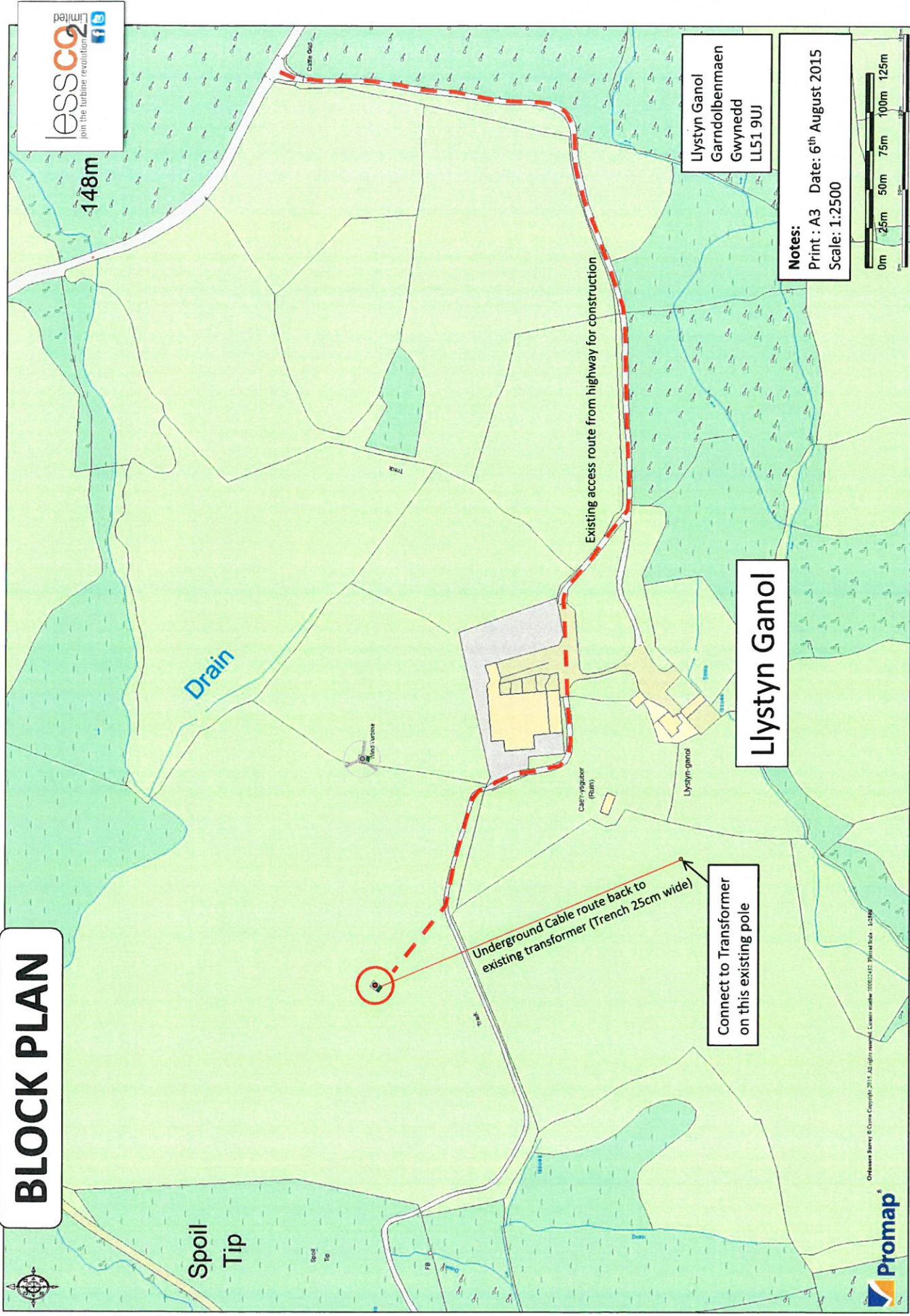


Rhif y Cais / Application Number : C15-1296-36-LL

Cynllun lleoliad ar gyfer adnabod y safle yn unig. Dim i raddfa.  
Location Plan for identification purposes only. Not to scale.



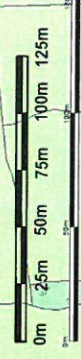
# BLOCK PLAN



148m

Llystyn Ganol  
Garndolbenmaen  
Gwynedd  
LL51 9UJ

**Notes:**  
Print : A3 Date: 6<sup>th</sup> August 2015  
Scale: 1:2500



Llystyn Ganol

Underground Cable route back to existing transformer (Trench 25cm wide)

Connect to Transformer on this existing pole

Existing access route from highway for construction

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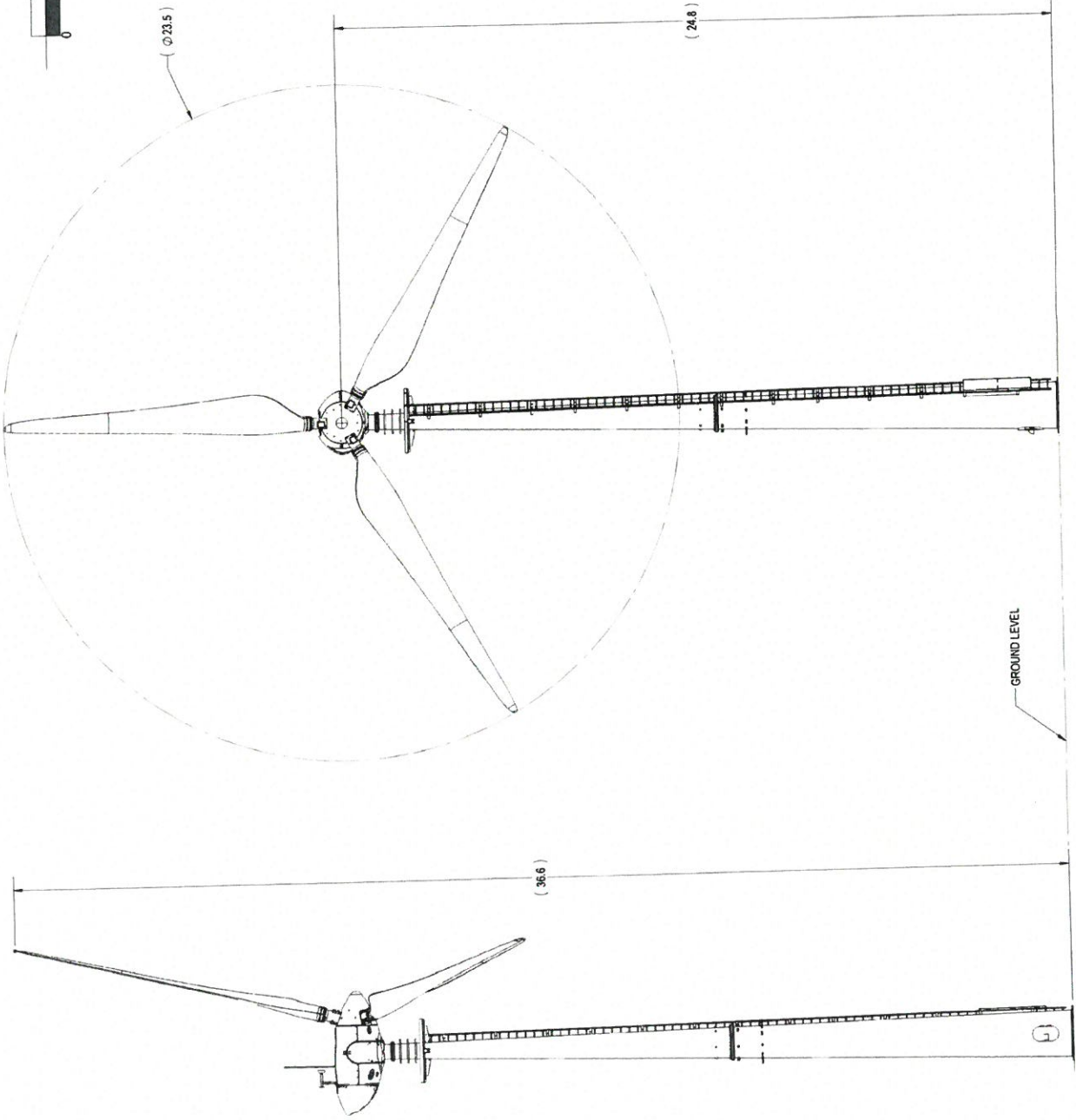


