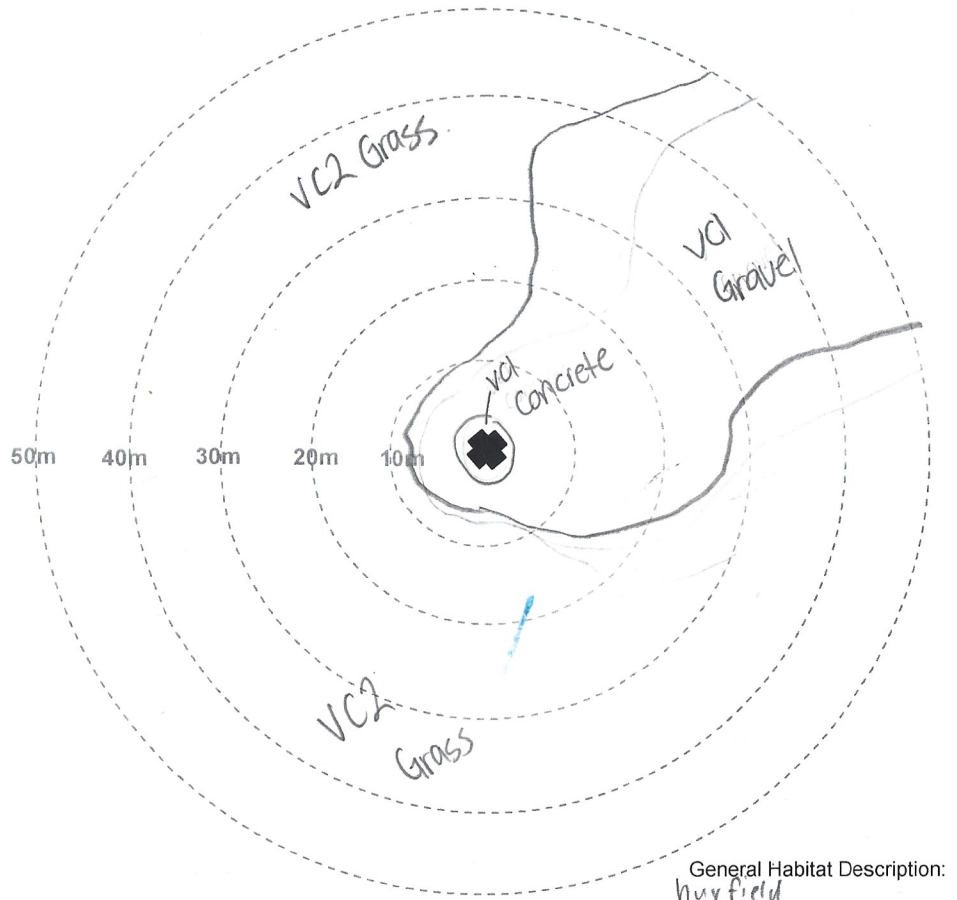
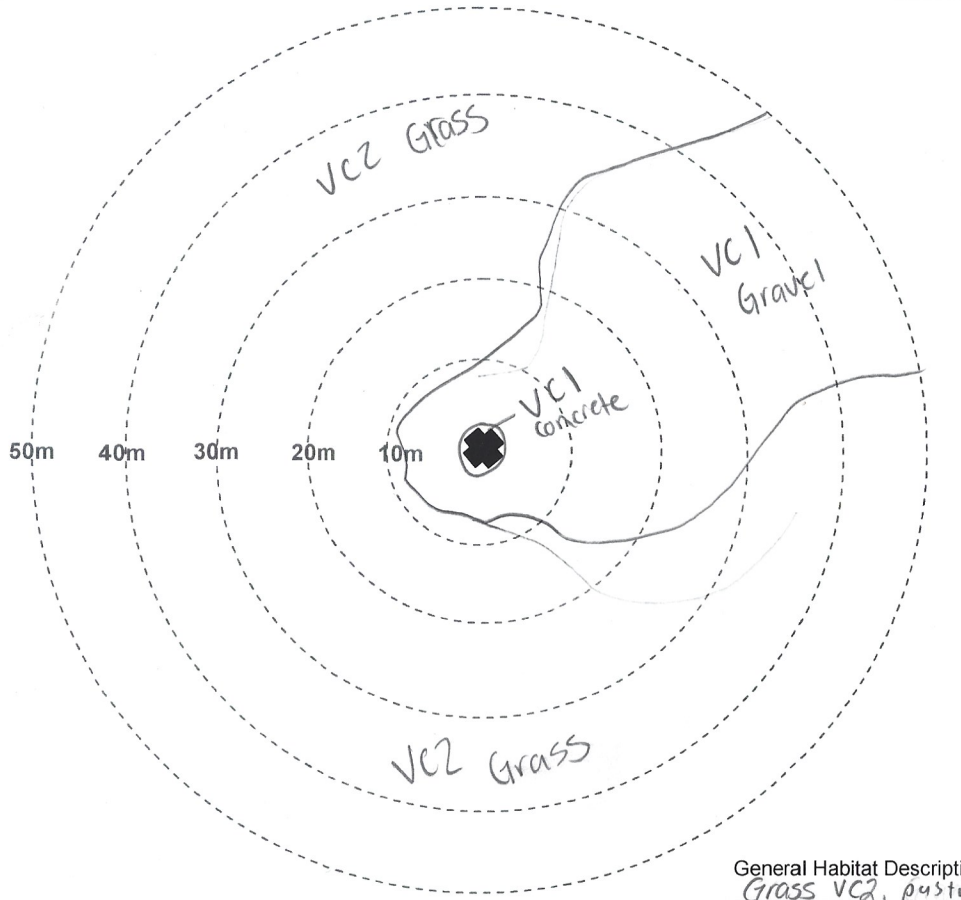
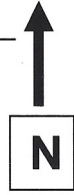


Photo Numbers (from turbine base)
 Facing North: 9570
 Facing East: 4672
 Facing South: 0104
 Facing West: 7333
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 07/06/21
 Observer: KLB
 Monthly/Seasonal
 Linear Transect Width: 5 m



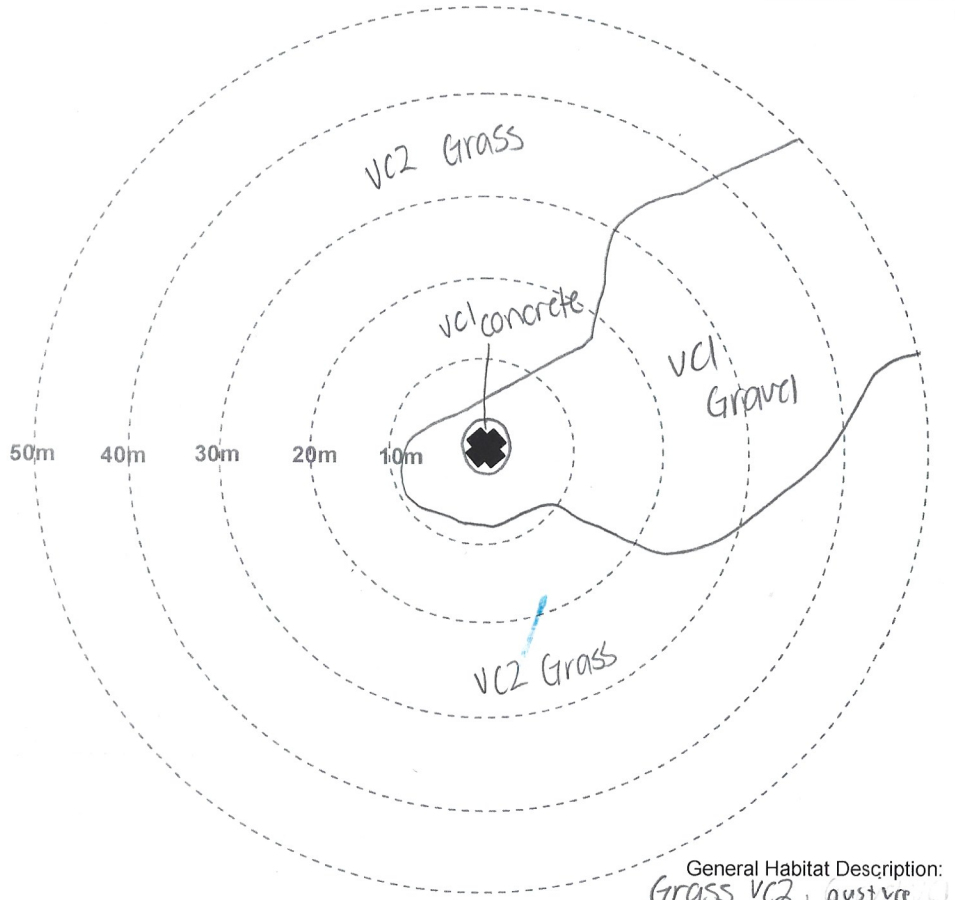
VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: 514

Photo Numbers (from turbine base)
 Facing North: 8206
 Facing East: 9209
 Facing South: 7693
 Facing West: 7276
 (sketch habitat and visibility classes)

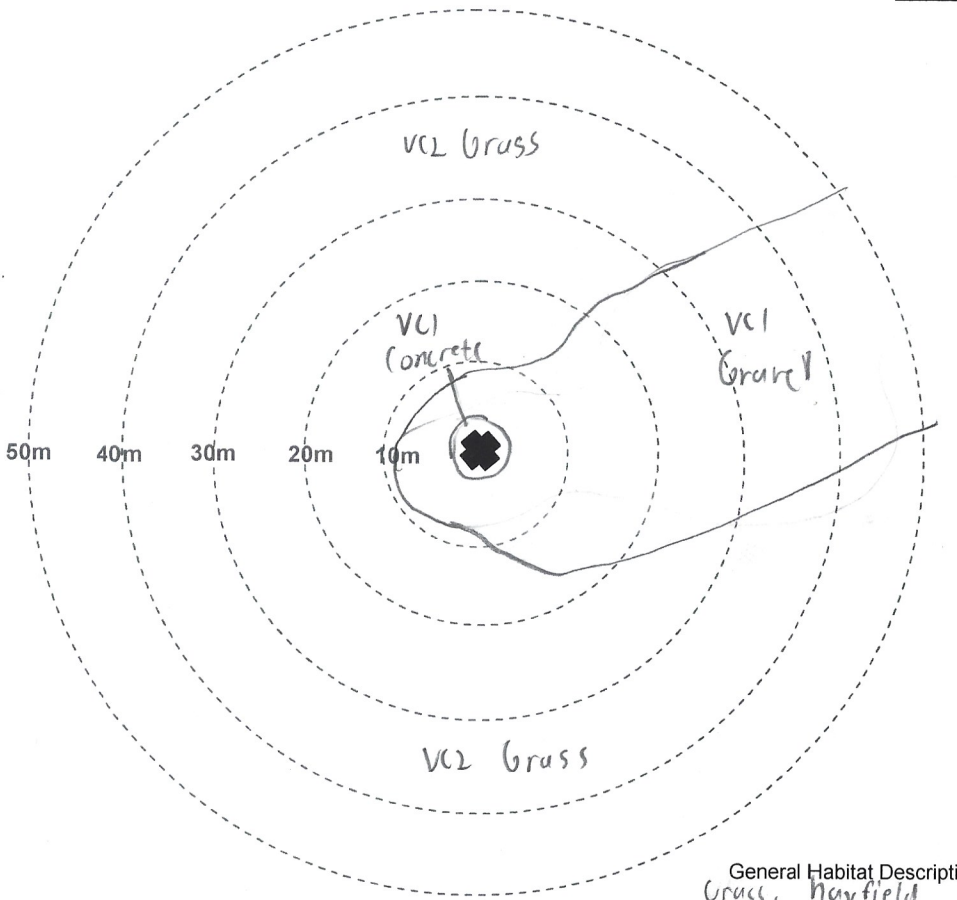
Date (DD/MM/YY): 05/07/21
 Observer: KLB
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
Grass VC2, pasture

Photo Numbers (from turbine base)
 Facing North: 67
 Facing East: 68
 Facing South: 69
 Facing West: 70
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 09/08/21
 Observer: MJD
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
Grass, hayfield

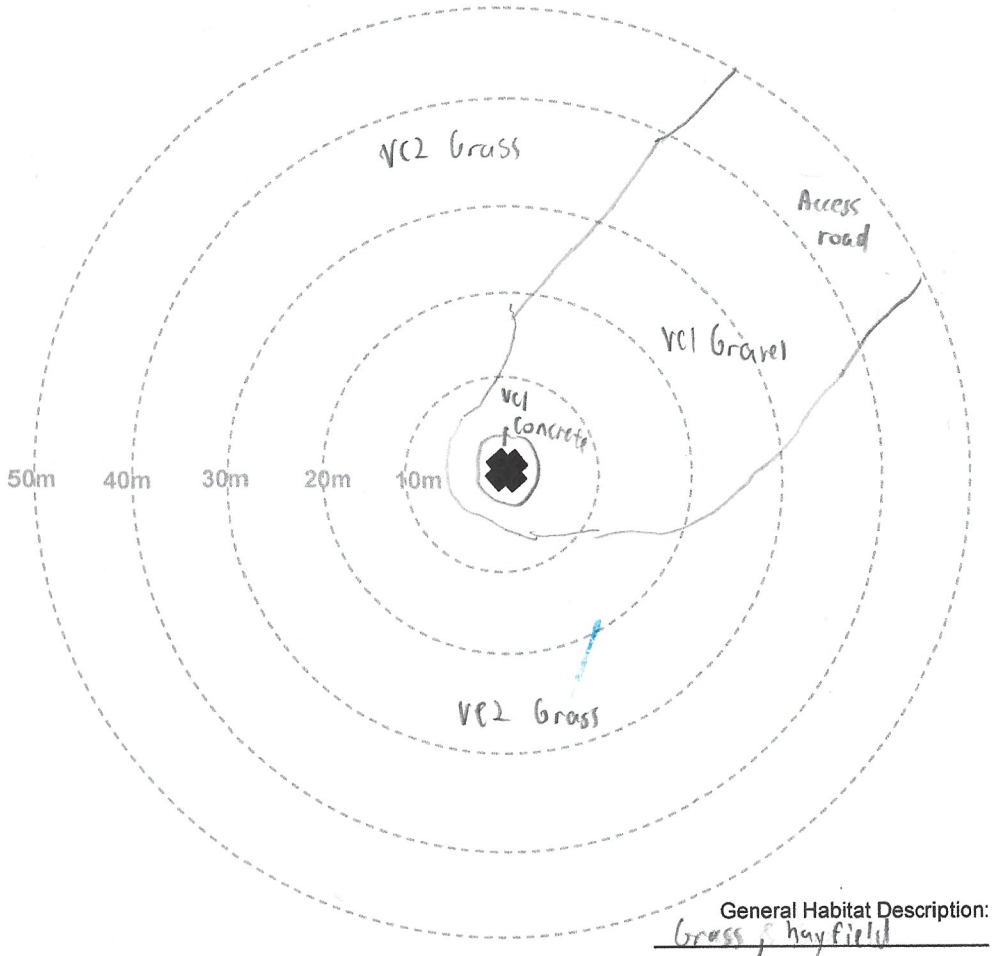
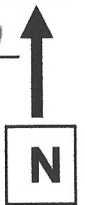
VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island W.P Project #: 2121F Turbine #: S14 Degree of Slope — degrees Slope Orientation — (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 20
 Facing East: 21
 Facing South: 22
 Facing West: 23
 (sketch habitat and visibility classes)

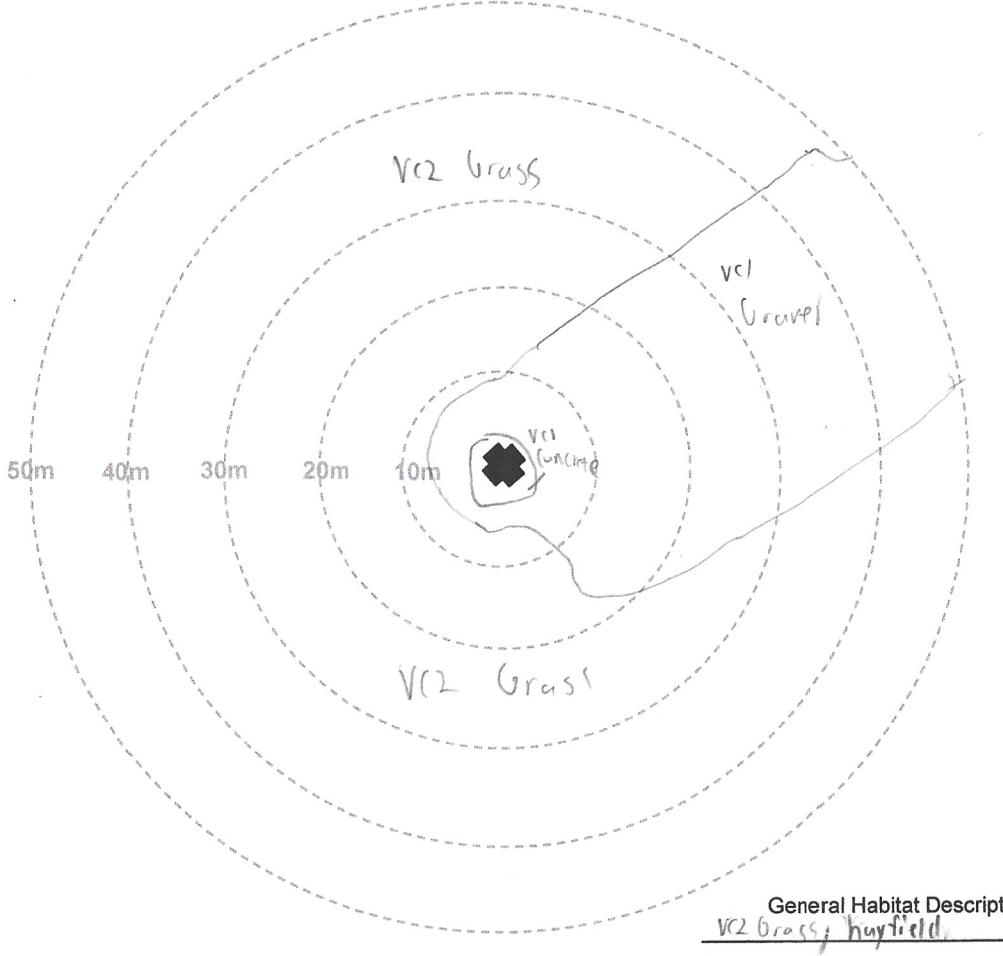
Date (DD/MM/YY): 06/09/21
 Observer: M.P.D
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
Grass, hayfield

Photo Numbers (from turbine base)
 Facing North: 13
 Facing East: 14
 Facing South: 15
 Facing West: 16
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 04/10/20
 Observer: M.P.D
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
Vc2 Grass, hayfield

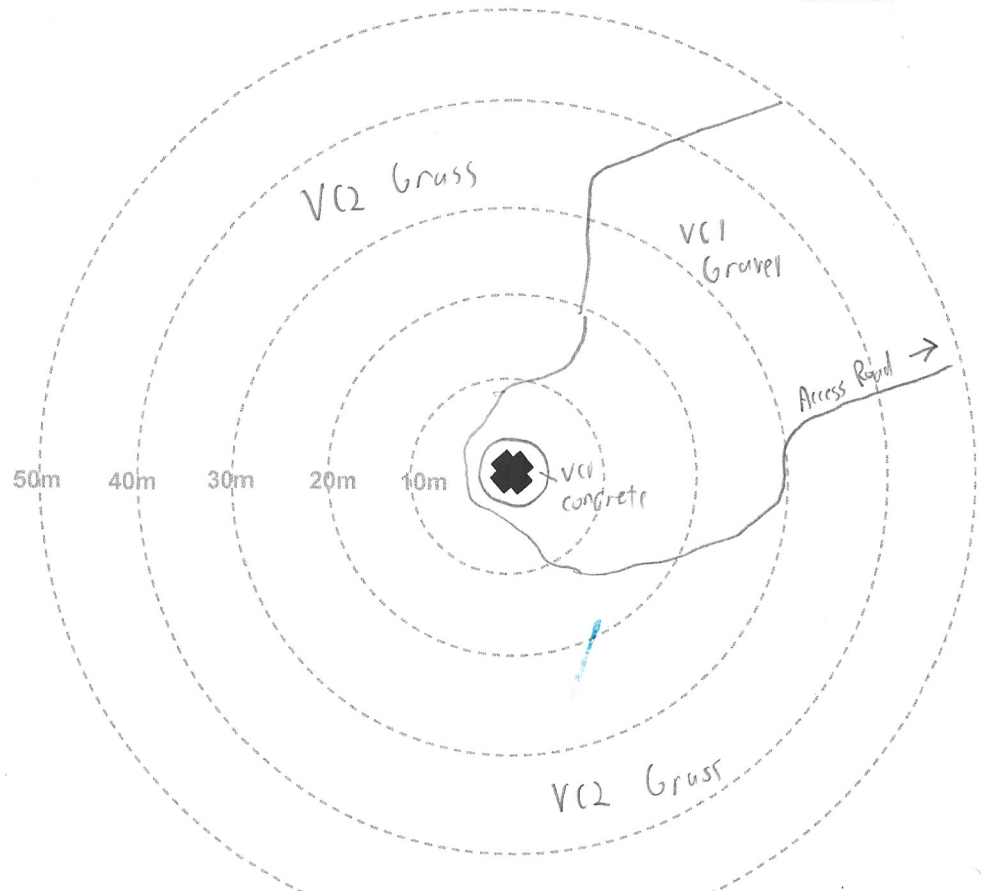
VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island W.P Project #: 2121F Turbine #: 514 Degree of Slope - degrees Slope Orientation - (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 07
 Facing East: 08
 Facing South: 09
 Facing West: 10
 (sketch habitat and visibility classes)

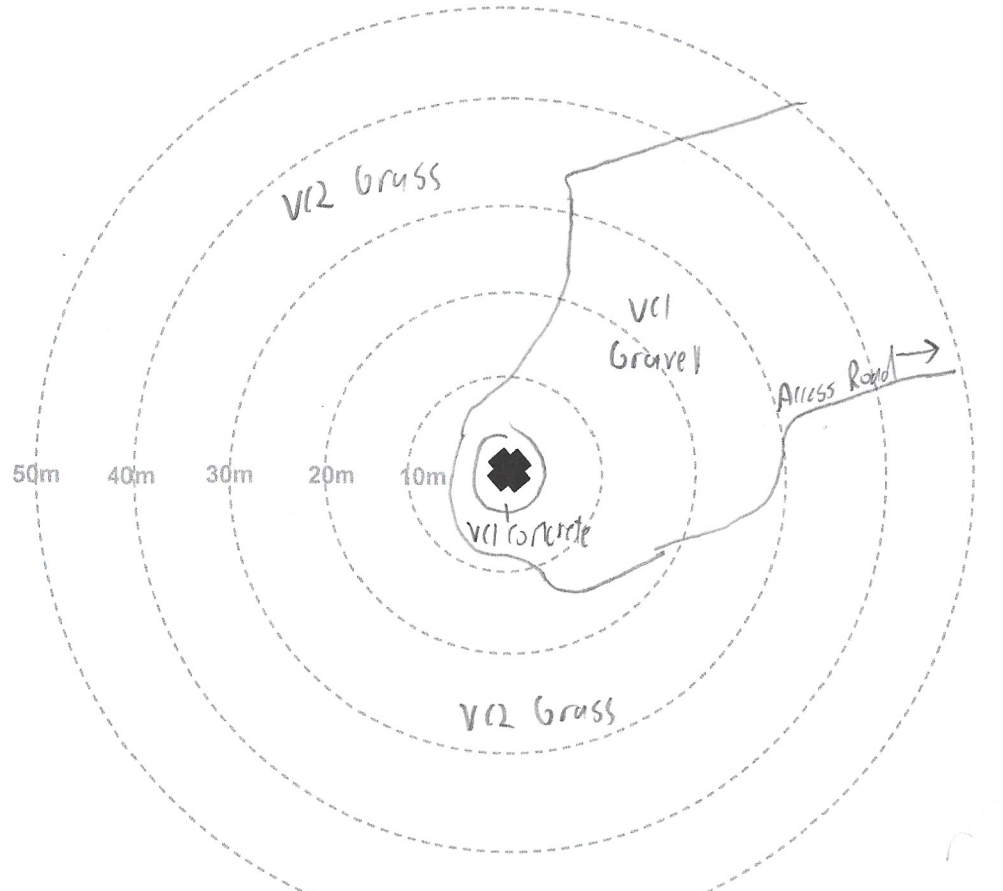
Date (DD/MM/YY): 08/11/21 ↑
 Observer: MPD
 Monthly/Seasonal Linear Transect Width: 5 m ↑
N



General Habitat Description:
Grass, Gravel, hayfield

Photo Numbers (from turbine base)
 Facing North: 01
 Facing East: 02
 Facing South: 03
 Facing West: 04
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 08/12/21 ↑
 Observer: MPD
 Monthly/Seasonal Linear Transect Width: 5 m ↑
N



General Habitat Description:
Grass, Gravel, hayfield

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: 516

Photo Numbers (from turbine base)
 Facing North: 220321
 Facing East: 220322
 Facing South: 220323
 Facing West: 220324
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 22/03/21
 Observer: JLB
 Monthly/Seasonal
 Linear Transect Width: 5 m

