Technical Note

Client	Subject	Date	Document ref
Llŷr Floating Wind Ltd	Llŷr Floating Wind Farm Landscape & Visual Note in Response to NRW Comments.	04 November 2025	60669422

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Project Llŷr Landscape & Visual Technical Note.

Executive Summary of Key Points

This technical note has been prepared in relation to points raised by Planning & Environment Decisions Wales (PEDW) and Natural Resources Wales (NRW) in relation to potential landscape and visual effects relating to Llŷr Floating Wind Farm.

It presents evidence in the form of additional Zone of Theoretical Visibility (ZTV) figures and wireline visualisations comparing 270m and 300m turbines for Llŷr Floating Wind Farm and a side-by-side comparison of Llŷr Floating Wind Farm and Erebus (Refer to Appendix A).

The conclusions are that:

a. The reduction in turbines from 325.5m assessed in the LVIA to 300m does not change the outcomes of the LVIA. Due to distance, any lesser impact from the reduced turbine height is not readily perceptible and does not lower the magnitude category from low to negligible. It therefore results in no change in the significance of effects. The LVIA and associated visualisations are therefore “worst case” and remain valid as the basis for decision making.
b. Due to distance and based on the ZTVs and the wirelines in Appendix A, there is no discernible difference in landscape and visual effects from Llŷr Floating Wind Farm turbines of 300m or 270m.
c. At 300m the Llŷr Floating Wind Farm turbines are not perceived as larger than the Erebus turbines from key locations, including the PCNP. This is due to distance and relative proximity of the two schemes to the onshore viewpoints.
d. The Offshore Wind Sensitivity Guidance, 2019 is an approximation of potential effects based on subjective judgements and a limited number of case studies from SLVIAs and offshore projects, generally with a considerably greater number of turbines than is proposed for Llŷr Floating Wind Farm.
e. The Erebus array does not comply with the Offshore Wind Sensitivity Guidance, 2019 and from several viewpoint locations, including the closest within the PCNP (VP2) is closer to the coast than the Project Llŷr array and appears larger, noting that it is a consented scheme.
f. The guidance itself notes that it is an approximation, and each case must be judged on its merits, the ready reckoner of turbine height is a rule of thumb only, rather than a fixed requirement, noting that the evidence in Appendix A does allow a measured and accurate understanding of the likely effects of Llŷr Floating Wind Farm turbines of 300m or 270m and we conclude there is no discernible benefit in a reduction in height.

1. Introduction

1.1 This document is a technical note intended to respond to comments from Planning & Environment Decisions Wales (PEDW) and Natural Resources Wales (NRW) in relation to potential landscape and visual effects relating to Llŷr Floating Wind Farm.

1.2 The technical note is intended to respond to the comments received from PEDW on 30/07/2025 (CAS-01352-L3N2P8) and NRW on 29 July 2025 (AOS-24286-0004-ORML2465) and provide additional information including relevant additional wirelines and ZTV analysis (attached as Appendix A).

1.3 The PEDW comments in response to the LVIA, may be summarised as relating to the following matters relevant to landscape and visual considerations:

- Following the applicant's commitment to limit turbine tip height to 300m above Highest Astronomical Tide (HAT) PEDW have asked how this impacts the LVIA and the reliability of the vantage point wireframes and photomontages.
- Comment on NRW's view that to avoid adverse impact, tip height should be reduced to 270m.

1.4 The NRW comments in response to the LVIA, may be summarised as relating to the turbine height and impacts on the Pembrokeshire Coast National Park (PCNP), based on the content of *"Seascape and visual sensitivity to offshore wind farms in Wales: Strategic assessment and guidance Stage 1- Ready reckoner of visual effects related to turbine size"* (Simon White, Simon Michaels and Helen King, White Consultants) Report No 315, hereafter referred to as The Offshore Wind Sensitivity Guidance, 2019.

1.5 The Offshore Wind Sensitivity Guidance, 2019 provides recommended distances from National Parks and Areas of Outstanding Natural Beauty (AONB) now referred to as National Landscapes, based on *"A very approximate ratio between turbine height and distance for average low magnitude of effect is 1:133 and 1:100 for average medium magnitude of effect (so an array of 200m high turbines is likely to have a significant visual effect up to 20 km distance)"*. Using this formula NRW reach the view that the maximum height of turbines advisable to reduce or mitigate effects on the Pembrokeshire National Park is 270m above HAT.

2. Effects on the Landscape and Visual Assessment of reducing tip height from 325.5 to 300m.

2.1 This section of the technical note sets out a response to comments provided by PEDW in CAS-01352-L3N2P8 (dated 30/07/2025) as summarised in the introduction.

2.2 As set out in paragraph 23.6.57 of the ES Chapter Volume 6, the LVIA considered the design parameters of the proposed Project which are predicted to result in the greatest environmental impact, known as the 'realistic worst-case scenario'. The realistic worst-case scenario represents, for any given receptor and potential impact on that receptor, various options in the Design Envelope that will result in the greatest potential for change to the receptor in question. Given that the realistic worst-case scenario is based on the design option (or combination of options) that represents the greatest potential for change, confidence can be held that the development of any alternative options within the design parameters will give rise to effects no greater or worse than those included in this impact assessment.

2.3 On this basis turbine heights of up to 325.5m above HAT formed the "worst case" as often adopted within the Rochdale Envelope Approach to EIA, including landscape and visual matters.

2.4 Similarly, the assessment is undertaken based on perfectly clear atmospheric conditions to present a worst-case approach. A review of average visibility data for the Milford Haven weather station suggests that frequency of visibility >35 km would be less than 33%, frequency of excellent visibility (>40 km) would be less than 24%, and frequency of visibility >50 km less than 10.5%. It is therefore likely that visibility of the proposed turbines would be more limited, and the resulting magnitude of impact would be lower that stated in the SLVIA, for the majority of the time.

2.5 All SLVIA judgments are subjective to a greater or lesser extent and rely on placing magnitude of effects into categories, in the case of Project Llŷr, these ranged from High/Medium/Small/Negligible. A reduction in tip height could theoretically reduce the magnitude of effects in terms of a reduction in the size/scale of change in views and/or the geographical extent of visibility of the lower height turbines. However, the duration and reversibility of effect would remain as described in the ES LVIA.

2.6 We have considered whether the change in size/scale or geographical extent have any consequence in reducing the magnitude outcomes for any of the 15 representative viewpoint locations assessed in the SLVIA, noting that these viewpoints are all at distances of between 34 and 57 km from the Proposed Development. The majority of viewers (12 out of 15 viewpoint locations) are assessed as experiencing a small adverse change in visual amenity, resulting in effects of minor significance. At the remaining three viewpoint location viewers are assessed as experiencing a negligible adverse change in visual amenity, resulting in effects of negligible significance.

2.7 The evidence to illustrate the differences in scale/size and geographical extent of the 325.5m and 300m turbines is provided by looking at Zone of Theoretical Visibility mapping and wireline visualisations provided in Appendix A.

