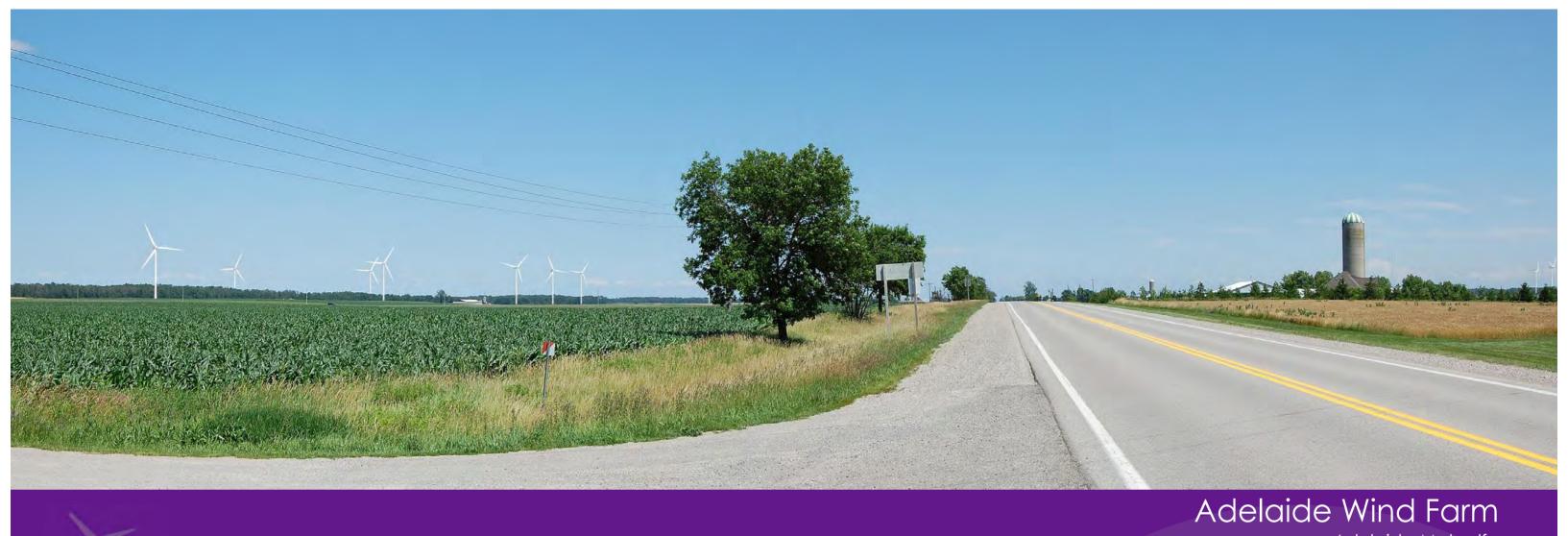
## APPENDIX E VISUAL IMPACT ASSESSMENT





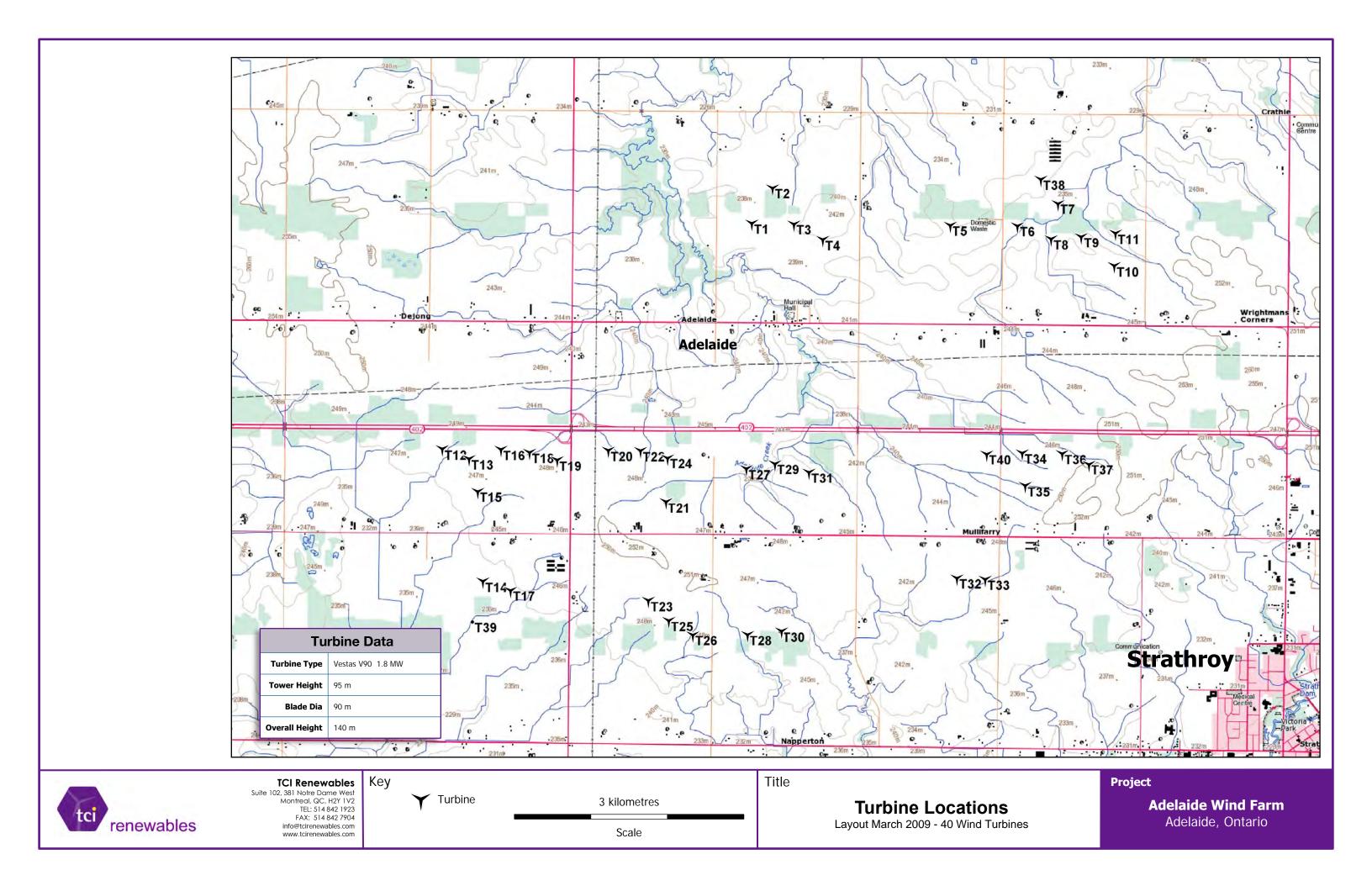
www.tcirenewables.com analysedesignbuildmanage Adelaide-Metcalfe Middlesex County, Ontario

> **Visual Montage Book** April 2009





## VISUALANALYSISMAPPING



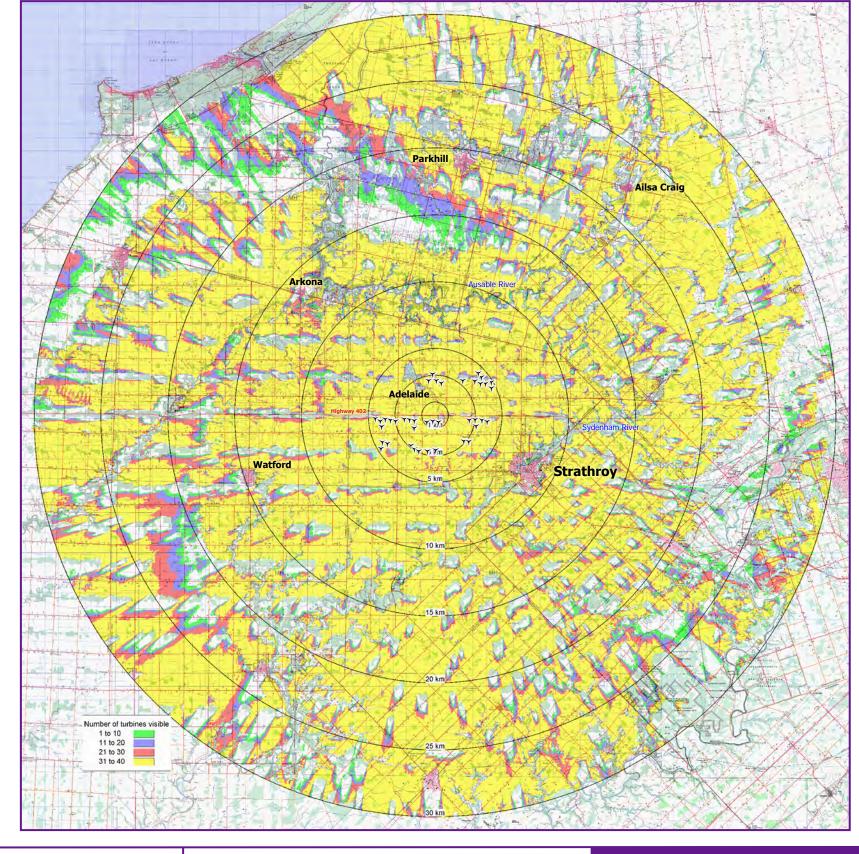
#### ZONES OF THEORETICAL VISIBILITY

**The selected region** is centred on the wind farm at Adelaide-Metcalfe and shows the potential visibility of the turbines out to 30.0 km (18.75 mile) radius.

The model has been assessed using a Vestas V90 with a blade diameter of 90 metres on a 95 m high tower.

The shaded regions indicates areas from where turbines may be visible. As the map key suggests the colour of shading indicates the number of turbines visible.

The Zone of Theoretical Visibility (ZTV) is produced on the Wind Farm programme and has been adjusted to allow for any non-topographical features, such as forestry and built-up areas, as they appear on the survey maps. An average height of 8.0 metres has been used for these exclusion zones. The model does not account for other features, such as hedges, fencing, raised roadways or individual buildings etc., which might otherwise screen or reveal the turbines.