Rotor Diameter 23.5m = Application Site Area (total max 0.1ha)

**Project:**  
Installation of an Endurance E-4660 85kW wind turbine with a 24.8m hub height tower, 23.5m rotor diameter, total height to blade tip 36.55m

**Our Reference:**  
GRoberts/Llystyn Ganol/E4660/DC

Less-CO2 Ltd., Unit 2, North Staffs Business Park, Innovation Way, Stoke-on-Trent, ST6 4BF  
T/0182 828720 M/07973 379847  
[www.less-co2.co.uk](http://www.less-co2.co.uk)



NOTE:  
DIMENSIONS APPROXIMATE AND PROVIDED FOR PLANNING  
PURPOSE ONLY.

CYNGOR GWYNEDD  
ADRAN RHEOLEDDIO  
1 5 MAW 2016  
GWASANAETH CYLLUNIO AC  
AMGYLCHEDD  
R-HIF TRAC.

DO NOT SCALE DRAWING  
UNLESS OTHERWISE SPECIFIED

\* ALL DIMENSIONS ARE IN METERS.  
\* DIMENSIONING AND TOLERANCING AS PER ASME Y14.5M-1994.  
\* DIMENSIONAL LIMITS APPLY AFTER FINISH.

MATERIAL	See BOM	SCALE	1:150
DRAWN BY	Rajesh (CPT)	DATE	03/Sep/2014
APPROVED AND CHECK BY / APPROVAL DATE		FORMA	B
		WEIGHT (kg)	
		THIRD ANGLE PROJECTION	
PROJECT	E-4660		



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TITLE E-4660 Elevation, 24m Tower, Class II

PART NUMBER	005668	REVISION	1	PRINT DATE	03/Sep/2014	SHEET	1 / 1
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REV.	PAGE	DESCRIPTION	DATE	ASSIGNEE	ECO
1		Initial release	25/Aug/2014	DS	2069

# BLOCK PLAN

CYNGOR GWYNEDD  
 ADWAN NIHOLEDDIO  
 - 3 IŴS 2015  
 GWASANAETH CYMULLUNIO AC  
 AMGYLCHEDD  
 RHIFTRAC

Spoil  
Tip

148m

Drain

Existing access route from highway for construction

Underground Cable route back to existing transformer (Trench 25cm wide)

Connect to Transformer on this existing pole

Llystyn Ganol

Llystyn Ganol  
 Gardolbenmaen  
 Gwynedd  
 LL51 9UJ

Notes:  
 Print : A3 Date: 6th August 2015  
 Scale: 1:2500



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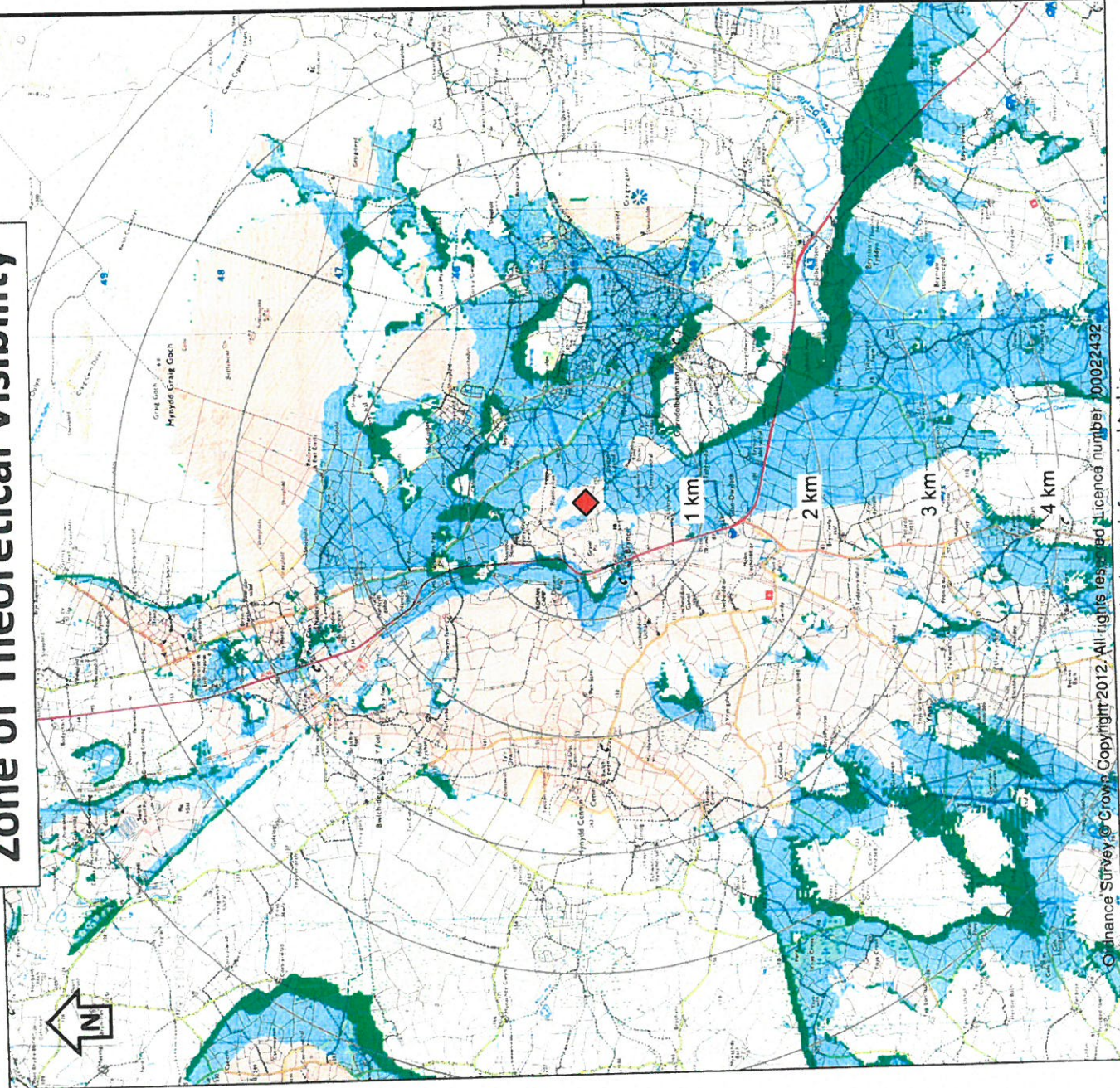
Rotor Diameter 23.5m = Application Site Area (total max 0.1ha)

**Project:**  
 Installation of an Endurance E-4660 85KW wind turbine with a 24.8m hub height tower, 23.5m rotor diameter, total height to blade tip 36.55m

**Our Reference:**  
 GRoberts/Llystyn Ganol/E4660/DC

Less-CO2 Ltd., Unit 2, North Staffs Business Park, Innovation Way, Stoke-on-Trent, ST6 4BF  
 T/01782 828720 M/ 07973 379847  
[www.less-co2.co.uk](http://www.less-co2.co.uk)



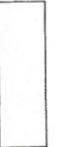
# Zone of Theoretical Visibility



Proposed Wind Turbine location  
**NGR: SH 48462 44919**  
 Eastings: 248462 Northings: 344919

Please note – visibility is based on ‘bare earth’ terrain data only and does not account for screening from buildings, trees and hedges. [View Height 1.6m]

### Visibility

	Blade tips only
	Hub and rotor
	Whole of turbine

**Project:**  
 Installation of an Endurance E-4660 wind turbine;  
 24.8m hub height, 23.5m diameter rotor,  
 Total height to blade tip 36.6m.