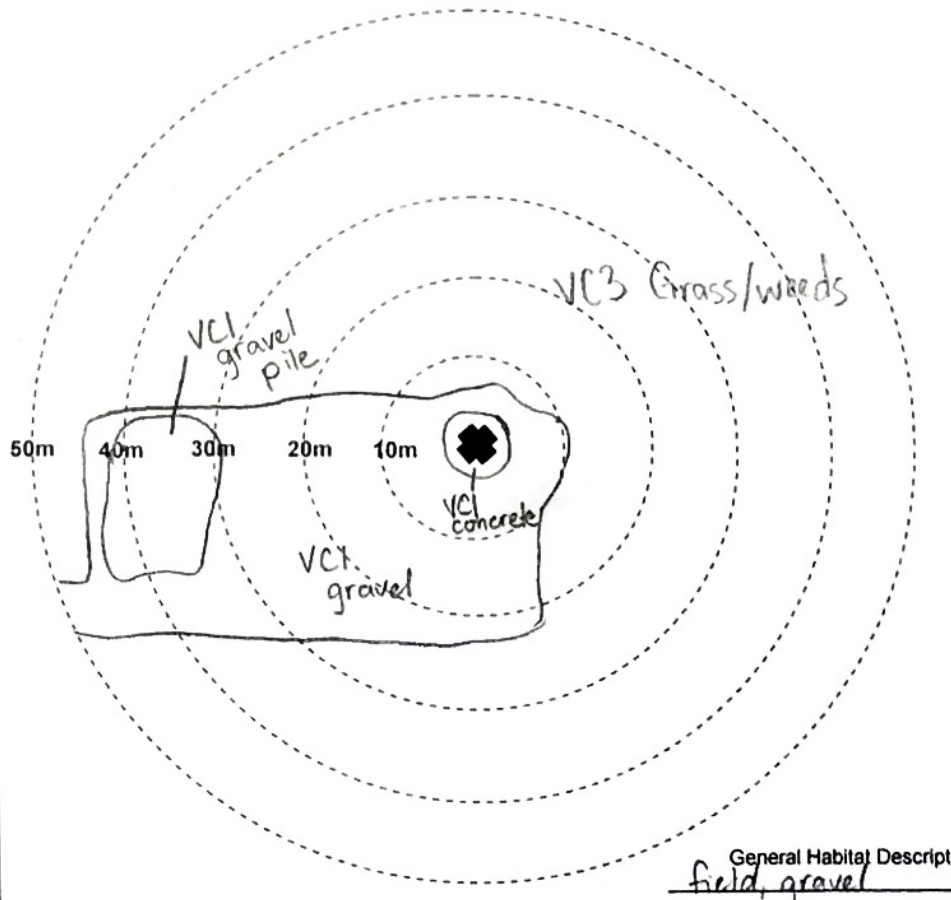
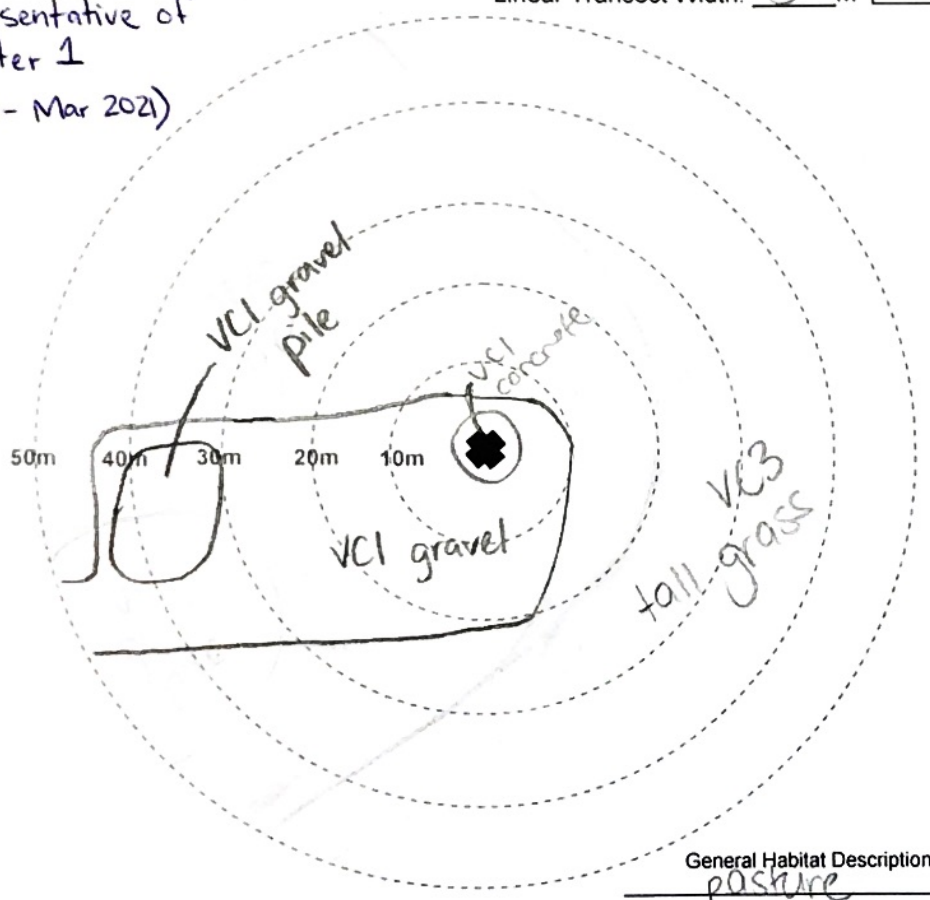


Photo Numbers (from turbine base)
 Facing North: 21
 Facing East: 22
 Facing South: 23
 Facing West: 24
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 14/12/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



Representative of
 Winter 1
 (Jan - Mar 2021)



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121E Turbine #: S18 Degree of Slope +1 degrees Slope Orientation S (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 250305
 Facing East: 250306
 Facing South: 250307
 Facing West: 250308
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 25/03/21

Observer: JYB

Monthly/Seasonal
 Linear Transect Width: 5 m



Photo Numbers (from turbine base)
 Facing North: 300437
 Facing East: 300438
 Facing South: 300439
 Facing West: 300440
 (sketch habitat and visibility classes)

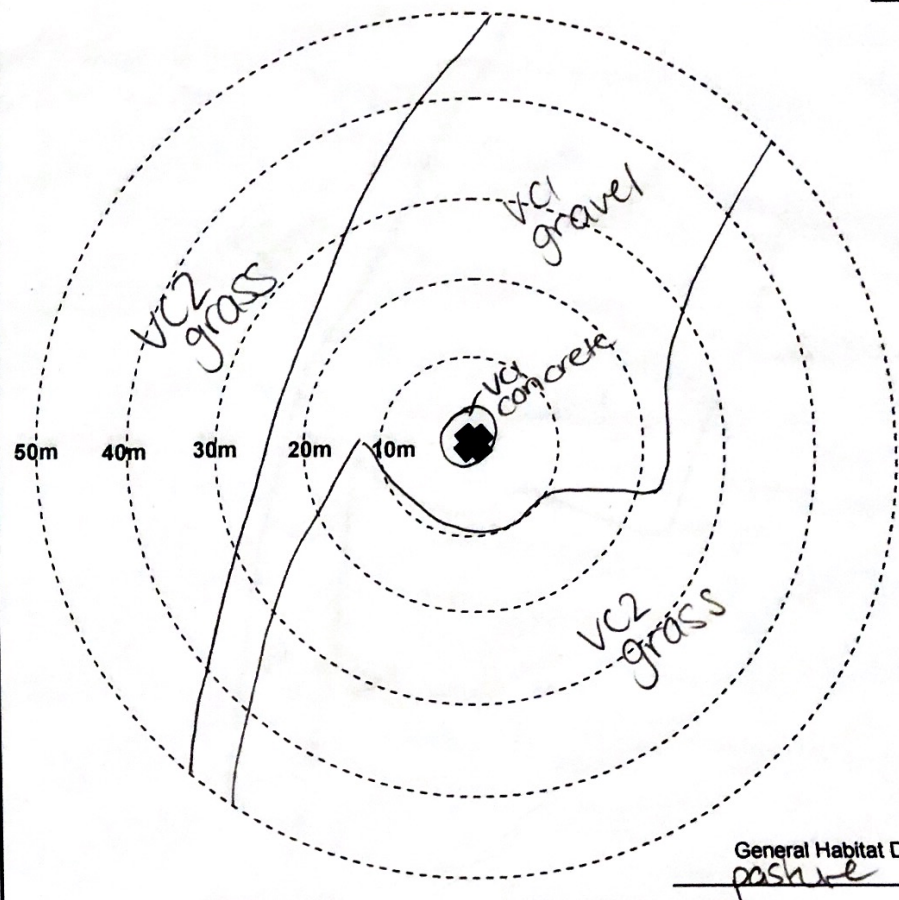
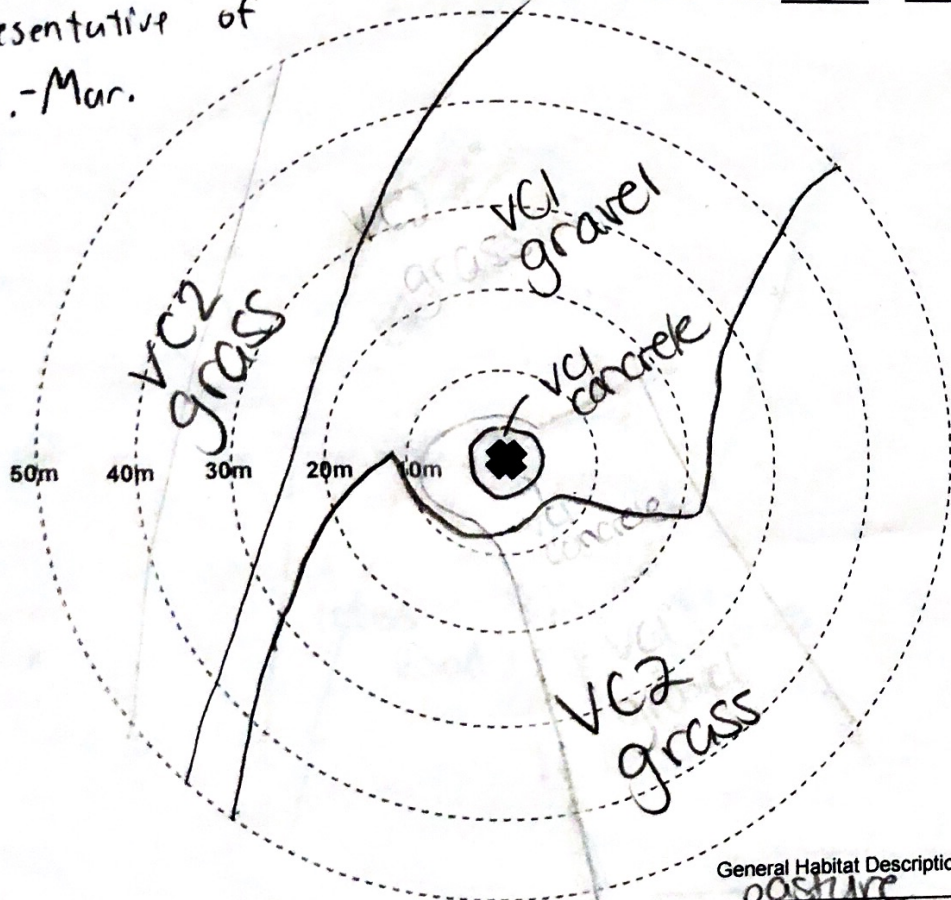
Date (DD/MM/YY): 30/04/21

Observer: JYB

Monthly/Seasonal
 Linear Transect Width: 5 m



Representative of
 Jan.-Mar.



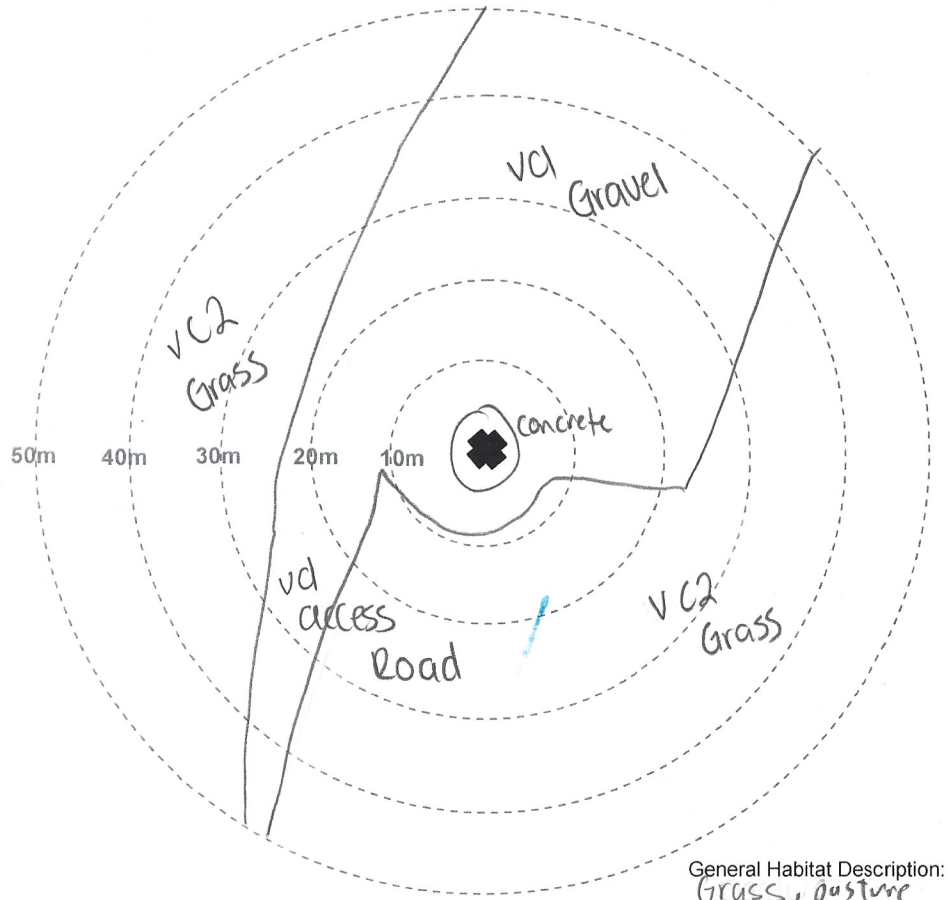
VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island Project #: 2121F Turbine #: 518

Photo Numbers (from turbine base)
 Facing North: 1855
 Facing East: 7824
 Facing South: 5131
 Facing West: 1252
 (sketch habitat and visibility classes)

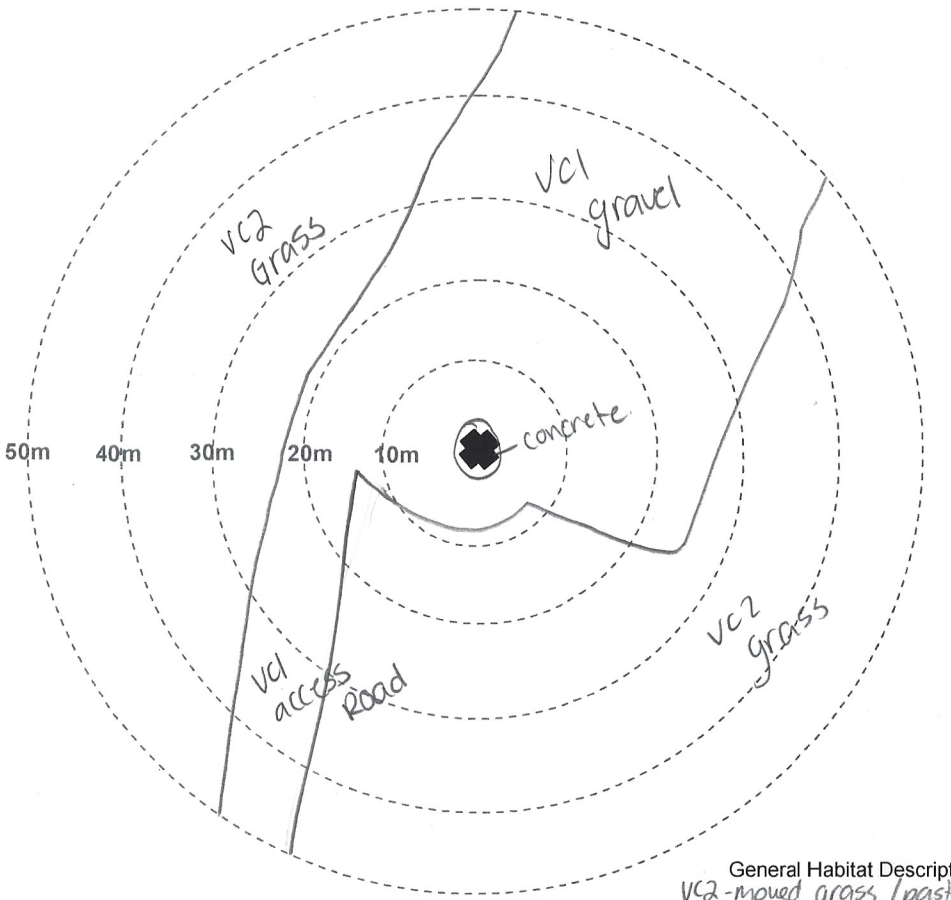
Date (DD/MM/YY): 31/05/21
 Observer: KLB
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
Grass, pasture

Photo Numbers (from turbine base)
 Facing North: 5918
 Facing East: 6449
 Facing South: 3682
 Facing West: 1761
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 10/06/21
 Observer: KLB
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
VC2-mowed grass/pasture

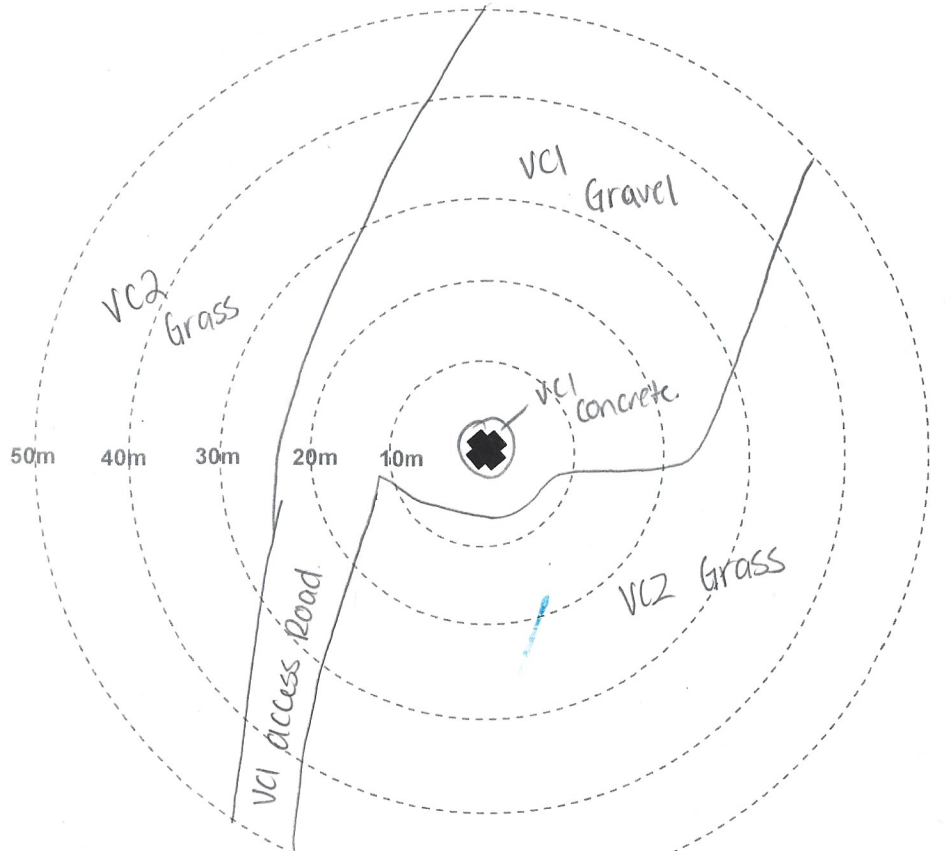
VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP. Project #: 2121F Turbine #: 518

Photo Numbers (from turbine base)
 Facing North: 9310
 Facing East: 8344
 Facing South: 0558
 Facing West: _____
 (sketch habitat and visibility classes)

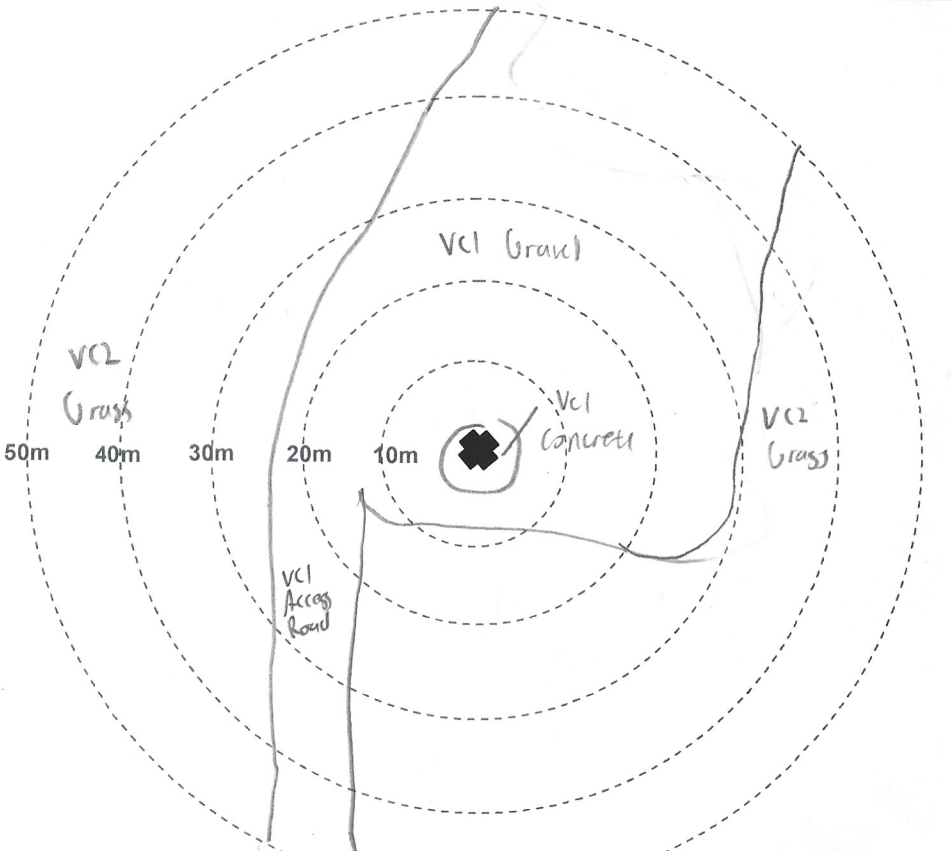
Date (DD/MM/YY): 05/07/21
 Observer: KLB
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
Grass Vc2, Gravel Vc1

Photo Numbers (from turbine base)
 Facing North: 79
 Facing East: 80
 Facing South: 81
 Facing West: 82
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 09/08/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
Grass Vc2, pasture

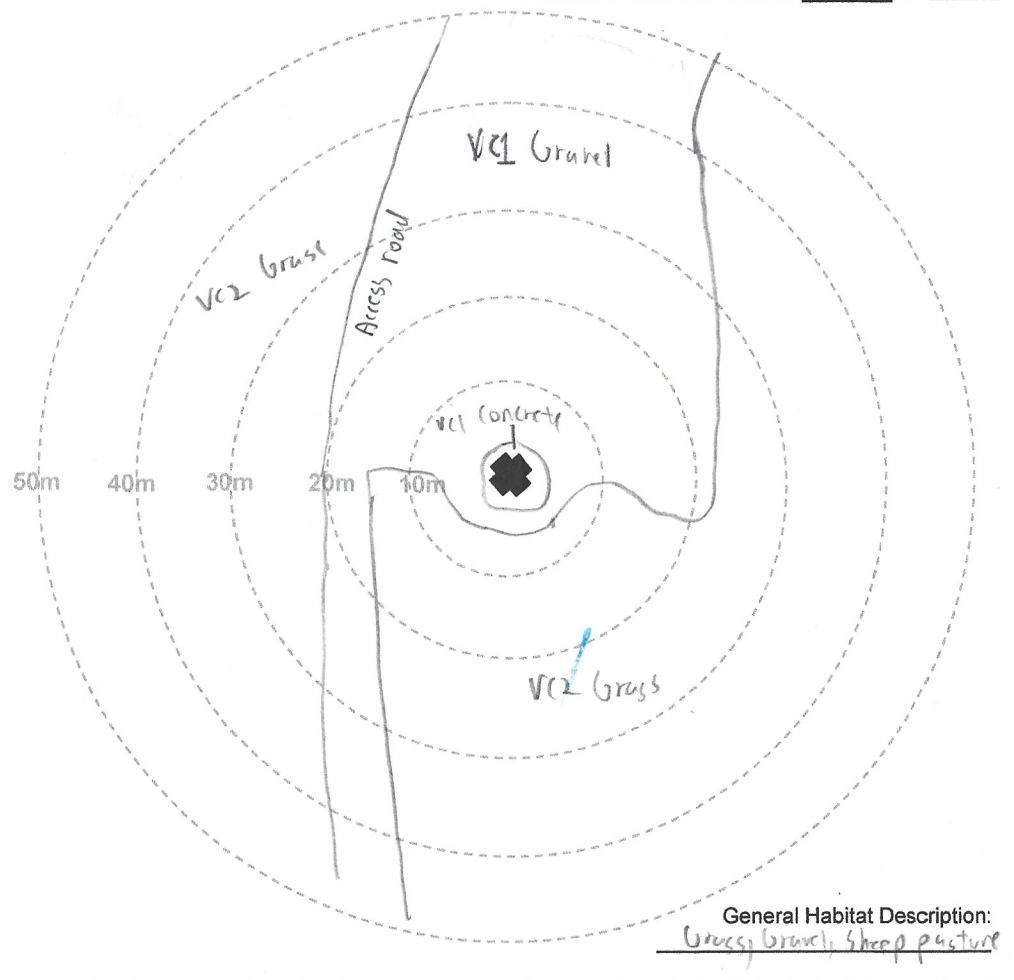
VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Class Map

Project Name: Amherst Island W.P Project #: 2121E Turbine #: 518 Degree of Slope — degrees Slope Orientation — (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 36
 Facing East: 37
 Facing South: 38
 Facing West: 39
 (sketch habitat and visibility classes)

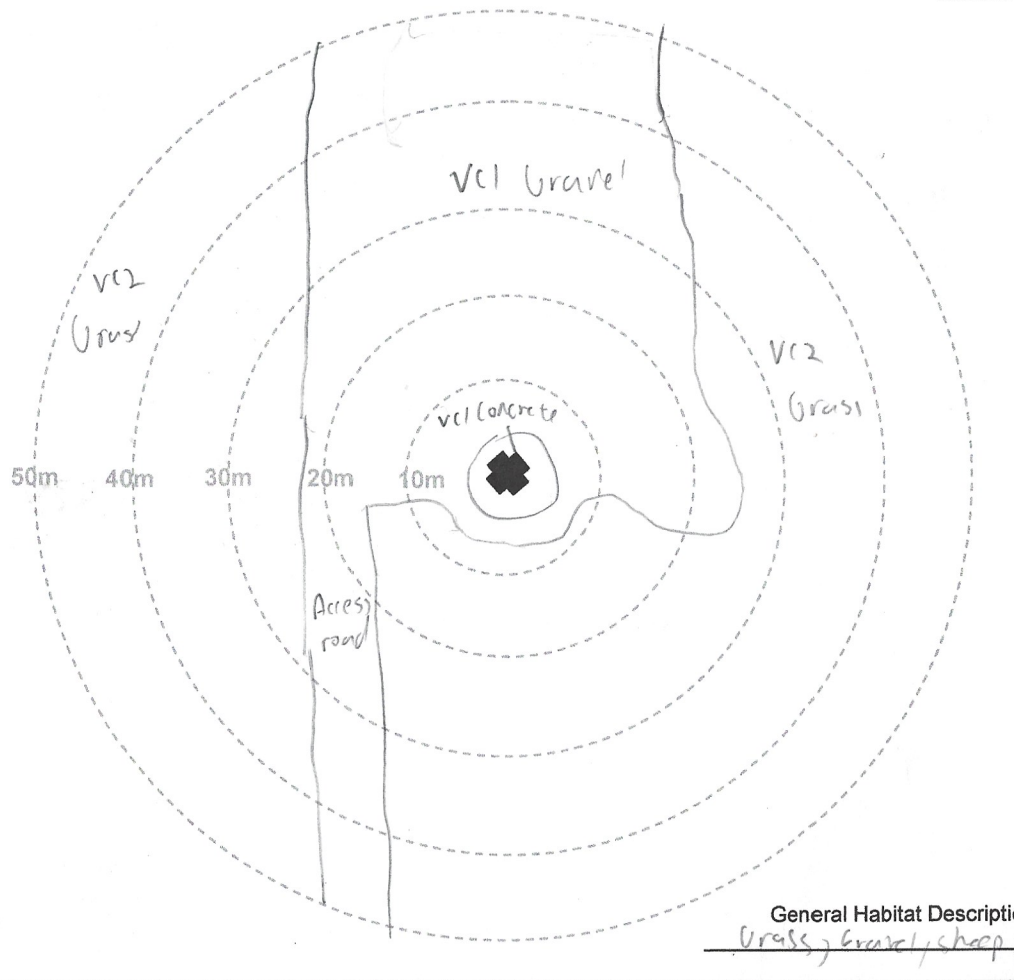
Date (DD/MM/YY): 06/09/21
 Observer: M P D
 Monthly/Seasonal Linear Transect Width: 5 m



General Habitat Description:
Grassy, brush, sheep pasture

Photo Numbers (from turbine base)
 Facing North: 29
 Facing East: 30
 Facing South: 31
 Facing West: 32
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 04/10/21
 Observer: M P D
 Monthly/Seasonal Linear Transect Width: 5 m



General Habitat Description:
Grass, gravel, sheep p.