TCI Renewables

Suite 102, 381 Notre Dame West Montreal, QC, H2Y IV2 TEL: 514 842 1923 FAX: 514 842 7904 info@tcirenewables.com www.tcirenewables.com Key

**Turbine** 

15 kilometres

Scale

Title

**ZTV** to 30 Kilometres

(Zone of Theoretical Visibility)

Project

**Adelaide Wind Farm** Adelaide, Ontario

Adelaide Wind Farm Project:

Date: Feb 10 2009 Created by: Paul Megahey

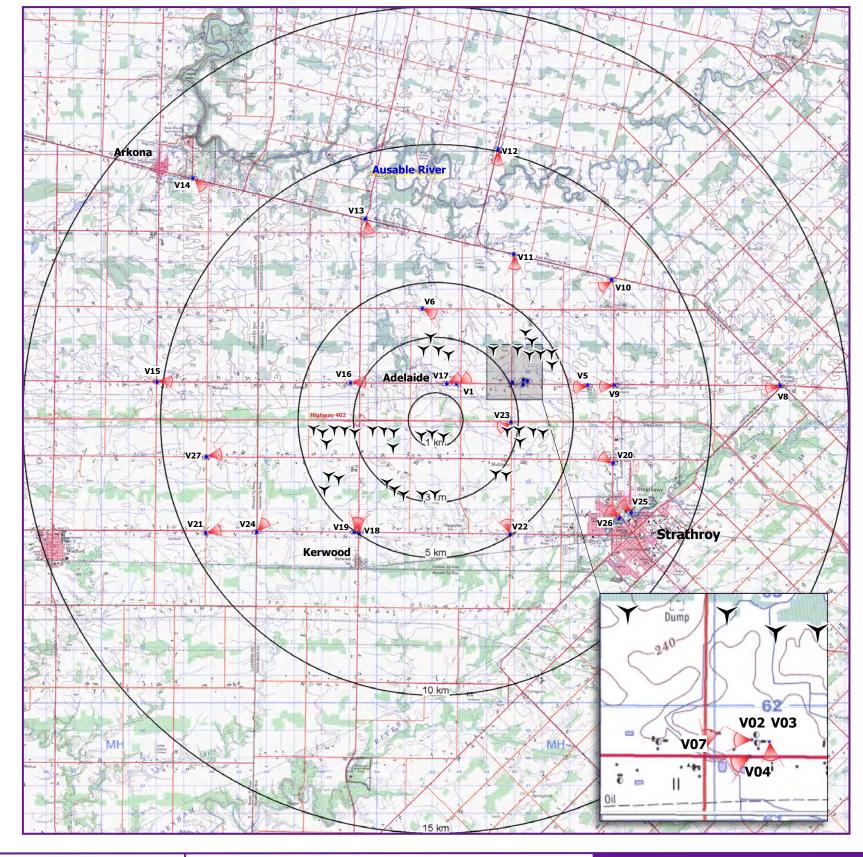
#### **VIEWPOINTS DETAILS**

	ID	Title	Easting	Northing	Direction Angle	Field of view
	V01	Egremont - Seed	442908	4761598	61°	70°
١	V02	Adelaide Creek I	445334	4761718	286°	65°
١	V03	Adelaide Creek II	445487	4761700	186°	80°
١	V04	Egremont Nr School	445317	4761570	222°	74°
١	V05	Shooting Star Motel	447657	4761542	266°	65°
١	V06	Cuddy Drive Nr Morse	441663	4764330	129°	75°
١	V07	School Road	444931	4761633	33°	75°
١	V08	Hickory Corner	454648	4761530	264°	43°
١	V09	Wrightman's Corners	448632	4761544	263°	70°
١	V10	Centre/Petty St	448536	4765352	224°	43°
١	V11	Centre/School	444981	4766291	180°	65°
١	V12	Knox Church	444420	4770087	192°	68°
١	V13	Keyser	439591	4767572	179°	75°
١	V14	Rock Glen	433334	4769039	138°	72°
١	V15	Egremont/Arkona	432035	4761663	98°	65°
١	V16	Egremont Kerwood	439050	4761627	90°	70°
١	V17	Municipal Offices	442558	4761607	83°	72°
١	V18	Kerwood/Napperton	439361	4756175	357°	67°
١	V19	Napperton	439186	4756196	2°	74°
١	V20	Strathroy	448583	4758681	319°	75°
١	V21	Confederation/Donnelly		4756168	70°	70°
١	V22	Napperton/School	444846	4756116	343.5°	70°
١	V23	School Overpass	444890	4760187	242°	63°
1	V24	Sexton/Napperton	435651	4756217	39°	76°
1	V25	Strathroy CA	449246	4756916	300°	68°
1	V26	Strathroy Tourist Office		4756687	310°	70°
1	V27	Zion/Donnelly	433825	4758940	77°	70°

Viewpoint locations were selected to accommodate several criteria:

- 360 degree coverage of the site
- Mainly within 10-kilometre radius
- Major roads and junctions
- Key institutions (Muncipal offices, churches etc)
- Conservation/tourist areas (after consultation with Strathroy Tourist Information Office)
- Industrial areas
- Residential areas

For authenticity, once the locations were selected, photographs were taken during different seasons of the year and under varying lighting conditions.



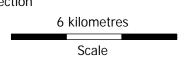


TCI Renewables Key

Viewpoint location and direction



Turbine



Title

**Viewpoints Layout** 

Project

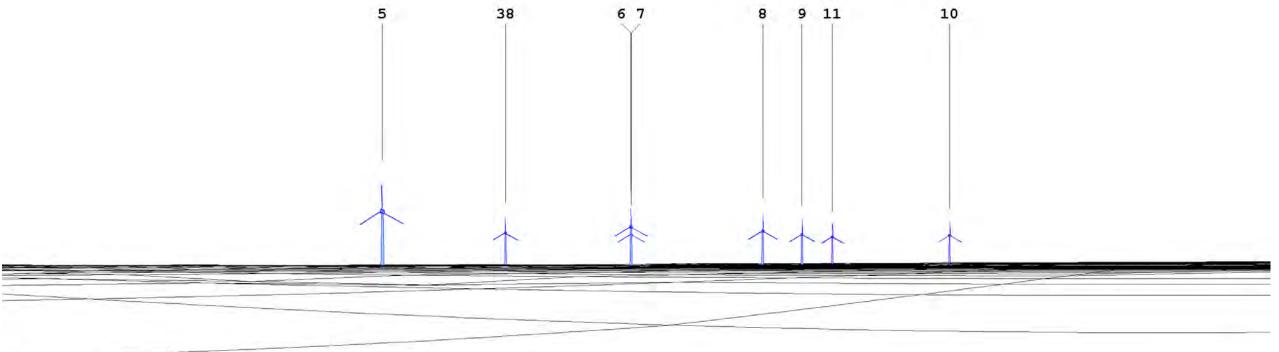
**Adelaide Wind Farm** Adelaide, Ontario

www.tcirenewables.com



# VISUALANALYSISMONTAGES



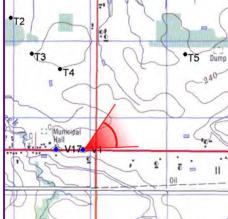




#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 01 **Egremont/Seed**



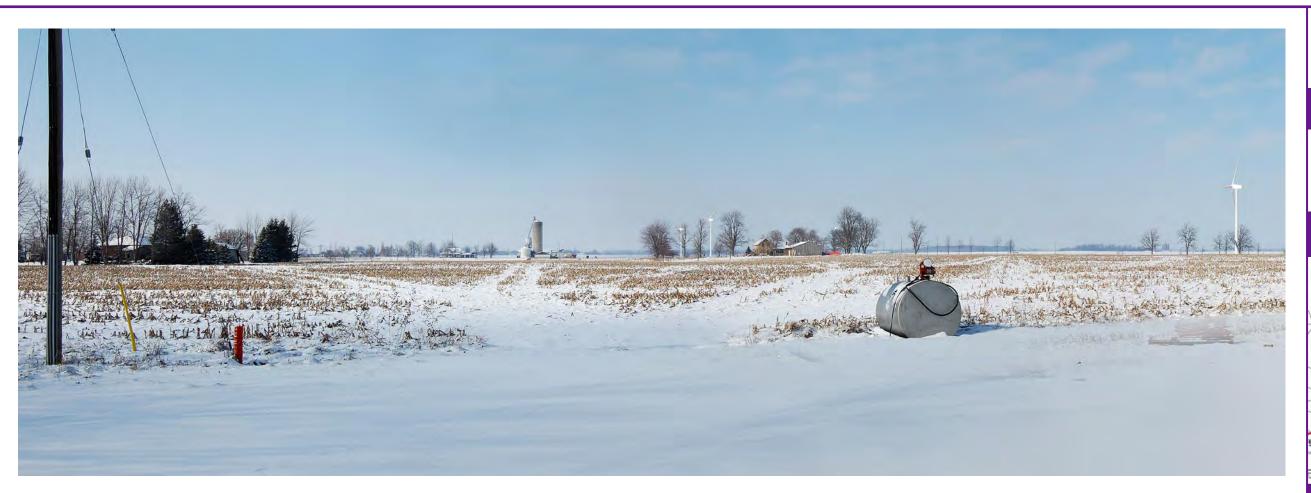
#### **Viewpoint Details**

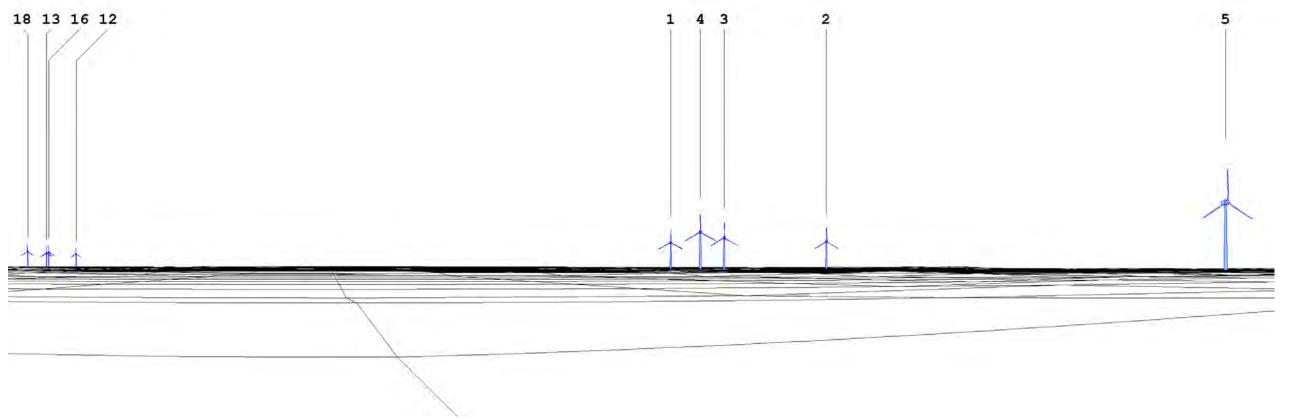
Distance	1100 m to Turbine 5
Date/time	08/14/2007 - 11:40
Grid Ref	442908E 4761598N
Bearing	61°
Field of View	70°
Elevation	239 m
Camera/ Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 28 cm



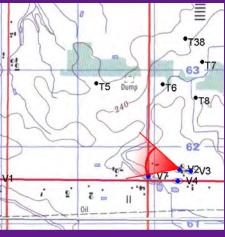




#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 02 Adelaide Creek I



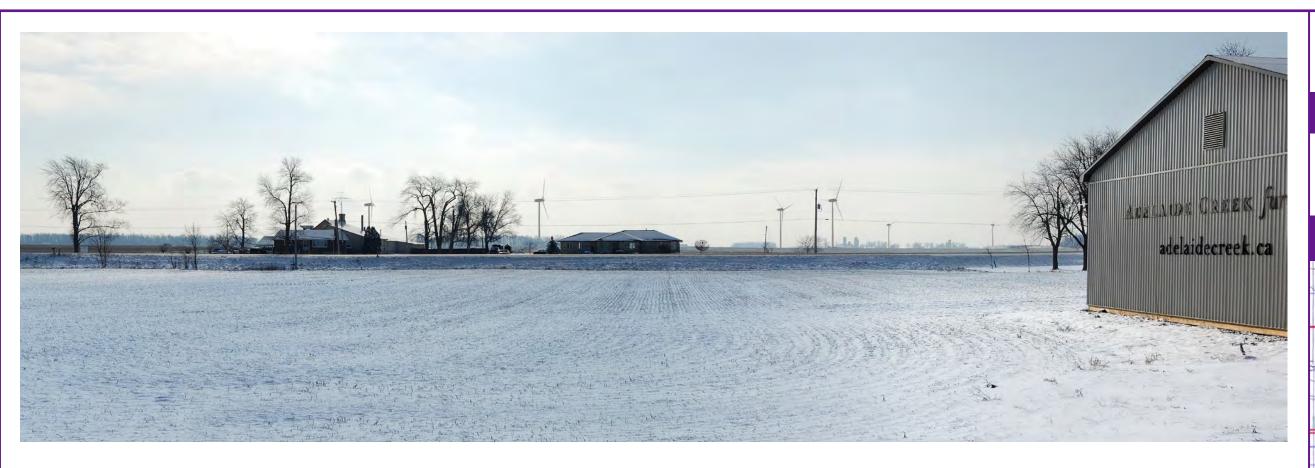
#### **Viewpoint Details**

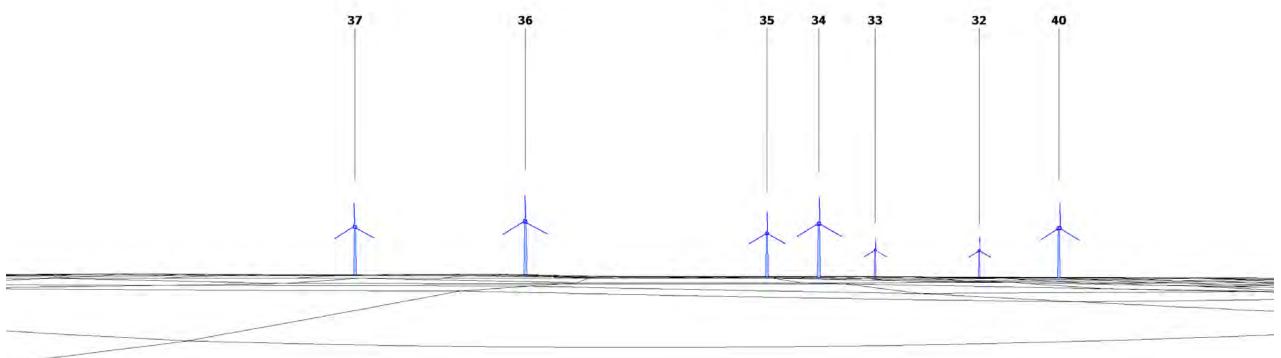
Distance	1563 m to Turbine 5
Date/time	16/Jan/2008 - 12.40
Grid Ref	445334E 4761718N
Bearing	286°
Field of View	65°
Elevation	241 m
Camera/ Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 30 cm