2.8 In response to the NRW question at para 170 relating to rotor width we can confirm that the rotor diameter is likely to reduce slightly, with the final dimension subject to a procurement exercise post consent.

2.9 Reference to Figure 1: Comparison of ZTV of Project Llŷr at 325.5 and 300m tip heights shows areas shaded blue in which 300m turbines would theoretically be visible, the red shaded areas show the additional geographical extent of theoretical visibility of the 325.5m turbines. A simple visual comparison indicates that the differences in geographical extent are extremely limited such that although there is a reduced impact it would not translate into a reduction in magnitude and hence significance of effect.

2.10 Similarly, in considering what is visible from the land and sea, we have prepared wirelines from the following five viewpoints (locations shown on Figures 1 and 2):

- VP2: Skokholm Island, which is the closest viewpoint within PCNP;
- VP6: St Ann's Head, which is the closest mainland viewpoint within PCNP;
- VP8: Castle Bay / Sheep Island, location on coast where Project Llŷr and Erebus are at same distance (both 38.8 km);
- VP9: Freshwater West Beach, location on coast at lower elevation; and
- VP11: Elegug Stacks, location on coast where Project Llŷr is approximately 5 km closer than Erebus.

2.11 These indicate that that the reduction in height of 25.5m is barely perceptible, largely as a result of the distance offshore.

2.12 Overall, based on this analysis it is not assessed that the conclusions of the LVIA would change as a result of adopting turbines at 300m rather than 325.5m. Similarly, any difference in the visualisations submitted with the application would be barely perceptible, and since those provided are worst case, any change in effects would only result in a reduced magnitude of effect, noting that it would not be sufficient to place magnitude in a lower category (e.g. from small to negligible).

3. Effects of reducing tip height from 300m to 270m.

3.1 NRW has raised multiple points regarding potential effects on landscape character and visual amenity which are based on the concern

"*that turbines with a maximum blade tip height of 300m would still be inside - rather than 'beyond' - the low magnitude of effect buffer identified for turbines of this height1 in the Offshore Wind Sensitivity Guidance, 2019. Consequently, turbines with a tip height of 300m in this location would still be contrary to siting principles outlined in the Offshore Wind Sensitivity Guidance.*

For example:

- *The Array would not be located 'beyond the limit of negligible visual effects, particularly for the highest sensitivity area National Parks overlaid with Heritage Coasts'. (Principle 3)*
- *The Array would not be located 'beyond the Stage I report low magnitude buffer distances for the highest potential turbine proposed from National Parks' which is requested when Principle 3 is not achievable (beyond 41.6 km for turbines between 226- 300m). At the closest point the Array is 35km from the PCNP. (Principle 4)*
- *The Array would not be located 'as far away from Heritage Coasts … as possible' using the low magnitude of effect buffer distances for the highest potential turbine proposed (Principle 5).*
- *The Array would not be located in 'areas identified as lower sensitivity in the Stage 3 report' (it is located in one of the higher sensitivity areas, Zone 13 which has high/medium sensitivity4) (Principle 6).*
- *The Array would not be located in 'areas offshore from local seascape character areas identified as having lower inherent sensitivity' (Principle 7).*
- *The Array would not be located 'off already industrialised or developed coastlines' (Principle 8).*
- *The Array would not be located to 'avoid locations offshore from remote headlands/peninsulas' (Principle 17).*

- *The Array would not be located to 'avoid potential cumulative impacts by extending the width of arrays visible through extensions or additional wind farms' when considered in the context of the consented Erebus development. (Principle 19).*

3.2 Our response is based on three main points of principle and specific comments on the points of detail:

1. The Offshore Wind Sensitivity Guidance, 2019 is an approximation of potential effects based on subjective judgements and a limited number of case studies from SLVIAs and offshore projects, generally with a considerably greater number of turbines than is Proposed. The guidance itself notes that it is an approximation, and each case must be judged on its merits, the ready reckoner is a rule of thumb only, rather than a fixed requirement.
2. Our specific analysis of the ZTV and wirelines indicates that at the distances involved there is no perceptible difference between 300m and 270m in terms of perceived impact and effects. At 35km from the coast there are no scale parameters to allow judgement of relative heights. Neither do adjacent turbines, for example the consented Erebus scheme, provide any meaningful comparison as they will not be in the same plane or proximity to allow direct comparison and being closer to the coast will appear relatively taller or at least not comparable with the more distant array of Project Llŷr.
3. The Erebus array does not comply with the Offshore Wind Sensitivity Guidance, 2019 and from several viewpoint locations, including the closest within the PCNP (VP2) is closer to the coast than the Project Llŷr array, noting that it is a consented scheme and any SLVIA effects are therefore outweighed by other benefits. It is therefore difficult to understand the definitive stance that Project Llŷr turbines would be unacceptable at 300m whereas Erebus turbines at 270m, but closer to the coast, are consented.

3.3 In order to illustrate these points, we have prepared four versions of comparative wirelines from selected viewpoints as follows:

- VP2: Skokholm Island, which is the closest viewpoint within PCNP (36.0 km to Project Llŷr and 31.0 km to Erebus);
- VP6: St Ann's Head, which is the closest mainland viewpoint within PCNP (37.3 km to Project Llŷr and 35.9 km to Erebus);
- VP8: Castle Bay / Sheep Island, location on coast where Project Llŷr and Erebus are at same distance (both 38.8 km);
- VP9: Freshwater West Beach, location on coast at lower elevation (39.4 km to Project Llŷr and 41.2 km to Erebus); and
- VP11: Elegug Stacks, location on coast where Project Llŷr (at 38.2 km) is 5 km closer than Erebus (at 43.1 km).

3.4 The comparative wirelines cover several scenarios:

- 90° Horizontal Field of View (HFOV) showing Project Llŷr at 325.5 and 300m tip heights (and Erebus at 270m);
- 90° HFOV showing Project Llŷr at 300 and 270m tip heights (and Erebus at 270m);
- 53.5° HFOV showing Project Llŷr at 300m tip height (and Erebus at 270m); and
- 53.5° HFOV showing Project Llŷr at 270m tip height (and Erebus at 270m).

3.5 Our conclusion, supported by this exercise and the wirelines in Appendix A, is that due to distance the reduction in height is likely to be barely perceptible and without the side-by-side comparison and no comparable scale parameters (including Erebus for the reasons identified) there is no logical reason to apply an approximate rule of thumb when more detailed evidence is provided.

3.6 This in turn informs our response to the specific points raised by NRW:

i. *The Array would not be located 'beyond the limit of negligible visual effects, particularly for the highest sensitivity area National Parks overlaid with Heritage Coasts'. (Principle 3)*:

Response: The Offshore Wind Sensitivity Guidance does not identify what it considers to be the limit of negligible visual effects. Standard SLVIA practice is that the only category beyond negligible effects is no change (i.e. no development), and therefore no proposed development would be able to comply with this principle. The threshold for significant effects in SLVIA is typically moderate and above (some assessments also consider that moderate effects could be not significant) and therefore these is no

requirement for a development to be beyond the limit of negligible visual effects to be considered acceptable.

