Wood Buffalo Environmental Association

Ambient Air Monitoring Station Site Documentation

Christina Lake

LAST UPDATED: MARCH 28, 2024

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Tables and Figures

W B E A

General Site Information

Revision Date: March 28, 2024

Station

Station ID	AMS 26
Station name	Christina Lake
Date station established	May 30, 2018

Location

Station street address	Located close to a non-operational well-pad 3-16 at Cenovus SAGD site
Legal land description	3-16-76-6 W4
Latitude	55.57915315
Longitude	-110.876009033
UTM East	507816.87
UTM North	6159249.07
Nearest community	Conklin
Community population	178

Owner/Operator/Approval Holder

Operating Agency	Wood Buffalo Environmental Association
Name of Approval Holder	Cenovus Energy Inc.
Approval number	48522-02-00
Contact Name	Sean Nichols
Address	500 Centre Street SE Calgary, AB T2P 0M5
Phone number	780-608-7176
Email address	Sean.nichols@cenvous.com

Site Description

Land use by sector	0 – 90 degrees	SAGD Operations
	91 – 180 degrees	SAGD Operations
	181 – 270 degrees	SAGD Operations
	271 – 360 degrees	SAGD Operations
Site elevation (Above sea level)	569.6m	
Angle of elevation to nearby building	Greatest angle	N/A
	Building direction	N/A
Airflow restrictions	North	No
	East	No
	South	No
	West	No
Sample manifold	Type	All glass
	Inlet height above roof	1 meter
Wind Sensors	Type	Cup and vane
	Height above ground	10
	Distance from station	7

Site Influences

Localized Sources

Type	Distance (m)	Description
Well-pad	100	Non-operational well pad. Capped.

Roadway Influences

Type	Traffic Volume	Distance (m)	Description
Dirt/gravel	Medium	20	Used by site workers

Major Point Sources

Facility Name	Source Type	Distance from site (m)	Compass direction from site
Cenovus Christina Lake	SAGD Facility	300	N

Station Equipment

Equipment Owner: Cenovus

Analytical Equipment

Parameter	Owner	Make	Model	Serial Number	Date Instrument Installed	WBEA Data Start Date
SO_2	Cenovus	Thermo Instruments	43I	1152430005	February, 2024	June, 2018
H_2S	Cenovus	Thermo Instruments	450I	1180030032	May, 2018	June, 2018
$NO/NO_x/NO_2$	Cenovus	Thermo Instruments	42I	1173480006	May, 2018	June, 2018

Meteorological Equipment

Parameter	Make	Model	Serial Number	WMO Site Class	Date Installed	WBEA Data Start Date
AT/RH	Vaisala	HMP155	G4330034	4	May 30, 2018	June, 2018
WS	Met One	010C-1	W23536	2	May 30, 2018	June, 2018
WD	Met One	020C-1	W23733	2	May 30, 2018	June, 2018

Support Equipment

Name	Description	Make	Model	Serial Number
Datalogger	Datalogger	Campbell Scientific	CR3000	7881
Zero air generator	Zero Air Generator	Teledyne/API	701	832
HVAC	Heating and air conditioning system. Wall mount unit	BARD	1 ton	NA
Shelter / Building	Air monitoring portable	ITB	8 x 16 trailer	NA
Gas Dilution Calibrator	Mass flow controlled gas dilution	Teledyne/API	T700	3253
Tower	10 Meter crank up	Aluma	T-135	217224002