#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 03 Adelaide Creek II



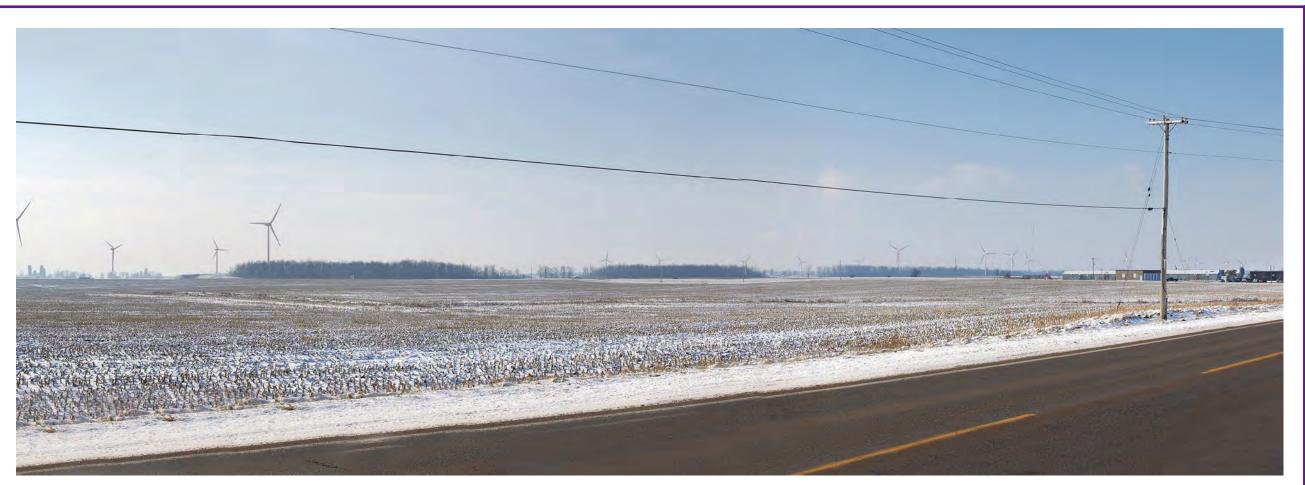
#### **Viewpoint Details**

Distance	1816 m to Turbine 34	
Date/time	16/Jan/2008 - 12.45	
Grid Ref	445487E 4761700N	
Bearing	186°	
Field of View	80°	
Elevation	243 m	
Camera/ Lens	Nikon D40 @ 30mm	

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 28 cm

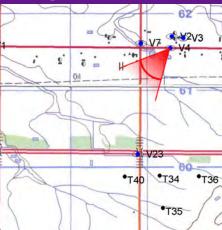




#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 04 **Egremont/School**



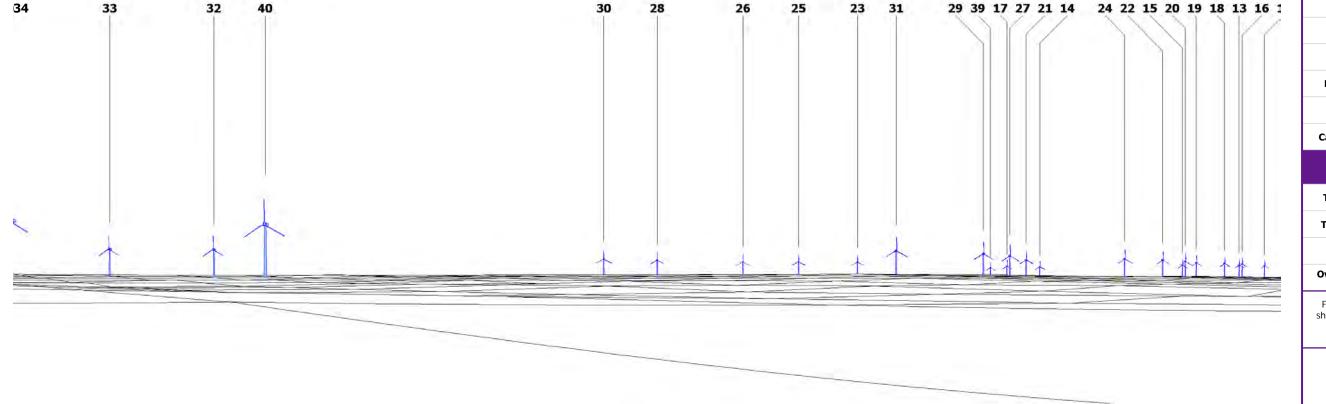
#### **Viewpoint Details**

Distance	1780 m to Turbine 40
Date/time	16/Jan/2008 - 12.50
Grid Ref	445317E 4761570N
Bearing	222°
Field of View	74°
Elevation	242 m
Camera/ Lens	Nikon D40 @ 30mm

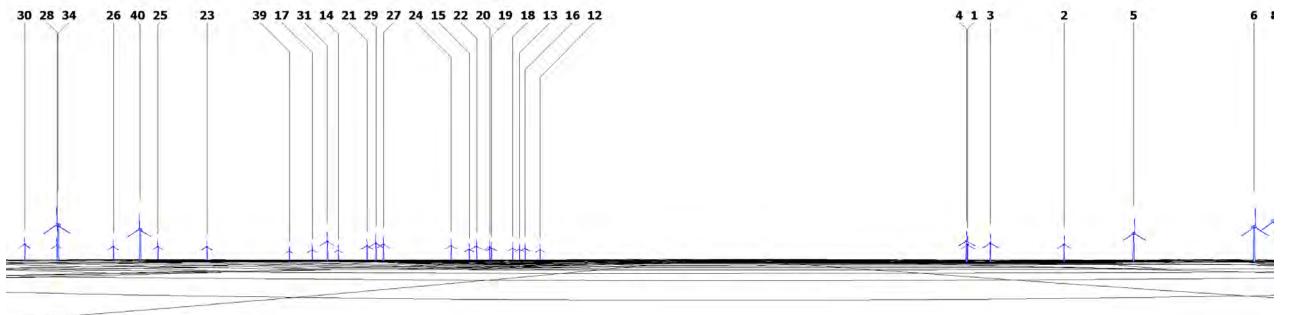
#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 25 cm





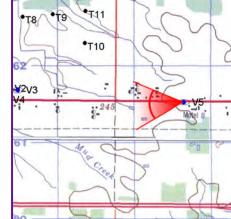




#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 05 Shooting Star Motel



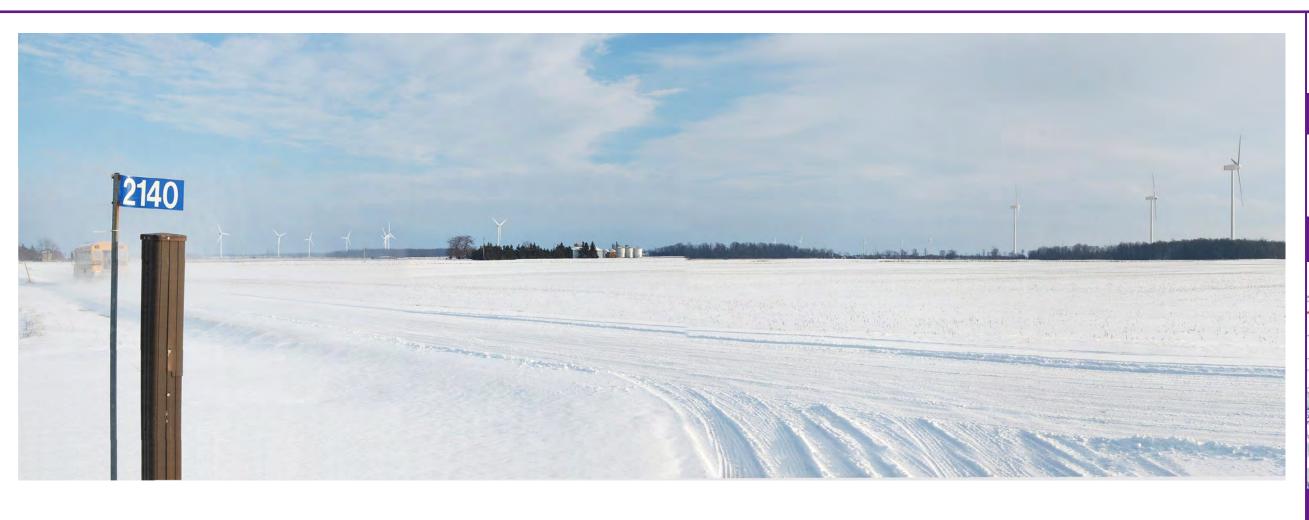
#### **Viewpoint Details**

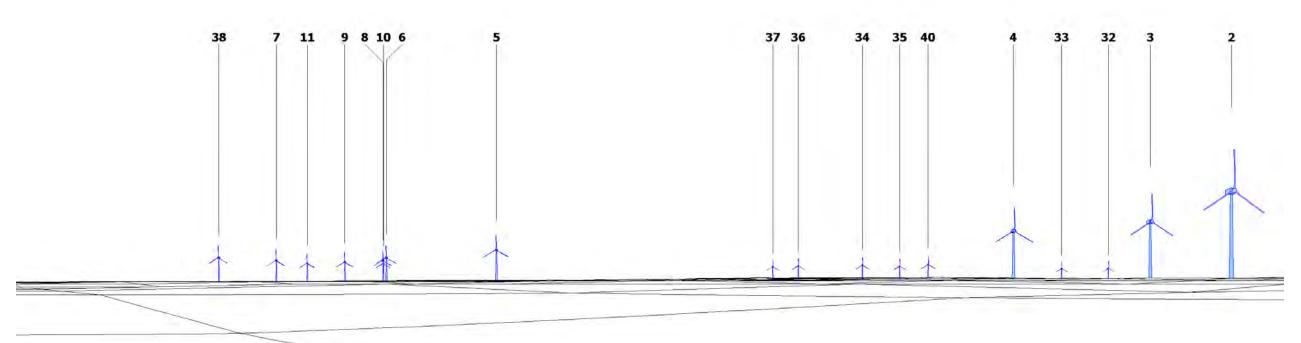
Distance	2850 m to Turbine 6
Date/time	16/Jan/2008 - 15.15
Grid Ref	447657E 4761542N
Bearing	266°
Field of View	65°
Elevation	250 m
Camera/ Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 30 cm