Erebus is closer to the PCNP than Project Llŷr (VP2) by some 5 km. The angle subtended (i.e. perceived height) by the Project Llŷr turbine closest to the PCNP is 0.477 degrees (to 3 decimal places) at 36 km as opposed to an angle subtended by the 270m turbine of Erebus at 31 km of 0.499 degrees. The angles have been calculated by drawing the real-world scale in AutoCAD and measuring the angles between the viewpoint and the top of the turbine. The Erebus turbines therefore appear larger in comparison but noting that the angle subtend/perceived height is vanishingly small at less than 0.5 degree in both cases and the curvature of the earth is not included in this calculation but would, in itself, further reduce the perceived height of the furthest turbines (i.e. Project Llŷr). A second factor is that from much of the PCNP the viewpoints towards Project Llŷr or Erebus, are elevated and hence the relative perspective of height will be distorted, with turbines appearing shorter than if viewed in a horizontal plane at the same level.

ii. *The Array would not be located 'beyond the Stage I report low magnitude buffer distances for the highest potential turbine proposed from National Parks' which is requested when Principle 3 is not achievable (beyond 41.6 km for turbines between 226-300m). At the closest point the Array is 35 km from the PCNP. (Principle 4)*.

Response: Erebus is closer to the PCNP than Project Llŷr (VP2) by some 5 km and as illustrated by the wirelines in Appendix A and the comparison with Erebus, as a consented scheme, closer to the PCNP, we contend that this is a meaningless comparison and arbitrary yardstick.

iii. *The Array would not be located 'as far away from Heritage Coasts … as possible' using the low magnitude of effect buffer distances for the highest potential turbine proposed (Principle 5)*.

Response: Erebus does not comply with this principle and the actual differences in perceived effects between 270m and 300m at the distances involved is not readily perceptible with no scale comparators. We are not aware of any consented wind farm on land or offshore were effects on visual amenity or landscape character are significant at over 30 km, therefore the differences causing concern for NRW are of immaterial magnitude.

iv. The Array would not be located in 'areas identified as lower sensitivity in the Stage 3 report' (it is located in one of the higher sensitivity areas, Zone 13 which has high/medium sensitivity4) (Principle 6).

Response: Noted but sensitivity is one component of significance and as assessed in the SLVIA and set out in this technical note by reference to wirelines/ZTVs and the angles subtended by the adjacent consented scheme, the magnitude of effect is small or negligible due to distance, hence effects at 270m or 300m are both minor or negligible significance.

v. The Array would not be located in 'areas offshore from local seascape character areas identified as having lower inherent sensitivity' (Principle 7).

Response: as per item iv).

vi. The Array would not be located 'off already industrialised or developed coastlines' (Principle 8).

Response: as per item iv).

vii. The Array would not be located to 'avoid locations offshore from remote headlands/peninsulas' (Principle 17).

Response: as per item iv).

viii. The Array would not be located to 'avoid potential cumulative impacts by extending the width of arrays visible through extensions or additional wind farms' when considered in the context of the consented Erebus development. (Principle 19).

Response: as per item iv) and noting that the two wind farms would appear as distant but similar elements in a coherent layout which avoids effects of scale, spatial conflicts or compounding of effects due to compatible array design and spatial extents.

3.7 In the Offshore Wind Sensitivity Guidance the above principles apply equally to turbines of 270m and 300m heights. NRW consider that turbines at a height of 270m are acceptable in relation to SLVIA impacts. This therefore demonstrates that a wind farm does not require to meet the above principles in order to be consented.

3.8 The only difference between turbines of 270m and 300m in relation to the Offshore Wind Sensitivity Guidance is application of the very approximate 1:133 ratio of turbine height to distance, which as highlighted above is based on a limited dataset. If this approximate ratio were to be applied to the consented Erebus scheme which is at a distance of 31km from the PCNP at its nearest point, it would indicate that turbines should be limited to 233m in height (31,000m / 133 = 233m) and not the consented 270m.

3.9 If Erebus, as a consented scheme, was used as the basis for defining a height to distance ratio, the result would be 1:115 (31,000m / 270). Application of this ratio to Project Llŷr at 36 km from PCNP would indicate that turbines of 313m in height at the increased distance would be comparable to the consented turbines of Erebus.

4. Summary

4.1 AECOM confirm that in our view, the reduction of turbine height from 325.5m to 300m does not change any of the SLVIA outcomes relating to Project Llŷr. The primary reason for the conclusion is that the SLVIA assessed a "worst case" and although the reduction in height results in a theoretical reduction in visibility and magnitude of effect, at the distances concerned (typically over 35 km) there is no justifiable reduction in magnitude to a lower category, noting that effects at all viewpoints are small or negligible magnitude. We consider that this is evident from the ZTV (Figure 1) and wirelines comparing the 325,5 and 300m tip heights (Figures 3.1, 4.1, 5.1, 6.1 and 7.1) in Appendix A, showing the difference in height, which is barely perceptible at 35 km.

4.2 The use of the Offshore Wind Sensitivity Guidance, 2019 is as acknowledged in the Stage 1 report, an approximation of potential effects rather than an assessment of a specific project as submitted in a detailed SLVIA within the ES. The concerns raised by NRW apply to an equal or greater extent in relation to the consented Erebus wind farm which is closer to the PCNP albeit with turbine heights which are 270m as opposed to 300m for Project Llŷr.

4.3 Our analysis, using wirelines and a calculation of the angle subtended in a view using the two turbine heights and distances based on VP2, is that the taller height of the Project Llŷr turbines does not translate into perceived increased height due to a reduction in size over distance. In simple terms, from the closest point in the PCNP (VP2) the closest Erebus turbines will appear larger than Project Llŷr turbines.

4.4 In relation to the points raised by NRW we assess that a comparison with Erebus is relevant given that it is a consented scheme, closer to the coast, not raising unacceptable effects on SLVIA receptors.

4.5 Our conclusion is that at the distances concerned, typically over 35 km the significance of effects of turbines at 300m height remains well below any significant threshold and the difference with the 270m suggested by NRW and the proposed 300m is imperceptible in real terms.

4.6 We consider that this is illustrated by Figure 2 showing the comparative ZTV and the range of wirelines for five of the assessment viewpoints provided in Appendix A of this technical note.