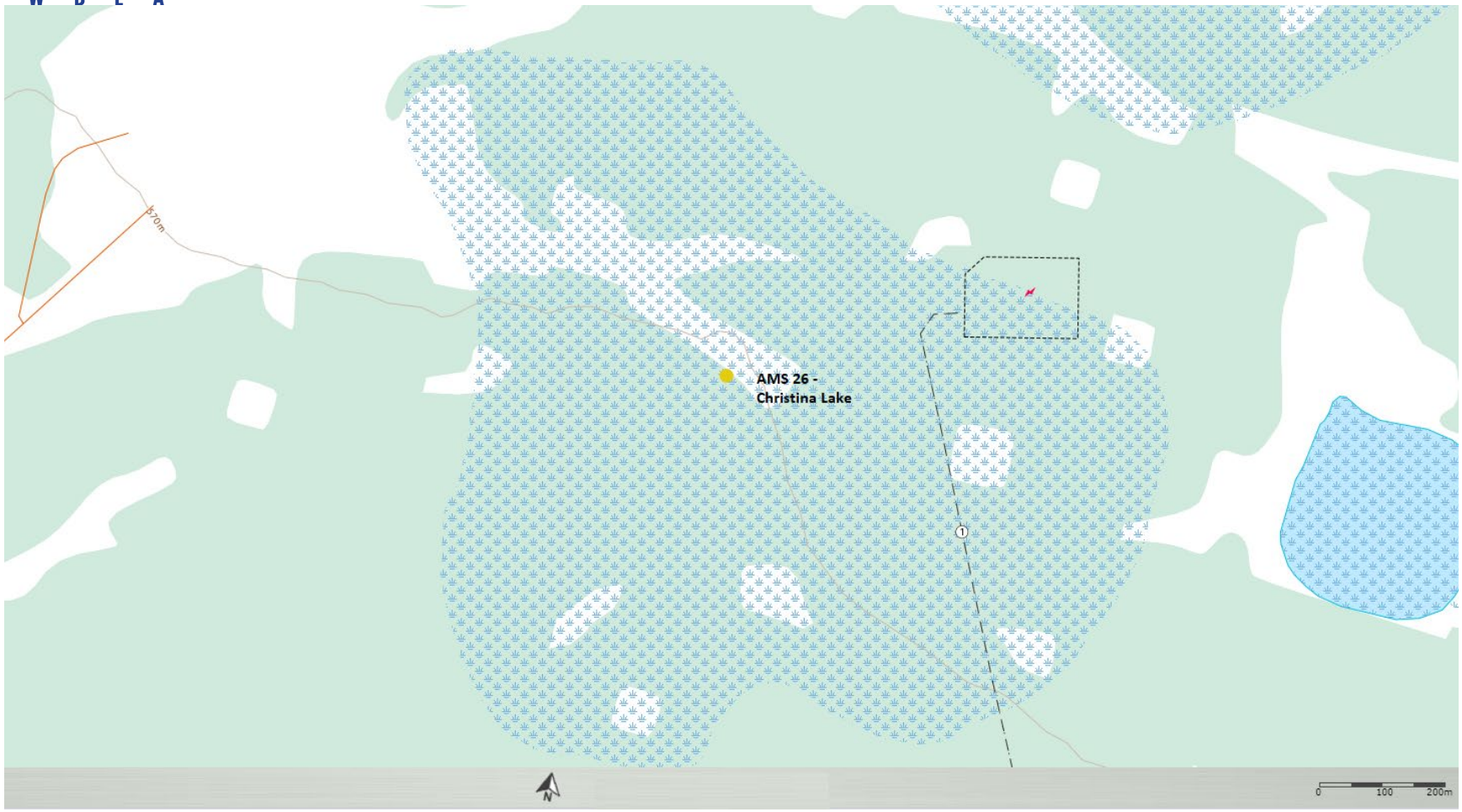

Figure 1 – Area topographic map showing AMS 26.