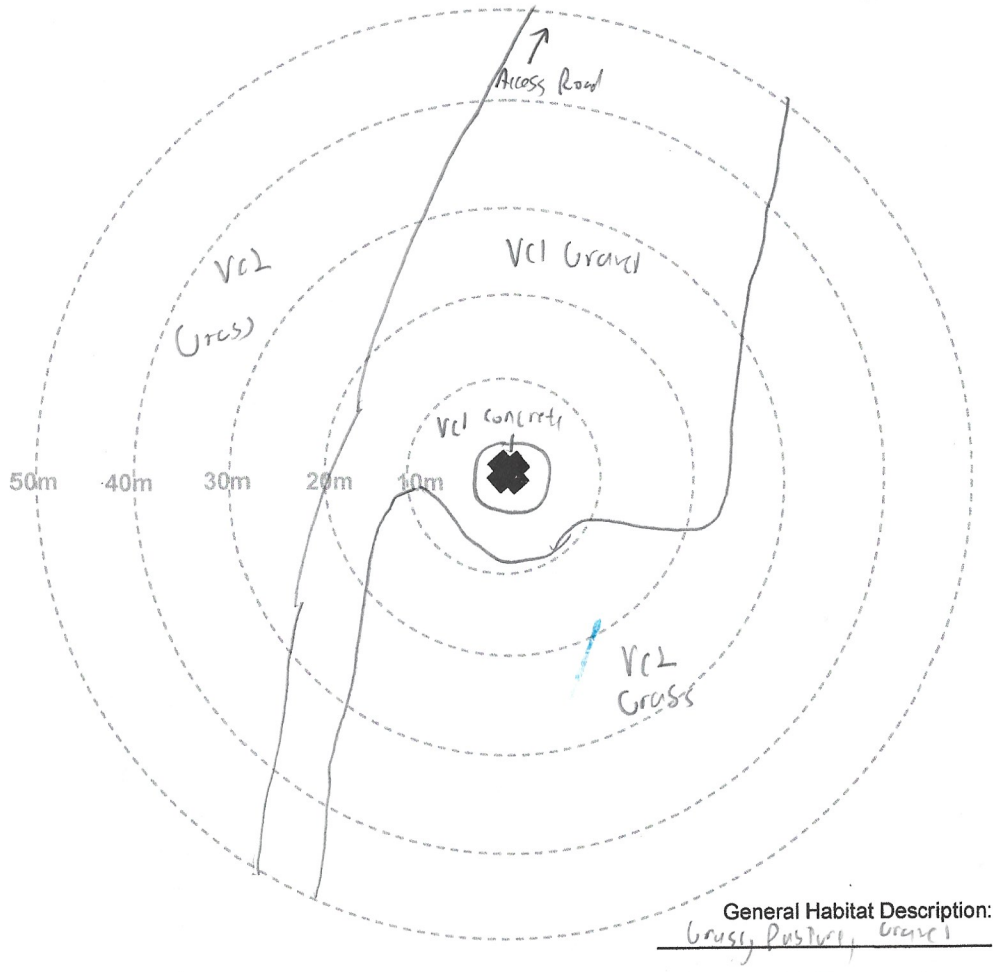
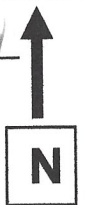
VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Class Map

Project Name: Amherst Island W.P. Project #: 221F Turbine #: 518 Degree of Slope — degrees Slope Orientation — (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 21
 Facing East: 22
 Facing South: 23
 Facing West: 24
 (sketch habitat and visibility classes)

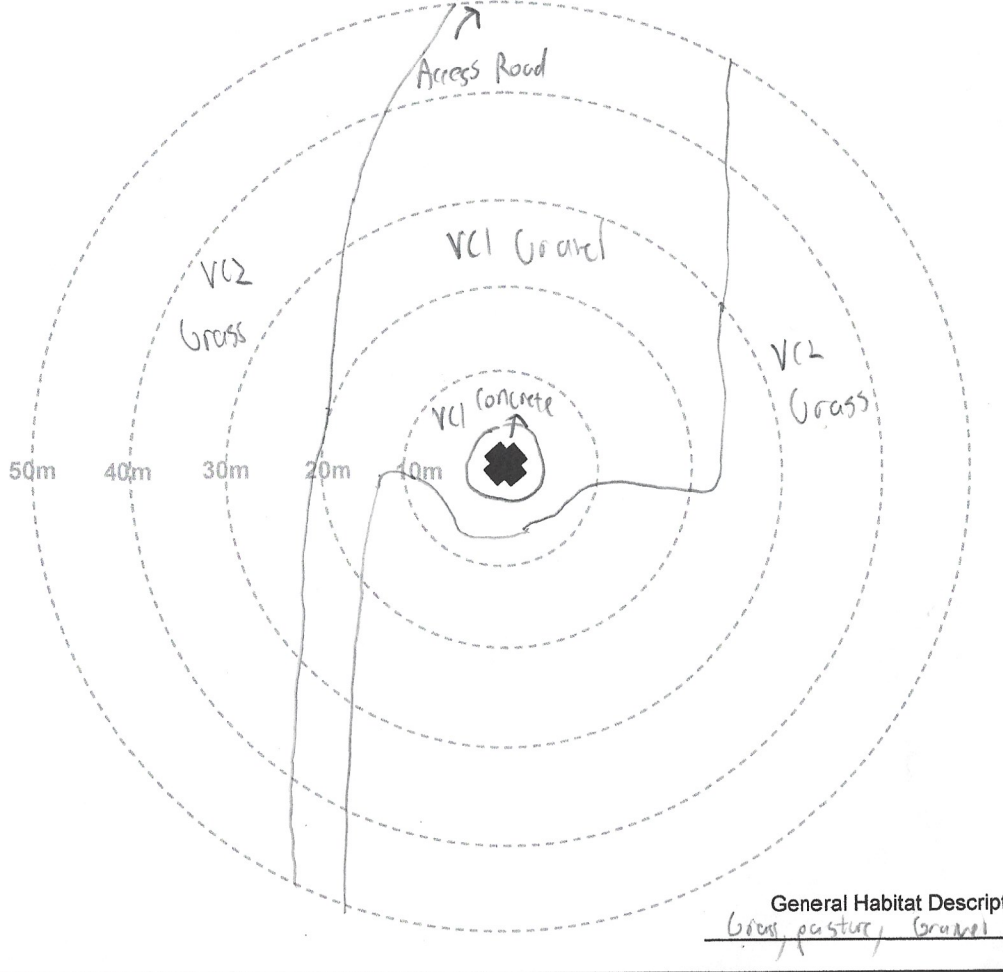
Date (DD/MM/YY): 08/11/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
Grassy Pasture, Gravel

Photo Numbers (from turbine base)
 Facing North: 29
 Facing East: 30
 Facing South: 31
 Facing West: 32
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 08/12/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
Grassy pasture, Gravel

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S19 Degree of Slope — degrees Slope Orientation — (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 220309
 Facing East: 220310
 Facing South: 220311
 Facing West: 220312
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 23/03/21 ↑

Observer: JMB

Monthly/Seasonal Linear Transect Width: 5 m ↑ **N**

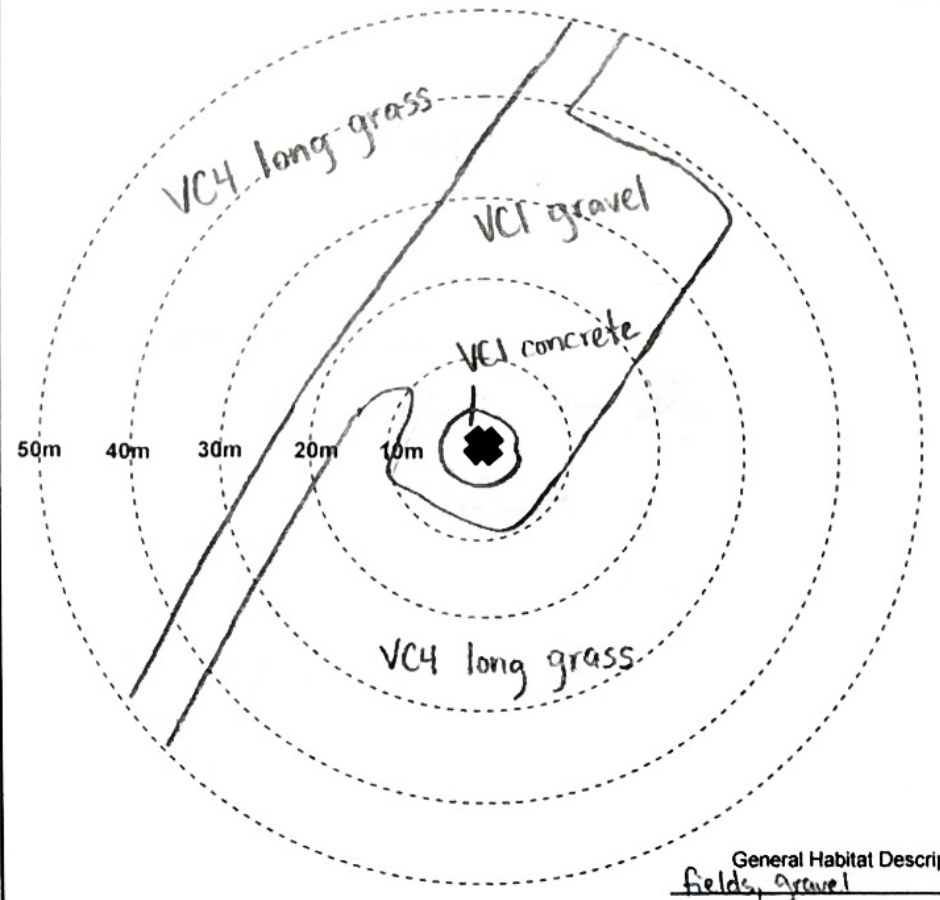
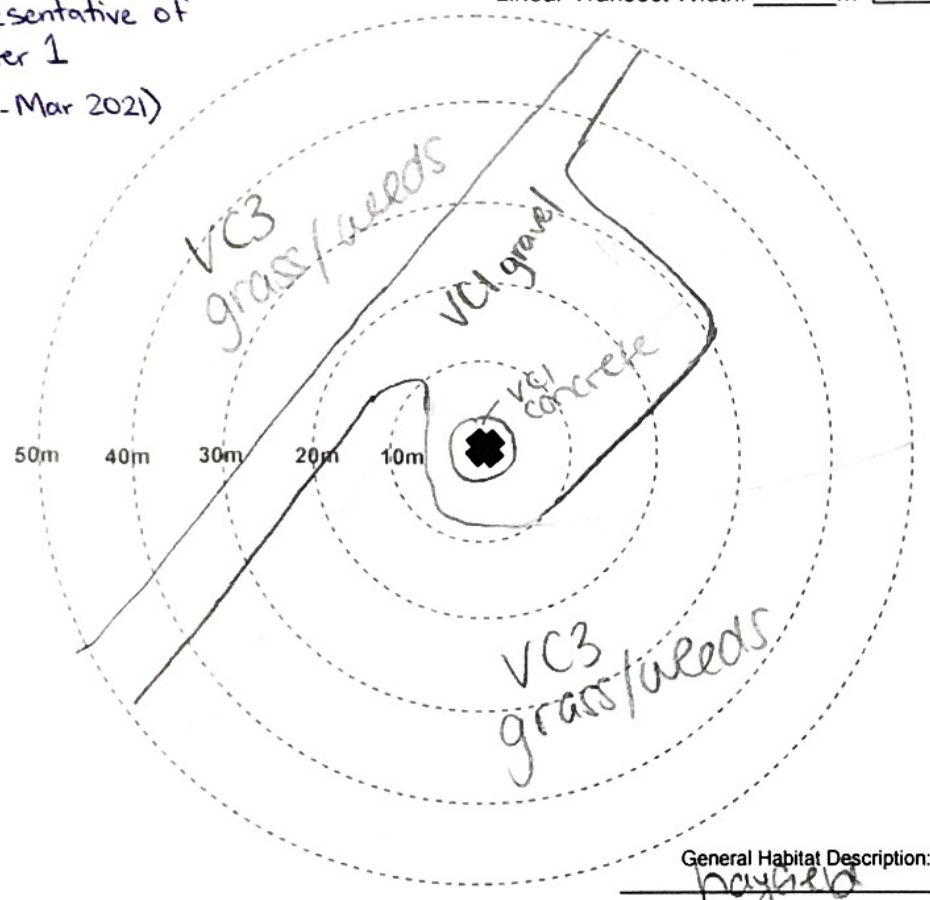
Photo Numbers (from turbine base)
 Facing North: 13
 Facing East: 14
 Facing South: 15
 Facing West: 16
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 07/12/21 ↑

Observer: MPD

Monthly/Seasonal Linear Transect Width: 5 m ↑ **N**

Representative of Winter 1 (Jan-Mar 2021)



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S20 Degree of Slope degrees Slope Orientation (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 220309
 Facing East: 220310
 Facing South: 220311
 Facing West: 220312
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 22/03/21
 Observer: J4B
 Monthly/Seasonal
 Linear Transect Width: 5 m

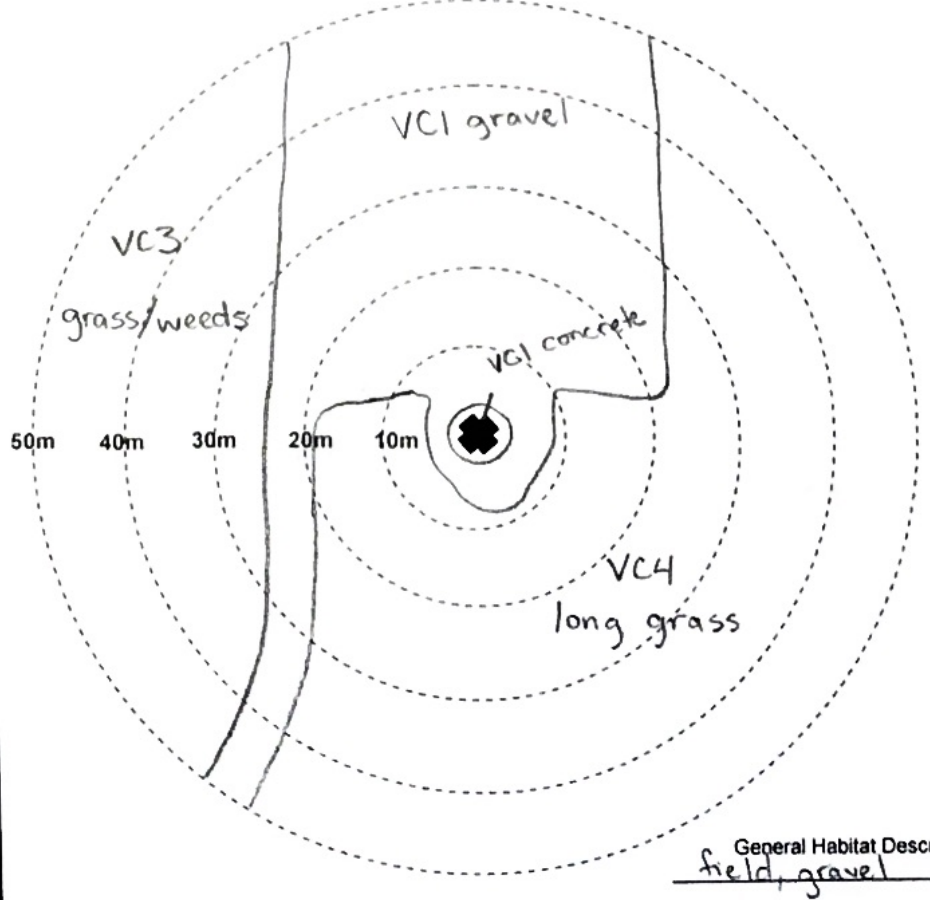
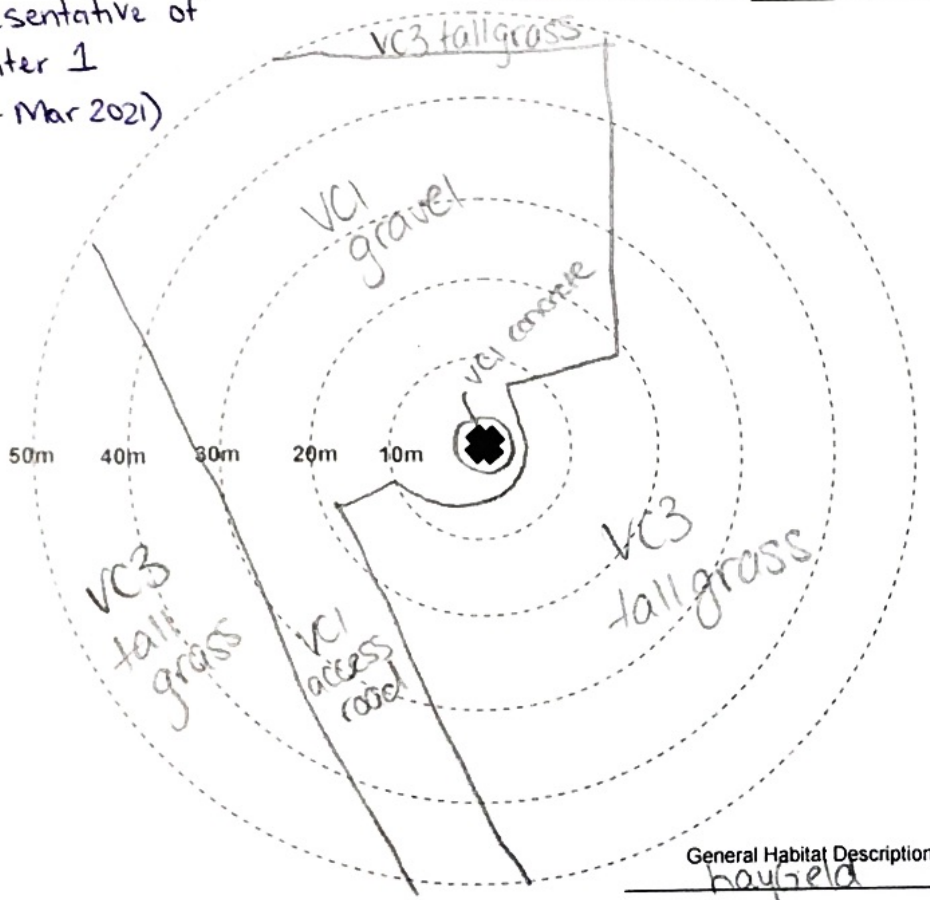


Photo Numbers (from turbine base)
 Facing North: 09
 Facing East: 10
 Facing South: 11
 Facing West: 12
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 14/12/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



Representative of
 Winter 1
 (Jan-Mar 2021)



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island UR Project #: 2121F Turbine #: S21

Photo Numbers (from turbine base)
 Facing North: 230301
 Facing East: 230302
 Facing South: 230303
 Facing West: 230304
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 23/03/21
 Observer: JUB
 Monthly/Seasonal Linear Transect Width: 5 m

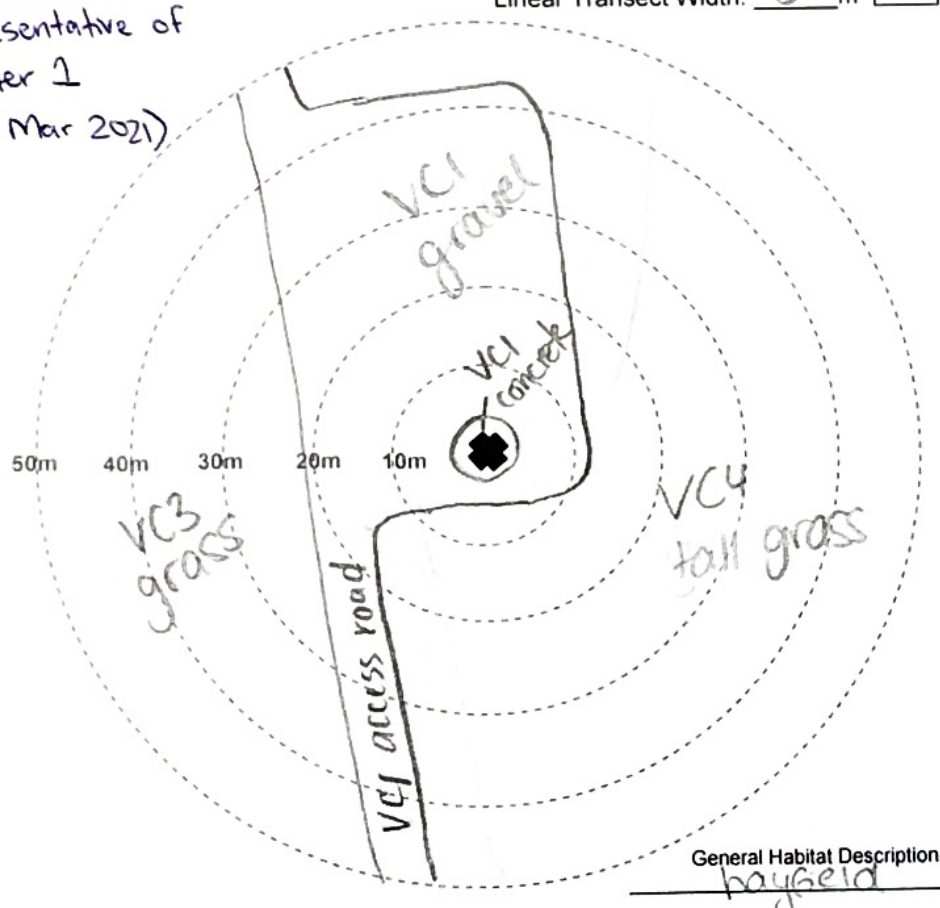


Photo Numbers (from turbine base)
 Facing North: 17
 Facing East: 18
 Facing South: 19
 Facing West: 20
 (sketch habitat and visibility classes)

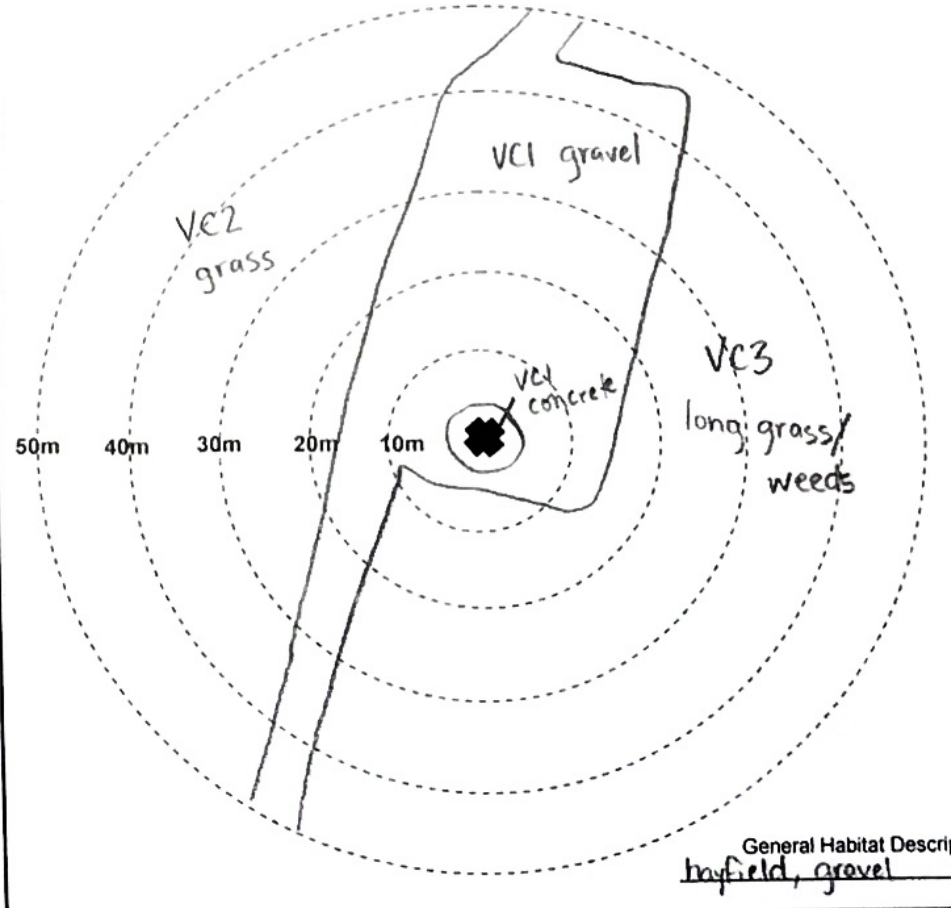
Date (DD/MM/YY): 07/12/21
 Observer: MPD
 Monthly/Seasonal Linear Transect Width: 5 m



Representative of Winter 1 (Jan-Mar 2021)



General Habitat Description: hayfield



General Habitat Description: hayfield, gravel

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S22 Degree of Slope +0.5 degrees Slope Orientation NW (e.g. SSW)