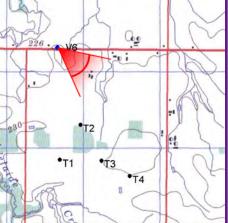




#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 06 **Cuddy Drive/Morse**



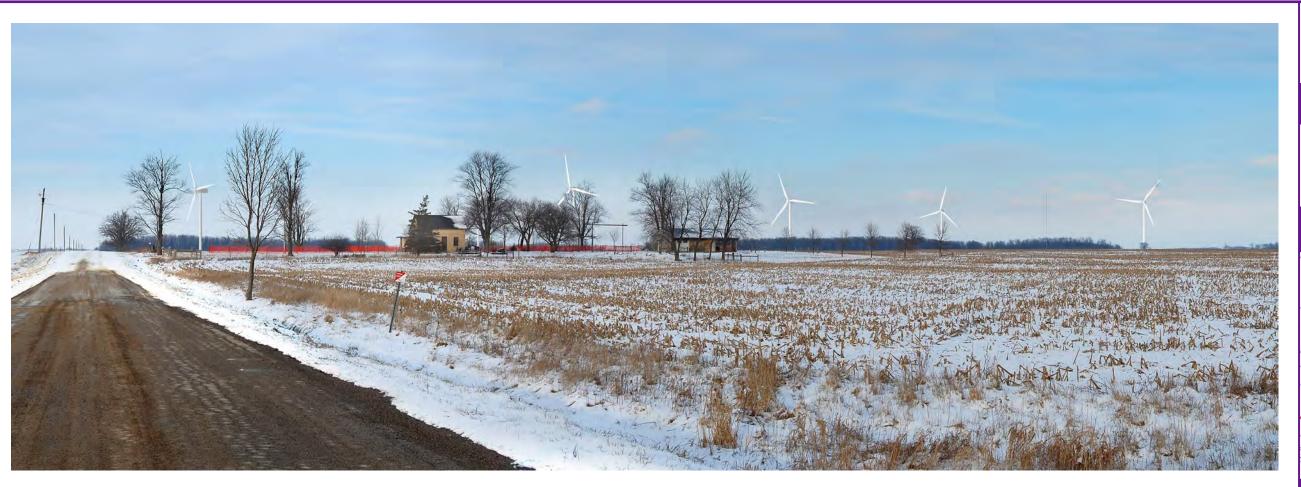
#### **Viewpoint Details**

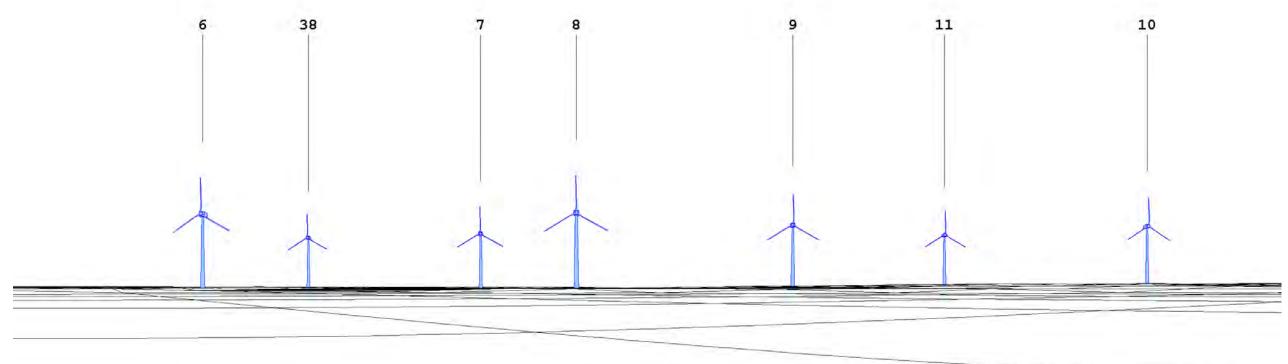
Distance	1048 m to Turbine 2	
Date/time	16/Jan/2008 - 16.45	
Grid Ref	441663E 4764330N	
Bearing	129°	
Field of View	75°	
Elevation	229 m	
Camera/ Lens	Nikon D40 @ 30mm	

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 25 cm



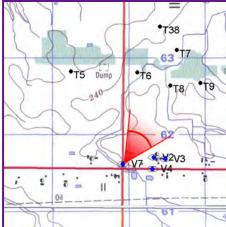




#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 07 **School Road**



#### **Viewpoint Details**

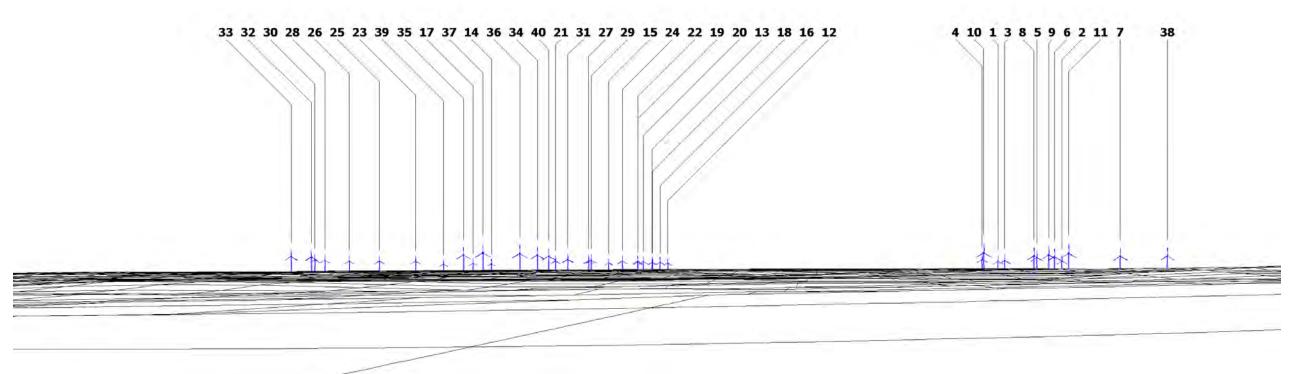
Distance	1201 m to Turbine 8
Date/time	16/Jan/2008 - 17.05
Grid Ref	444931E 4761633N
Bearing	33°
Field of View	75°
Elevation	239 m
Camera/ Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 25 cm







#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 08 **Hickory Corner**



#### **Viewpoint Details**

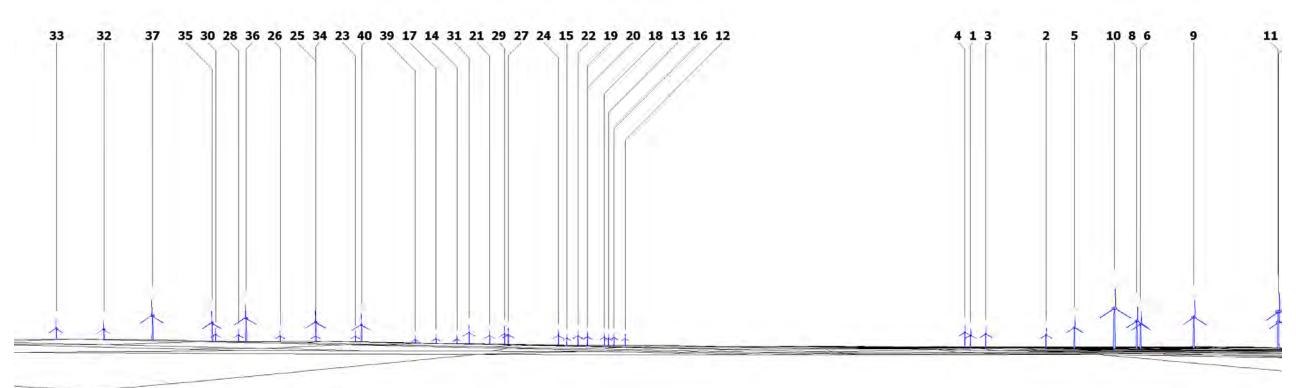
Distance	8324 m to Turbine 10
Date/time	09/July/2008 - 11.25
Grid Ref	454648E 4761530N
Bearing	264°
Field of View	43°
Elevation	250 m
Camera/ Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 50 cm



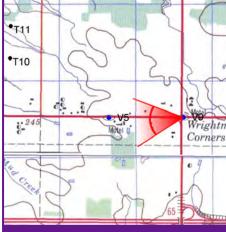




#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 09 **Wrightman's Corner**



#### **Viewpoint Details**

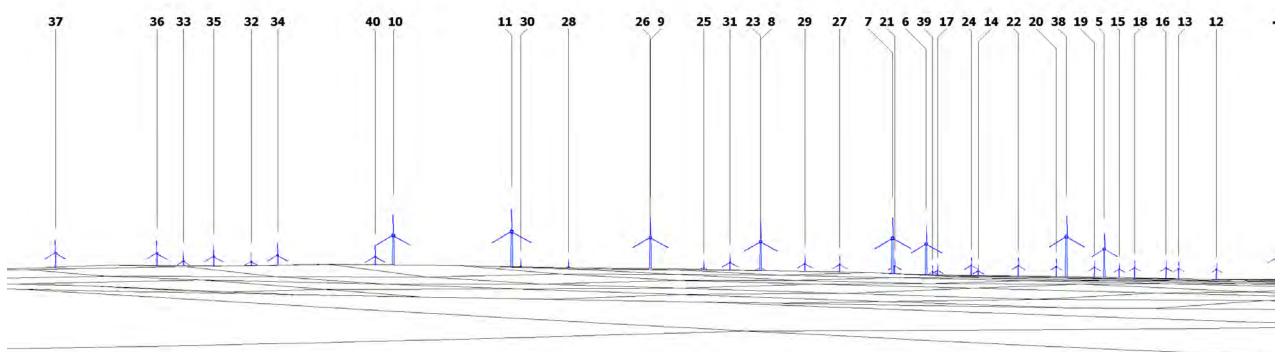
Distance	2397 m to Turbine 10
Date/time	09/July/2008 - 11.35
Grid Ref	448632E 4761544N
Bearing	263°
Field of View	70°
Elevation	250 m
Camera/ Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 28 cm



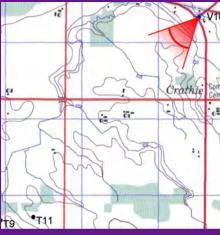




#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 10 **Centre/Petty**



#### **Viewpoint Details**

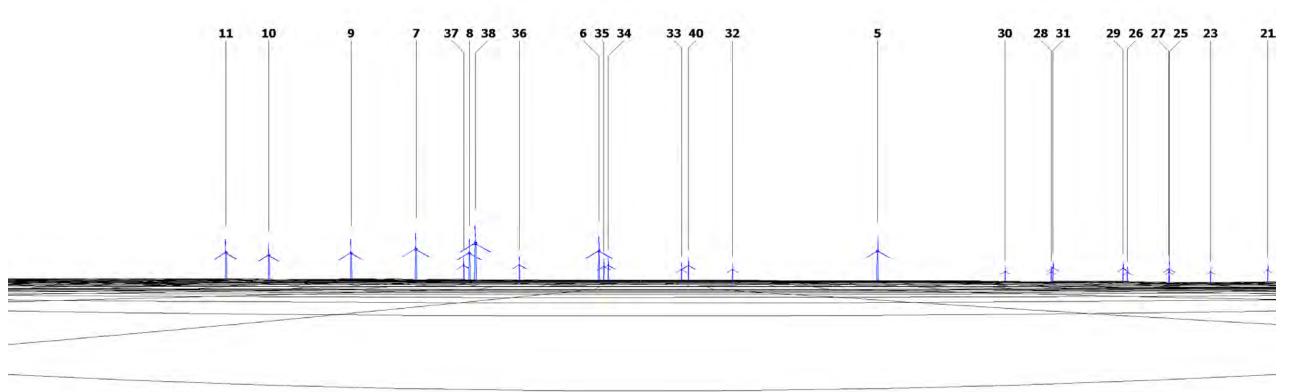
Distance	3397 m to Turbine 11
Date/time	09/July/2008 - 11.45
Grid Ref	448536E 4765352N
Bearing	224°
Field of View	43°
Elevation	232 m
Camera/ Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 50 cm