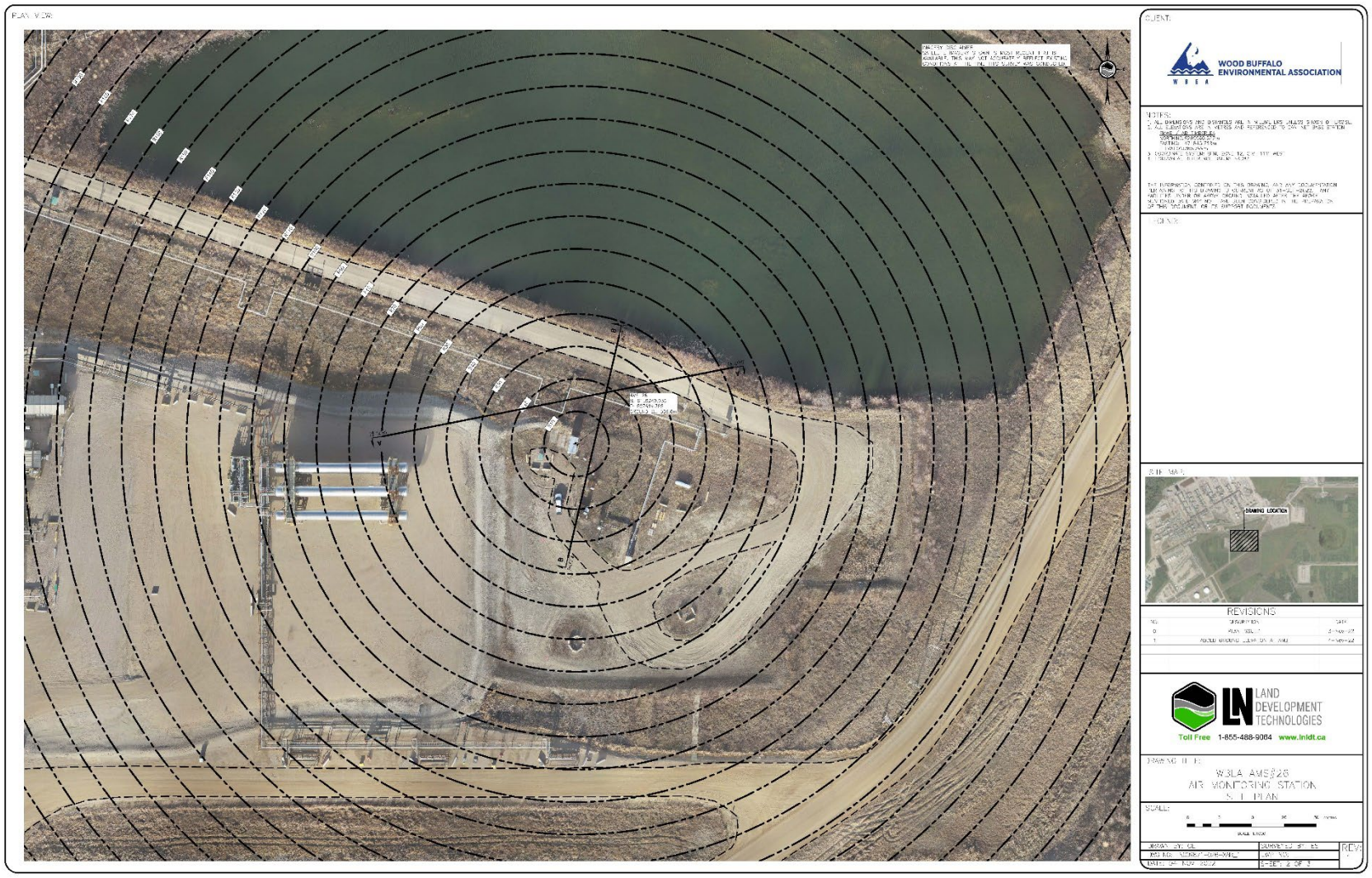

Figure 2 – Plan view image for AMS 26 site.