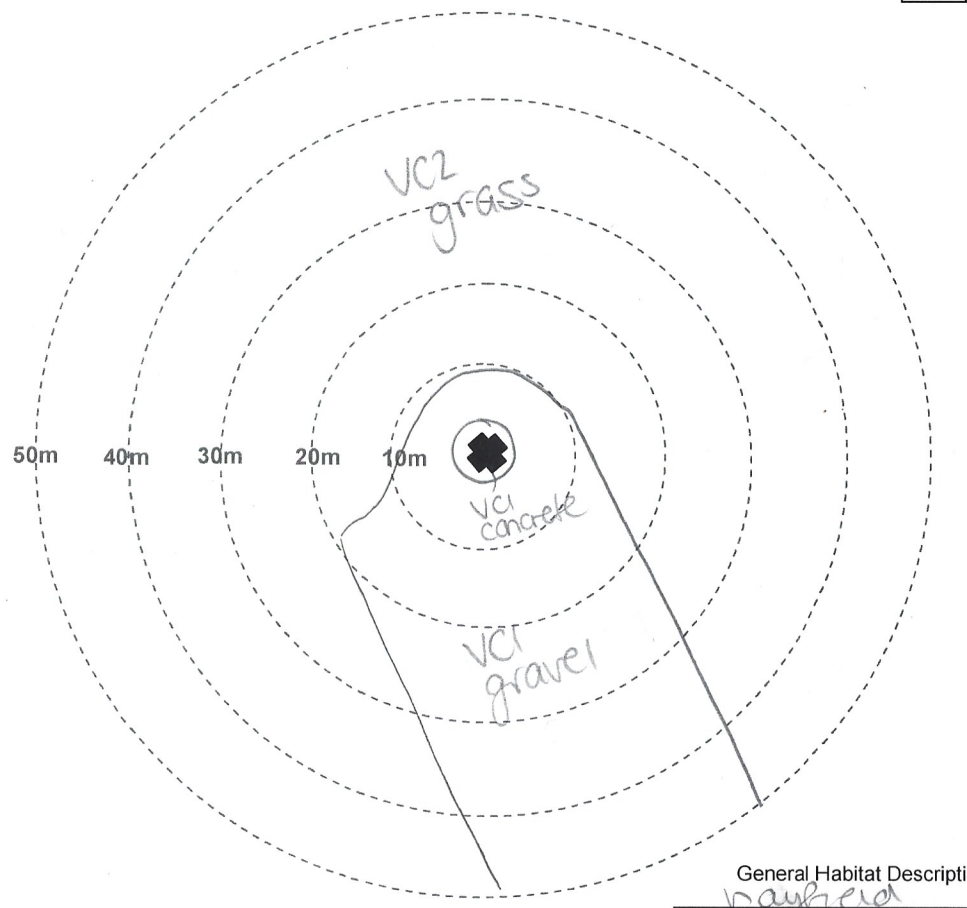
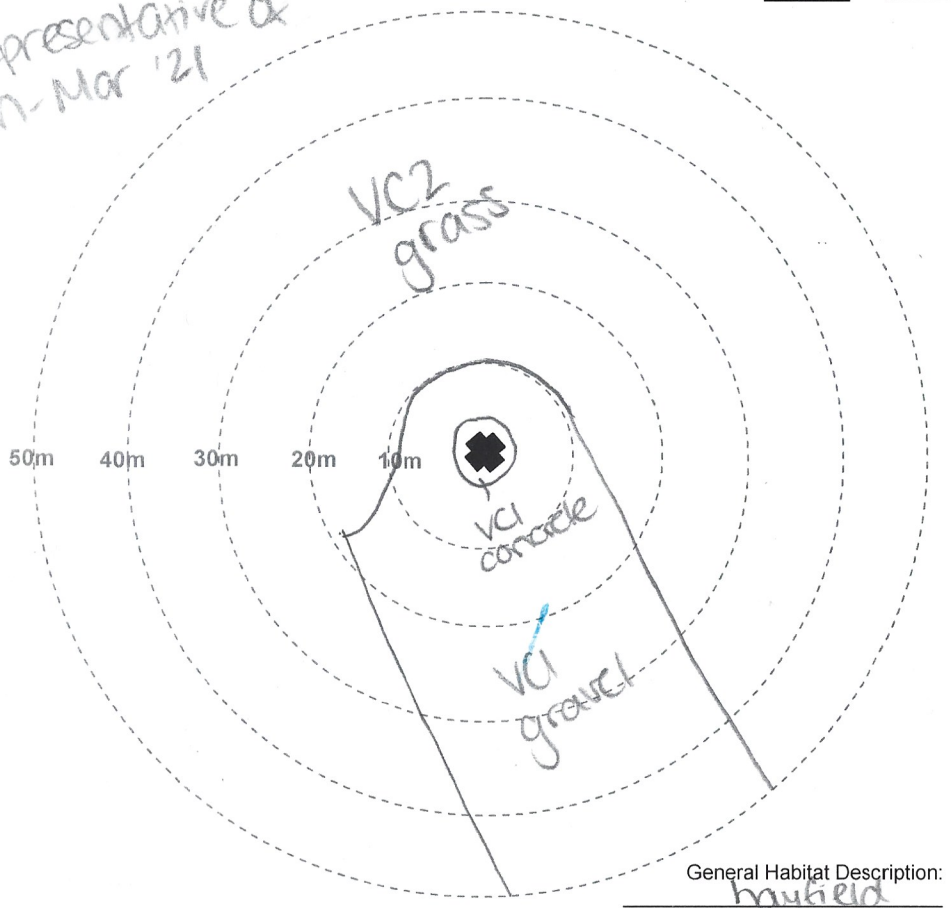
Photo Numbers (from turbine base)
 Facing North: 220317
 Facing East: 220318
 Facing South: 220319
 Facing West: 220320
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 22/03/21 ↑
 Observer: JYB
 Monthly/Seasonal
 Linear Transect Width: 5 m **N**

Photo Numbers (from turbine base)
 Facing North: 300405
 Facing East: 300406
 Facing South: 300407
 Facing West: 300408
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 30/04/21 ↑
 Observer: JYB
 Monthly/Seasonal
 Linear Transect Width: 5 m **N**

*Representative of
Jan-Mar '21*



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island W.P Project #: 2121F Turbine #: 522

Photo Numbers (from turbine base)
 Facing North: 17
 Facing East: 18
 Facing South: 19
 Facing West: 20
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 27/05/21
 Observer: M.P.I
 Monthly/Seasonal
 Linear Transect Width: 5 m

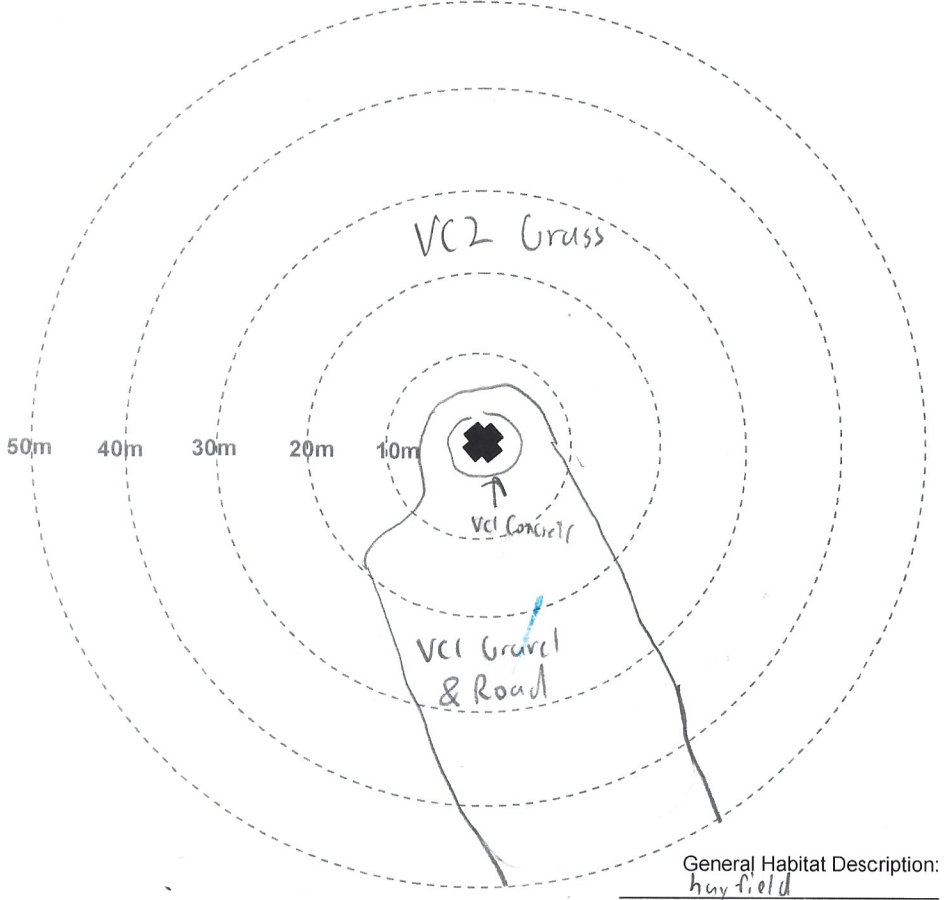
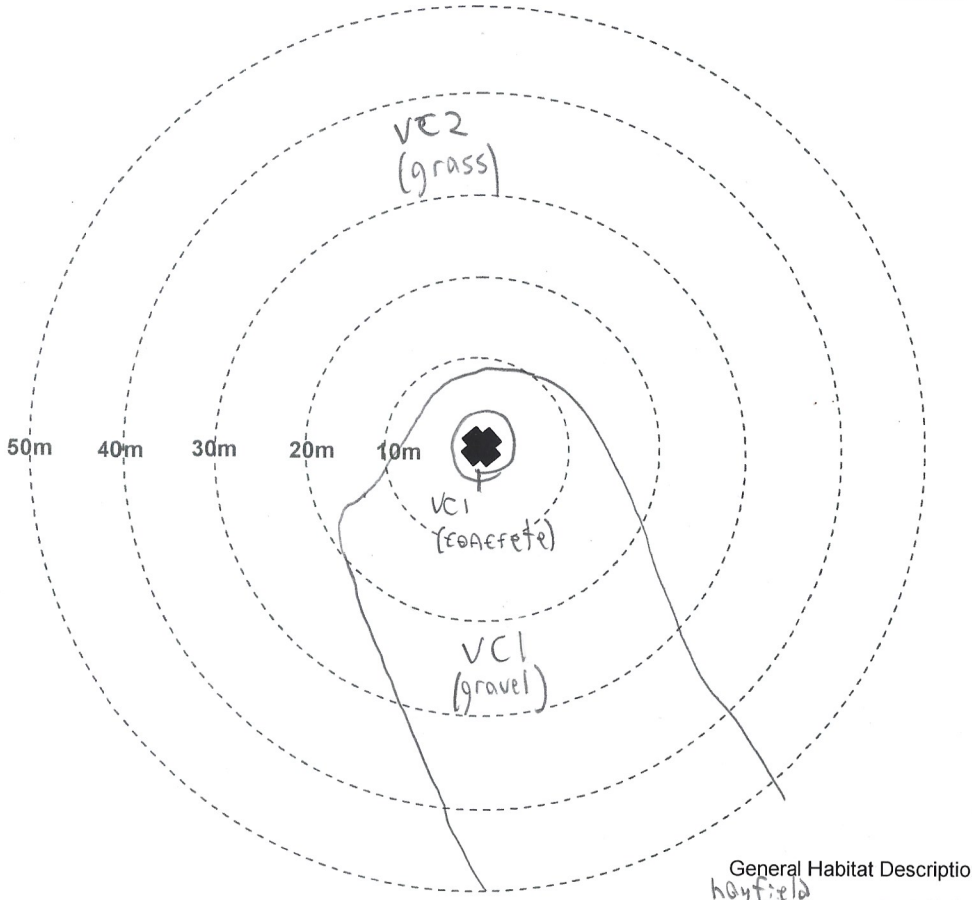


Photo Numbers (from turbine base)
 Facing North: 014
 Facing East: 015
 Facing South: 016
 Facing West: 017
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 07/06/21
 Observer: MCT
 Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121f Turbine #: 522

Photo Numbers (from turbine base)
 Facing North: 184
 Facing East: 185
 Facing South: 186
 Facing West: 187
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 05/07/21
 Observer: MCT
 Monthly/Seasonal
 Linear Transect Width: 5 m

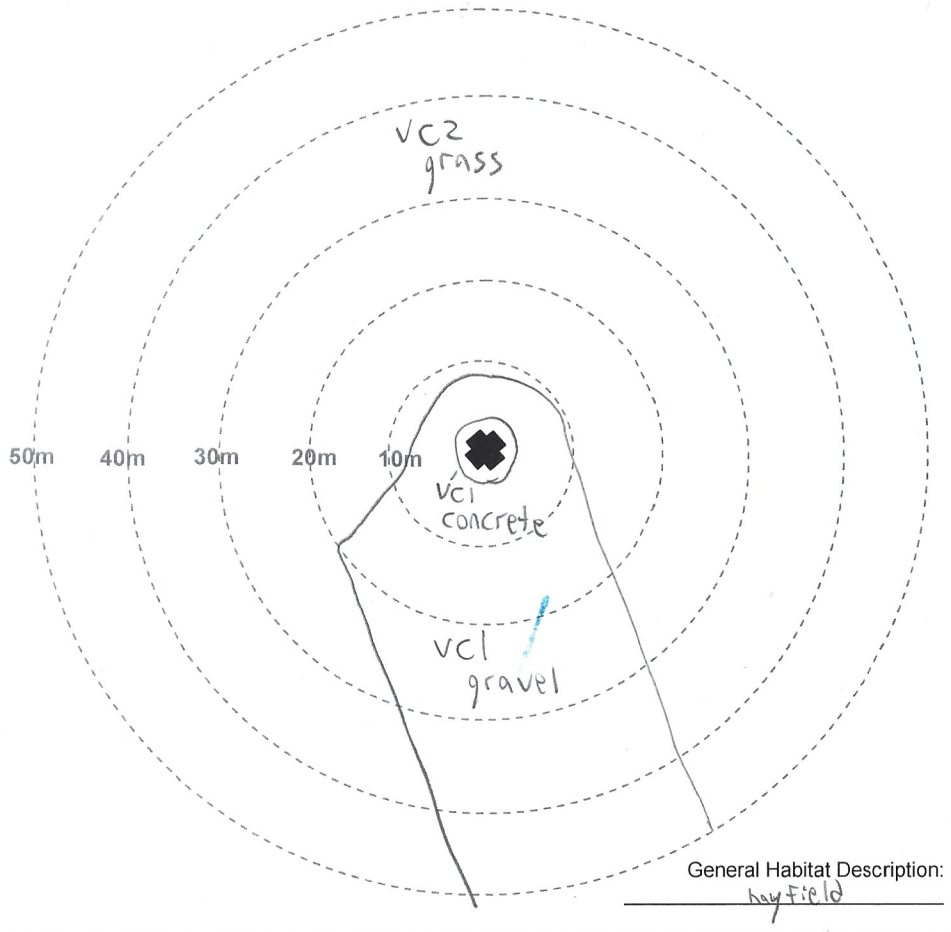
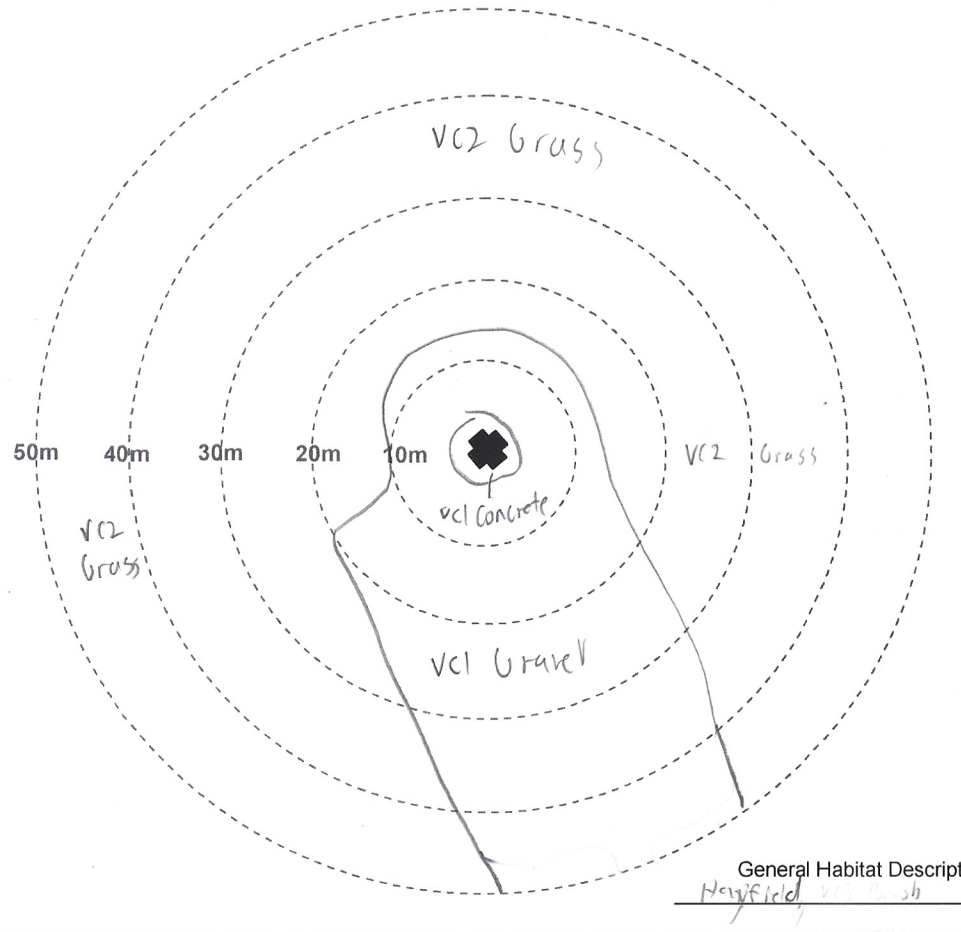


Photo Numbers (from turbine base)
 Facing North: 15
 Facing East: 16
 Facing South: 17
 Facing West: 18
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 12/08/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island W.P. Project #: 2121F Turbine #: S22

Photo Numbers (from turbine base)
 Facing North: 05
 Facing East: 06
 Facing South: 07
 Facing West: 08
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 09/09/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m

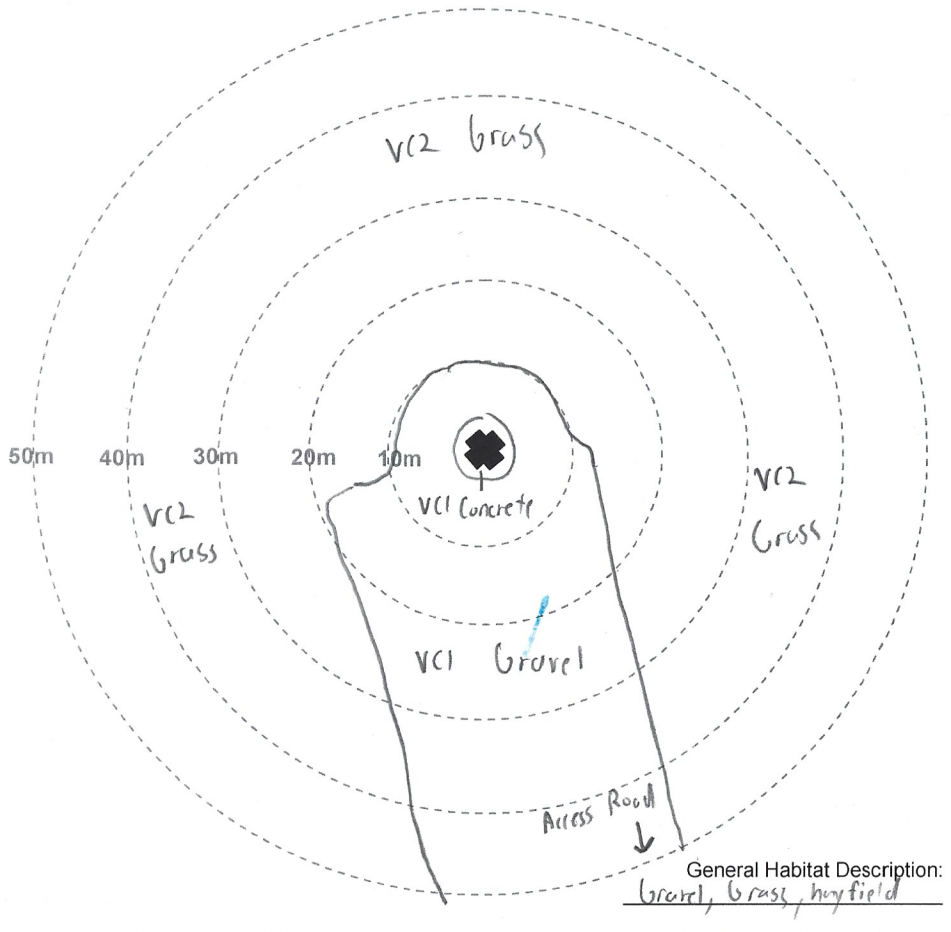
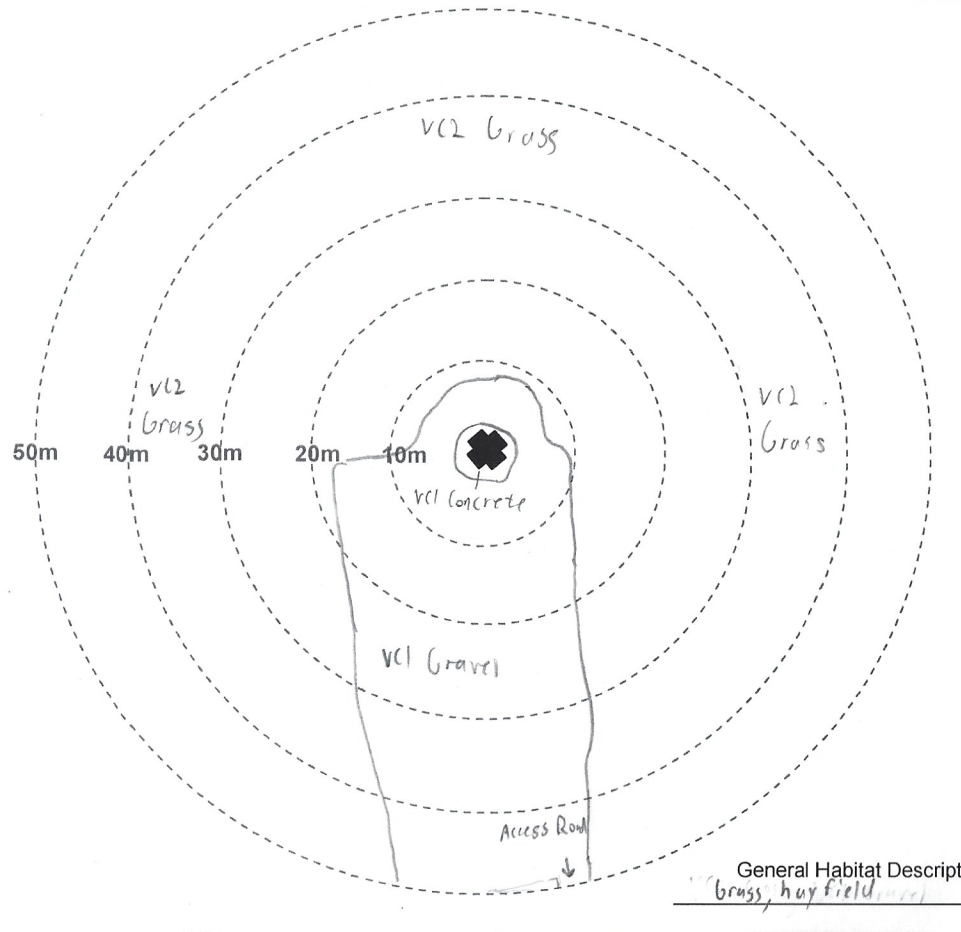


Photo Numbers (from turbine base)
 Facing North: 07
 Facing East: 08
 Facing South: 09
 Facing West: 10
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 07/10/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

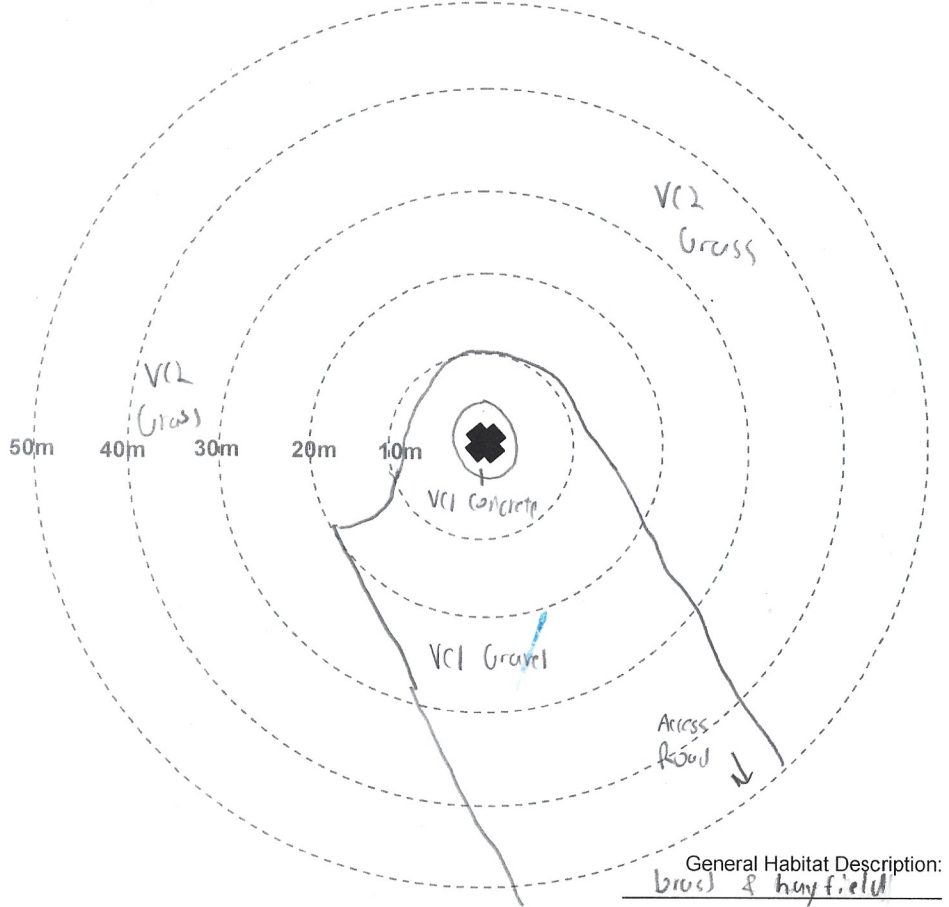
Project Name: Amherst Island W.P

Project #: 2015

Turbine #: 522

Photo Numbers (from turbine base)
 Facing North: 05
 Facing East: 06
 Facing South: 07
 Facing West: 08
 (sketch habitat and visibility classes)

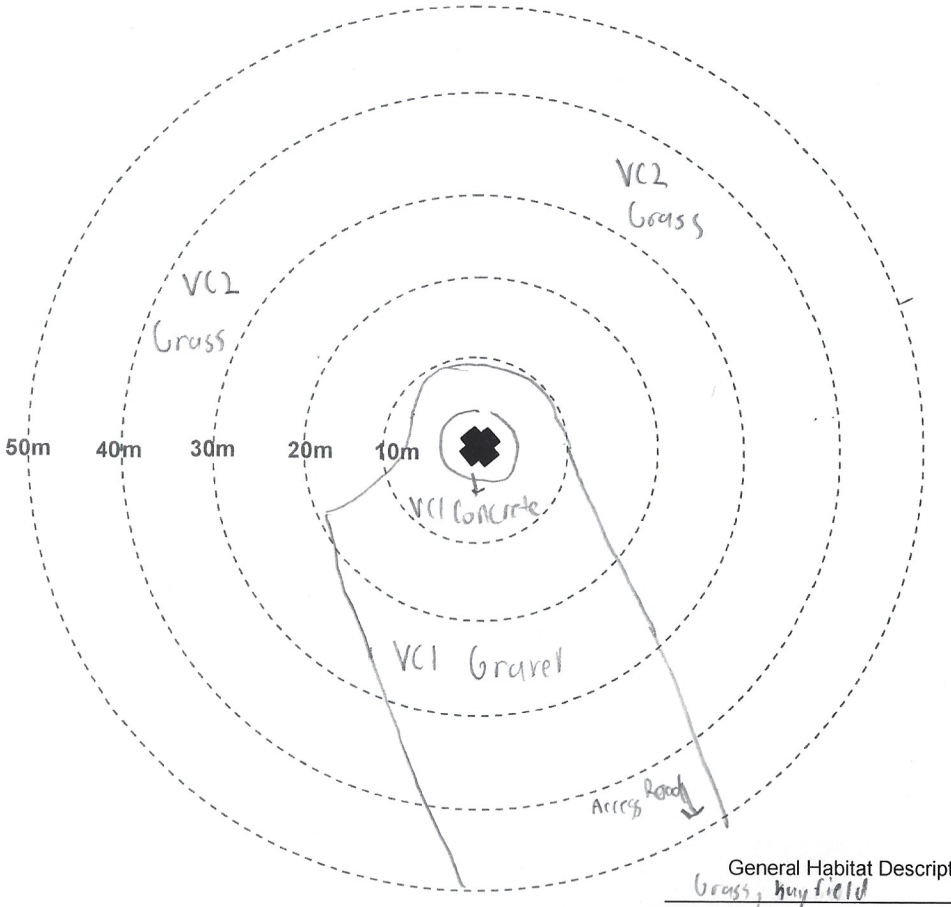
Date (DD/MM/YY): 01 / 11 / 21
 Observer: M.P.D.
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
grass & hayfield

Photo Numbers (from turbine base)
 Facing North: 17
 Facing East: 18
 Facing South: 19
 Facing West: 20
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 14 / 12 / 21
 Observer: M.P.D.
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
grass, hayfield