#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario





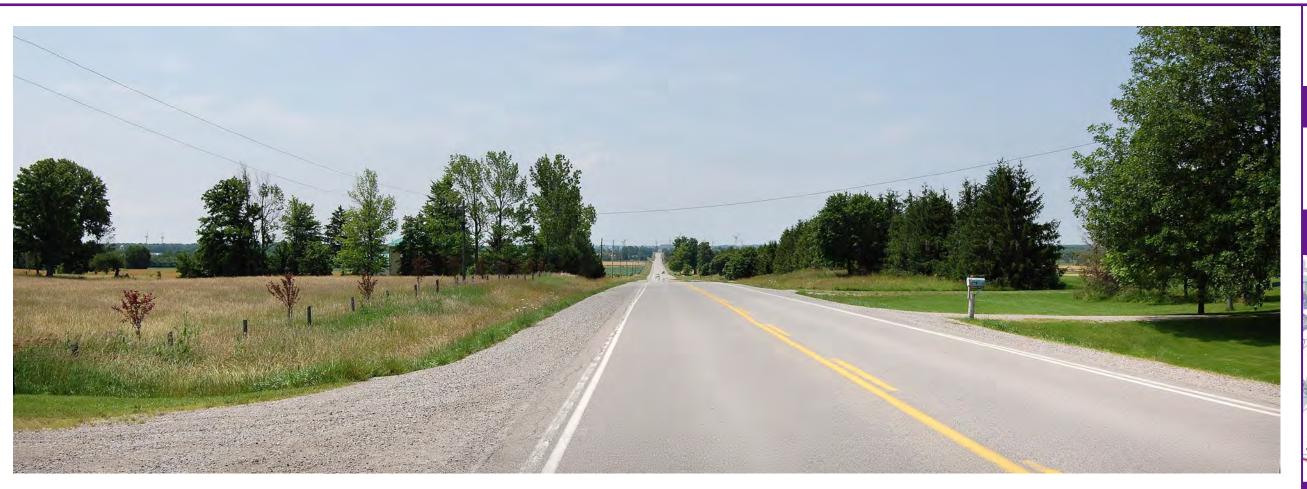
#### **Viewpoint Details**

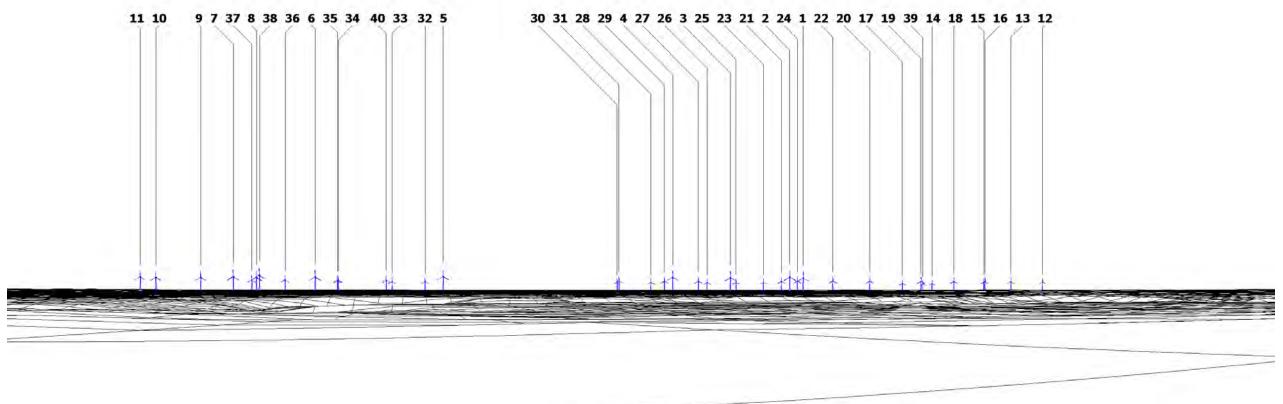
Distance	2892 m to Turbine 38
Date/time	09/July/2008 - 11.55
Grid Ref	444981E 4766291N
Bearing	180°
Field of View	65°
Elevation	225 m
Camera/ Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 30 cm







#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 12 **Knox Church**



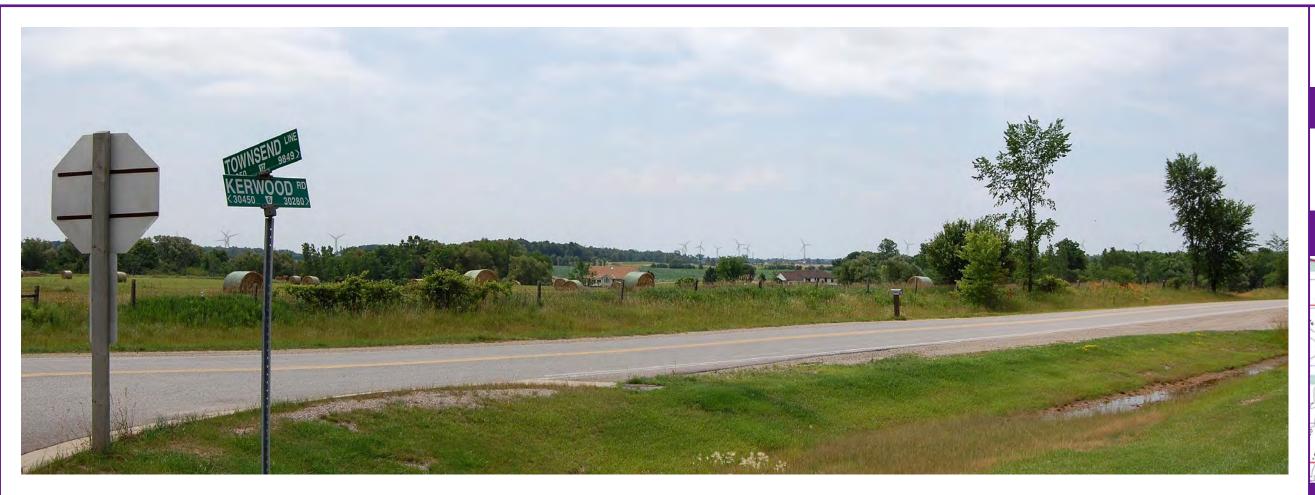
#### **Viewpoint Details**

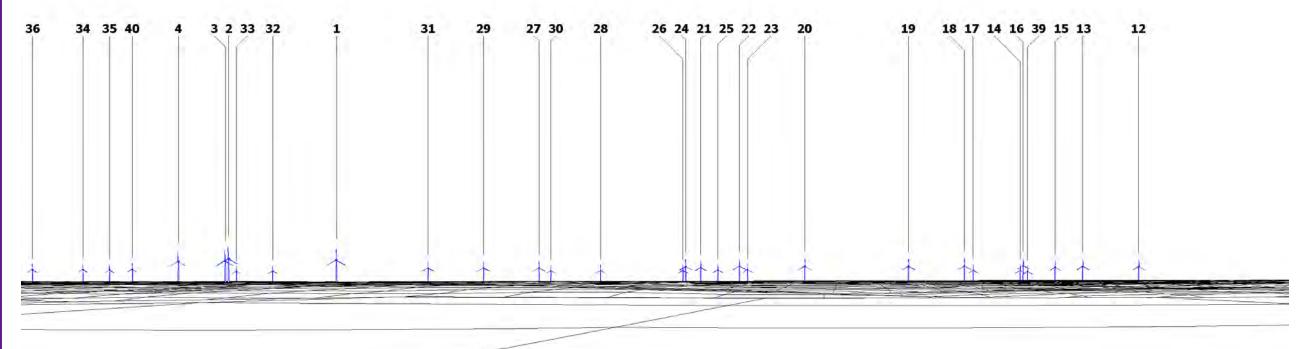
Distance	7535 m to Turbine 3
Date/time	09/July/2008 - 12.05
Grid Ref	444420E 4770087N
Bearing	192°
Field of View	68°
Elevation	238 m
Camera/ Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 30 cm







#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### **V13** Keyser



#### **Viewpoint Details**

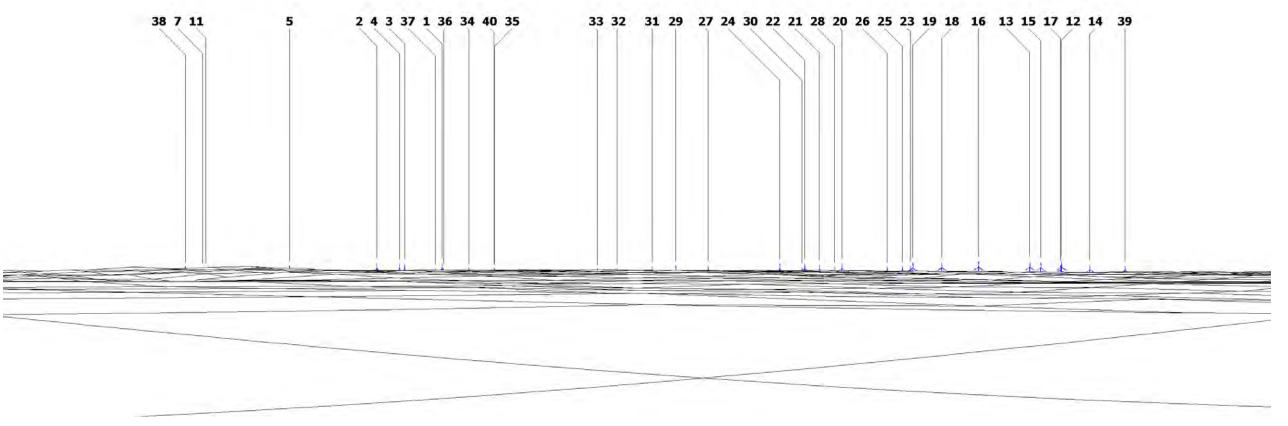
Distance	5150 m to Turbine 1
Date/time	09/July/2008 - 12.15
Grid Ref	439591E 4767572N
Bearing	179°
Field of View	75°
Elevation	230 m
Camera/Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 35 cm