**CYNGOR GWYNEDD**  
**ADRIAN RHEOLEDDIO**  
 - 3 RHAG 2015  
**GWASANAETH CYNLLUNIO AC**  
**AMGYLCHEDD**  
**RHWITRAC**

**On the land at:**  
 Llystyn Ganol  
 Garndolbenmaen  
 Gwynedd  
 LL51 9UJ

**Our Reference:**  
 Groberts/Llystyn Ganol/ZTV/DC

**Notes:**  
 Print : A3 Date: 26.10.15  
 (Not to scale)

# SITE LOCATION PLAN



Existing turbine (Endurance E-3120 on 24.6m hub)

Rotor Diameter 23.5m = Application Site Area (total max 0.1ha)

Underground Cable route back to existing transformer (Trench 25cm wide) to connect to farm buildings and grid connection.

Land ownership boundary

Access route from highway along existing farm tracks (temporary road mats used across the last (field surface))



**Project:**

Installation of an Endurance E-4660 85kW wind turbine with a 24.8m hub height tower, 23.5m rotor diameter, total height to blade tip 36.55m

**On the land at:**

Llystyn Ganol  
Gardolbenmaen  
Gwynedd  
LL51 9UJ

**Our Reference:**

GRoberts/LlystynGanol/E4660/DC

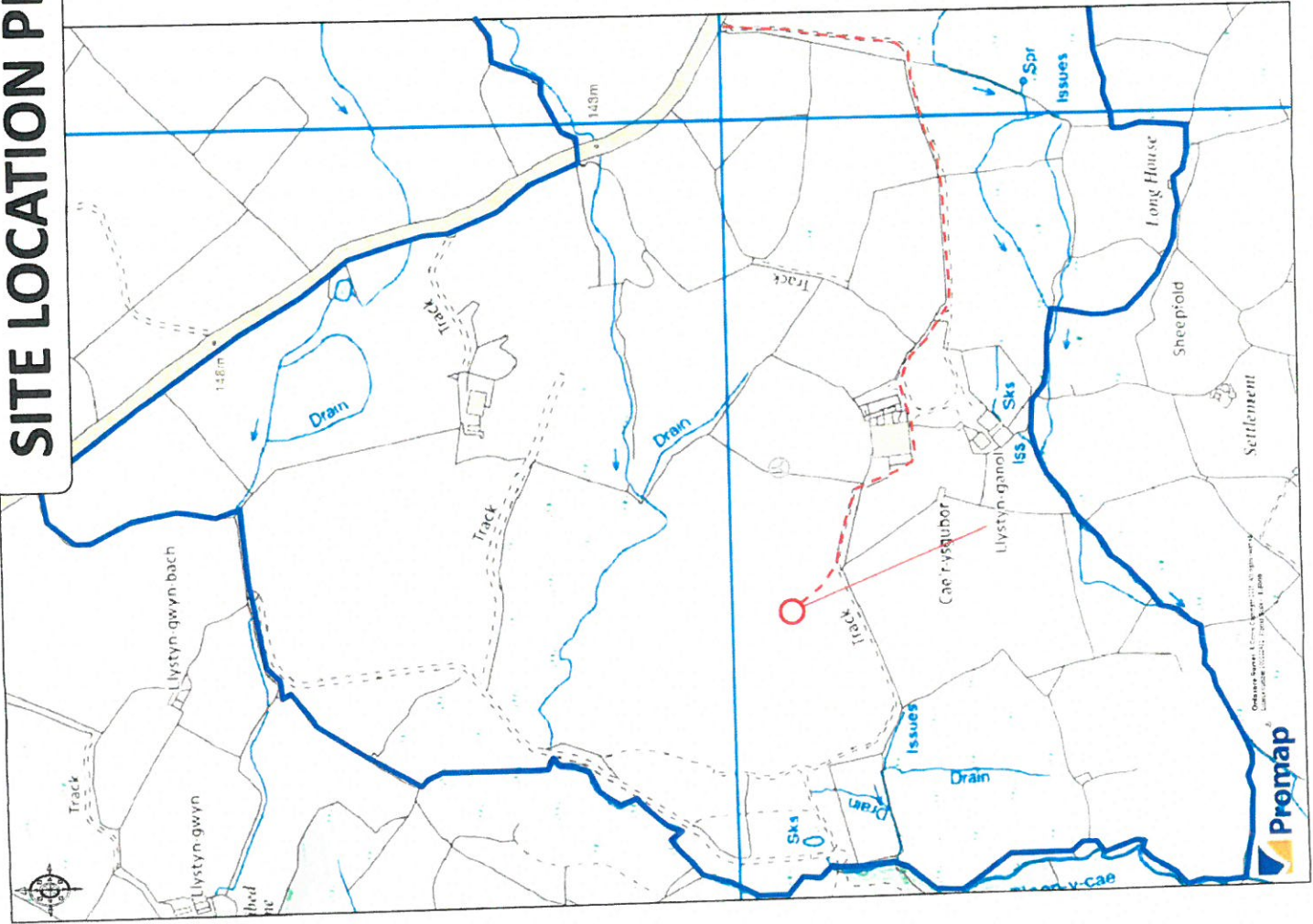
**Notes:**

Print : A3 Date: 18<sup>th</sup> September 2015

Scale: 1:5,000



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T/01782 828722 M/07973 379847  
[www.les-co2.co.uk](http://www.les-co2.co.uk)