Appendix A:

Figure 1: Comparison of ZTV of Project Llŷr at 325.5 and 300m tip heights

Figure 2: Comparison of ZTV of Project Llŷr at 300 and 270m tip heights

Figure 3.1: VP 2 Skokholm Island - 90° wirelines showing Project Llŷr at 325.5 and 300m tip heights

Figure 3.2: VP 2 Skokholm Island - 90° wirelines showing Project Llŷr at 300 and 270m tip heights

Figure 3.3: VP 2 Skokholm Island - 53.5° wireline showing Project Llŷr at 300m tip height

Figure 3.4: VP 2 Skokholm Island - 53.5° wireline showing Project Llŷr at 270m tip height

Figure 4.1: VP 6 St Ann's Head - 90° wirelines showing Project Llŷr at 325.5 and 300m tip heights

Figure 4.2: VP 6 St Ann's Head - 90° wirelines showing Project Llŷr at 300 and 270m tip heights

Figure 4.3: VP 6 St Ann's Head - 53.5° wireline showing Project Llŷr at 300m tip height

Figure 4.4: VP 6 St Ann's Head - 53.5° wireline showing Project Llŷr at 270m tip height

Figure 5.1: VP 8 Castles Bay / Sheep Island - 90° wirelines showing Project Llŷr at 325.5 and 300m tip heights