#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 14 Rock Glen



#### **Viewpoint Details**

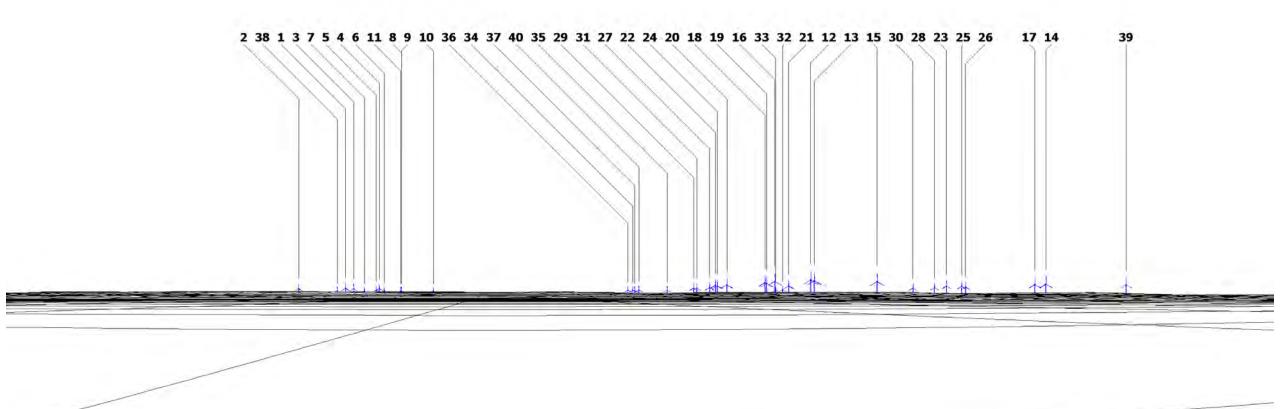
Distance	10660 m to Turbine 18
Date/time	09/July/2008 - 12.30
Grid Ref	433334E 4769039N
Bearing	138°
Field of View	72°
Elevation	246 m
Camera/ Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 35 cm



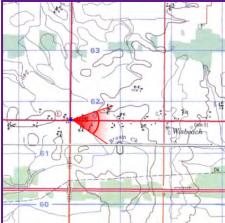




#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 15 **Egremont/Arkona**



#### **Viewpoint Details**

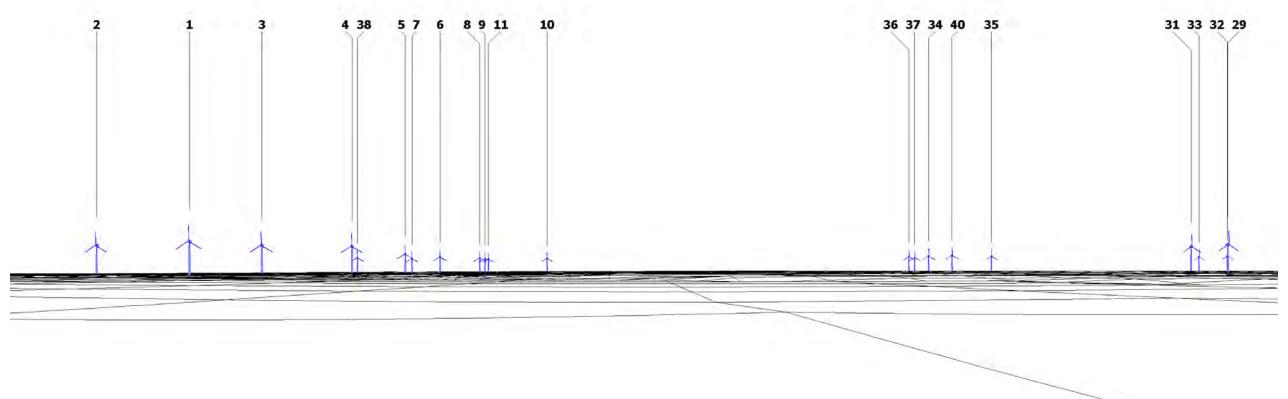
Distance	6550 m to Turbine 15
Date/time	09/July/2008 - 14.25
Grid Ref	432035E 4761663N
Bearing	98°
Field of View	65°
Elevation	249 m
Camera/ Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 30 cm



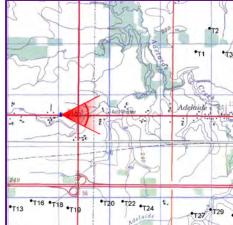




#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 16 **Egremont/Kerwood**



#### **Viewpoint Details**

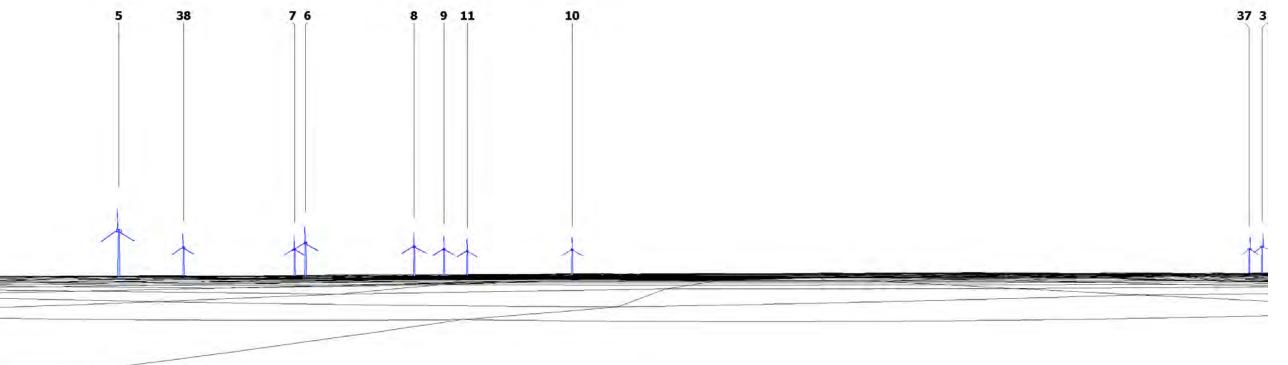
Distance	2914 m to Turbine 1
Date/time	09/July/2008 - 14.45
Grid Ref	439050E 4761627N
Bearing	90°
Field of View	70°
Elevation	243 m
Camera/ Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 28 cm



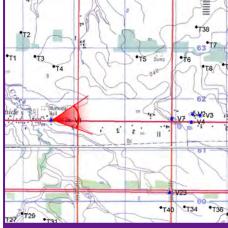




#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 17 **Municipal Offices**



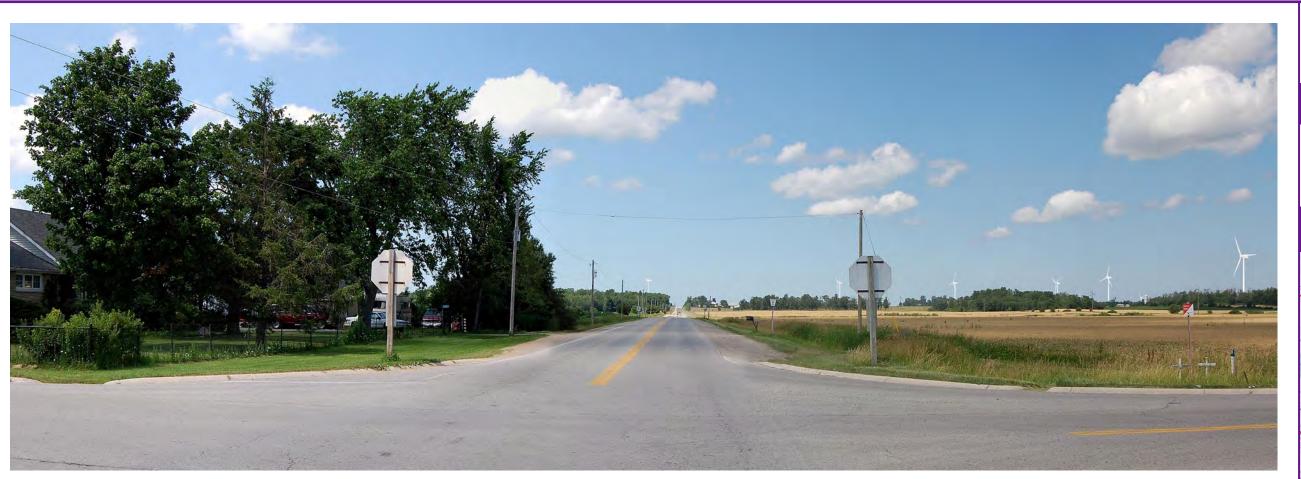
#### **Viewpoint Details**

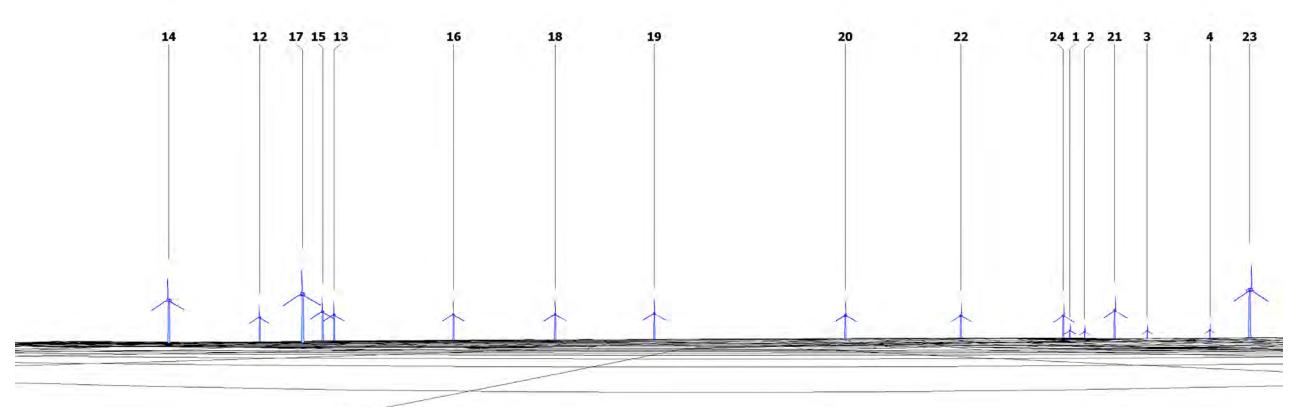
Distance	2098 m to Turbine 5
Date/time	09/July/2008 - 14.55
Grid Ref	442558E 4761607N
Bearing	83°
Field of View	72°
Elevation	239 m
Camera/ Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 28 cm







#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 18 **Kerwood/Napperton**



#### **Viewpoint Details**

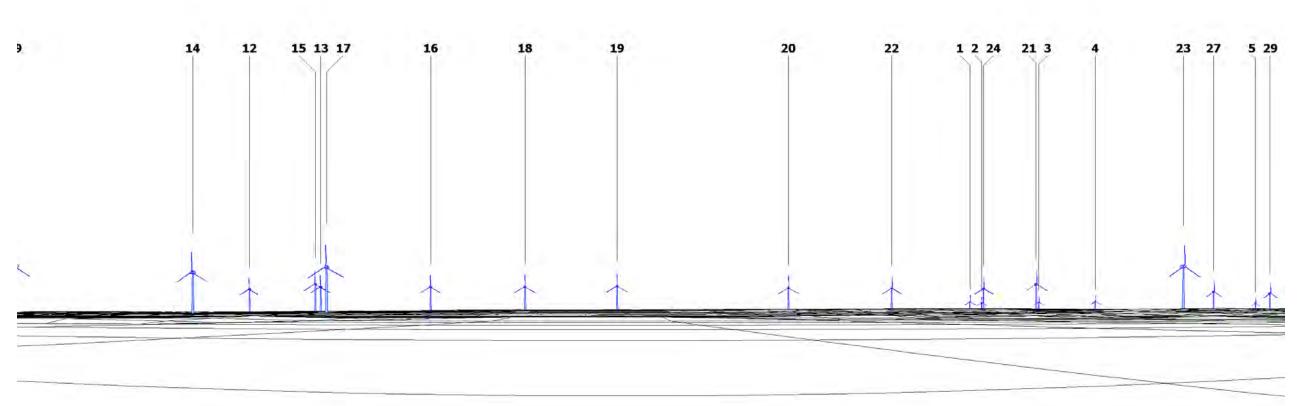
Distance	2083 m to Turbine 23
Date/time	09/July/2008 - 15.20
Grid Ref	439361E 4756175N
Bearing	357°
Field of View	67°
Elevation	235 m
Camera/ Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 30 cm