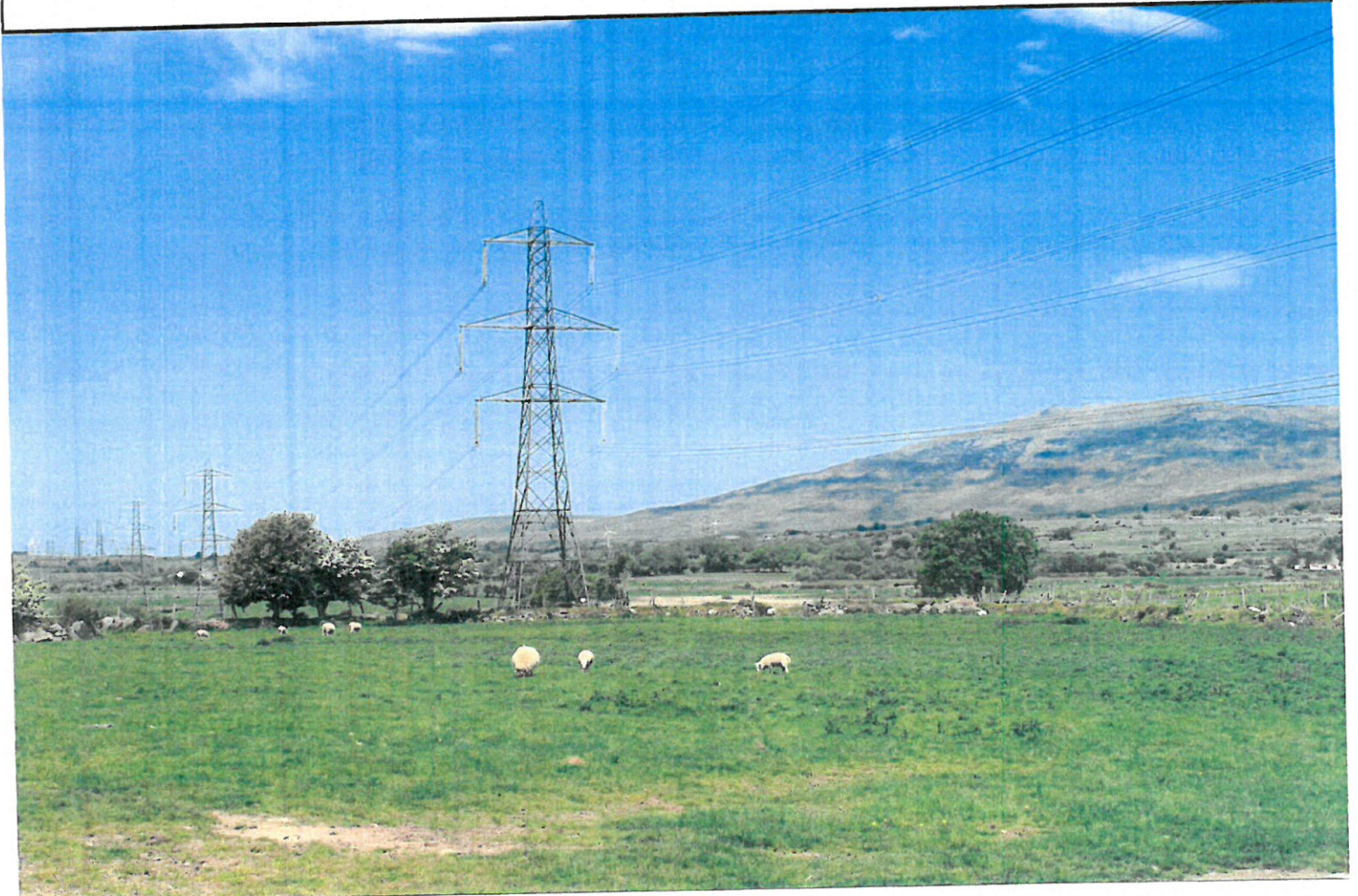
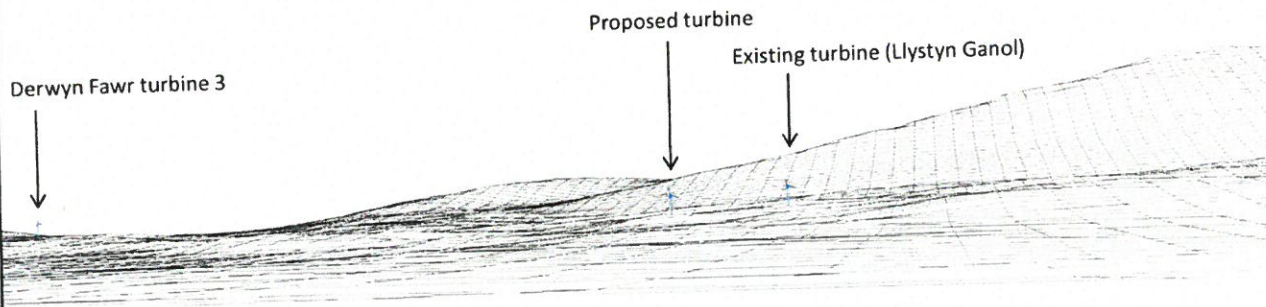


Viewpoint 6 - start of footpath, north of entrance to Cefn-Uchaf

Eastings: 248835 Northings: 342064

CYNGOR GWYNEDD  
 ADRAN RHEOLEDDIO  
 = 3 RHAG 2019  
 GWASANAETH CYNLLUNIO AC  
 AMGYLCHEDD  
 EMFTRAC

Date of Photo	11.6.15
Print page	A3
Distance from turbine	2.9km
Elevation at photo	113m
Camera Model	Canon EOS 1000D
Focal Length	33mm
Equiv to 35mm format	52mm
Camera Height	1.6m
Bearing	355.2°
Horizontal FOV	37.18°
Vertical FOV	25.28°
Viewing distance	43cm

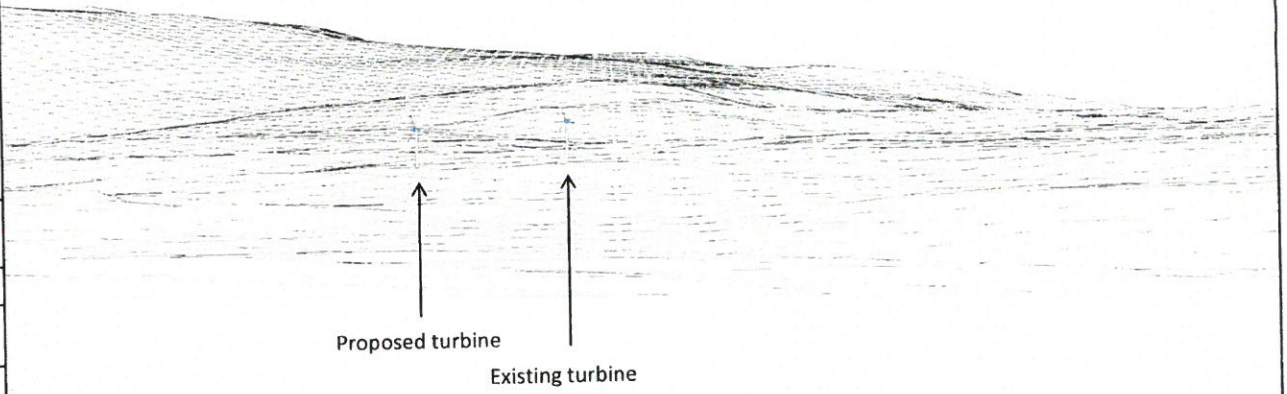


Viewpoint 8 - near Llecheiddior (Ganol & Plas)

Eastings: 247538 Northings: 343791

Date of Photo	11.6.15
Print page	A3
Distance from turbine	1.5km
Elevation at photo	120m
Camera Model	Canon EOS 1000D
Focal Length	33mm
Equip to 35mm format	53mm
Camera Height	1.6m
Bearing	43.2°
Horizontal FOV	37.18°
Vertical FOV	25.28°
Viewing distance	43cm

CYNGOR GWYNEDD  
ADRAN RHEOLEDDIO  
- 3 RHAG 2015  
GWASANAETH CYNLLUNIO AC  
AMGYLCHEDD  
RHIF TRAC:



proposed turbine would just partially visible through the trees from this viewpoint