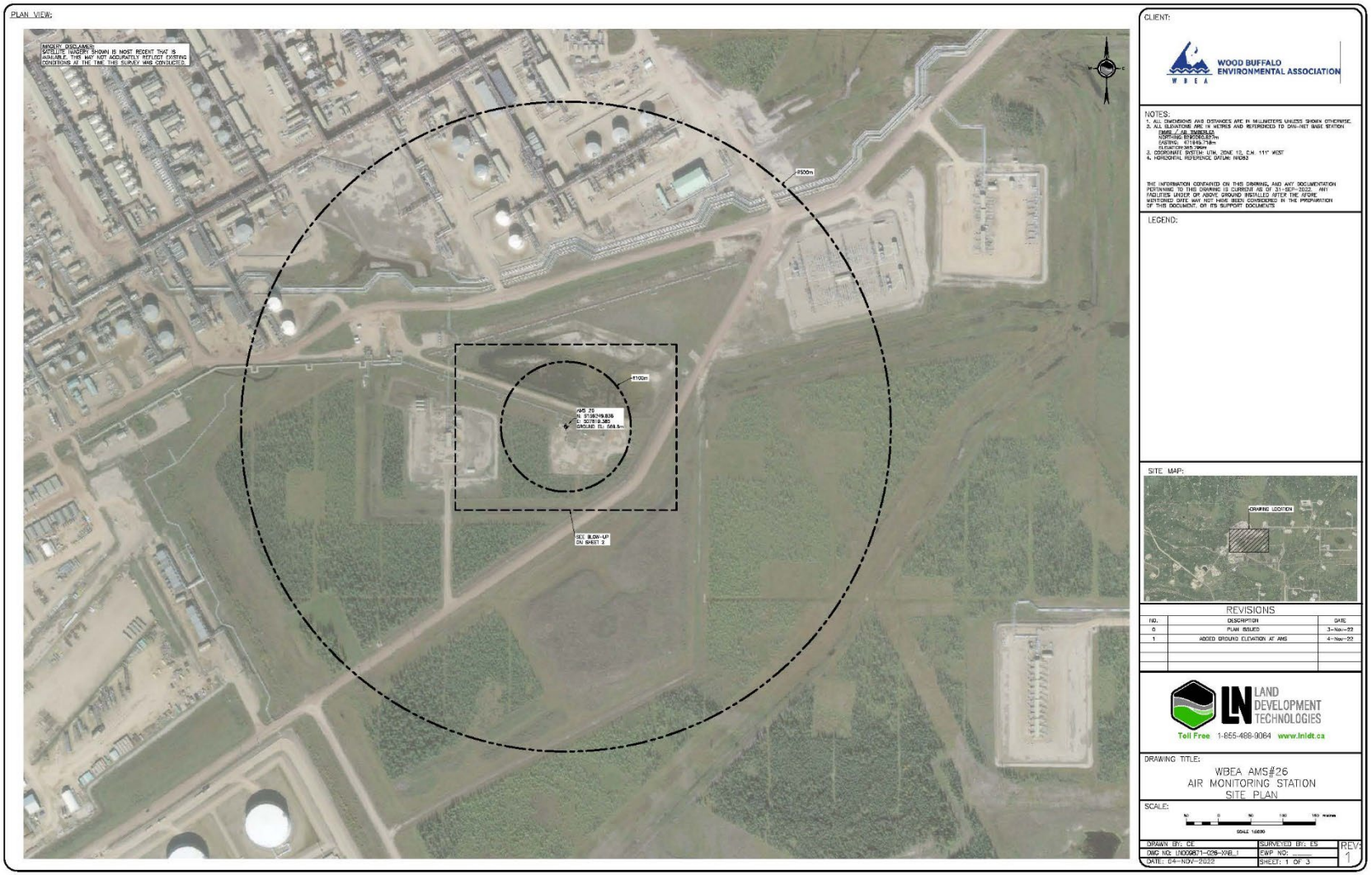

Figure 3 – Aerial photo showing AMS 26.