#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 19 Napperton



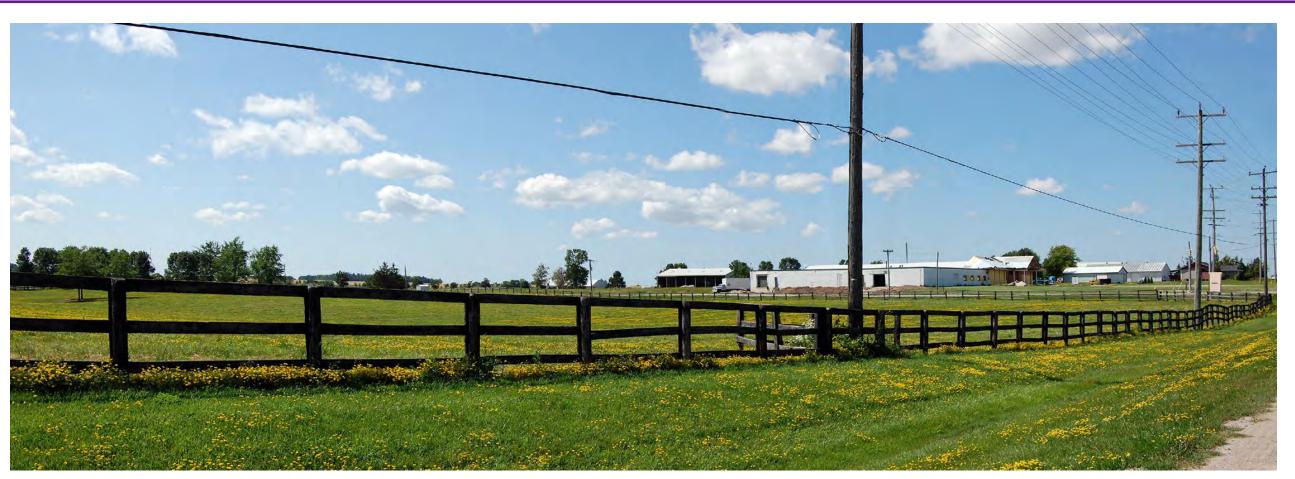
#### **Viewpoint Details**

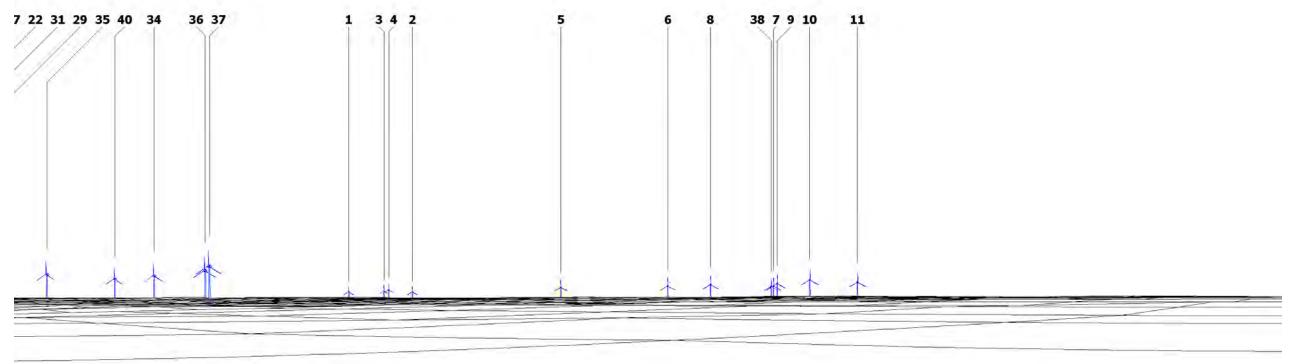
Distance	2037 m to Turbine 17
Date/time	09/July/2008 - 15.30
Grid Ref	439186E 4756196N
Bearing	2°
Field of View	74°
Elevation	233 m
Camera/ Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 25 cm



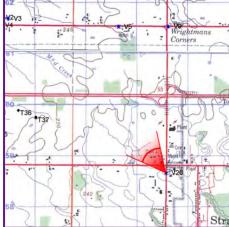




#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 20 Strathroy



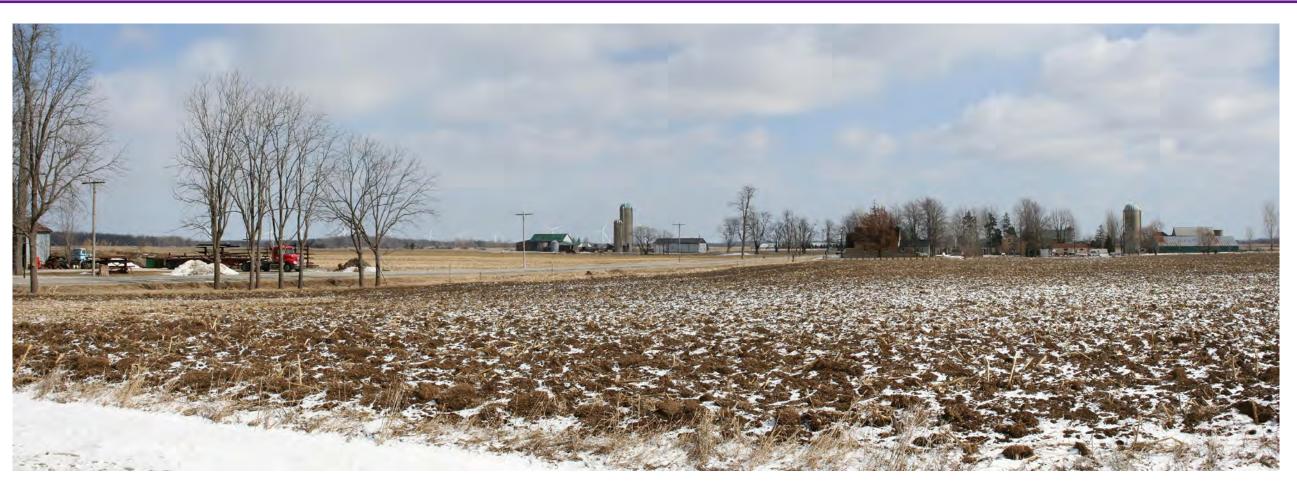
#### **Viewpoint Details**

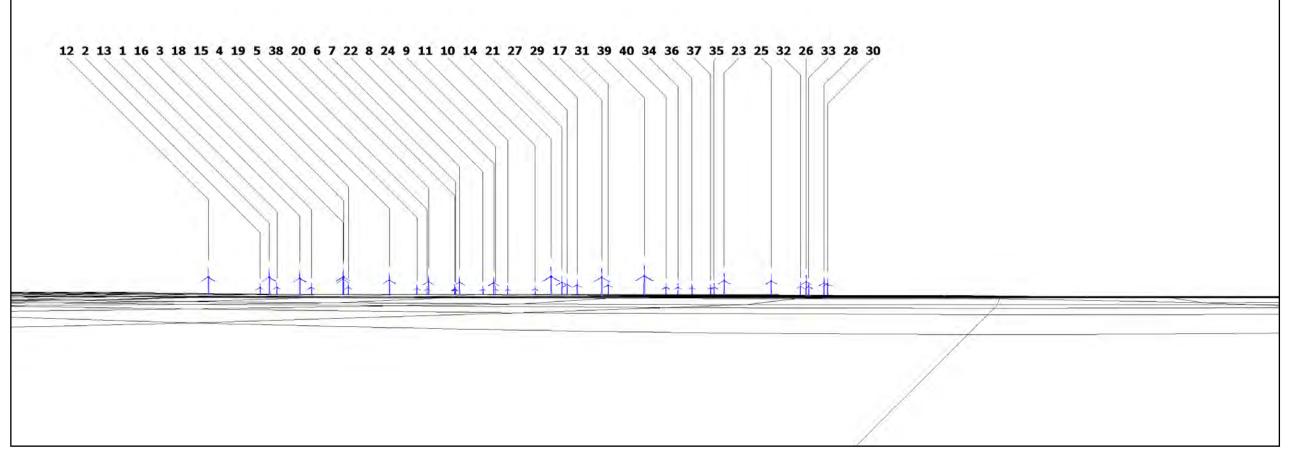
Distance	4258 m to Turbine 10
Date/time	09/July/2008 - 16.00
Grid Ref	448583E 4758681N
Bearing	319°
Field of View	75°
Elevation	241 m
Camera/ Lens	Nikon D40 @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 25 cm



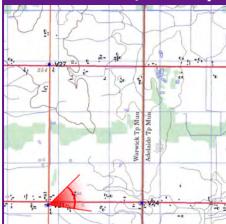




#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 21 Confederation/Donnelly



#### **Viewpoint Details**

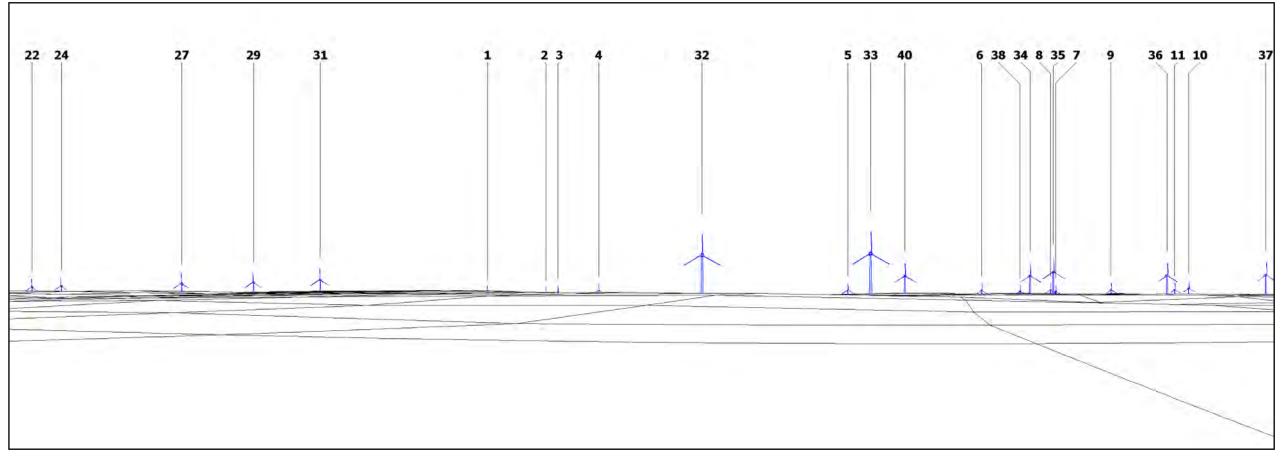
Distance	5185 m to Turbine 17
Date/time	03/03/2009 - 12:30
Grid Ref	433799E 4756168N
Bearing	80°
Field of View	70°
Elevation	25 m
Camera/ Lens	Canon EOS @ 28mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 28 cm