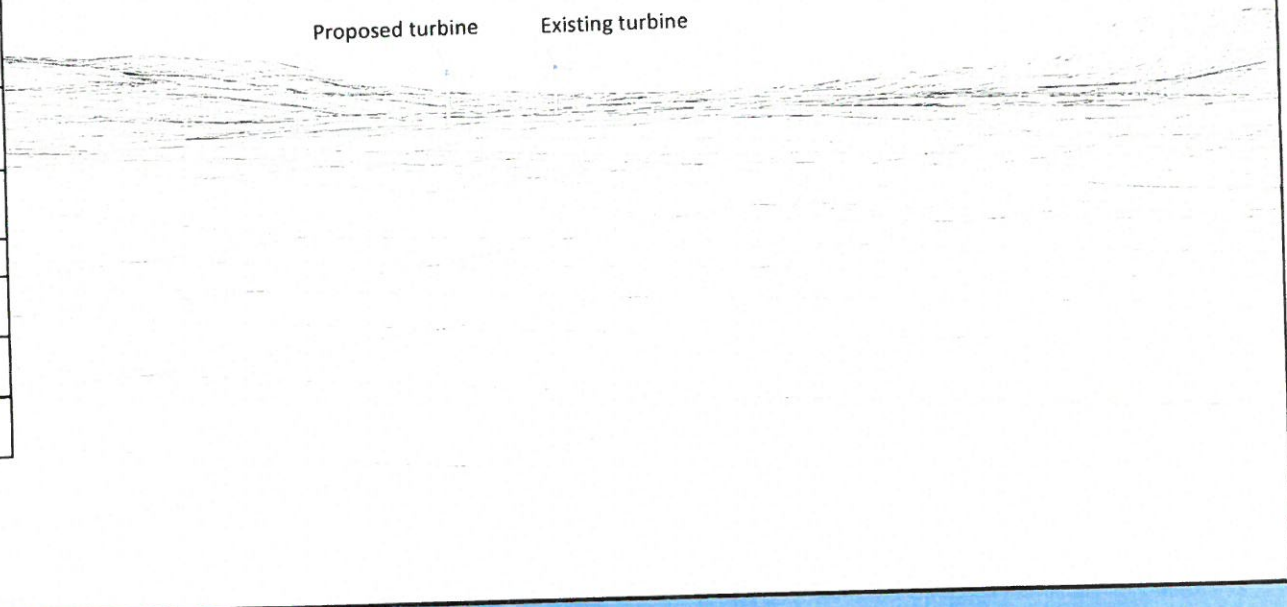


Viewpoint 9 - on road coming down hill to east of Llecheiddior Uchaf

Eastings: 247607 Northings: 344505

Date of Photo	11.6.15
Print page	A3
Distance from turbine	1km
Elevation at photo	121m
Camera Model	Canon EOS 1000D
Focal Length	33mm
Equiv to 35mm format	53mm
Camera Height	1.6m
Bearing	66.4°
Horizontal FOV	37.18°
Vertical FOV	25.28°
Viewing distance	43cm

CYNGOR GWYNEDD  
ADRAN RHEOLEDDIO  
- 3 RHAG 2015  
GWASANAETH CYNLLUNIO AC  
AMGYLCHEDD  
RHIFTRAC:

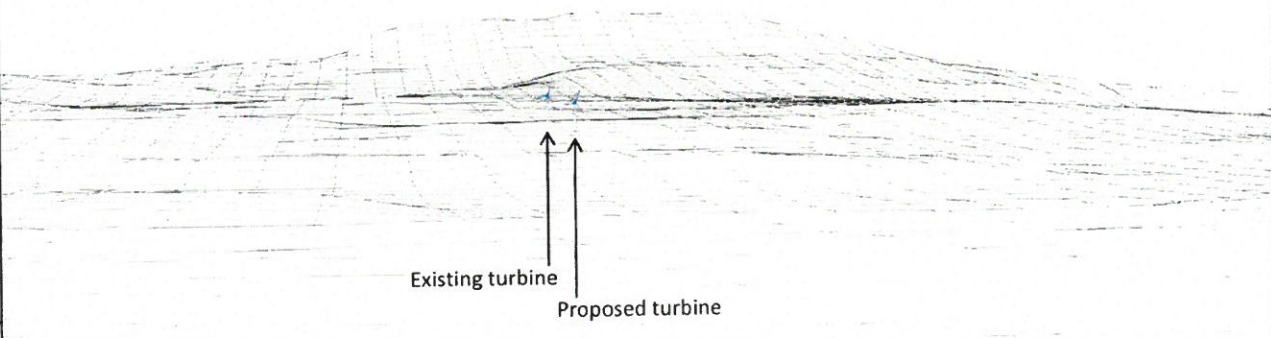


Viewpoint 11 – Pant Glas Cennin

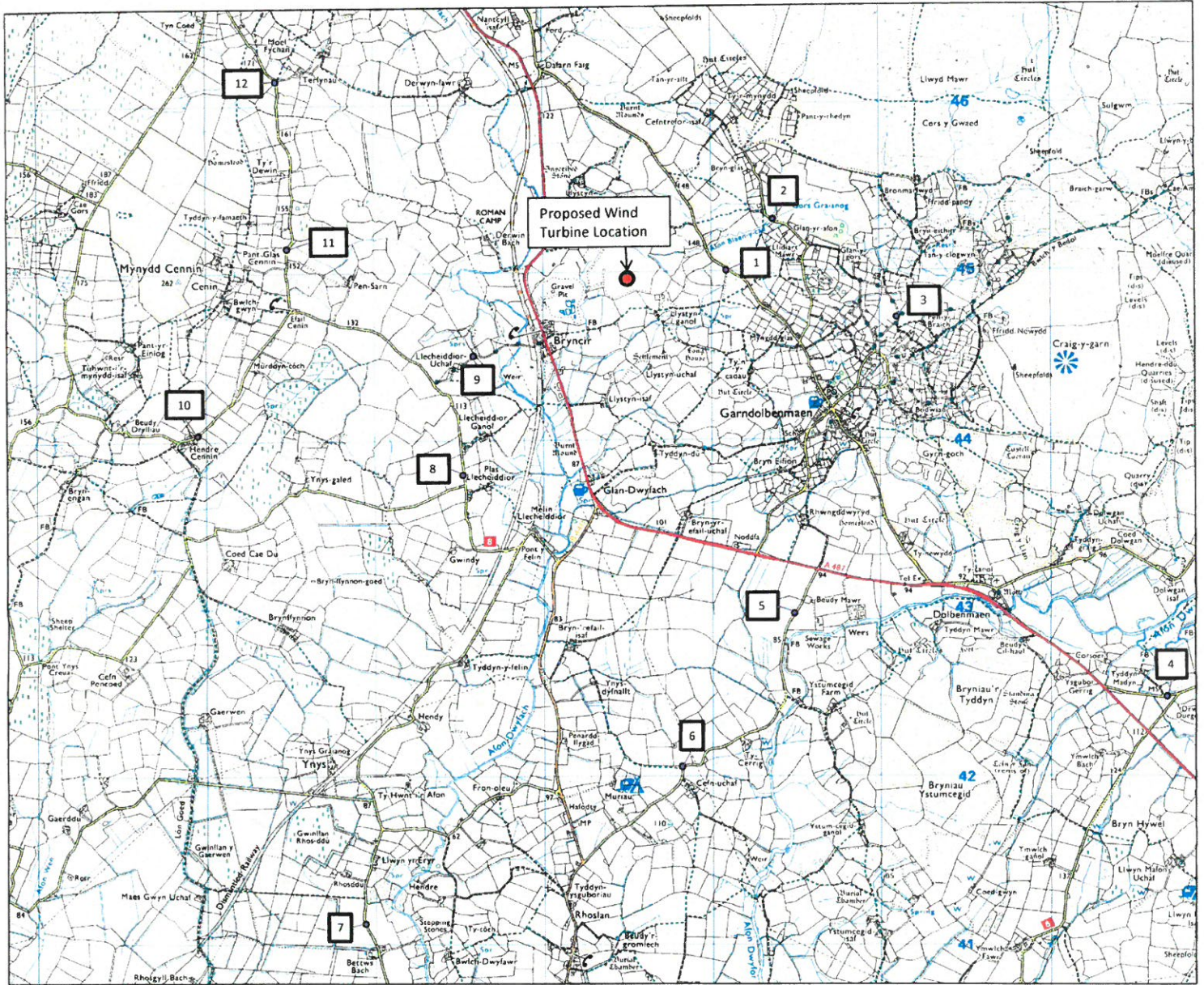
Eastings: 246484 Northings: 345137

Date of Photo	11.6.15
Print page	A3
Distance from turbine	2.05km
Elevation at photo	161m
Camera Model	Canon EOS 1000D
Focal Length	33mm
Equiv to 35mm format	53mm
Camera Height	1.6m
Bearing	94.6°
Horizontal FOV	37.18°
Vertical FOV	25.28°
Viewing distance	43cm

CYNGOR GWYNEDD  
ADRAN RHEOLEIDDIO  
- 3 RHAG 2015  
GWASANAETH CYNLLUNIO AC  
AMGYLCHEDD  
RHIFTRAC:



# VIEWPOINT PHOTO LOCATION MAP



**CYBOR GWYBODAETH**  
**ADRAN RHEOLEDDIO**  
 = 3 RHAF 2015  
**GWASANAETH CYNLLUNIO AC**  
**AMGYLCHEDD**  
**RAIFTRAE**

DATE	September 2015
PRINT	A3
REF:	Roberts, Geraint Llystyn Ganol
TITLE	PHOTOMONTAGE/WIREFRAME

