

Gelliondale Distance Survey

Site Address 110 Birds Road, Hedley 3967

Client
Synergy Wind

Issued
22/12/2022

**ADVERTISED
PLAN**



Leongatha Office
45A Bair Street
Leongatha VIC 3953
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Client: Synergy Wind
Issued: 22/12/2022
Version: A
Prepared by: Ryan Birkett
Checked by: David Harris LS
Project Manager: Bernard Stewart
Project Number: 2102213



LICENSED SURVEYORS REPORT

Surveyors name: David Rupert Harris

Surveyors Reference: 2102213

Equipment used: Trimble S6 DR Plus S/N 93210049 Calibrated at Cowwarr baseline 27/05/2022
Leica Viva GNSS Rover S/N GS15-1502051

Crown description of land: **Parish of Welshpool**
Section B
Crown Allotment 18A

Municipality: **South Gippsland Shire Council**

Property: **110 Birds Road S, Hedley 3967**

Purpose of survey: To determine the linear distance between the Wind Turbines described as **GWT02 & GWT03** and the dwelling described as **N046**.

Date of survey: 6th June 2022

Connection to permanent marks: This survey has connected to Alberton East PM 4

Horizontal Datum: GDA94		Vertical Datum: AHD	
Easting	Northing	RL	C.S.F.
471094.578	5725409.176	5.969	0.9996094



Survey Methodology: The survey has been completed by adopting at least the minimum procedures as recommended by the Surveyor General Victoria.

GNSS (Global navigation Satellite System) Survey

- Verify GNSS measurements by connecting to a registered survey control network (SCN) mark to achieve a vertical accuracy of less than 0.1m.
- To perform a minimum of two independent observations of a registered SCN mark to provide horizontal uncertainty of less than 0.025m for coordinated positions between surveyed observations.
- Compute the average MGA94 Zone 55 coordinates for all survey marks where the horizontal linear distance between any two observations does not exceed 0.05m.

Total Station (Conventional) Survey

- Where the above option was not possible due to access constraints, Total Station observations with a Trimble S6 Total Station using direct reflex (DR) measurements were used to locate the dwelling. Using a control established via GNSS Survey, radiations were observed to the relevant dwelling corners. The GNSS control was confirmed by directly measuring distances and angles between control marks. The linear distance accuracy should not exceed 0.05m and the angular accuracy should not exceed 10". The radiations were confirmed by a second independent measurement.

Photogrammetry Method

- Where the two options above were not possible due to access constraints, photogrammetry was used to compute the location of the dwelling. Ariel orthophotos were sourced from Geovic with the ariel images flown on 20/01/2019. The image resolution was 0.15m. Using survey control established via GNSS Survey, these images were referenced to the local site using control points/features. Redundant measurements were made to confirm the accuracy of the referencing. The resultant accuracy of the distances computed between points can be confirmed to be correct to +/- 1 metre.

CONCLUSION

I conclude that the South West corner of the dwelling at 110 Birds Road, Hedley, exceeds 1000 metres from the proposed location of the closest Wind Turbine described as GWT02.

Turbine Coordinates

ID	EASTING	NORTHING	SURVEYED ELEVATION
GWT02	459315	5721623	3.64
GWT03	459650	5722924	8.62

Building Coordinates N046

CORNER	EASTING	NORTHING	DISTANCE TO GWT02	DISTANCE TO GWT03	
North East	458521	5722411	Geodetic: 1118.6 m Plane: 1119.0 m	Geodetic: 1239.4 m Plane: 1239.8 m	
South East	458519	5722405	Geodetic: 1115.9 m Plane: 1116.3 m	Geodetic: 1243.5 m Plane: 1243.9 m	
South West	458512	5722408	Geodetic: 1123.1 m Plane: 1123.5 m	Geodetic: 1249.3 m Plane: 1249.8 m	

Gelliondale Distance Survey

Site Address 5 James Road, Hedley 3967

Client
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Surveyors name: David Rupert Harris

Surveyors Reference: 2102213

Equipment used: Trimble S6 DR Plus S/N 93210049 Calibrated at Cowwarr baseline 27/05/2022
Leica Viva GNSS Rover S/N GS15-1502051

Crown description of land: **Parish of Welshpool**
Section B
Crown Allotment 22B

Municipality: **South Gippsland Shire Council**

Property: **5 James Road, Hedley 3967**

Purpose of survey: To determine the linear distance between the Wind Turbine described as **GWT03** and the dwelling described as **N048**.