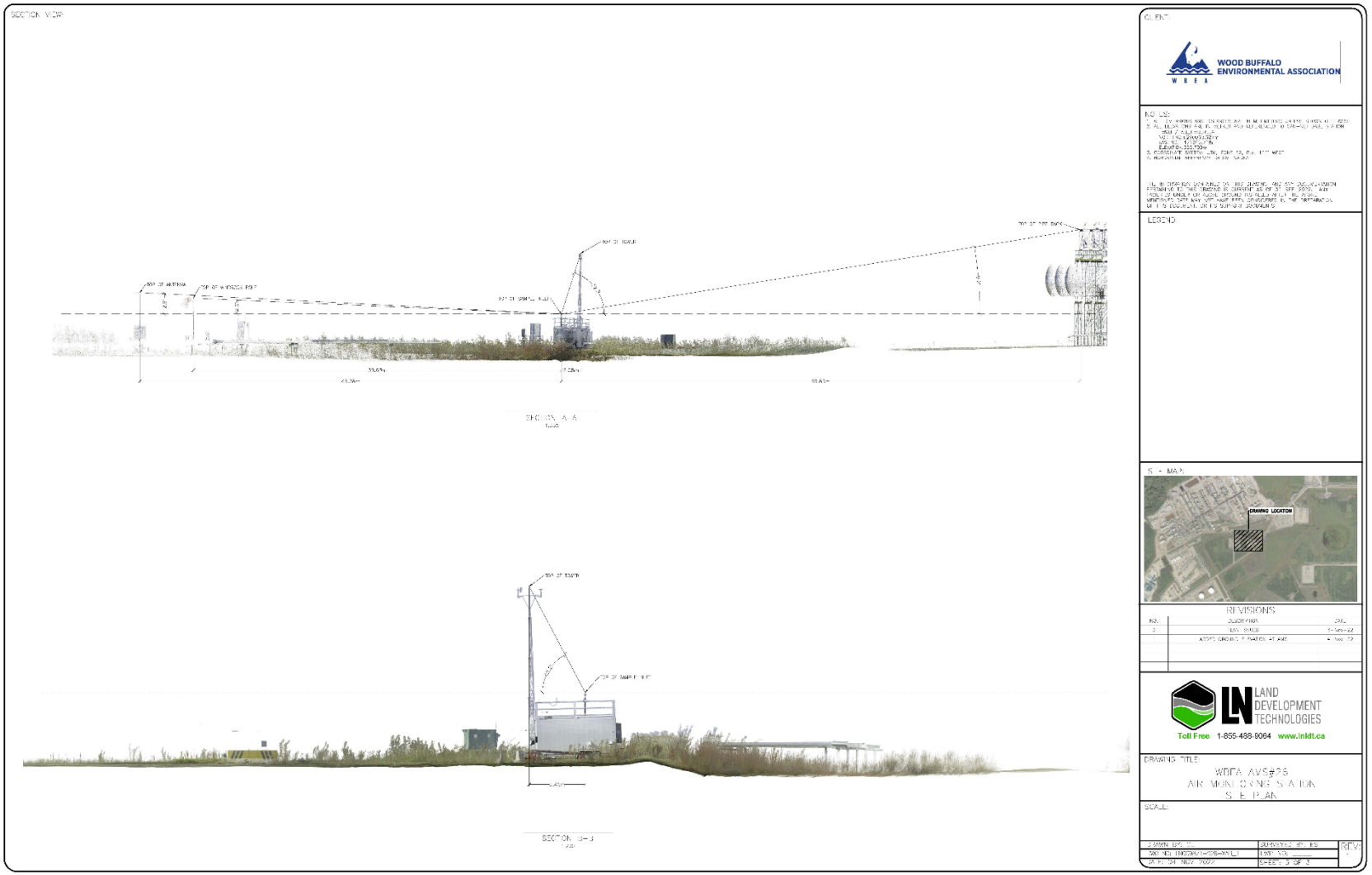

Figure 4 – Elevation view image for AMS 26.