Appendix A - Figures

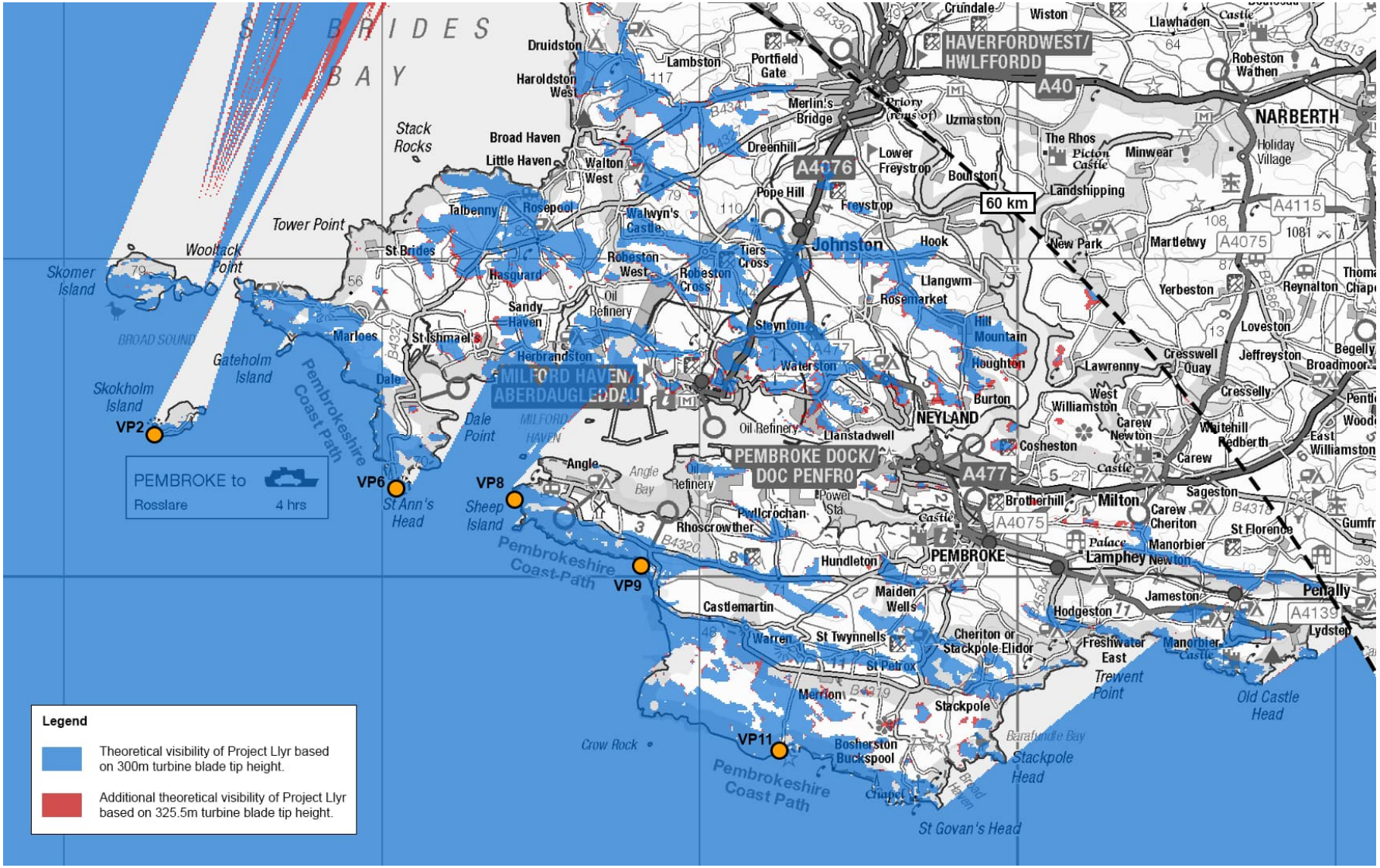


Figure 1: Comparison of ZTV of Project Llŷr at 325.5m and 300m tip heights

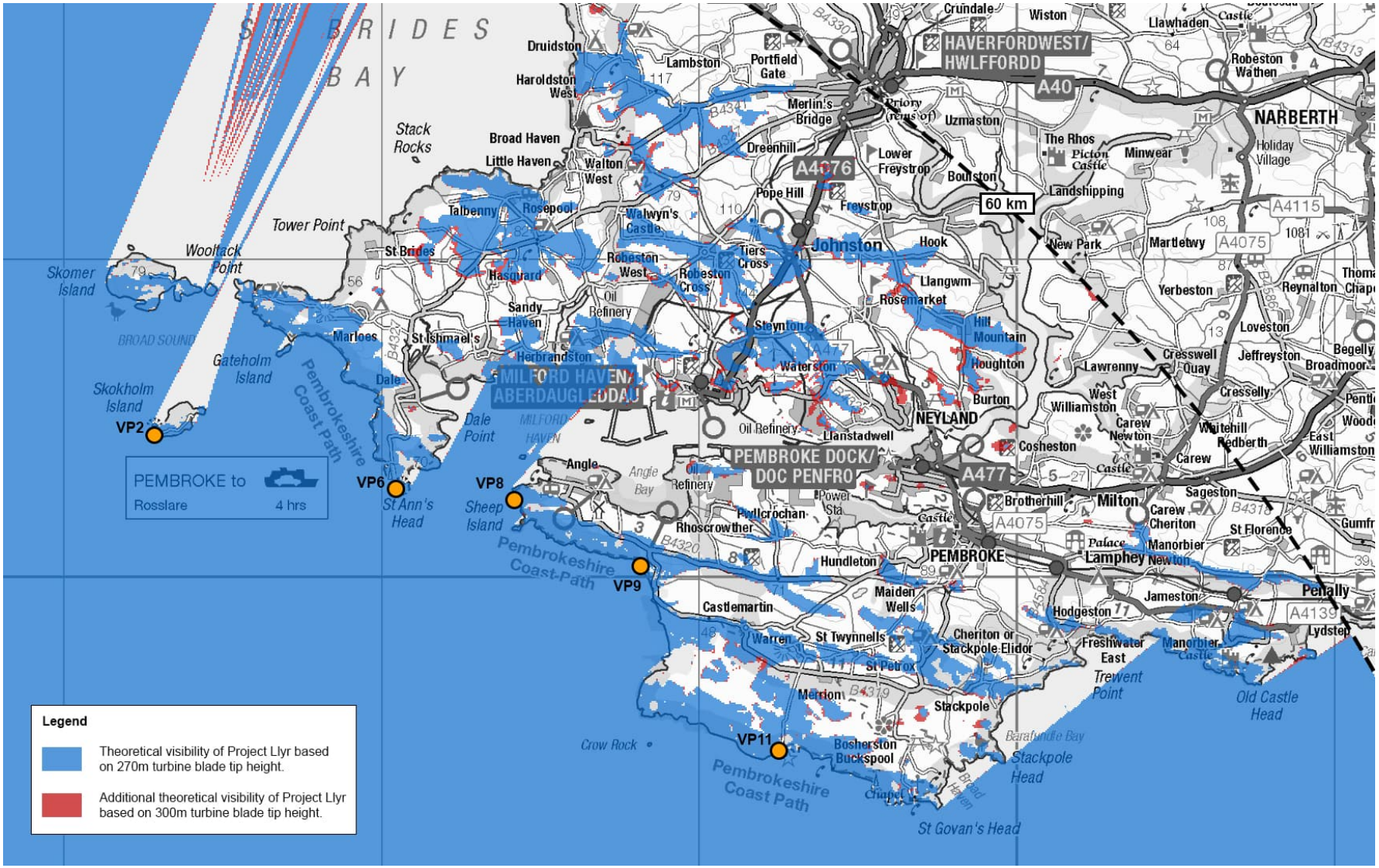
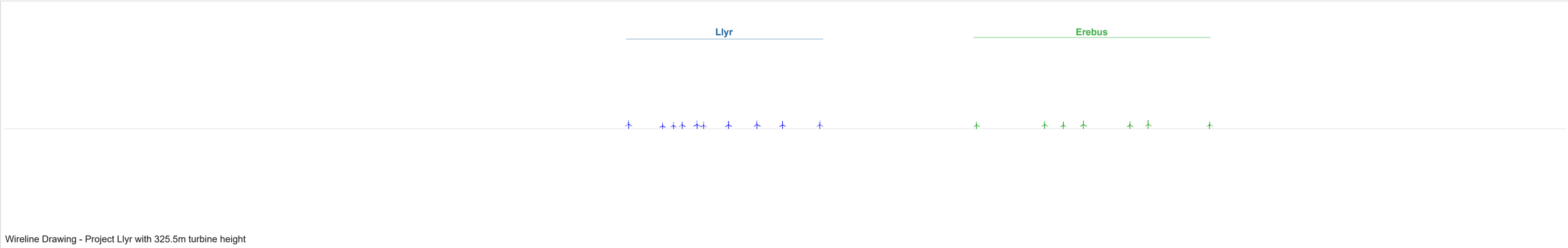
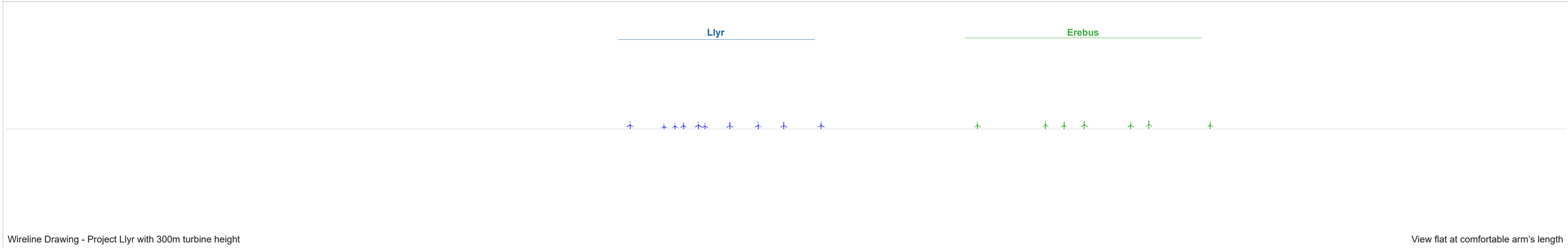


Figure 2: Comparison of ZTV of Project Llŷr at 300m and 270m tip heights



Wireline Drawing - Project Llyr with 325.5m turbine height

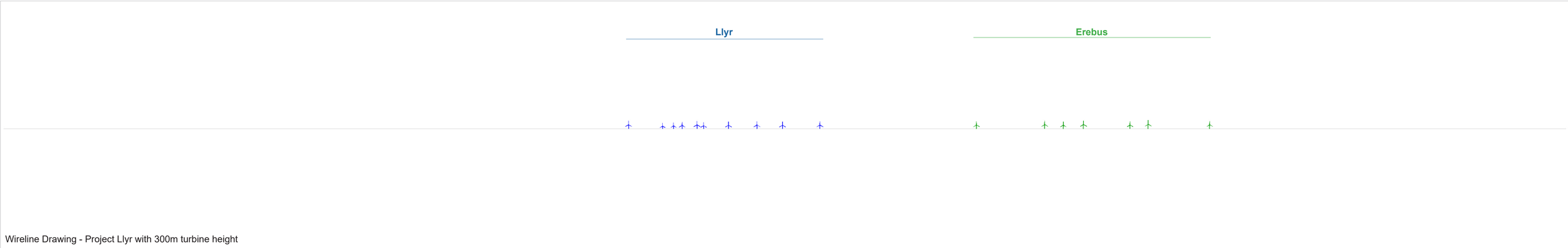


Wireline Drawing - Project Llyr with 300m turbine height

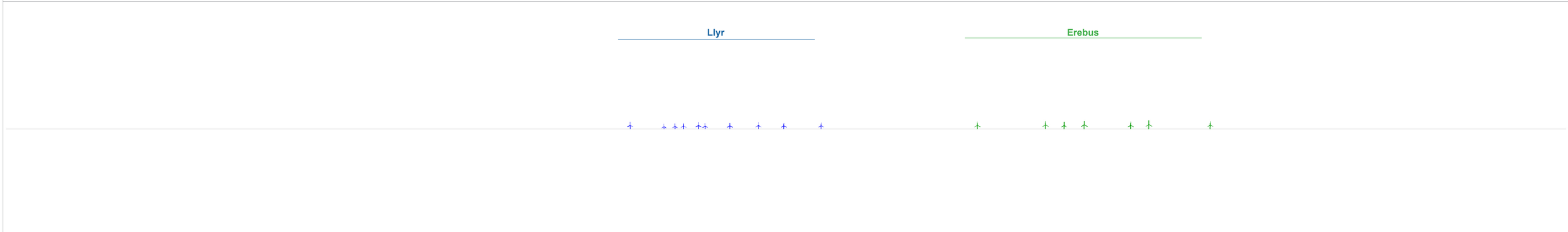
View flat at comfortable arm's length

Figure 3.1 - Comparative Wireline (325.5m and 300m tip heights)
Viewpoint 2: Skokholm Island