Date of survey: 6th June 2022

Connection to permanent marks: This survey has connected to Alberton East PM 4

Horizontal Datum: GDA94		Vertical Datum: AHD	
Easting	Northing	RL	C.S.F.
471094.578	5725409.176	5.969	0.9996094



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Total Station (Conventional) Survey

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Photogrammetry Method

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CONCLUSION

I conclude that the North East corner of the dwelling at 5 James Road, Hedley, exceeds 1000 metres from the proposed location of the closest Wind Turbine described as GWT03.

Turbine Coordinates

ID	EASTING	NORTHING	SURVEYED ELEVATION
GWT03	459650	5722924	8.62

Building Coordinates N048

CORNER	EASTING	NORTHING	DISTANCE TO GWT03		
North East	458740	5723600	Geodetic: 1133.5 m Plane: 1133.9 m		
South East	458729	5723589	Geodetic: 1135.8 m Plane: 1136.2 m		

Gelliondale Distance Survey

Site Address 67 Lanes Road, Gelliondale 3967

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Surveyors Reference: 2102213

Equipment used: Trimble S6 DR Plus S/N 93210049 Calibrated at Cowwarr baseline 27/05/2022
Leica Viva GNSS Rover S/N GS15-1502051

Crown description of land: **Parish of Alberton West**
Lot 2
PS506513

Municipality: **Wellington Shire Council**

Property: **67 Lanes Road, Gelliondale 3971**

Purpose of survey: To determine the linear distance between the Wind Turbines described as **GWT05 & GWT06** and the dwelling described as **N068**.

Date of survey: 6th June 2022

Connection to permanent marks: This survey has connected to Alberton East PM 4

Horizontal Datum: GDA94		Vertical Datum: AHD	
Easting	Northing	RL	C.S.F.
471094.578	5725409.176	5.969	0.9996094



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Total Station (Conventional) Survey

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Photogrammetry Method

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CONCLUSION

I conclude that the South West & South East corner of the dwelling at 67 Lanes Road, Gelliondale, exceeds 1000 metres from the proposed location of the closest Wind Turbines described as GWT05 & GWT06.

Turbine Coordinates

ID	EASTING	NORTHING	SURVEYED ELEVATION
GWT05	462866	5723392	8.85
GWT06	463555	5723271	8.32

Building Coordinates N068

CORNER	EASTING	NORTHING	DISTANCE TO GWT05	DISTANCE TO GWT06	
South West	463386	5724313	Geodetic: 1057.8 m Plane: 1058.2 m	Geodetic: 1055.3 m Plane: 1055.7 m	
South East	463399	5724313	Geodetic: 1063.8 m Plane: 1064.2 m	Geodetic: 1053.1 m Plane: 1053.5 m	

Gelliondale Distance Survey

Site Address 7666 South
Gippsland Highway,
Gelliondale 3971

Client
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Surveyors name: David Rupert Harris

Surveyors Reference: 2102213

Equipment used: Trimble S6 DR Plus S/N 93210049 Calibrated at Cowwarr baseline 27/05/2022
Leica Viva GNSS Rover S/N GS15-1502051

Crown description of land: **Parish of Alberton West**
Allotment 13B1
TP321954

Municipality: **Wellington Shire Council**

Property: **7666 South Gippsland Highway, Gelliondale 3971**

Purpose of survey: To determine the linear distance between the Wind Turbine described as **GWT09** and the dwelling described as **N121**.

Date of survey: 6th June 2022

Connection to permanent marks: This survey has connected to Alberton East PM 4

Horizontal Datum: GDA94		Vertical Datum: AHD	
Easting	Northing	RL	C.S.F.
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GNSS (Global navigation Satellite System) Survey

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Total Station (Conventional) Survey

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Photogrammetry Method

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CONCLUSION

I conclude that the South West corner of the dwelling at 7666 South Gippsland Highway, Gelliondale, exceeds 1000 metres from the proposed location of the closest Wind Turbine described as GWT09.