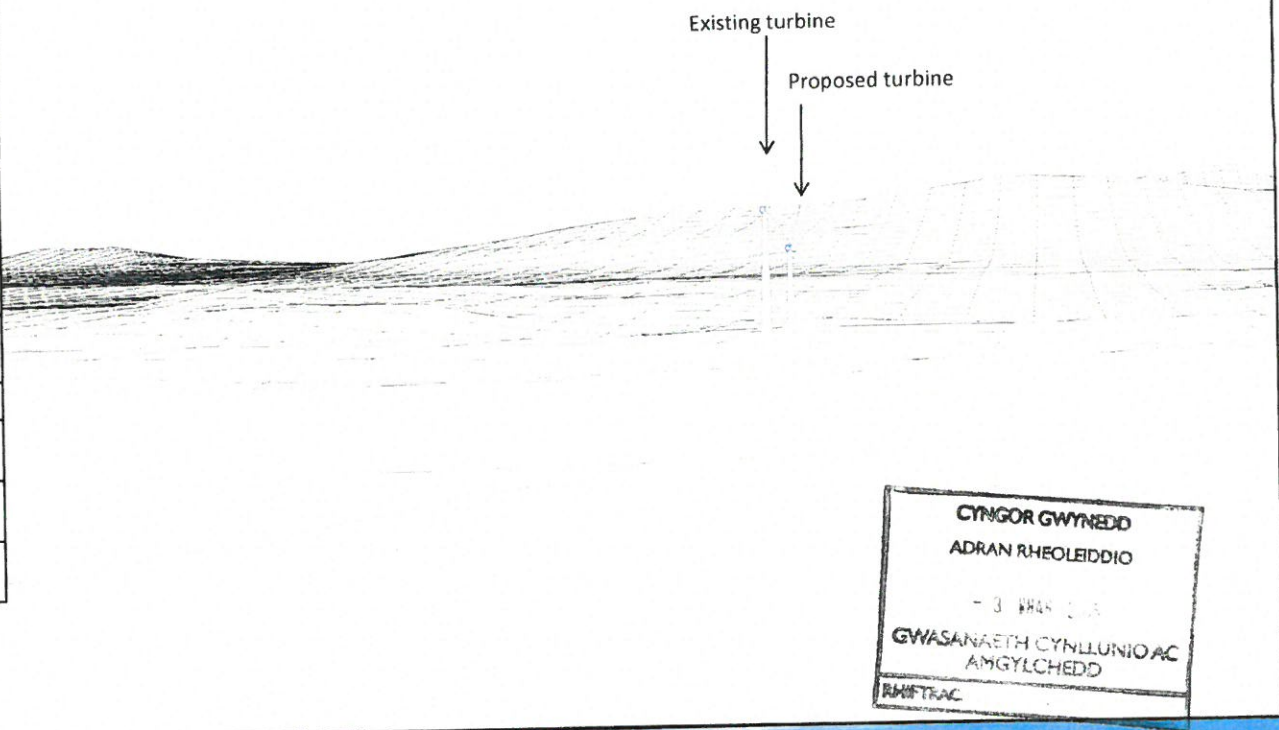
**Proposed Wind Turbine Location**  
**SH 48462 44919 (E:248462 N:344919)**  
**Elevation: 128m**

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[info@less-co2.co.uk](mailto:info@less-co2.co.uk)

Viewpoint 1 - start of entrance drive to Llystyn Ganol

Eastings: 249094 Northings: 345008

Date of Photo	11.6.15
Print page	A3
Distance from turbine	593m
Elevation at photo	160m
Camera Model	Canon EOS 1000D
Focal Length	32mm
Equip to 35mm format	52mm
Camera Height	1.6m
Bearing	257°
Horizontal FOV	38.26°
Vertical FOV	26.04°
Viewing distance	42cm



CYNGOR GWYNEDD  
ADRAN RHEOLEDDIO  
- 3 1984 2015  
GWASANAETH CYLLUNIO AC  
AMGYLCHEDD  
RHESTRAC



**Viewpoint 2 - Gors Graianog, on road bridge**

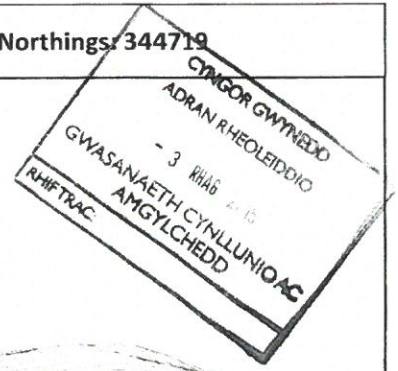
**Eastings: 249375 Northings: 345298**

Date of Photo	11.6.15
Print page	A3
Distance from turbine	942m
Elevation at photo	165m
Camera Model	Canon EOS 1000D
Focal Length	32mm
Equip to 35mm format	52mm
Camera Height	1.6m
Bearing	247°
Horizontal FOV	38.26°
Vertical FOV	26.04°
Viewing distance	42cm

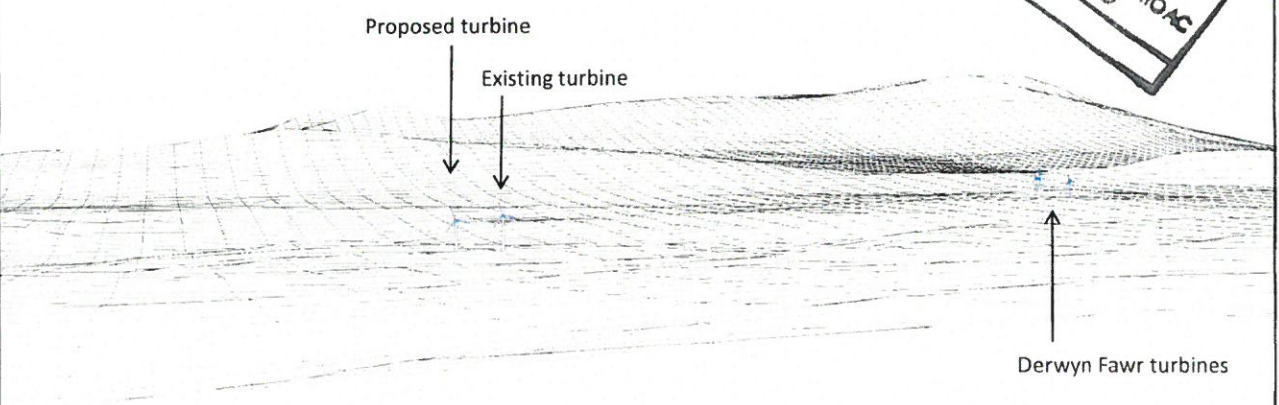
CYNGOR GWYNEDD  
ADRAN RHEOLEDDIO  
- 3 RHAG 2015  
GWASANAETH CYNLLUNIO AC  
AMGYLCHEDD  
PHOTRAC



**Viewpoint 3 - by reservoir, upper part of Garndolbenmaen Eastings: 250117 Northings: 344719**



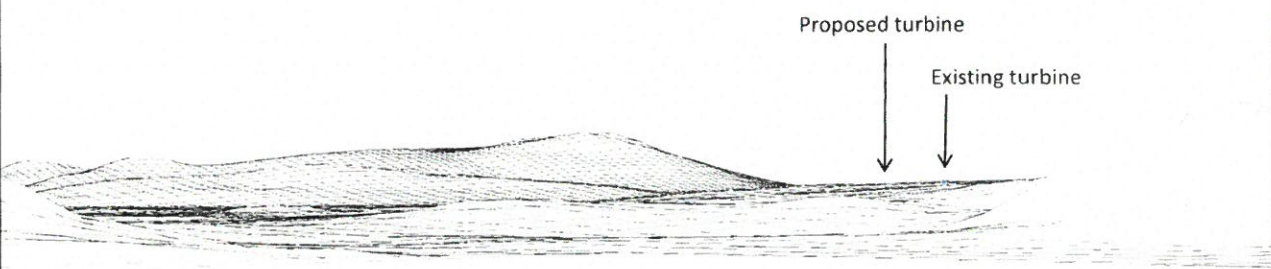
Date of Photo	11.6.15
Print page	A3
Distance from turbine	1.65km
Elevation at photo	211m
Camera Model	Canon EOS 1000D
Focal Length	32mm
Equip to 35mm format	52mm
Camera Height	1.6m
Bearing	280°
Horizontal FOV	38.26°
Vertical FOV	26.04°
Viewing distance	40cm