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S26 Degree of Slope — degrees Slope Orientation — (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 250309
 Facing East: 250310
 Facing South: 250311
 Facing West: 250312
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 25/03/21
 Observer: JYB
 Monthly/Seasonal
 Linear Transect Width: 5 m

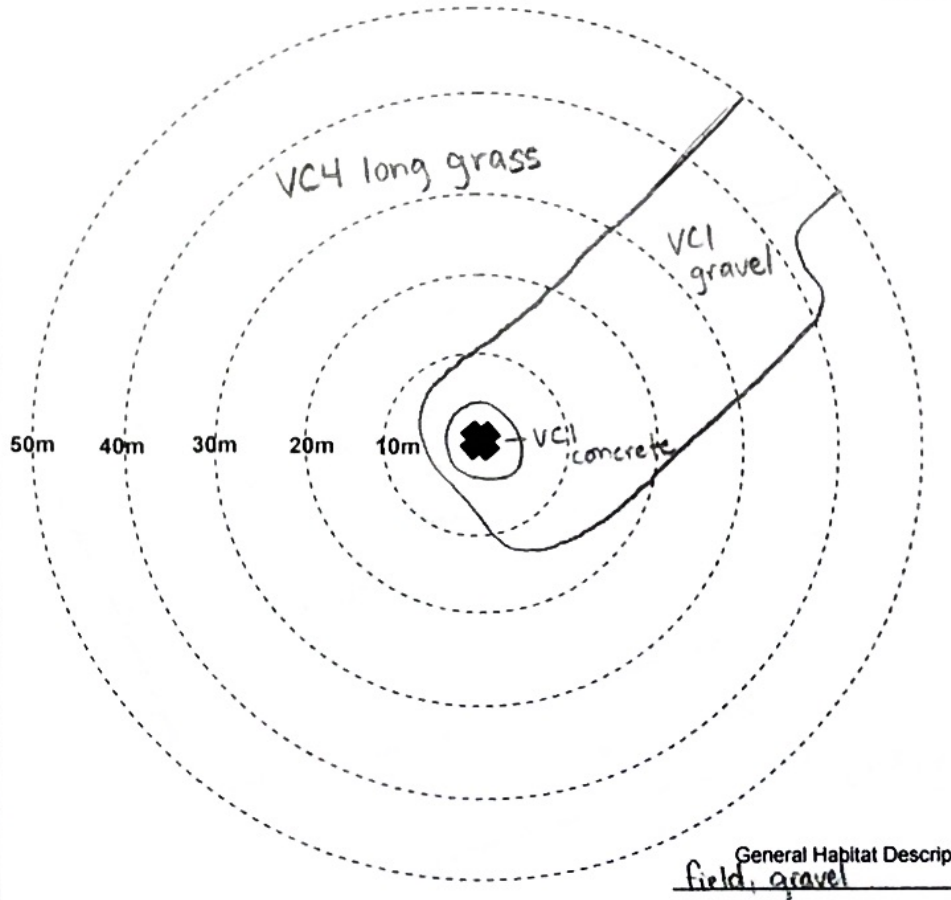
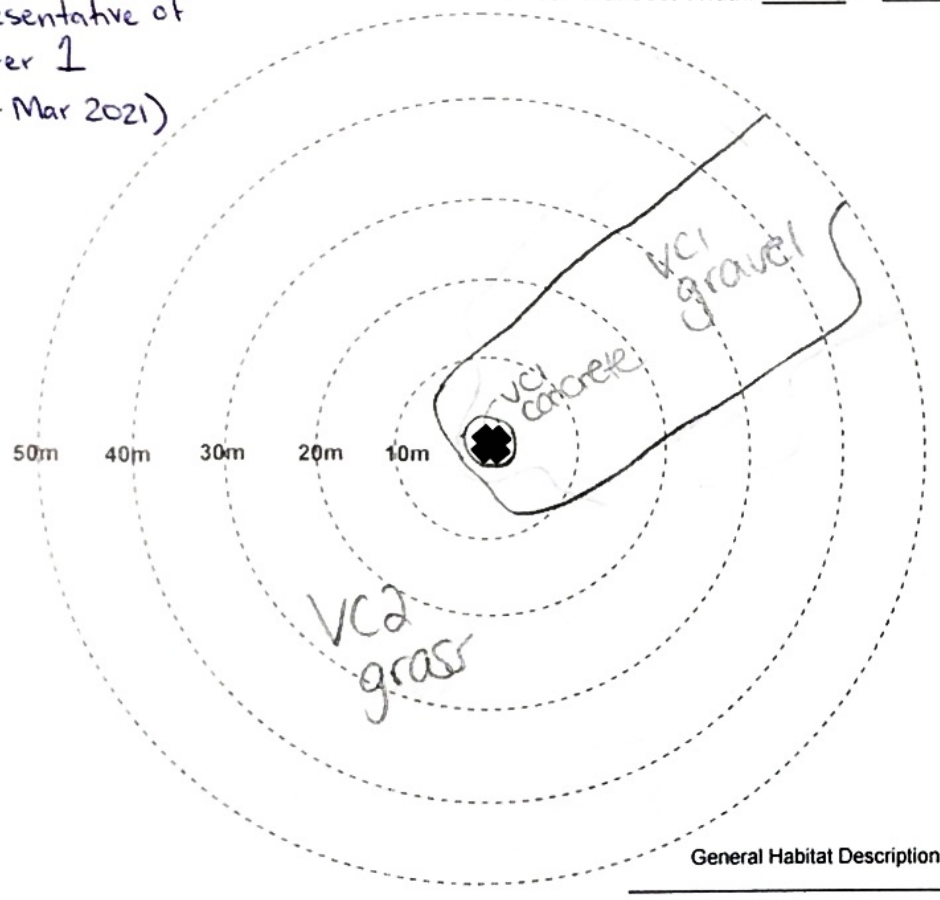


Photo Numbers (from turbine base)
 Facing North: 25
 Facing East: 26
 Facing South: 27
 Facing West: 28
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 08/12/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



Representative of
 Winter 1
 (Jan-Mar 2021)



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S27 Degree of Slope — degrees Slope Orientation — (e.g. SSW)

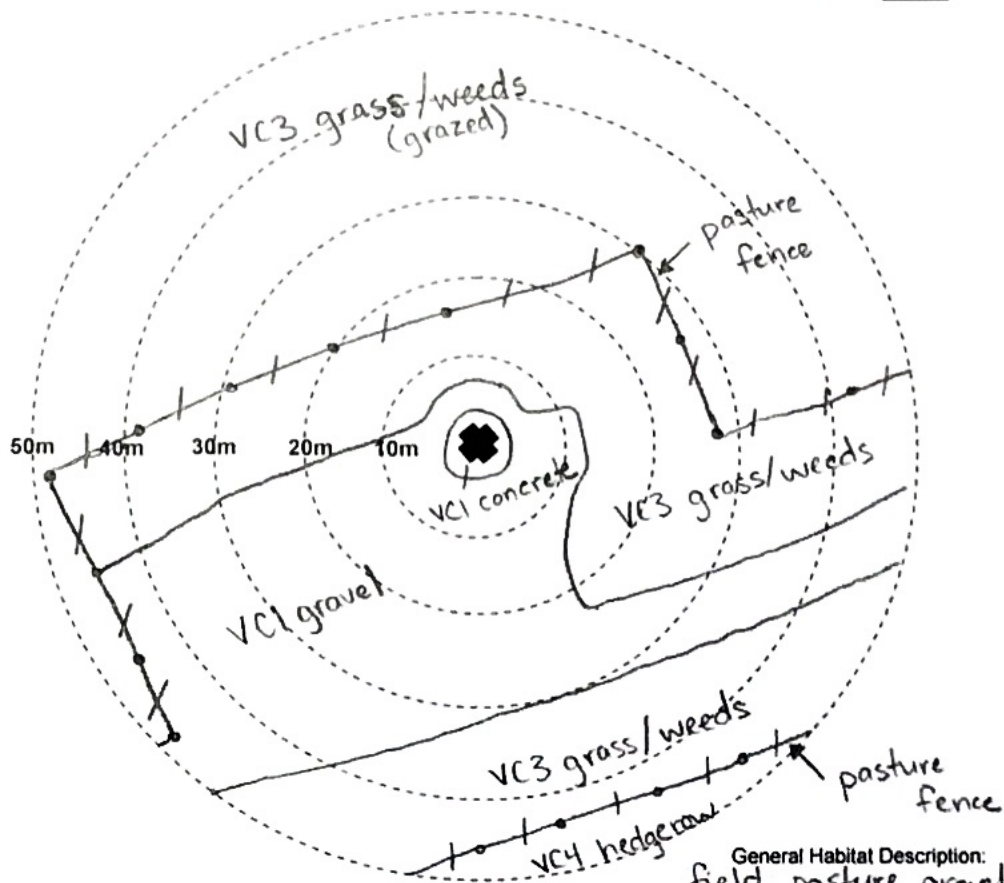
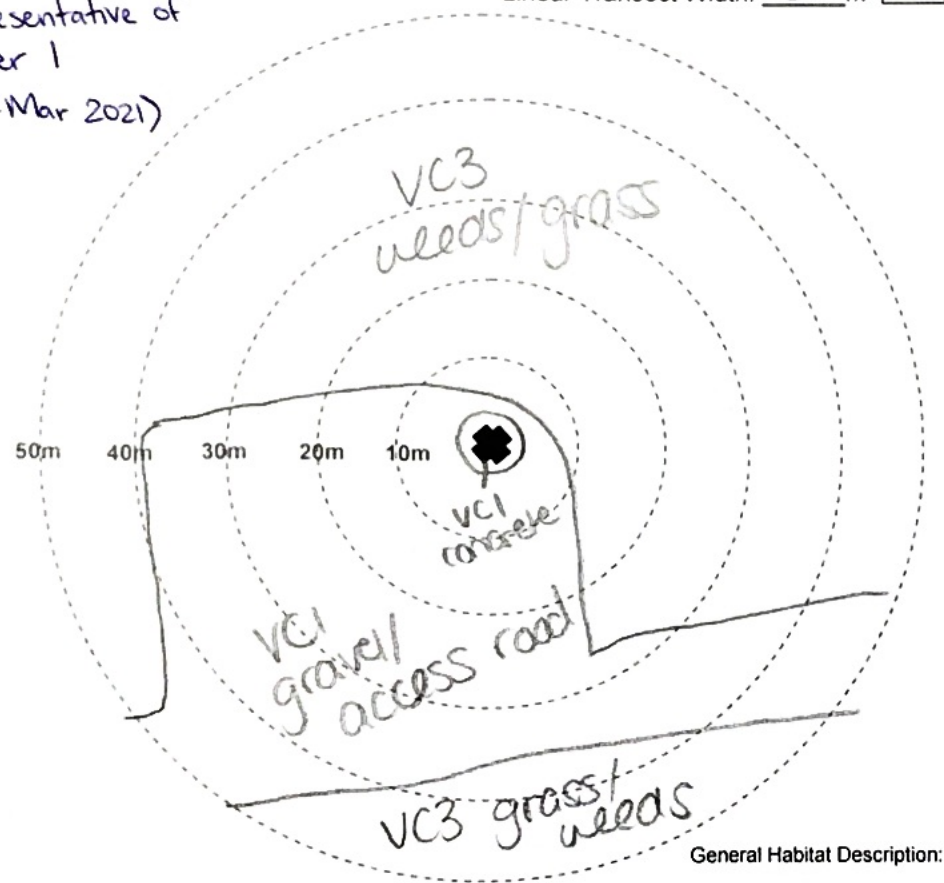
Photo Numbers (from turbine base)
 Facing North: 230317
 Facing East: 230318
 Facing South: 230319
 Facing West: 230320
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 23/03/21 ↑
 Observer: JJB
 Monthly/Seasonal Linear Transect Width: 5 m ↑
 N

Photo Numbers (from turbine base)
 Facing North: 29
 Facing East: 30
 Facing South: 31
 Facing West: 32
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 07/12/21 ↑
 Observer: MPD
 Monthly/Seasonal Linear Transect Width: 5 m ↑
 N

Representative of Winter 1 (Jan-Mar 2021)



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island UR Project #: 2121F Turbine #: 528 Degree of Slope +0.5 degrees Slope Orientation E (e.g. SSW)

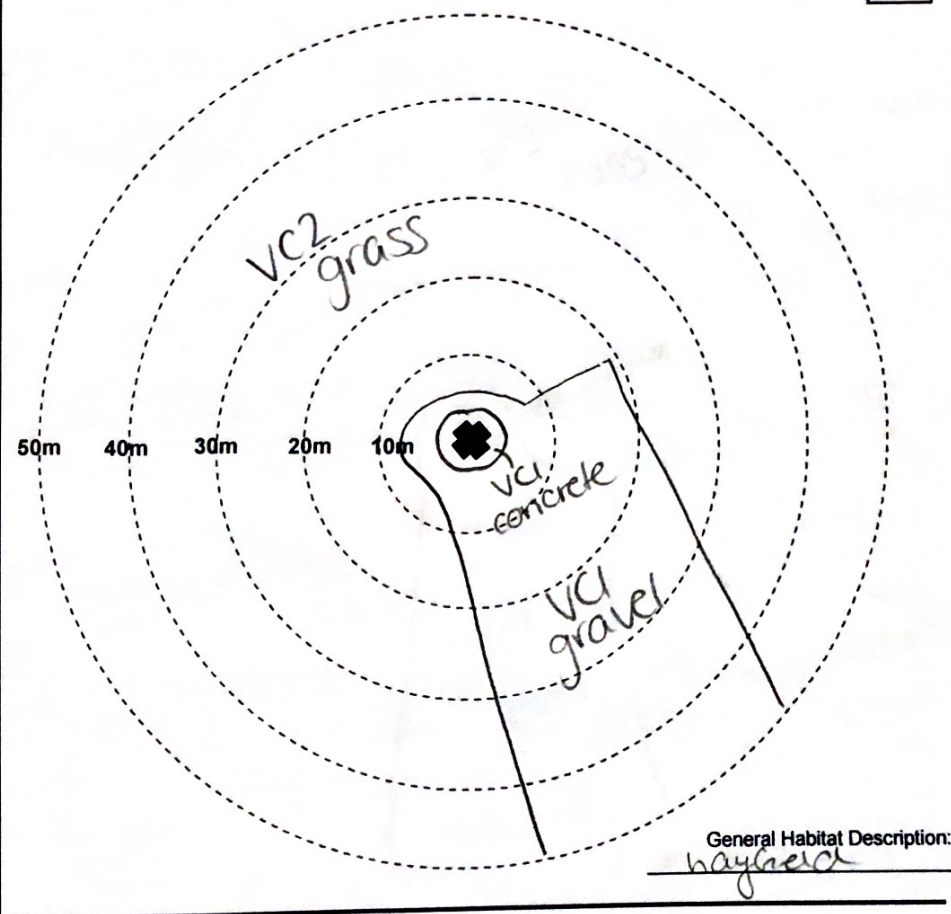
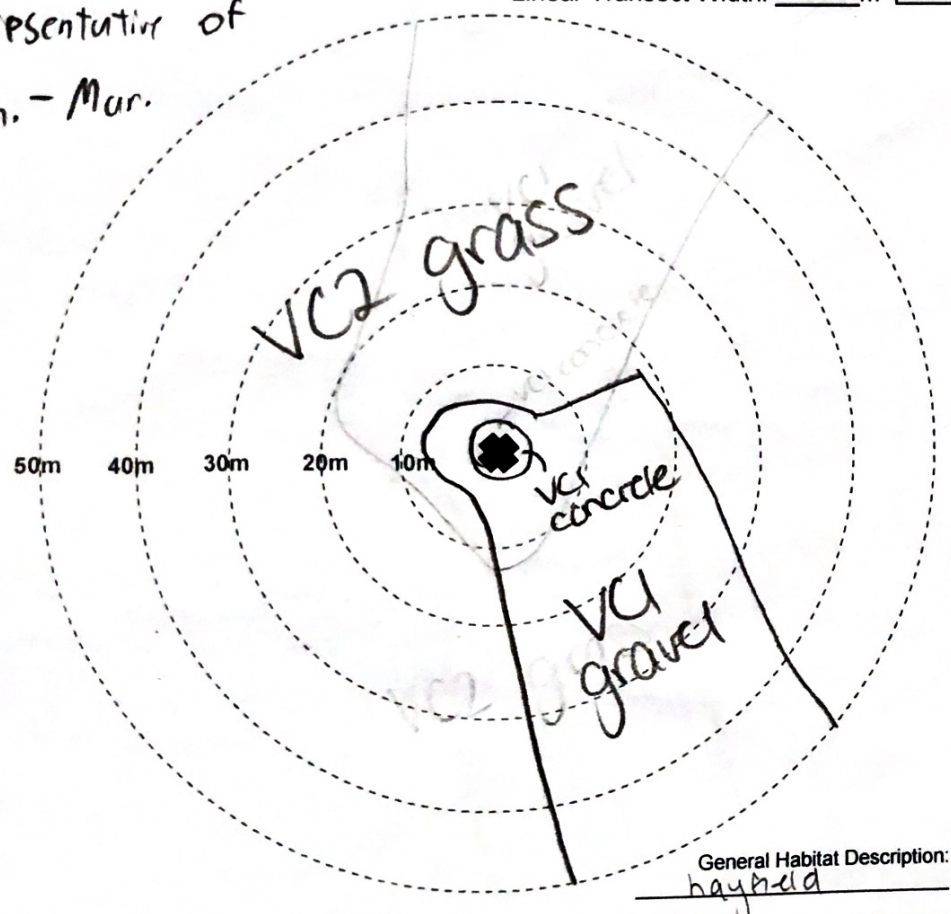
Photo Numbers (from turbine base)
 Facing North: 250321
 Facing East: 250322
 Facing South: 250323
 Facing West: 250324
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 25/03/21 ↑
 Observer: JYB
 Monthly/Seasonal
 Linear Transect Width: 5 m **N**

Photo Numbers (from turbine base)
 Facing North: 300433
 Facing East: 300434
 Facing South: 300435
 Facing West: 300436
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 30/04/21 ↑
 Observer: JYB
 Monthly/Seasonal
 Linear Transect Width: 5 m **N**

Representative of
 Jun. - Mar.



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island Project #: 2121F Turbine #: ~~502~~ 528

Photo Numbers (from turbine base)
 Facing North: 2507
 Facing East: 2595
 Facing South: 9325
 Facing West: 5973
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 27/05/21
 Observer: KLB
 Monthly/Seasonal
 Linear Transect Width: 5 m

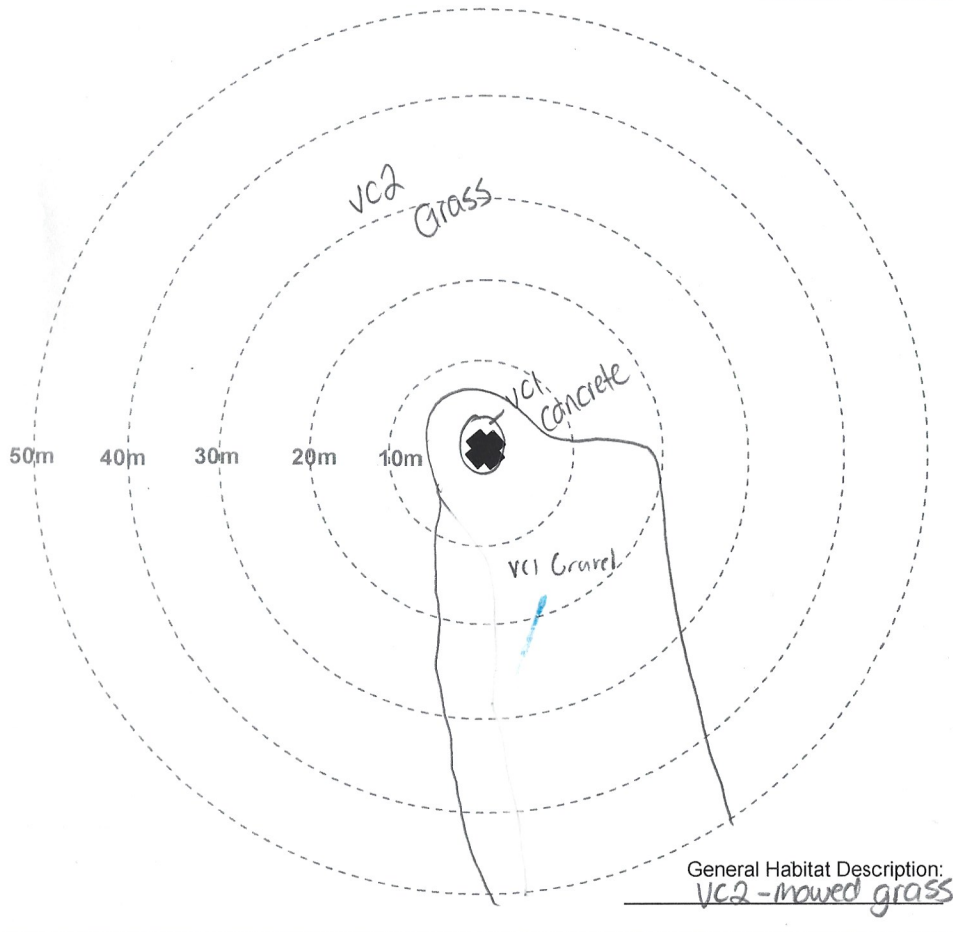
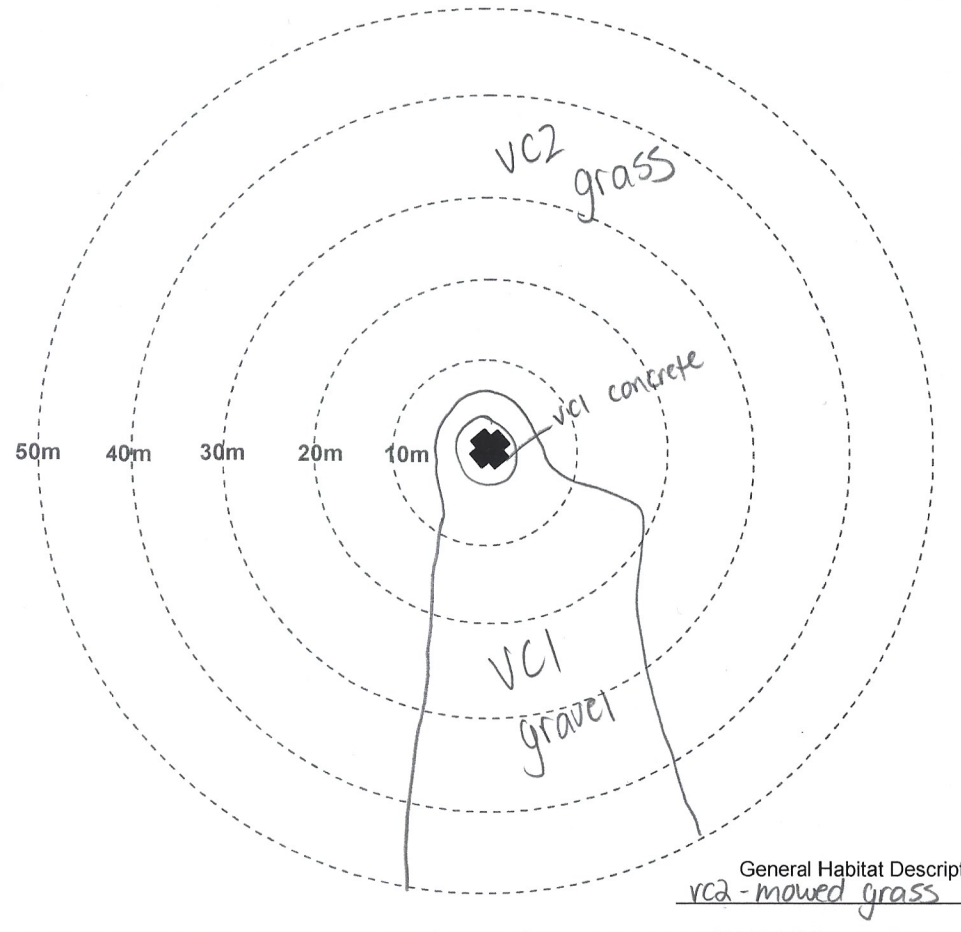


Photo Numbers (from turbine base)
 Facing North: 4191
 Facing East: 0824
 Facing South: 7167
 Facing West: 5011
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 10/06/21
 Observer: KLB
 Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: 528

Photo Numbers (from turbine base)
 Facing North: 6551
 Facing East: 9604
 Facing South: 2874
 Facing West: 1464
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 05/07/21
 Observer: KLB
 Monthly/Seasonal
 Linear Transect Width: 5 m

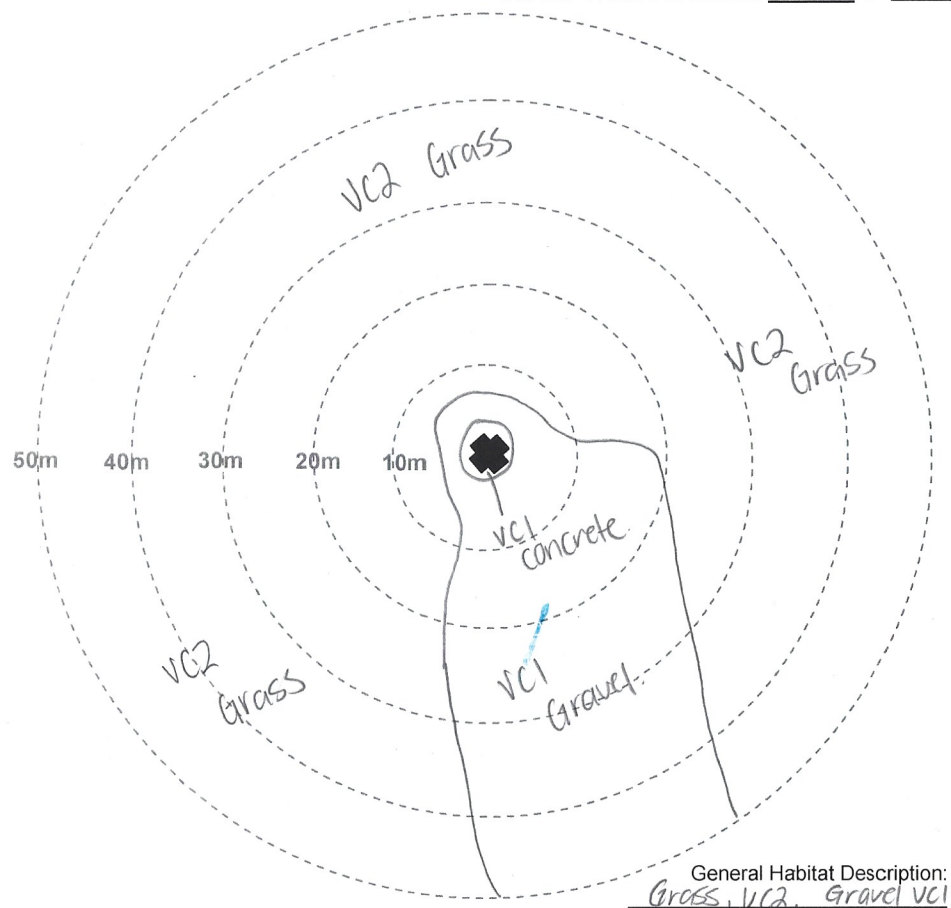
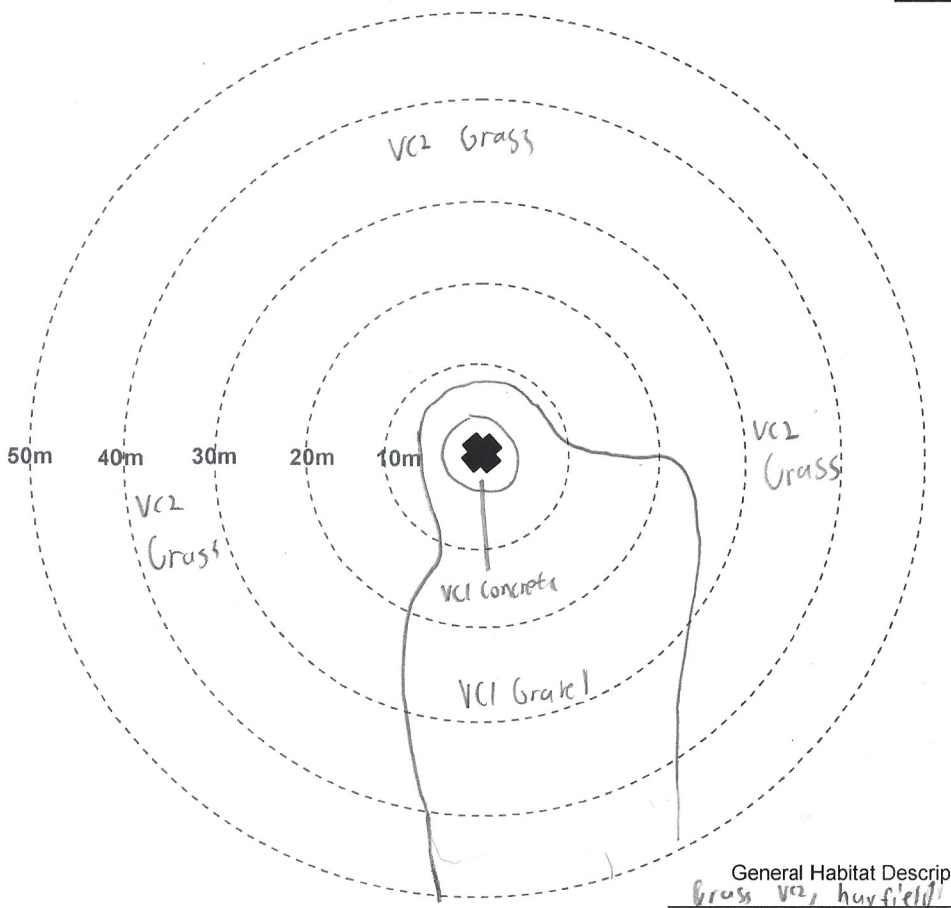