OS reference:	172922 E 204555 N	Horizontal field of view:	90° (cylindrical projection)
Eye Level:	37.5m AOD	Principal distance:	522 mm
Direction of view (Llyr):	200°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	36.0 km	Correct printed image size:	820 x 130mm



Wireline Drawing - Project Llyr with 300m turbine height

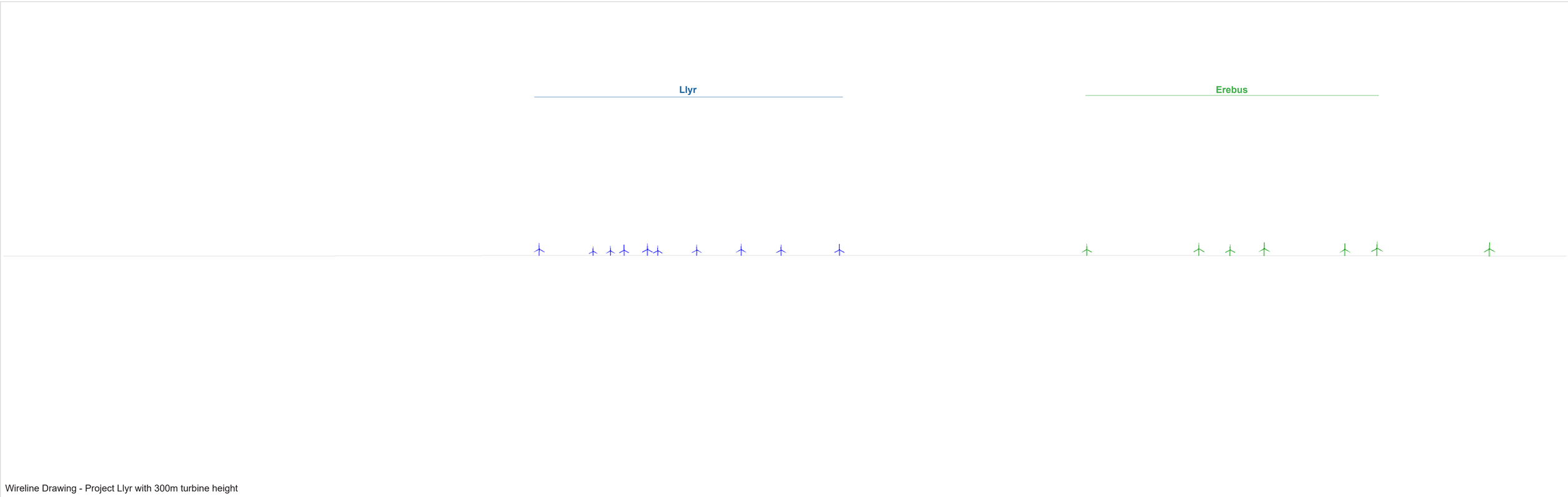


Wireline Drawing - Project Llyr with 270m turbine height

View flat at comfortable arm's length

Figure 3.2 - Comparative Wireline (300m and 270m tip heights)
Viewpoint 2: Skokholm Island

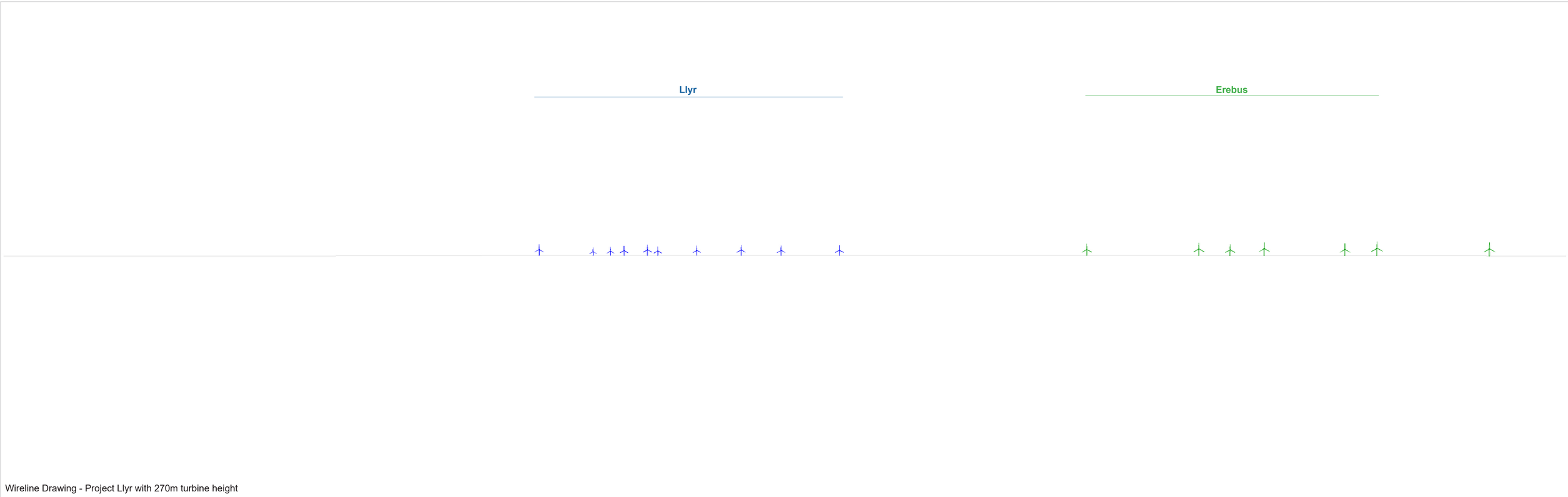
OS reference:	172922 E 204555 N	Horizontal field of view:	90° (cylindrical projection)
Eye Level:	37.5m AOD	Principal distance:	522 mm
Direction of view (Llyr):	200°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	36.0 km	Correct printed image size:	820 x 130mm



Wireline Drawing - Project Llyr with 300m turbine height

Figure 3.3 - Wireline Drawing
Viewpoint 2: Skokholm Island

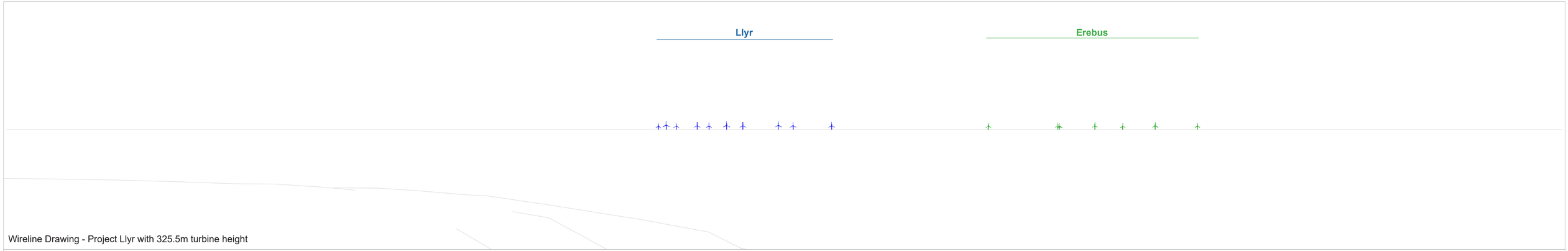
OS reference:	172922 E 204555 N	Horizontal field of view:	53.5° (planar projection)
Eye Level:	37.5m AOD	Principal distance:	812.5 mm
Direction of view (Llyr):	200°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	36.0 km	Correct printed image size:	820 x 260mm