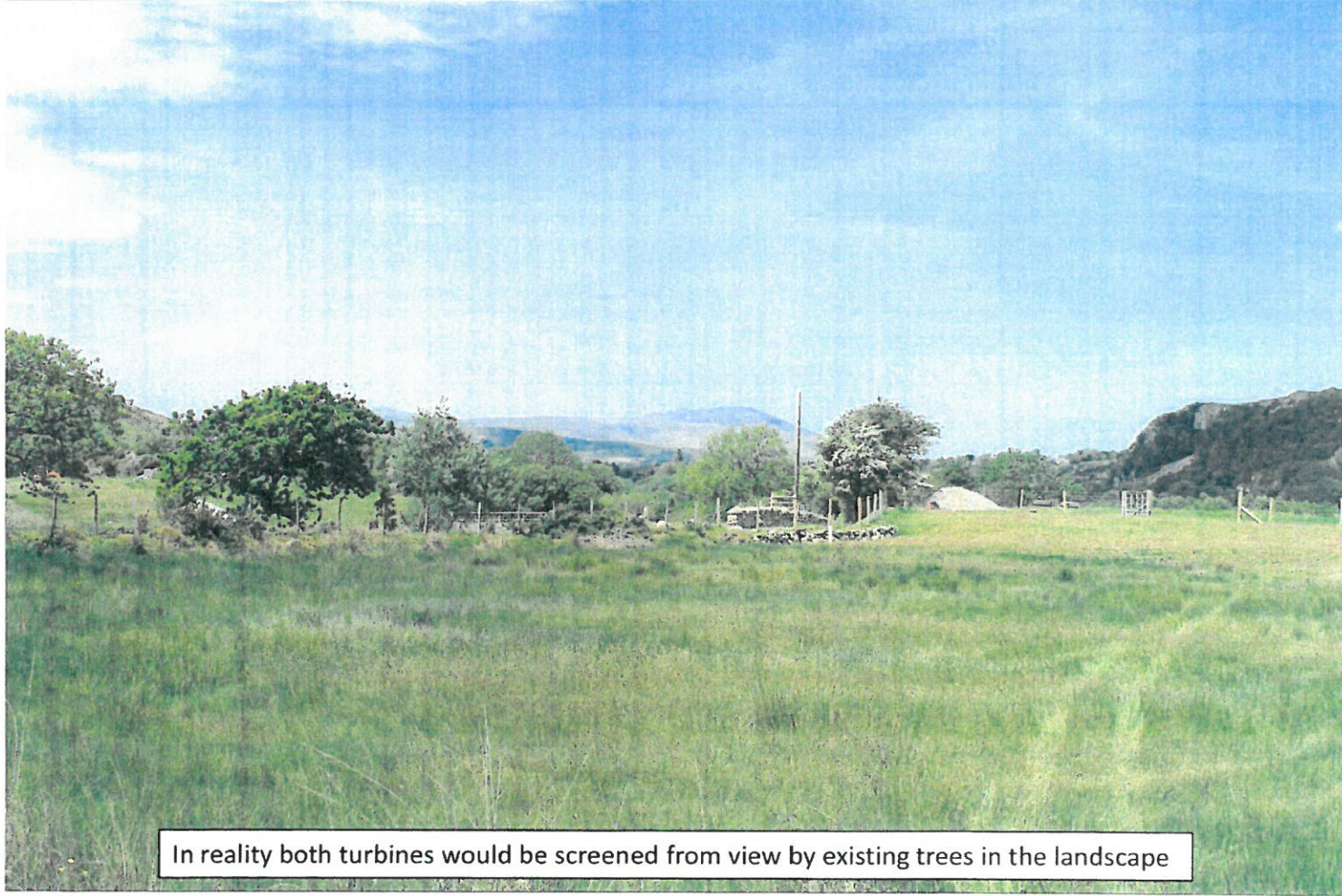
**Viewpoint 4 - on road to Golan, just after junction from A487**

**Eastings: 251724 Northings: 342477**

Date of Photo	11.6.15
Print page	A3
Distance from turbine	4.05km
Elevation at photo	108m
Camera Model	Canon EOS 1000D
Focal Length	33mm
Equip to 35mm format	53mm
Camera Height	1.6m
Bearing	298.7°
Horizontal FOV	37.18°
Vertical FOV	25.28°
Viewing distance	42cm



Theoretically the tips of the blades of both turbines would just be visible over the horizon



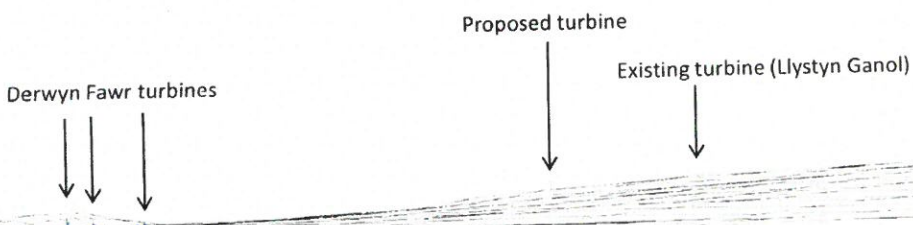
In reality both turbines would be screened from view by existing trees in the landscape

Viewpoint 5 - near entrance drive to Beudy Mawr just south of A487

Eastings: 249501 Northings: 342964

CŶNGOR GWYNEBID  
 ADARAN RHEOLEDDIO  
 - 3 RHIF  
 GWASANAETH CYNLLUNIO AC  
 RHIFTRAC  
 AMGYLCHEDD

Date of Photo	11.6.15
Print page	A3
Distance from turbine	2.2km
Elevation at photo	100m
Camera Model	Canon EOS 1000D
Focal Length	33mm
Equiv to 35mm format	53mm
Camera Height	1.6m
Bearing	334.7°
Horizontal FOV	37.18°
Vertical FOV	25.28°
Viewing distance	43cm



The tip of the blade would just be visible over the horizon, but would often be screened by trees