Photo Numbers (from turbine base)
 Facing North: 75
 Facing East: 76
 Facing South: 77
 Facing West: 78
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 09/08/21
 Observer: MID
 Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island W.P Project #: 21217 Turbine #: 528 Degree of Slope — degrees Slope Orientation — (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 30
 Facing East: 31
 Facing South: 32
 Facing West: 33
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 06/09/21
 Observer: M PD
 Monthly/Seasonal
 Linear Transect Width: 5 m

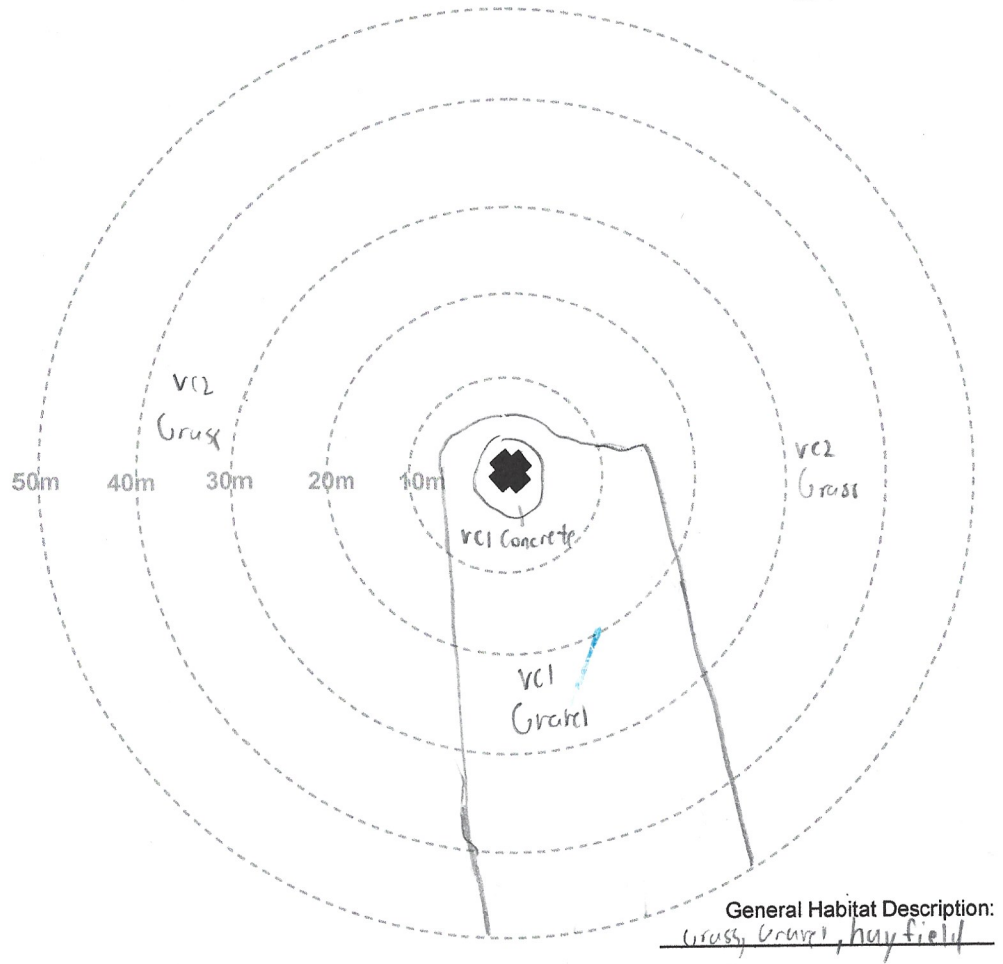
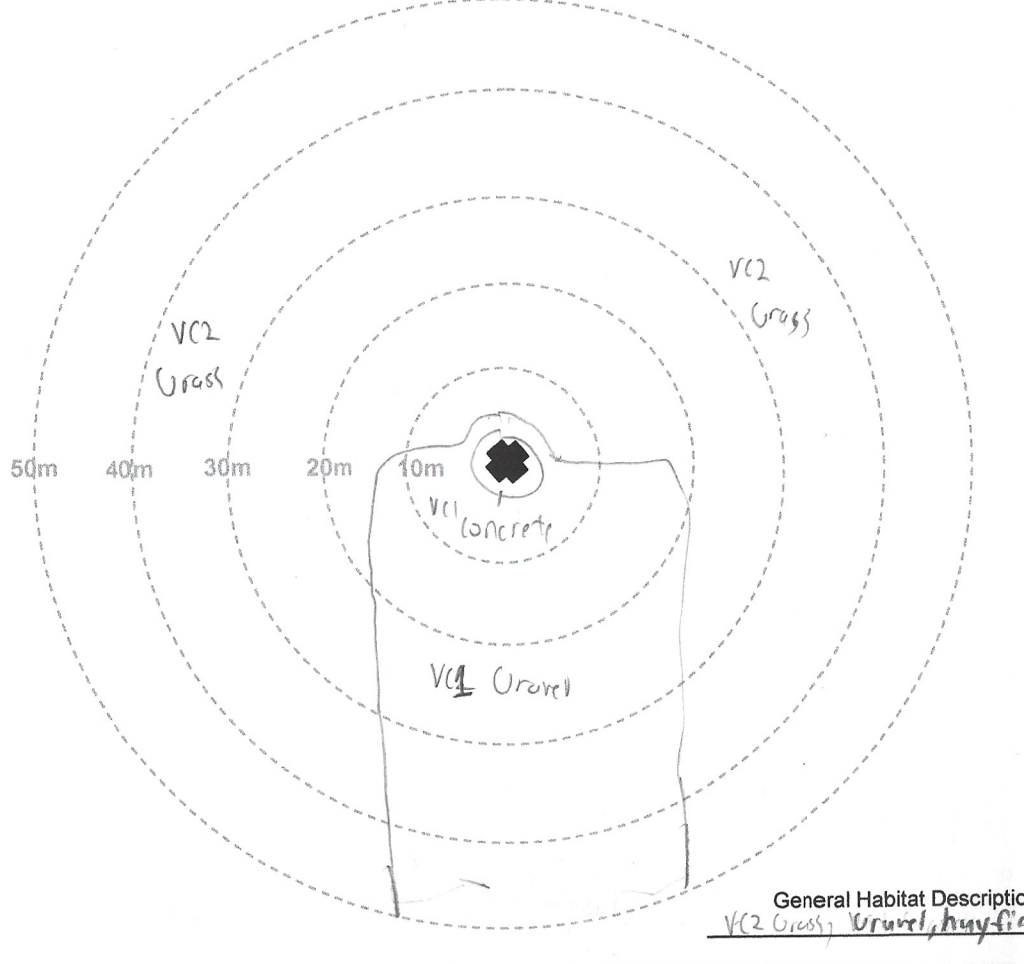


Photo Numbers (from turbine base)
 Facing North: 25
 Facing East: 26
 Facing South: 27
 Facing West: 28
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 04/10/21
 Observer: M PD
 Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

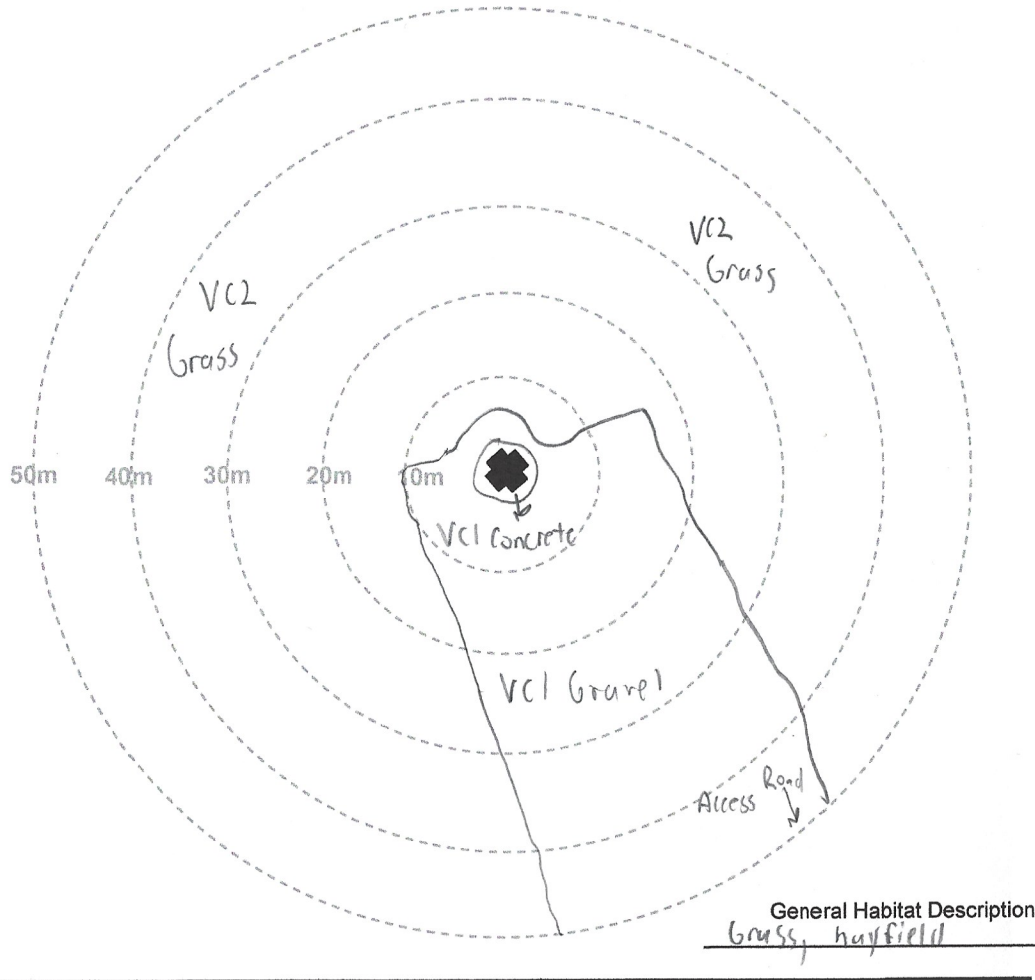
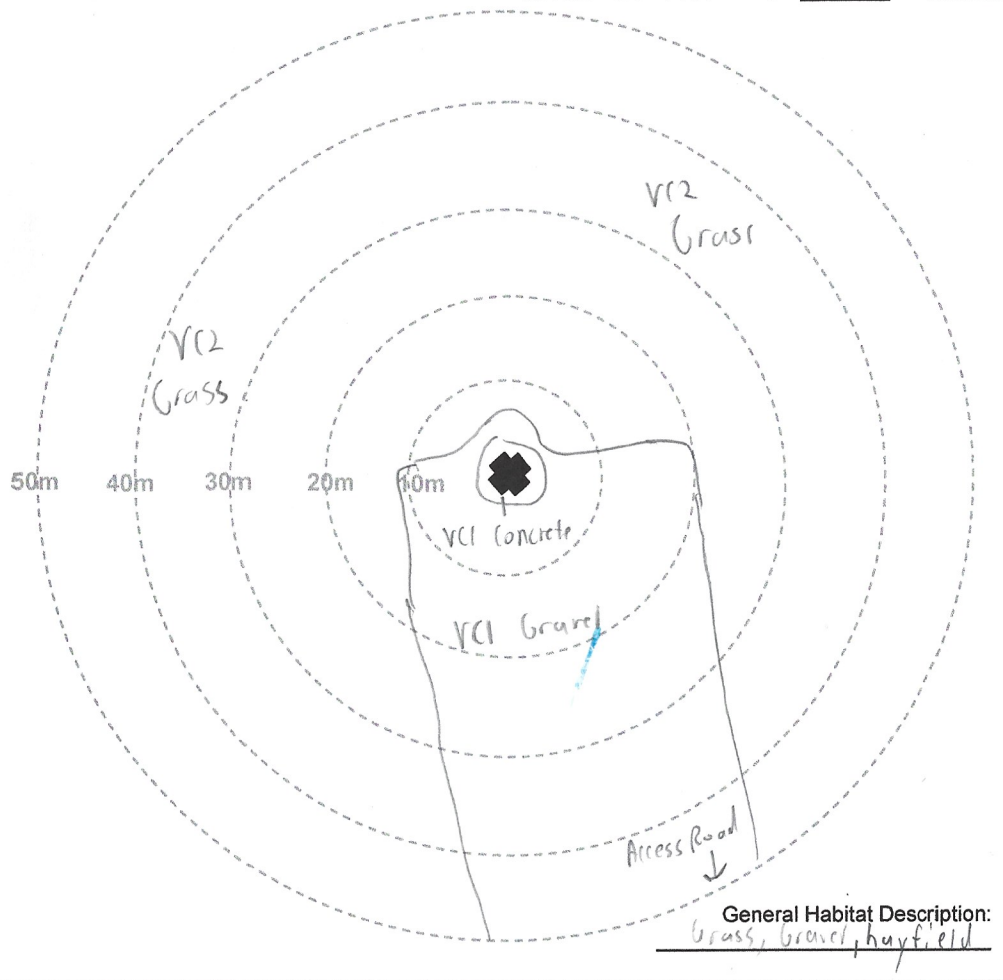
Project Name: Amherst Island W.P Project #: 221F Turbine #: 528 Degree of Slope — degrees Slope Orientation — (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 17
 Facing East: 18
 Facing South: 19
 Facing West: 20
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 08/11/21
 Observer: MPD
 Monthly/Seasonal Linear Transect Width: 5 m **N**

Photo Numbers (from turbine base)
 Facing North: 17
 Facing East: 18
 Facing South: 19
 Facing West: 20
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 08/12/21
 Observer: MPD
 Monthly/Seasonal Linear Transect Width: 5 m **N**



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S29 Degree of Slope degrees Slope Orientation (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 220333
 Facing East: 220334
 Facing South: 220335
 Facing West: 220336
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 23/03/21
 Observer: JLB
 Monthly/Seasonal
 Linear Transect Width: 5 m

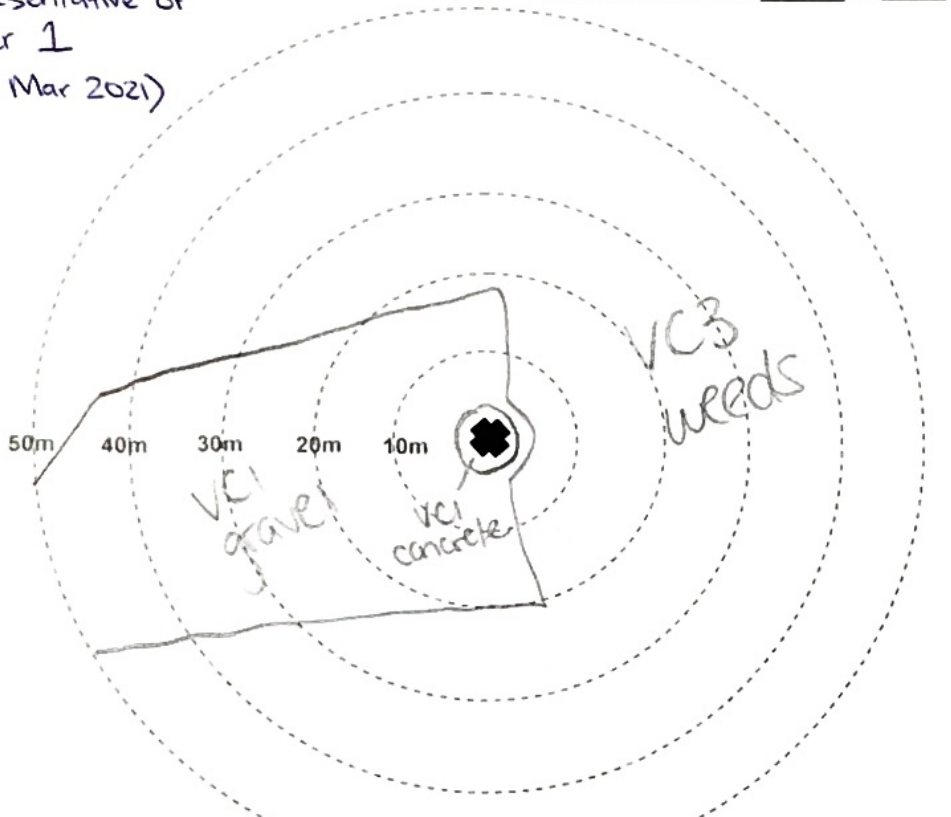


Photo Numbers (from turbine base)
 Facing North: 33
 Facing East: 34
 Facing South: 35
 Facing West: 36
 (sketch habitat and visibility classes)

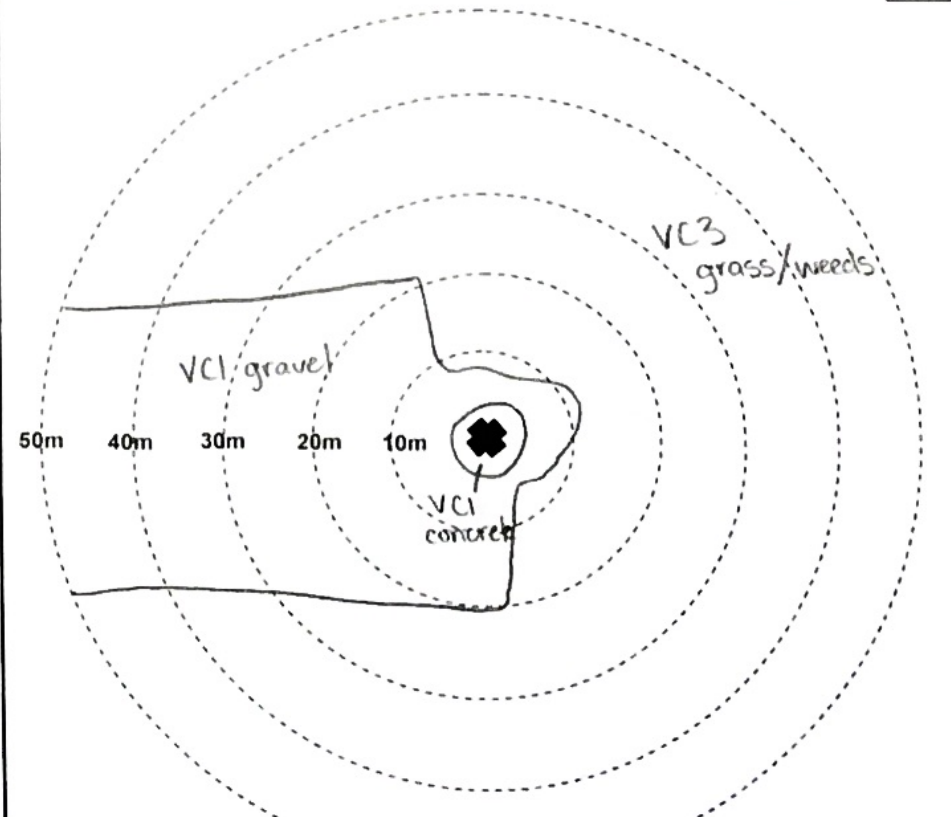
Date (DD/MM/YY): 14/12/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



Representative of
 Winter 1
 (Jan - Mar 2021)



General Habitat Description:
pasture



General Habitat Description:
pasture, gravel

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S30 Degree of Slope — degrees Slope Orientation — (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 250813
 Facing East: 250819
 Facing South: 250815
 Facing West: 250816
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 25/03/21
 Observer: JAB
 Monthly/Seasonal
 Linear Transect Width: 5 m

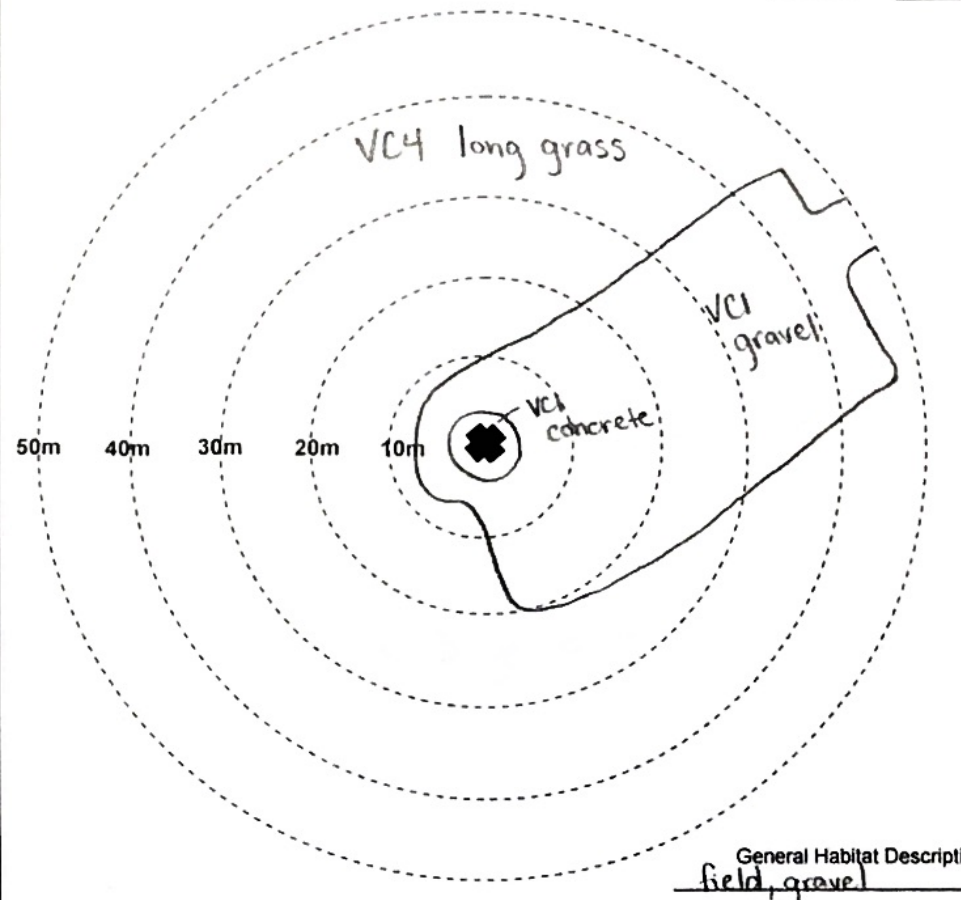
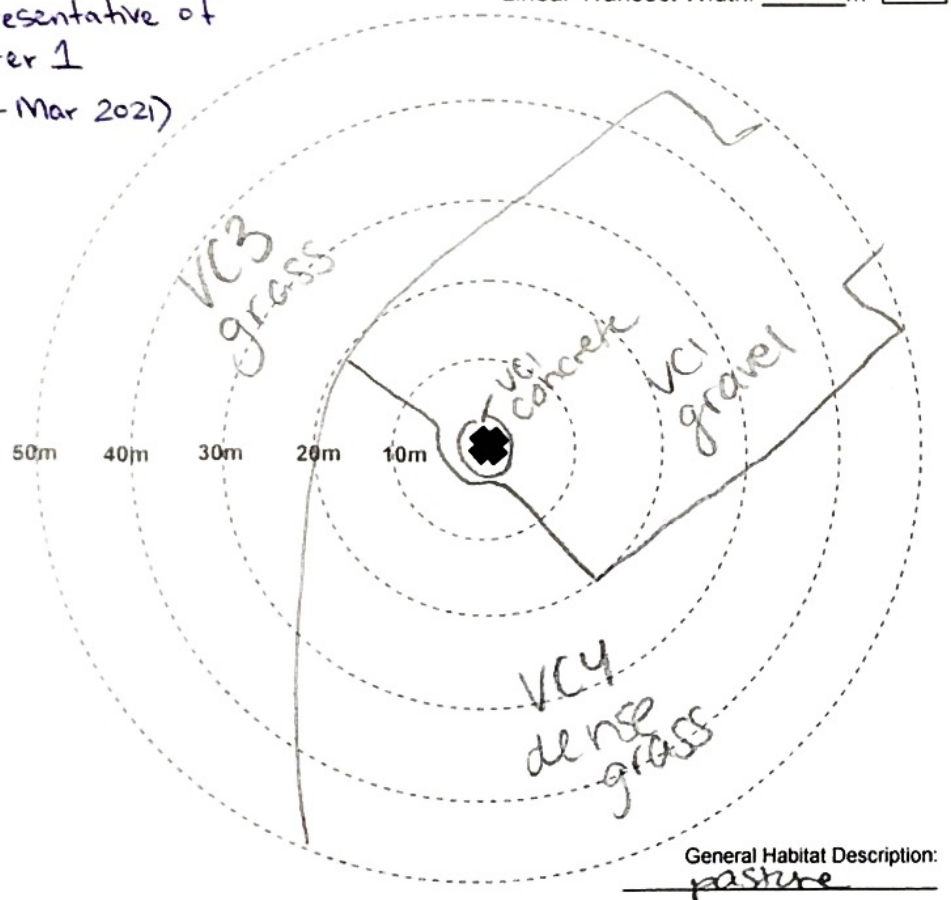


Photo Numbers (from turbine base)
 Facing North: 21
 Facing East: 22
 Facing South: 23
 Facing West: 24
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 08/12/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



Representative of
 Winter 1
 (Jan-Mar 2021)



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S31 Degree of Slope — degrees Slope Orientation — (e.g. SSW)