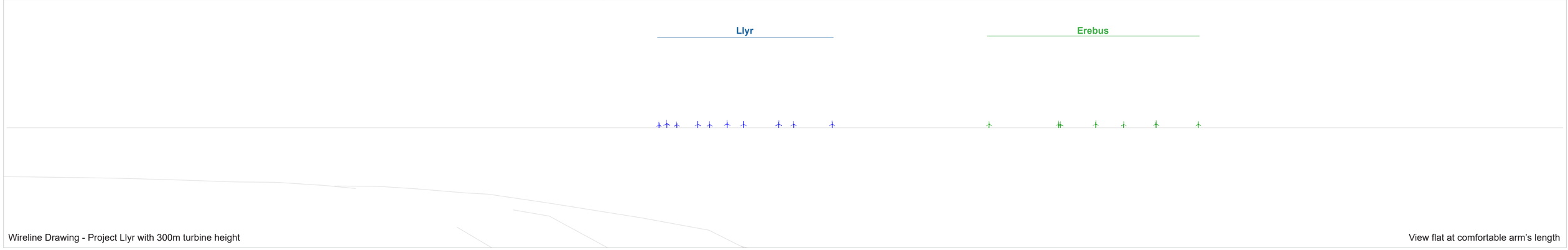
Wireline Drawing - Project Llyr with 270m turbine height

Figure 3.4 - Wireline Drawing
Viewpoint 2: Skokholm Island

OS reference:	172922 E 204555 N	Horizontal field of view:	53.5° (planar projection)
Eye Level:	37.5m AOD	Principal distance:	812.5 mm
Direction of view (Llyr):	200°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	36.0 km	Correct printed image size:	820 x 260mm



Wireline Drawing - Project Llyr with 325.5m turbine height

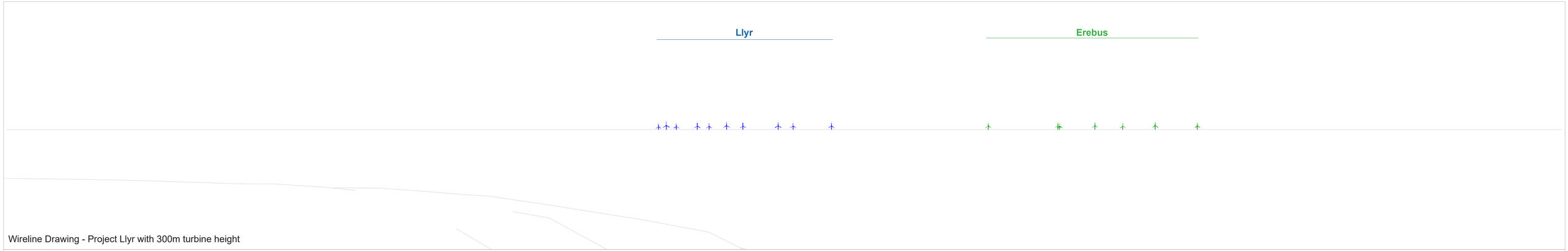


Wireline Drawing - Project Llyr with 300m turbine height

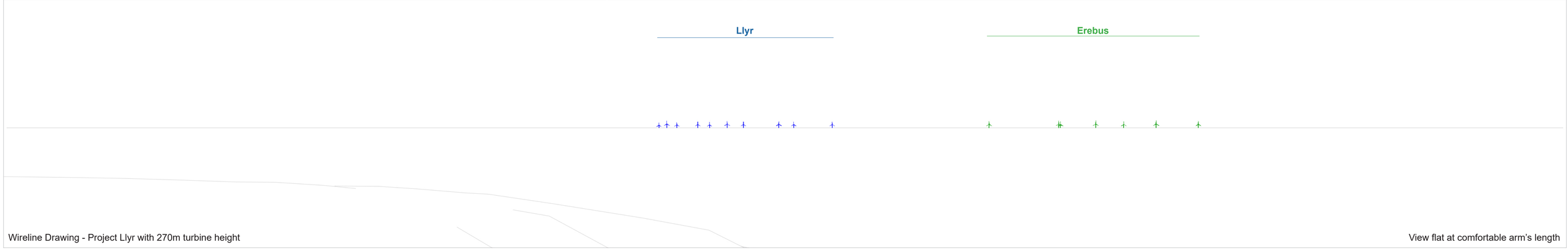
View flat at comfortable arm's length

Figure 4.1 - Comparative Wireline (325.5m and 300m tip heights)
Viewpoint 6: St Ann's Head

OS reference:	180606 E 202868 N	Horizontal field of view:	90° (cylindrical projection)
Eye Level:	46.3m AOD	Principal distance:	522 mm
Direction of view (Llyr):	210°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	37.3 km	Correct printed image size:	820 x 130mm



Wireline Drawing - Project Llyr with 300m turbine height



Wireline Drawing - Project Llyr with 270m turbine height

View flat at comfortable arm's length

Figure 4.2 - Comparative Wireline (300m and 270m tip heights)
Viewpoint 6: St Ann's Head

OS reference:	180606 E 202868 N	Horizontal field of view:	90° (cylindrical projection)
Eye Level:	46.3m AOD	Principal distance:	522 mm
Direction of view (Llyr):	210°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	37.3 km	Correct printed image size:	820 x 130mm