Site photos

The following photos show the environment surrounding the monitoring station.

Figure 5 – Environment looking North.

Figure 6 – Environment looking East.

Figure 7 – Environment looking South.

Figure 8 – Environment looking West.

Figure 9 – Meteorological tower.

Station Photos

The following photos show the monitoring station and instrumentation.

Figure 10 – Photo showing the inlet and sample manifold.

Figure 11 – Curb shot of the monitoring station.

Figure 12 –Photo of front and back of instrument rack.

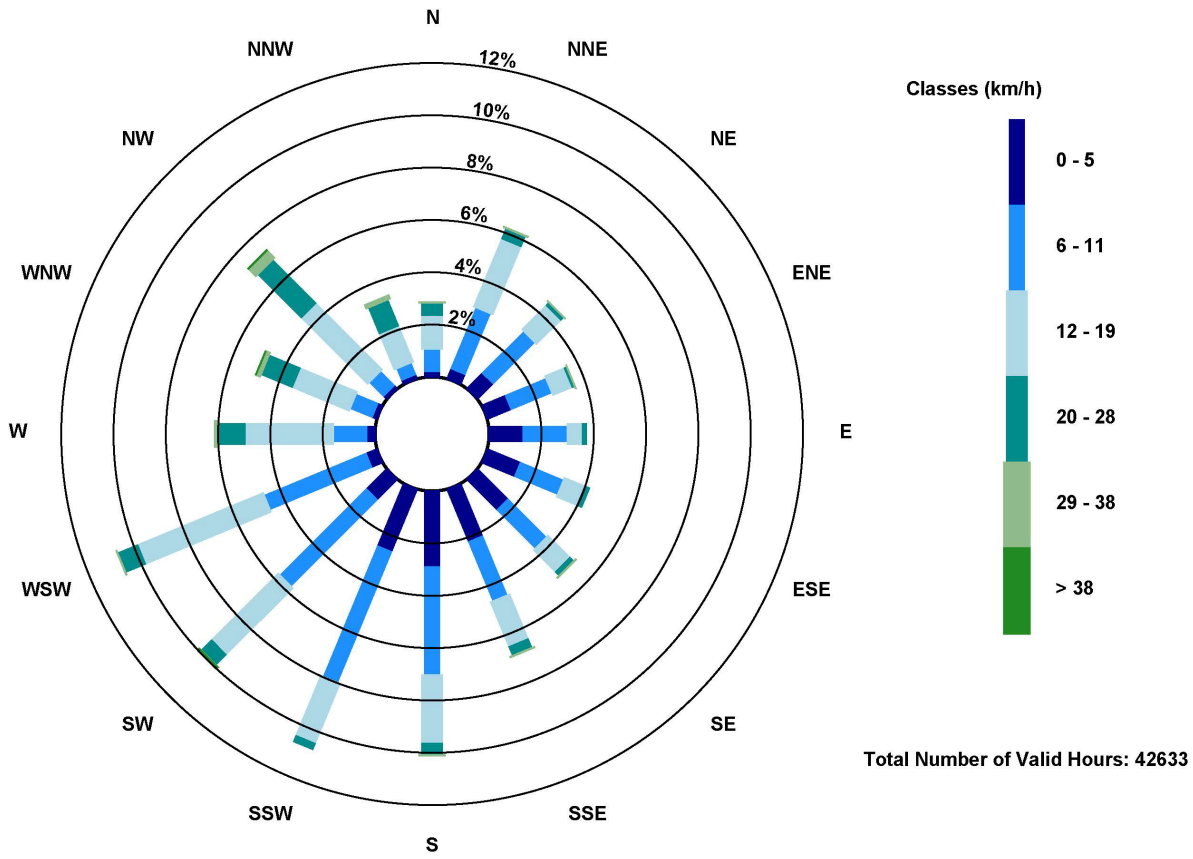

Figure 13 – Windrose (Five Year).