Photo Numbers (from turbine base)
 Facing North: 220305
 Facing East: 220306
 Facing South: 220307
 Facing West: 220308
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 22/03/21
 Observer: JYB
 Monthly/Seasonal
 Linear Transect Width: 5 m

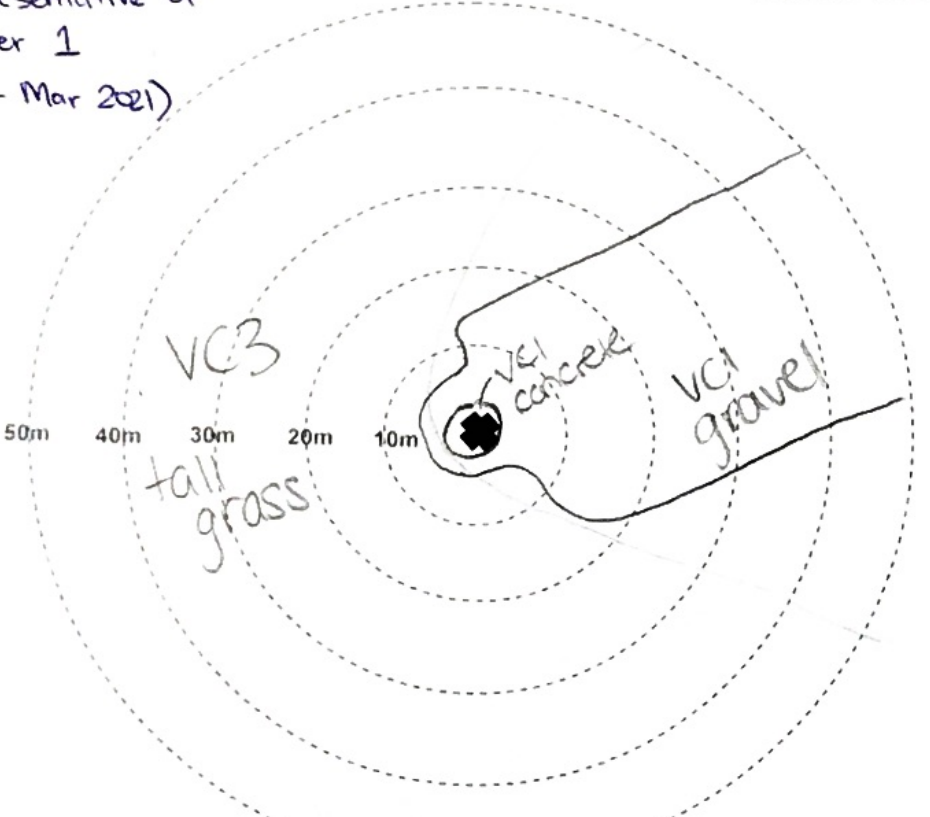


Photo Numbers (from turbine base)
 Facing North: 05
 Facing East: 06
 Facing South: 07
 Facing West: 08
 (sketch habitat and visibility classes)

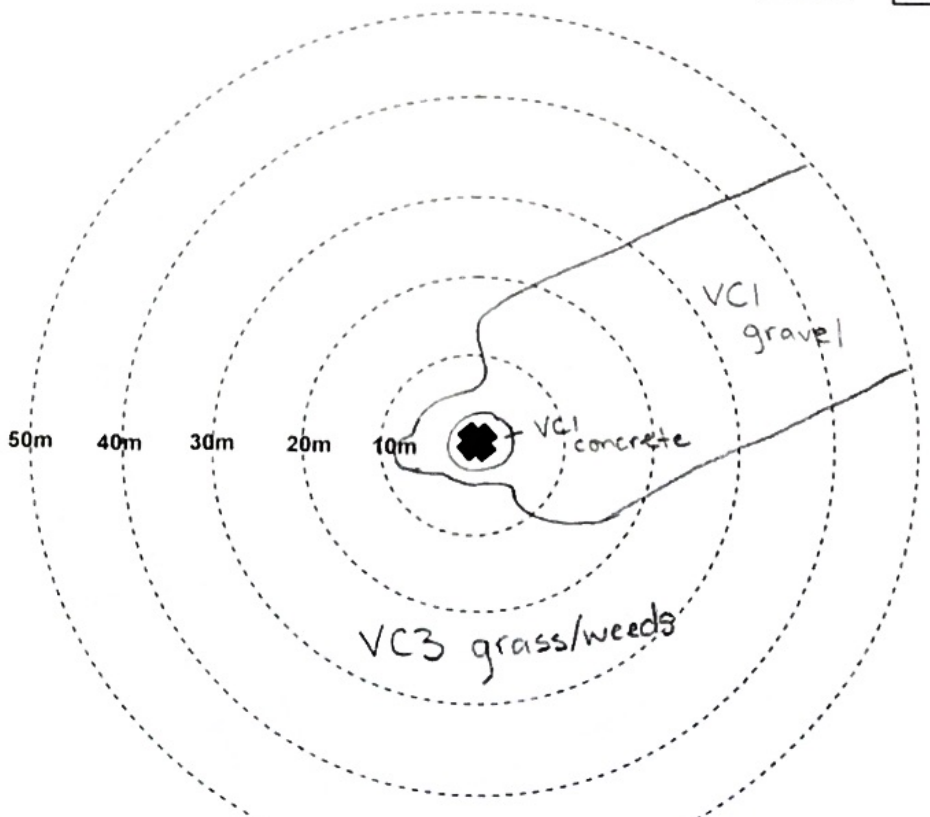
Date (DD/MM/YY): 14/12/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m



Representative of
 Winter 1
 (Jan-Mar 2021)



General Habitat Description:
rayfield



General Habitat Description:
field, gravel

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S33 Degree of Slope — degrees Slope Orientation — (e.g. SSW)

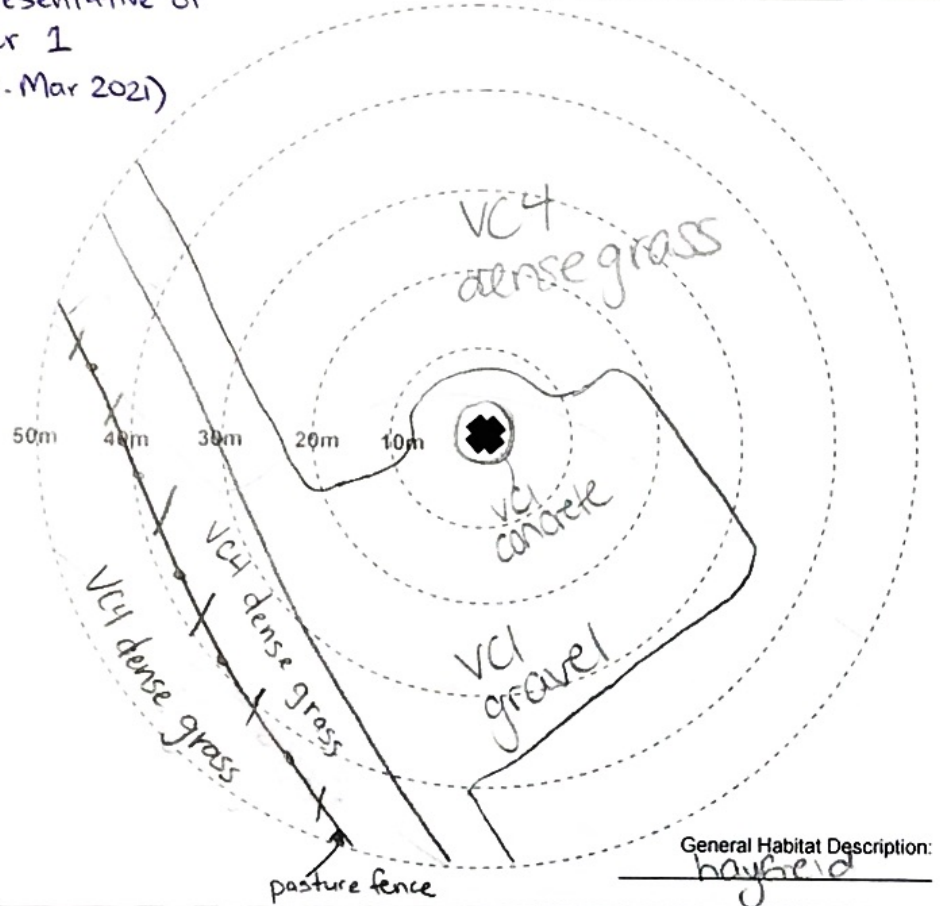
Photo Numbers (from turbine base)
 Facing North: 250317
 Facing East: 250318
 Facing South: 250319
 Facing West: 250320
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 25/03/21
 Observer: JYB
 Monthly/Seasonal Linear Transect Width: 5 m

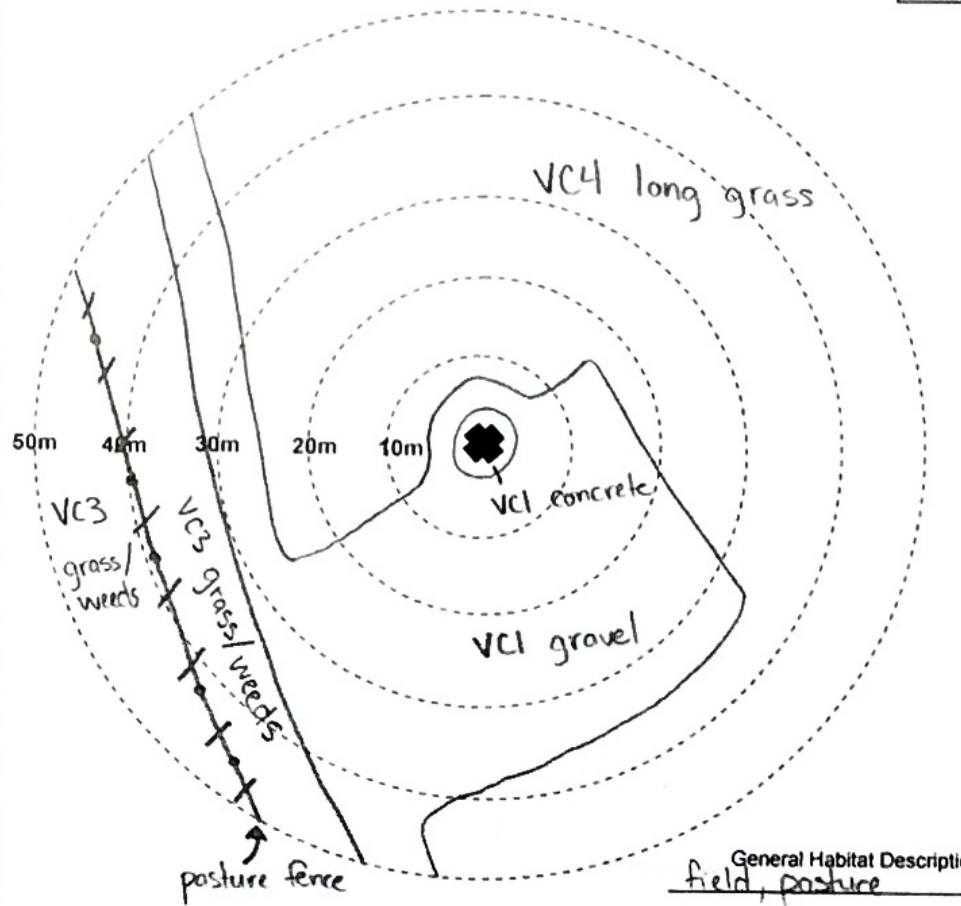
Photo Numbers (from turbine base)
 Facing North: 13
 Facing East: 14
 Facing South: 15
 Facing West: 16
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 08/12/21
 Observer: MPD
 Monthly/Seasonal Linear Transect Width: 5 m

Representative of Winter 1 (Jan-Mar 2021)



General Habitat Description: hayfield



General Habitat Description: field, pasture

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S34 Degree of Slope degrees Slope Orientation (e.g. SSW)

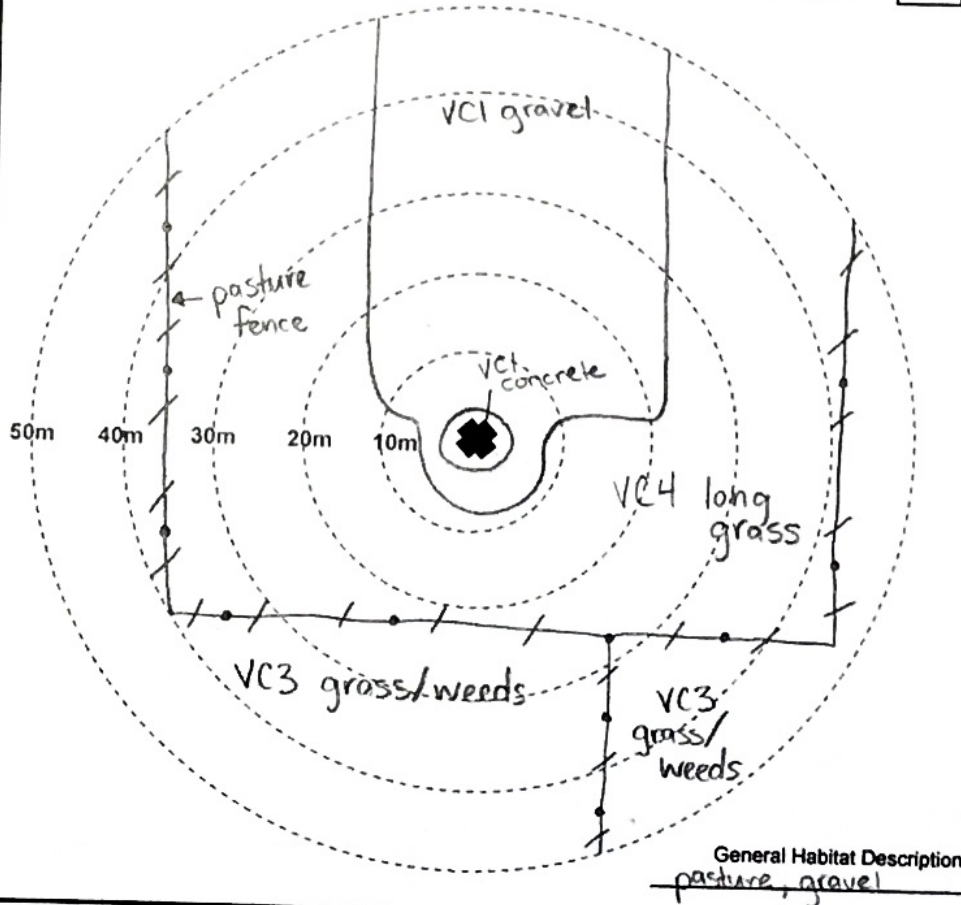
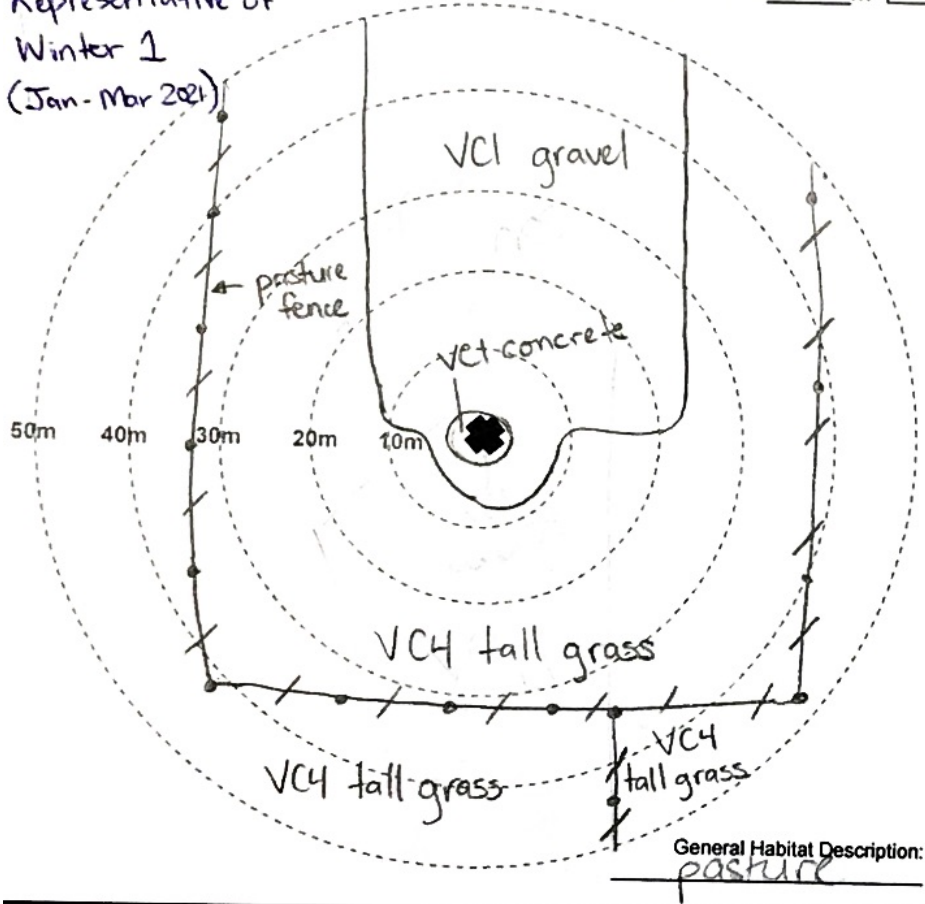
Photo Numbers (from turbine base)
 Facing North: 220301
 Facing East: 220302
 Facing South: 220303
 Facing West: 220304
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 22/03/21
 Observer: J4B
 Monthly/Seasonal
 Linear Transect Width: 5 m

Photo Numbers (from turbine base)
 Facing North: 01
 Facing East: 02
 Facing South: 03
 Facing West: 04
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 14/12/21
 Observer: MPD
 Monthly/Seasonal
 Linear Transect Width: 5 m

Representative of
 Winter 1
 (Jan-Mar 2021)



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 21AIF Turbine #: S36 Degree of Slope +2 degrees Slope Orientation NE (e.g. SSW)

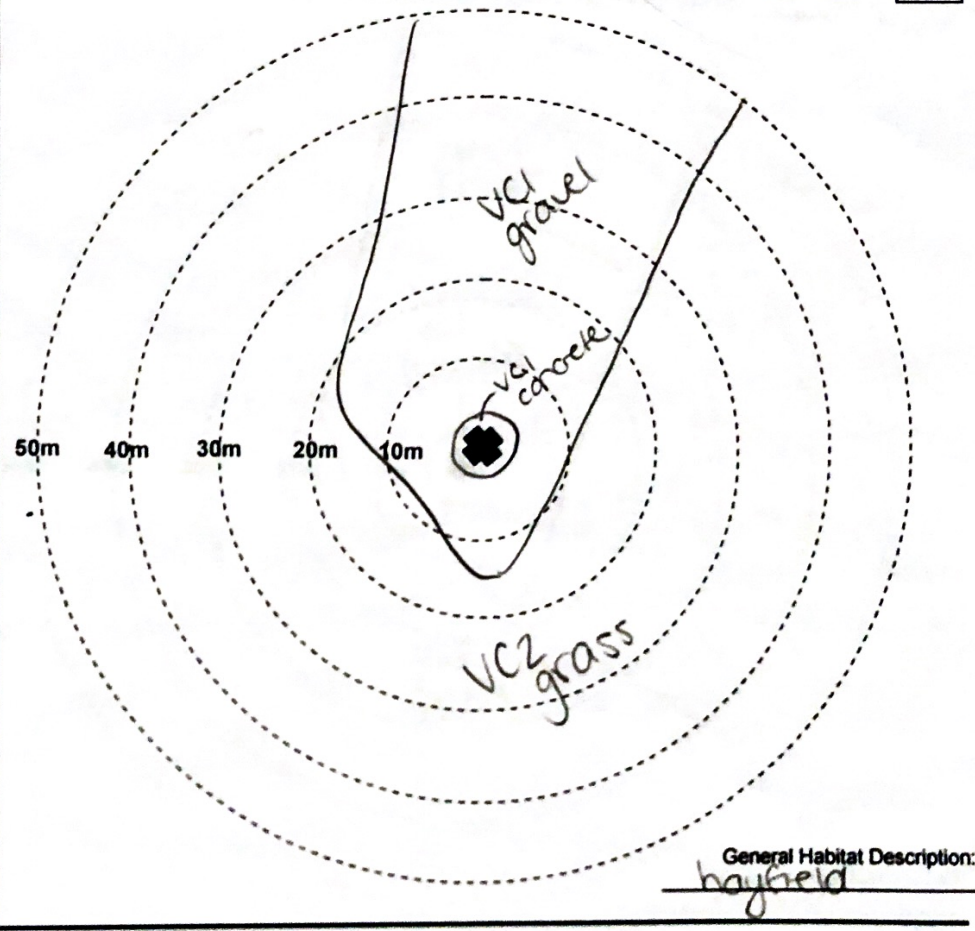
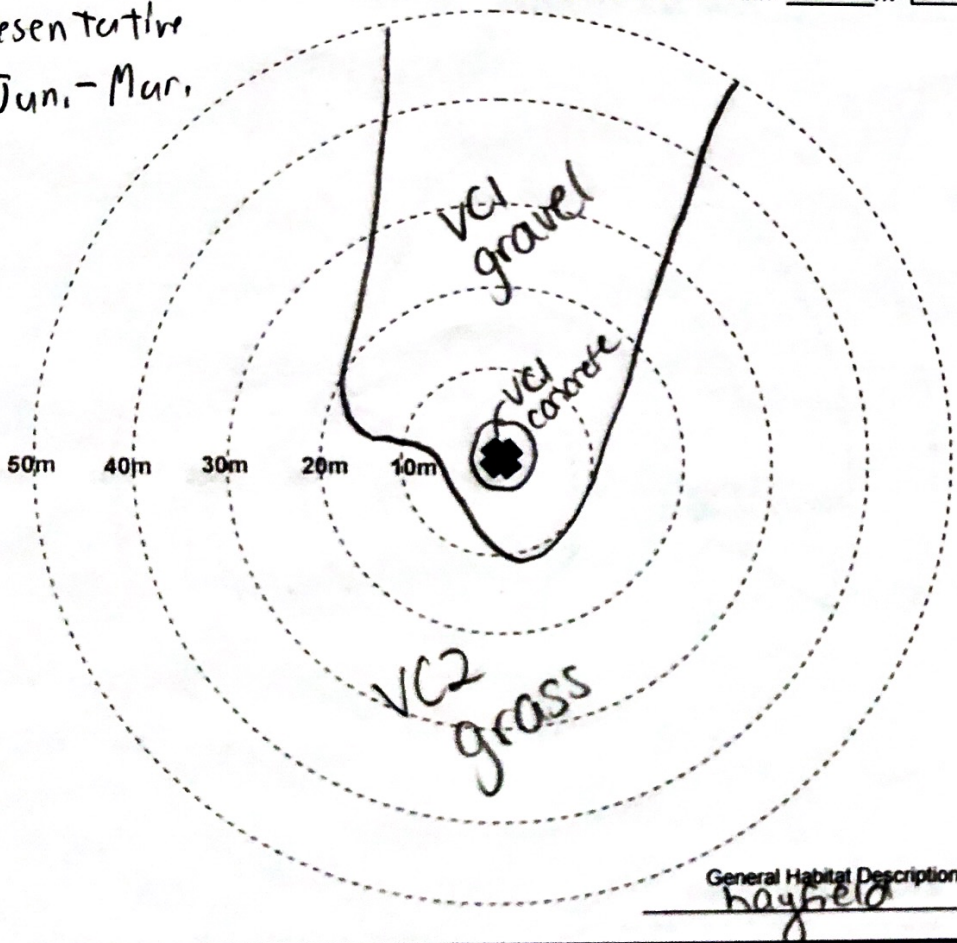
Photo Numbers (from turbine base)
 Facing North: 230205
 Facing East: 230206
 Facing South: 230207
 Facing West: 230208
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 23/03/21 ↑
 Observer: JYB
 Monthly/Seasonal
 Linear Transect Width: 5 m **N**

Photo Numbers (from turbine base)
 Facing North: 300417
 Facing East: 300418
 Facing South: 300419
 Facing West: 300420
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 30/04/21 ↑
 Observer: JY
 Monthly/Seasonal
 Linear Transect Width: 5 m **N**

representative
 Jun. - Mar.