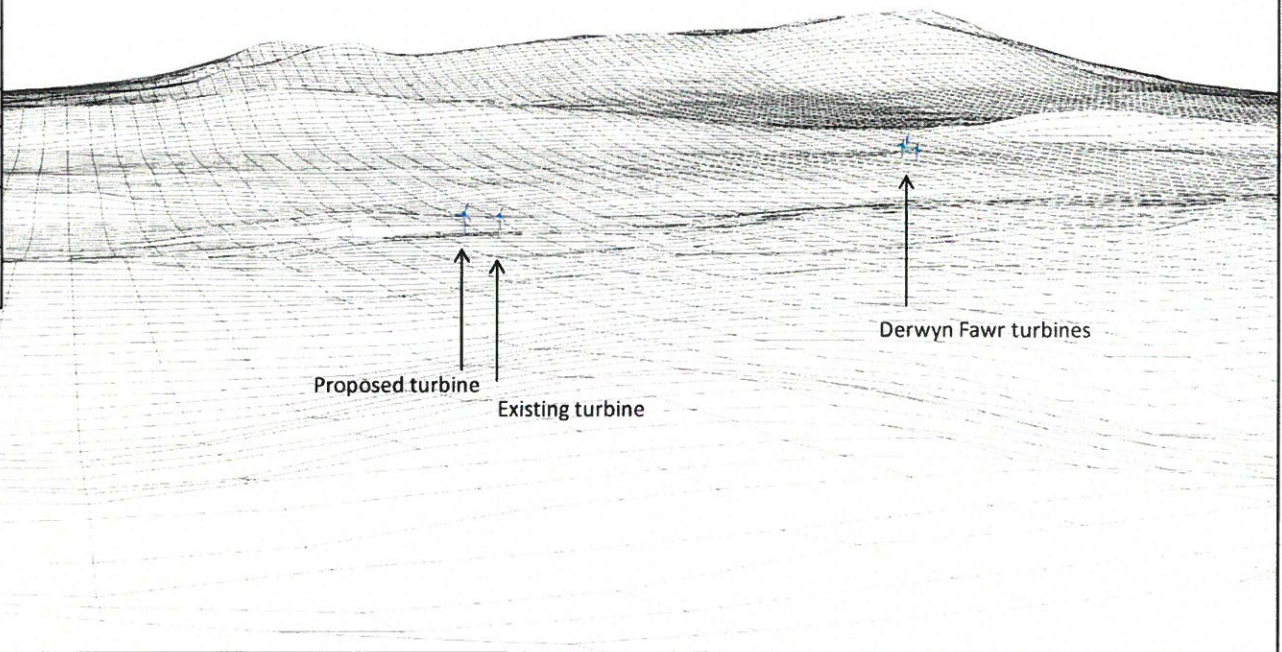


**Additional Wireframe Viewpoint - Top of Craig-y-garn**

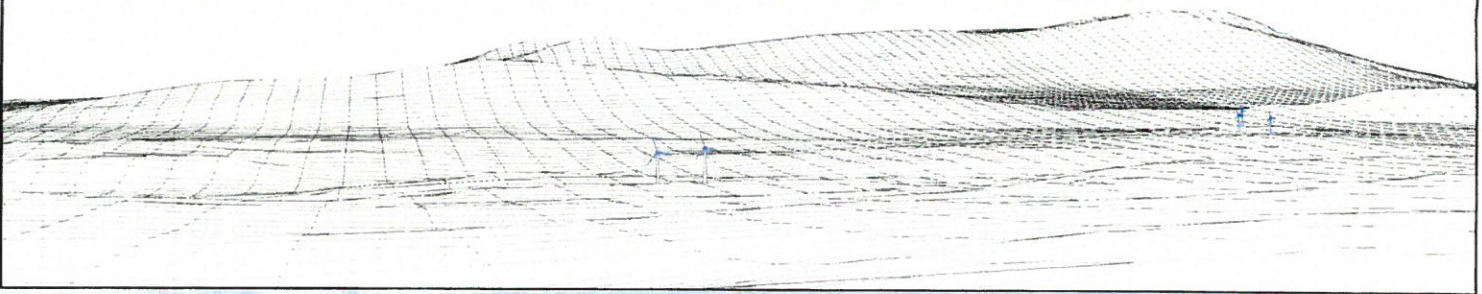
**Eastings: 251031 Northings: 344493**

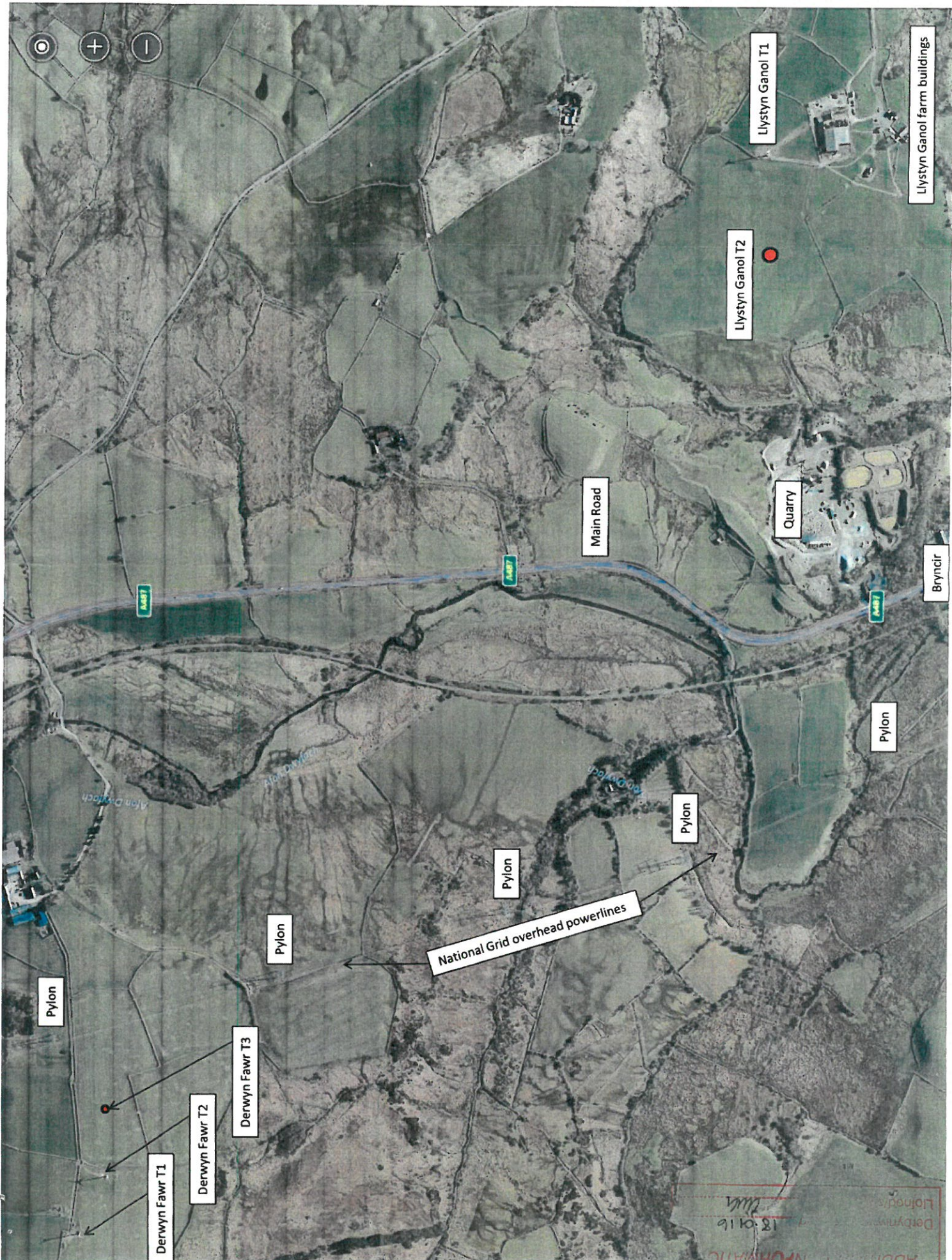
Print page	A3
Distance from turbine	2.67km
Viewpoint Elevation	338m
Equip to 35mm format	50mm
Camera Height	1.6m
Bearing	282°
Horizontal FOV	38.26°
Vertical FOV	26.04°
Viewing distance	40cm

**GWYBODAETH YCHWANEGOL**  
**ADDITIONAL INFORMATION**  
 Derbyniwyd/Received 18.01.16  
 Llofnod/signature *UMA*



Compare the above wireframe to viewpoint 3 (bottom two images on this page) that has already been provided. The visual impact will be similar except that the top of Craig-y-garn is further away so all turbines will look smaller.





GWYBODAETH YCHWANEB  
ADDYGIAD YNFFORMATI  
Derwyn Fawr T1  
18.916  
km

Llystyn Ganol farm buildings

Llystyn Ganol T1

Llystyn Ganol T2

Main Road

Quarry

Bryncir

Pylon

Pylon

Pylon

National Grid overhead powerlines

Pylon

Pylon

Derwyn Fawr T3

Derwyn Fawr T2

Derwyn Fawr T1