Turbine Coordinates

ID	EASTING	NORTHING	SURVEYED ELEVATION
GWT09	465168	5723721	6.13

Building Coordinates N121

CORNER	EASTING	NORTHING	DISTANCE TO GWT09		
South West	466025	5724442	Geodetic: 1120.0 m Plane: 1120.4 m		
North West	466025	5724456	Geodetic: 1129.4 m Plane: 1129.8 m		

Gelliondale Distance Survey

Site Address 81
Blackshaws Road E,
Alberton 3971

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Synergy Wind

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Surveyors name: David Rupert Harris

Surveyors Reference: 2102213

Equipment used: Trimble S6 DR Plus S/N 93210049 Calibrated at Cowwarr baseline 27/05/2022
Leica Viva GNSS Rover S/N GS15-1502051

Crown description of land: **Parish of Yarram Yarram**
Lot 2
PS619484

Municipality: **Wellington Shire Council**

Property: **81 Blackshaws Road E, Alberton 3971**

Purpose of survey: To determine the linear distance between the Wind Turbines described as **GWT10 & GWT11** and the dwelling described as **N0135**.

Date of survey: 6th June 2022

Connection to permanent marks: This survey has connected to Alberton East PM 4

Horizontal Datum: GDA94		Vertical Datum: AHD	
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Total Station (Conventional) Survey

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Photogrammetry Method

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CONCLUSION

I conclude that the South West & South East corner of the dwelling at 81 Blackshaws Road, Alberton, exceeds 1000 metres from the proposed location of the closest Wind Turbines described as GWT10 & GWT11.

Turbine Coordinates

ID	EASTING	NORTHING	SURVEYED ELEVATION
GWT10	466840	5726262	9.38
GWT11	467329	5725914	8.32

Building Coordinates N135

CORNER	EASTING	NORTHING	DISTANCE TO GWT10	DISTANCE TO GWT11	
South West	467667	5726996	Geodetic: 1106.4 m Plane: 1106.8 m	Geodetic: 1134.1 m Plane: 1134.5 m	
South East	467688	5726997	Geodetic: 1122.3 m Plane: 1122.7 m	Geodetic: 1141.2 m Plane: 1141.7 m	

Gelliondale Distance Survey

Site Address 189B Ti
Tree Road, Alberton
3971

Client
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Equipment used: Trimble S6 DR Plus S/N 93210049 Calibrated at Cowwarr baseline 27/05/2022
Leica Viva GNSS Rover S/N GS15-1502051

Crown description of land: **Parish of Alberton West**
Lot 3
PS603015

Municipality: **Wellington Shire Council**

Property: **189B Ti Tree Road**

Purpose of survey: To determine the linear distance between the Wind Turbine described as **GWT13** and the dwelling described as **N146**.

Date of survey: 6th June 2022

Connection to permanent marks: This survey has connected to Alberton East PM 4

Horizontal Datum: GDA94		Vertical Datum: AHD	
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Total Station (Conventional) Survey

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CONCLUSION

I conclude that the North East & North West corner of the dwelling at 189B Ti Tree Road, Alberton, exceeds 1000 metres from the proposed location of the closest Wind Turbine described as GWT13.

Turbine Coordinates

ID	EASTING	NORTHING	SURVEYED ELEVATION
GWT13	467574	5724242	4.50

Building Coordinates N146

CORNER	EASTING	NORTHING	DISTANCE TO GWT13		
North East	468417	5723350	Geodetic: 1226.7 m Plane: 1227.2 m		
North West	468387	5723331	Geodetic: 1221.3 m Plane: 1221.8 m		

Gelliondale Distance Survey

Site Address 189A Ti
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Leica Viva GNSS Rover S/N GS15-1502051

Crown description of land: **Parish of Alberton West**
Lot 2
PS603015

Municipality: **Wellington Shire Council**

Property: **189A Ti Tree Road**

Purpose of survey: To determine the linear distance between the Wind Turbine described as **GWT13** and the dwelling described as **N147**.

Date of survey: 6th June 2022

Connection to permanent marks: This survey has connected to Alberton East PM 4

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Easting	Northing	RL	C.S.F.
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CONCLUSION

I conclude that the North West & South West corner of the dwelling at 189A Ti Tree Road, Alberton, exceeds 1000 metres from the proposed location of the closest Wind Turbine described as GWT13.

Turbine Coordinates

ID	EASTING	NORTHING	SURVEYED ELEVATION
GWT13	467574	5724242	4.50

Building Coordinates N147

CORNER	EASTING	NORTHING	DISTANCE TO GWT13		
North West	468415	5723417	Geodetic: 1177.9 m Plane: 1178.4 m		
South West	468413	5723405	Geodetic: 1185.1 m Plane: 1185.5 m		