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island W.P. Project #: 2121F Turbine #: 836

Photo Numbers (from turbine base)
 Facing North: 9
 Facing East: 10
 Facing South: 11
 Facing West: 12
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 27/05/21
 Observer: M.P.D
 Monthly/Seasonal
 Linear Transect Width: 5 m

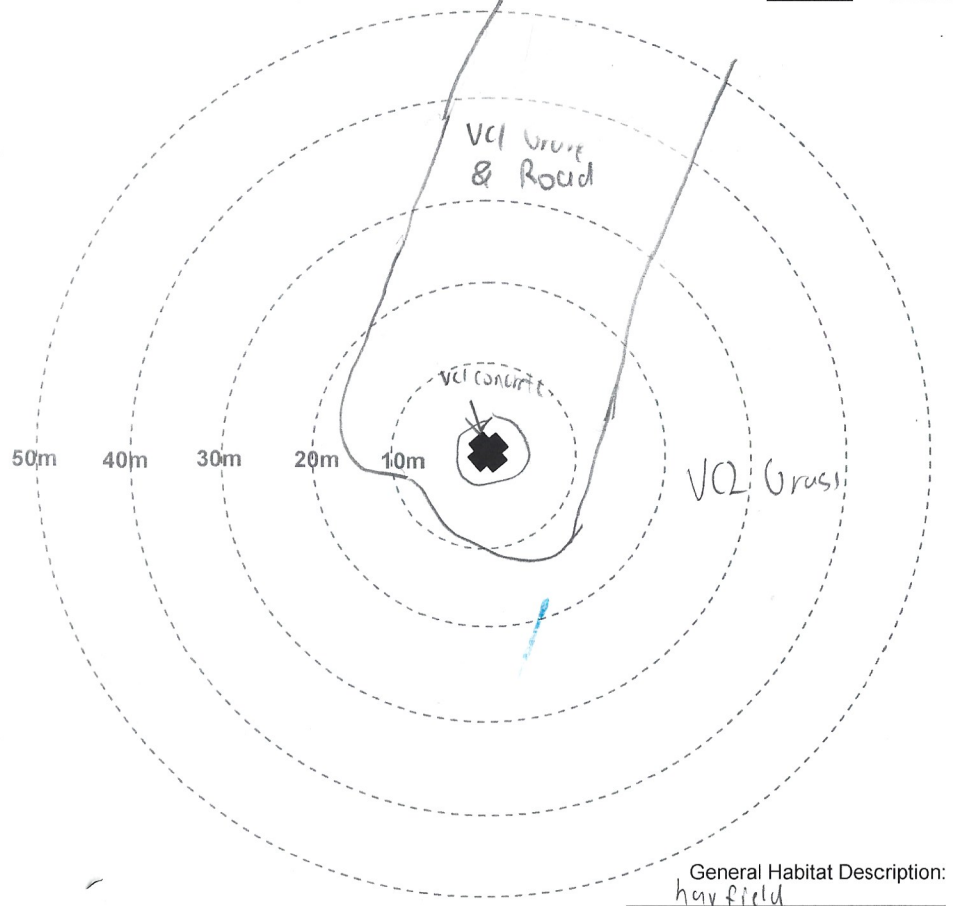
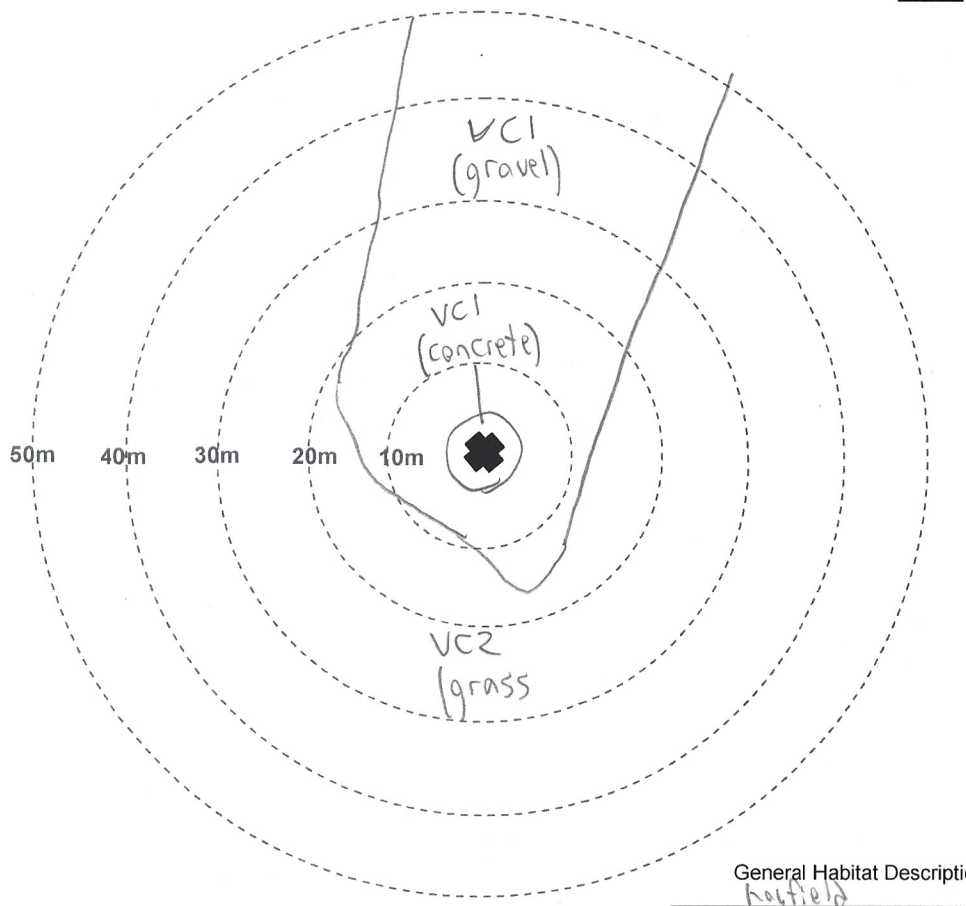
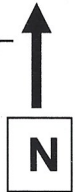


Photo Numbers (from turbine base)
 Facing North: 030
 Facing East: 031
 Facing South: 032
 Facing West: 033
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 07/06/21
 Observer: MCT
 Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: 536

Photo Numbers (from turbine base)

Facing North: 210
 Facing East: 211
 Facing South: 212
 Facing West: 213

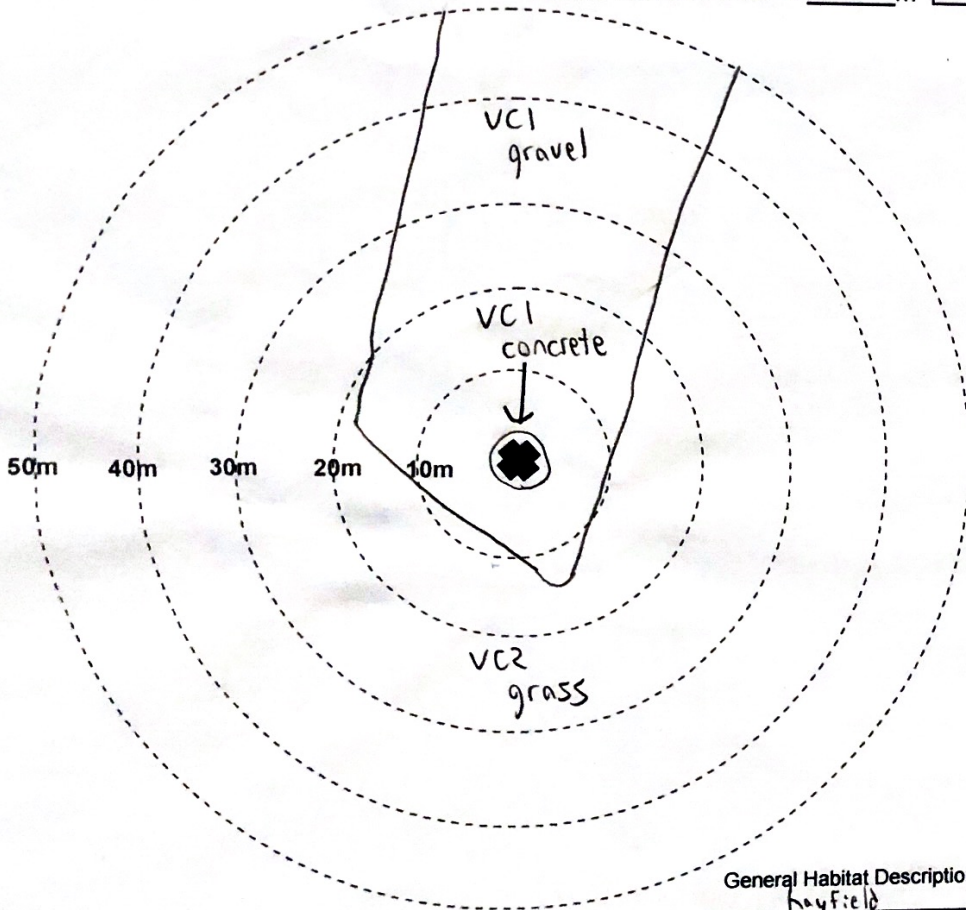
(sketch habitat and visibility classes)

Date (DD/MM/YY): 05/07/21

Observer: MCT

Monthly/Seasonal
 Linear Transect Width: 5 m

N



General Habitat Description:
Hayfield

Photo Numbers (from turbine base)

Facing North: 38
 Facing East: 39
 Facing South: 40
 Facing West: 41

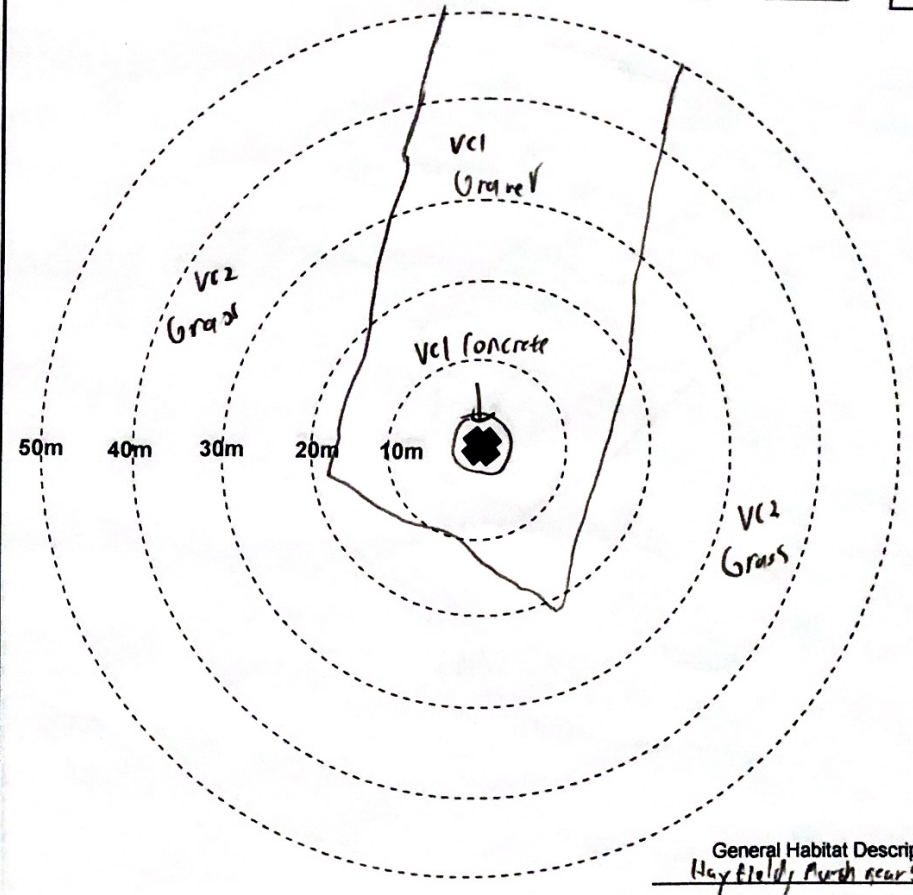
(sketch habitat and visibility classes)

Date (DD/MM/YY): 12/08/21

Observer: MPD

Monthly/Seasonal
 Linear Transect Width: 5 m

N



General Habitat Description:
Hayfield, Marsh nearby

VISIBILITY CLASSES

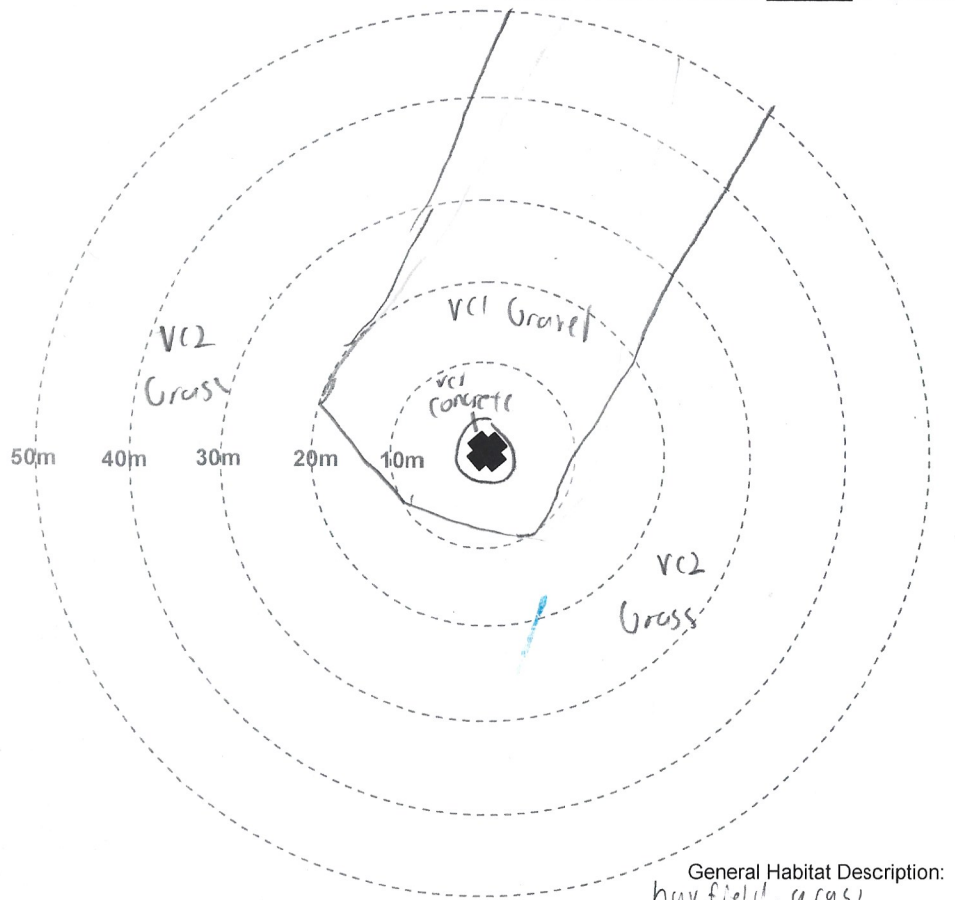
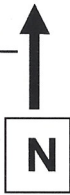
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island W.P Project #: 221F Turbine #: S36

Photo Numbers (from turbine base)
 Facing North: 36
 Facing East: 37
 Facing South: 38
 Facing West: 39
 (sketch habitat and visibility classes)

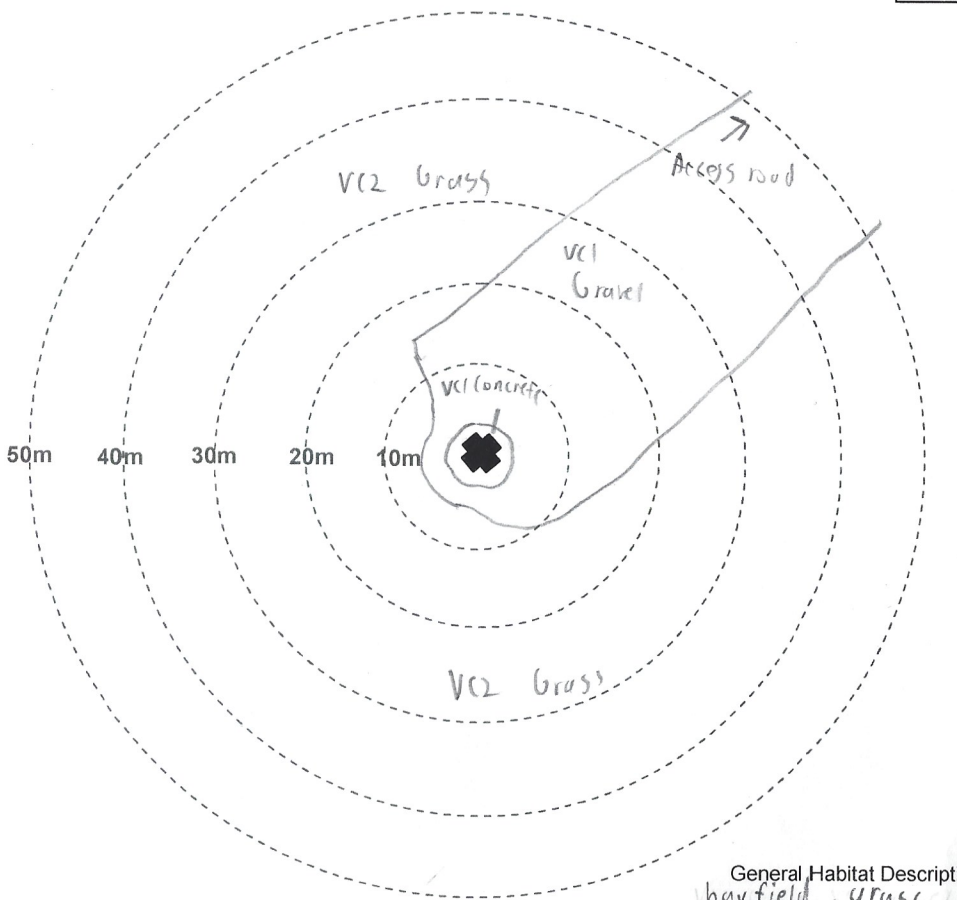
Date (DD/MM/YY): 09/09/21
 Observer: M P D
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
hay field, grass

Photo Numbers (from turbine base)
 Facing North: 27
 Facing East: 28
 Facing South: 29
 Facing West: 30
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 07/10/21
 Observer: M P D
 Monthly/Seasonal
 Linear Transect Width: 5 m



General Habitat Description:
hay field, grass

VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island W.P Project #: 2121E Turbine #: 536

Photo Numbers (from turbine base)
 Facing North: 19
 Facing East: 20
 Facing South: 21
 Facing West: 22
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 07/11/21
 Observer: M.P.D
 Monthly/Seasonal
 Linear Transect Width: 5 m

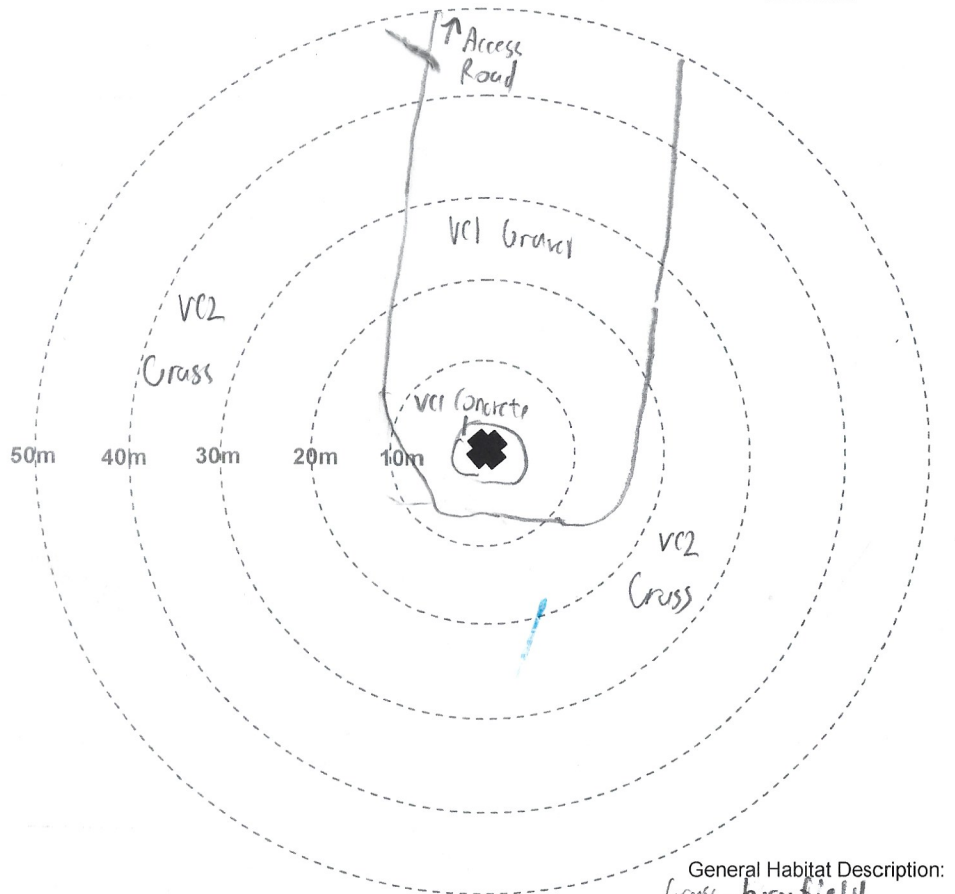
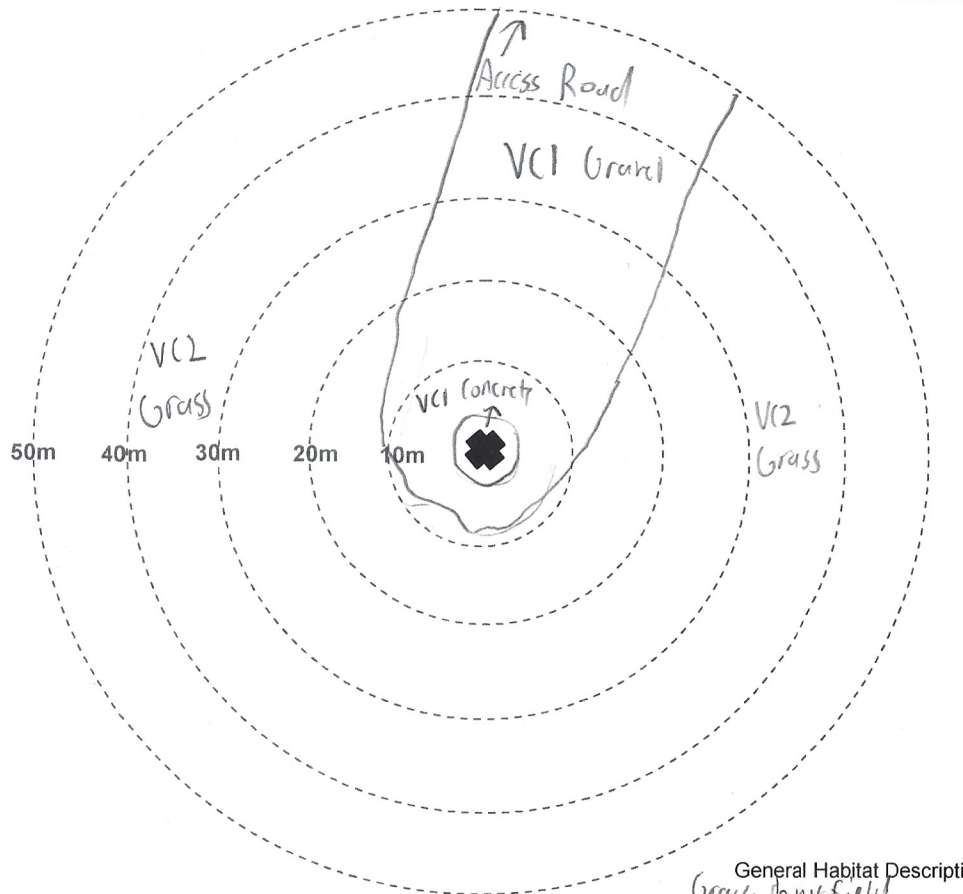


Photo Numbers (from turbine base)
 Facing North: 21
 Facing East: 22
 Facing South: 23
 Facing West: 24
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 07/12/21
 Observer: M.P.D
 Monthly/Seasonal
 Linear Transect Width: 5 m



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats

Visibility Class Map

Project Name: Amherst Island WP Project #: 2121F Turbine #: S37 Degree of Slope — degrees Slope Orientation — (e.g. SSW)

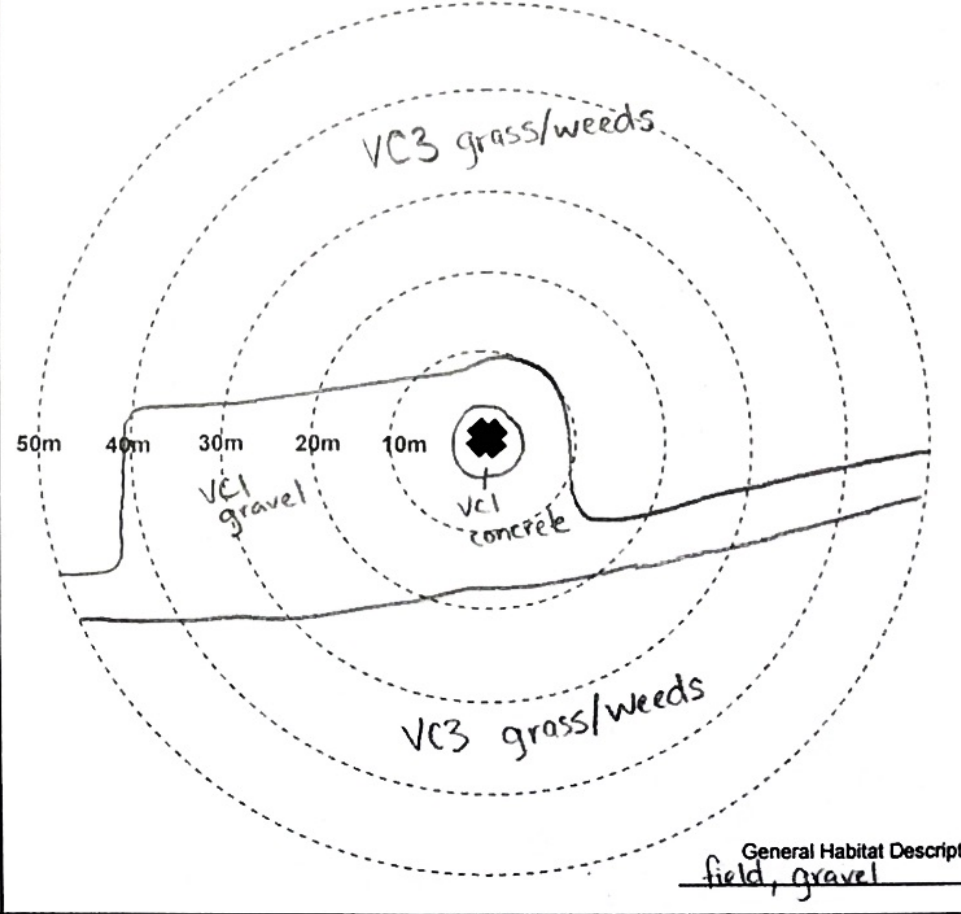
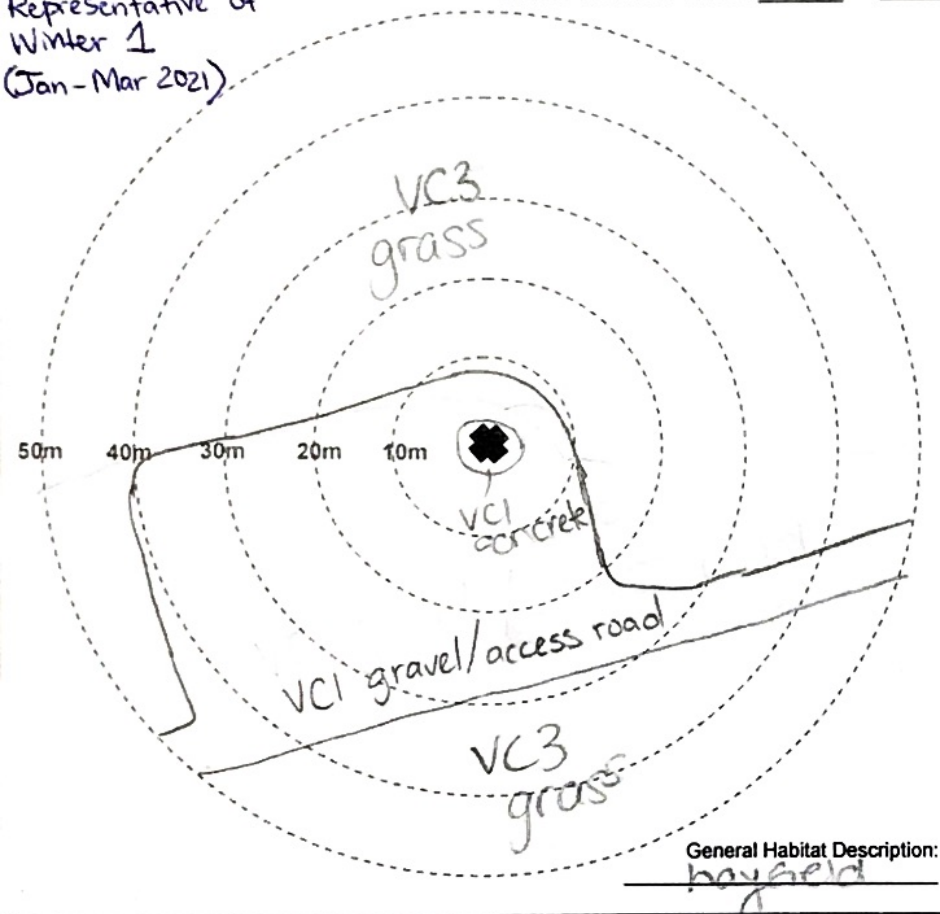
Photo Numbers (from turbine base)
 Facing North: 220321
 Facing East: 220322
 Facing South: 220323
 Facing West: 220324
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 23/03/21
 Observer: JYB
 Monthly/Seasonal Linear Transect Width: 5 m

Photo Numbers (from turbine base)
 Facing North: 37
 Facing East: 38
 Facing South: 39
 Facing West: 40
 (sketch habitat and visibility classes)

Date (DD/MM/YY): 08/12/21
 Observer: MPD
 Monthly/Seasonal Linear Transect Width: 5 m

Representative of Winter 1 (Jan-Mar 2021)



VISIBILITY CLASSES	
Class 1	≥ 90% bare ground; vegetation ≤ 15cm tall
Class 2	≥ 25% bare ground; vegetation ≤ 15cm tall
Class 3	≤ 25% bare ground; less than 25% of veg. > 30cm tall
Class 4	Little or no bare ground; more than 25% of veg. > 30cm tall
Not Searchable	Dense shrubs, woods, or other unsearchable habitats