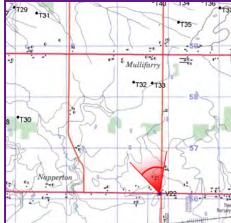




#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 22 Napperton/School



#### **Viewpoint Details**

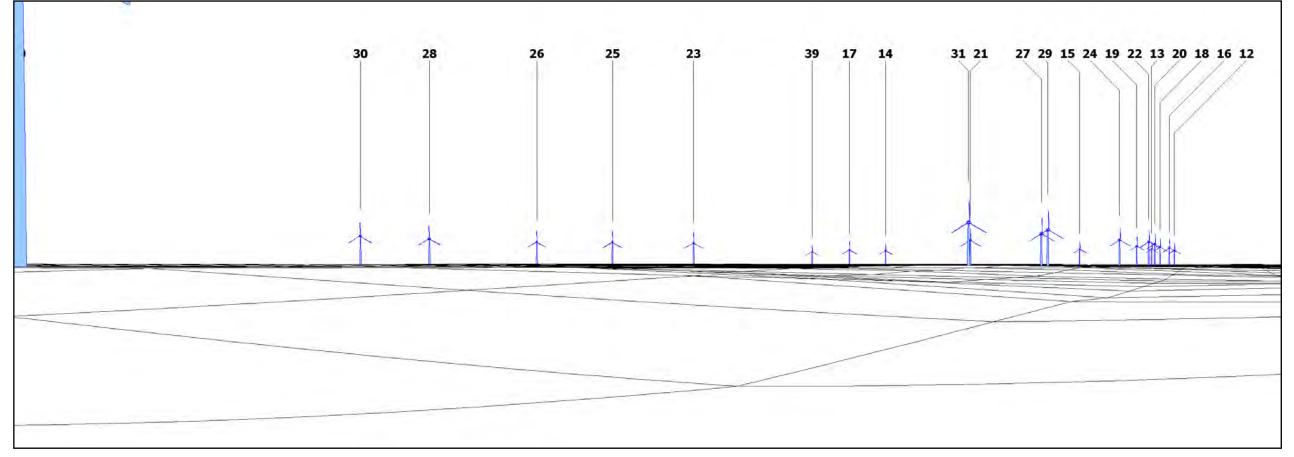
Distance	2265 m to Turbine 32
Date/time	03/03/2009 - 11:05
Grid Ref	444846E 4756130N
Bearing	343.5°
Field of View	70°
Elevation	230 m
Camera/ Lens	Canon EOS @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 28 cm







#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 23 **School Overpass**



#### **Viewpoint Details**

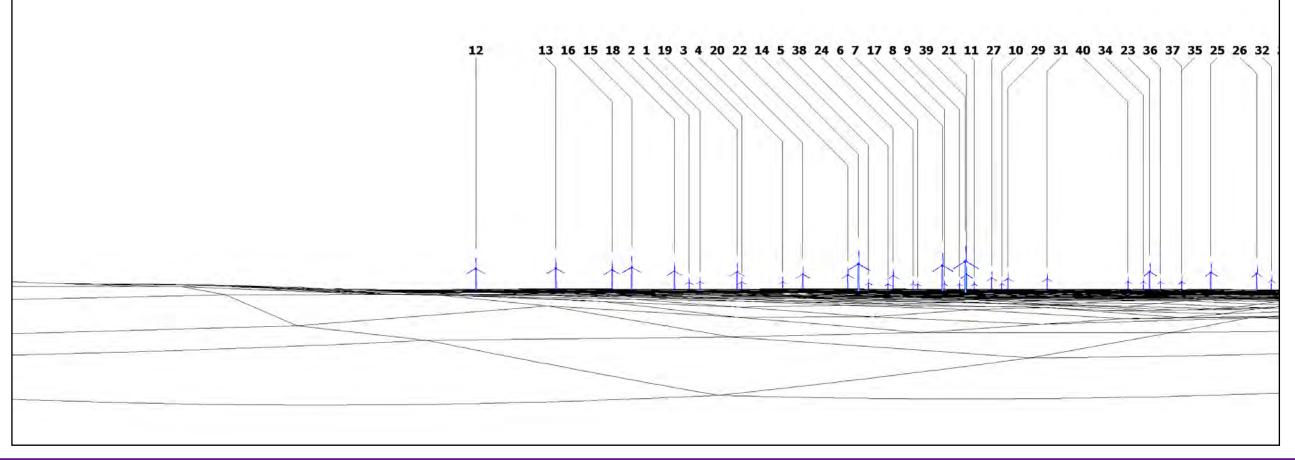
Distanc	2500 m to Turbine 31
Date/tim	03/03/2009 - 11:20
Grid R	<b>ef</b> 442908E 4761598N
Bearin	ng 242°
Field of Vie	<b>w</b> 63°
Elevatio	<b>on</b> 244 m
Camera/Ler	Canon FOS @ 28mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 30 cm



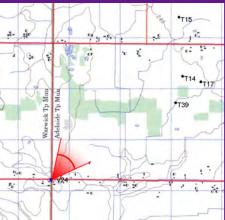




#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 24 Sexton/Napperton



## **Viewpoint Details**

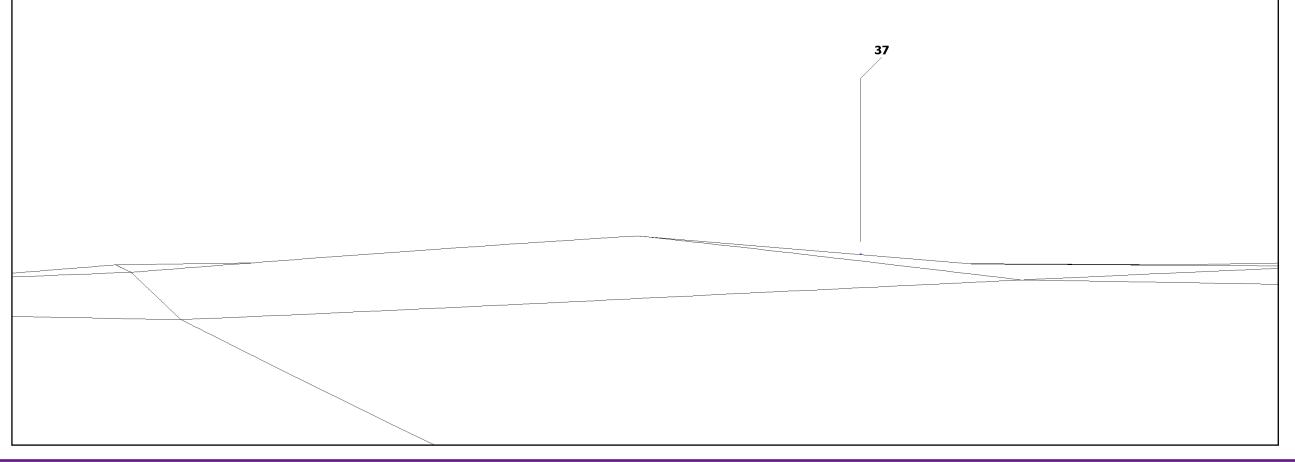
Distance	2883 m to Turbine 39
Date/time	03/03/2009 - 11:55
Grid Ref	435651E 4756217N
Bearing	39°
Field of View	76°
Elevation	240 m
Camera/ Lens	Canon EOS @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 25 cm







#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 25 **Strathroy CA**



#### **Viewpoint Details**

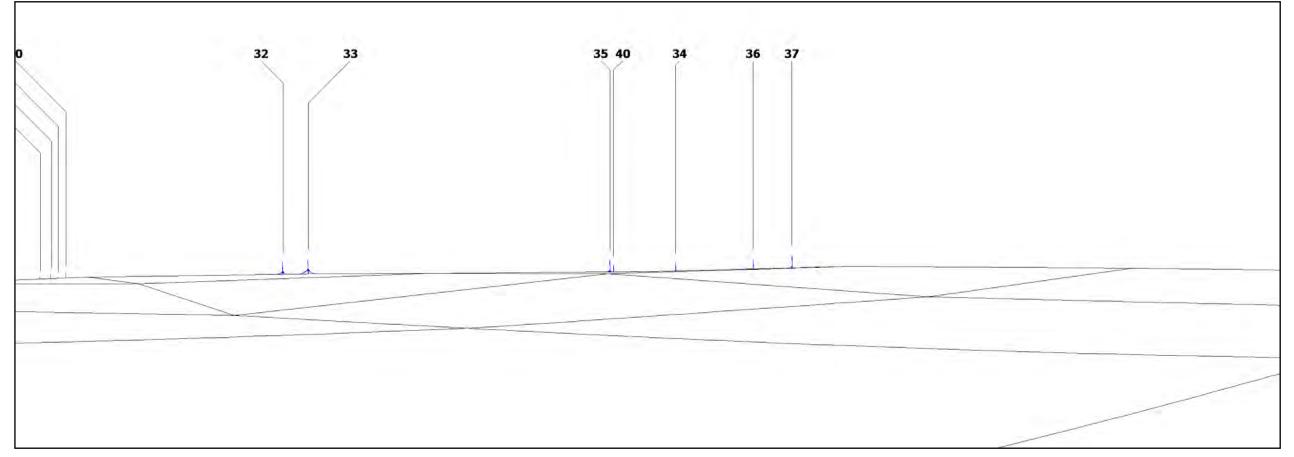
Distance	4295 m to Turbine 37
Date/time	03/03/2009 - 10:45
Grid Ref	449246E 4756916N
Bearing	300°
Field of View	68°
Elevation	223 m
Camera/ Lens	Canon EOS @ 30mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

No turbines in view







#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 26 **Strathroy Tourist Office**



## **Viewpoint Details**

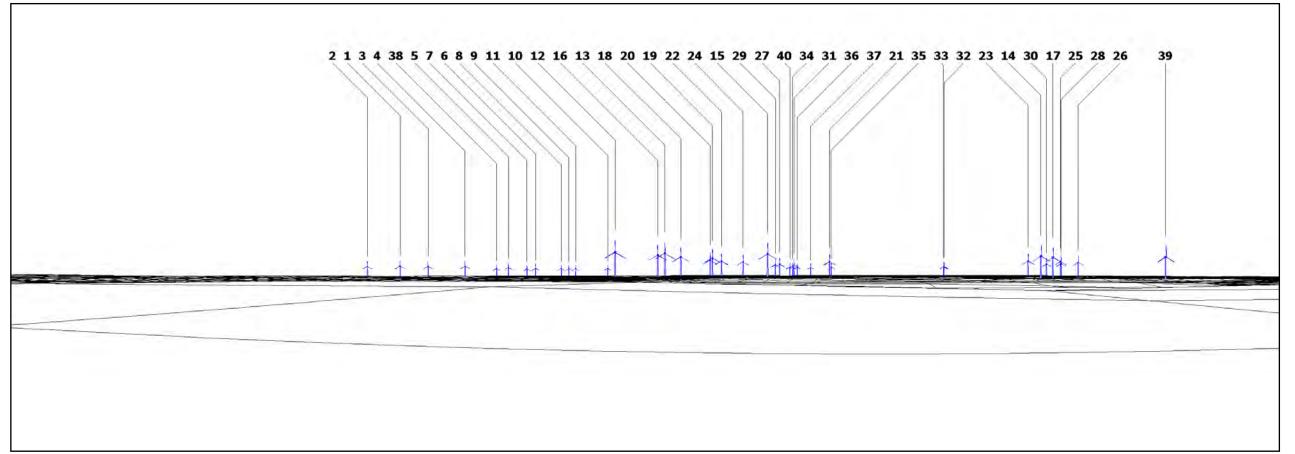
Distance	4145 m to Turbine 37
Date/time	03/03/2009 - 10:25
Grid Ref	448808E 4756687N
Bearing	310°
Field of View	70°
Elevation	224 m
Camera/Lens	Canon FOS @ 28mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

No turbines in view



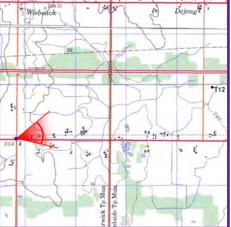




#### **Adelaide Wind Farm**

Adelaide-Metcalfe Ontario

#### V 27 **Zion/Donnelly**



#### **Viewpoint Details**

Distance	4015 m to Turbine 12
Date/time	03/03/2009 - 12:00
Grid Ref	433825E 4758940N
Bearing	77°
Field of View	70°
Elevation	239 m
Camera/ Lens	Canon EOS @ 35mm

#### **Turbine Data**

Turbine Type	Vestas V90
Tower Height	90 m
Blade Dia	90 m
Overall Height	140 m

For better perspective accuracy this montage should be viewed at a distance of approximately 28 cm