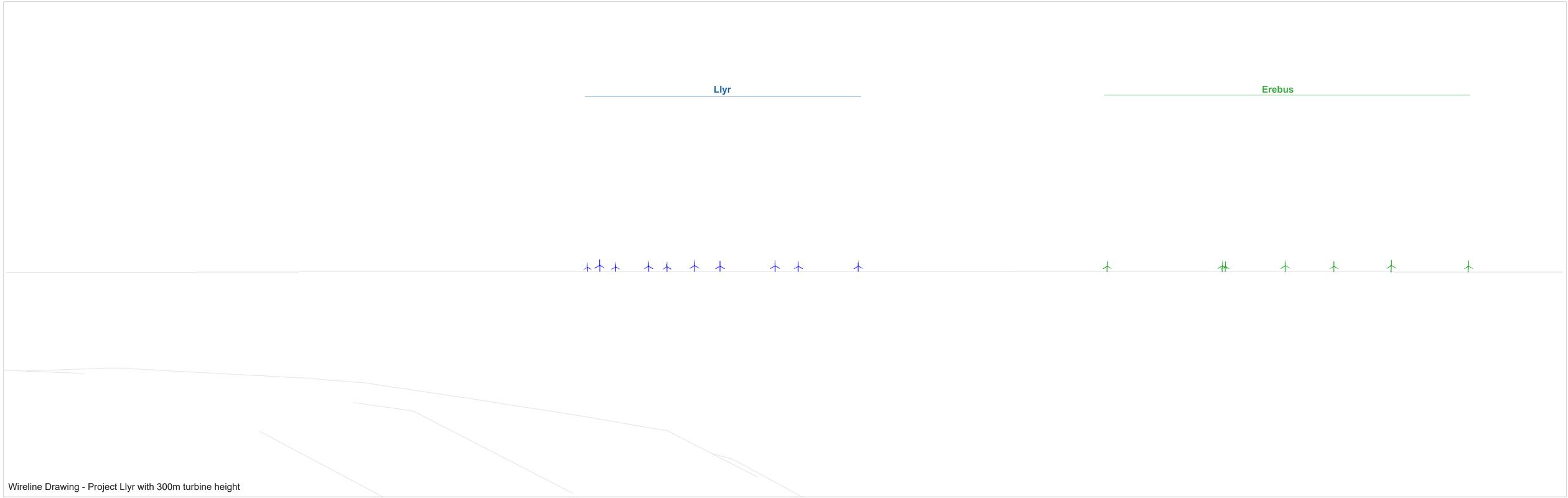


Figure 4.3 - Wireline Drawing
Viewpoint 6: St Ann's Head

OS reference:	180606 E 202868 N	Horizontal field of view:	53.5° (planar projection)
Eye Level:	46.3m AOD	Principal distance:	812.5 mm
Direction of view (Llyr):	210°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	37.3 km	Correct printed image size:	820 x 260mm

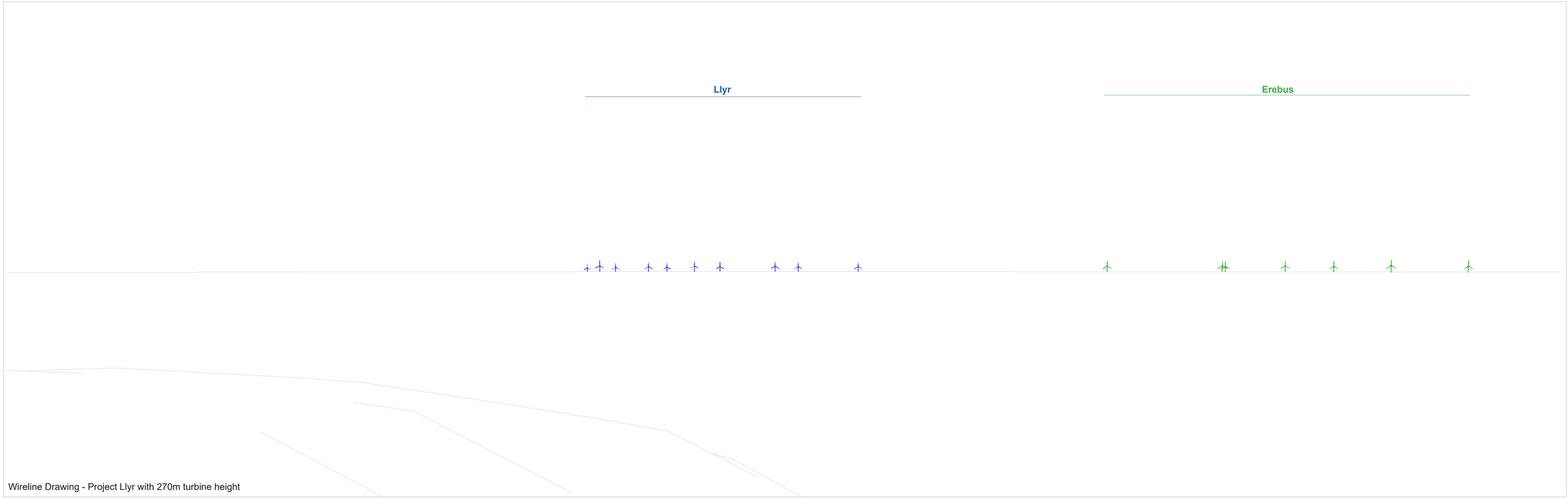
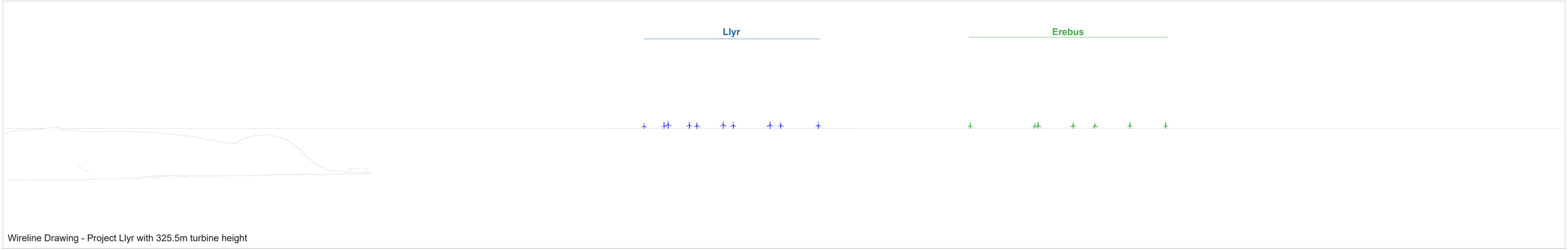
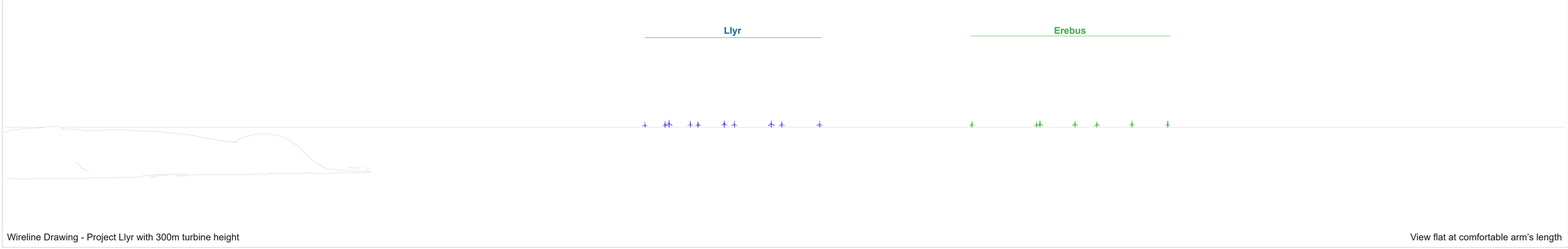


Figure 4.4 - Wireline Drawing
Viewpoint 6: St Ann's Head

OS reference:	180606 E 202868 N	Horizontal field of view:	53.5° (planar projection)
Eye Level:	46.3m AOD	Principal distance:	812.5 mm
Direction of view (Llyr):	210°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	37.3 km	Correct printed image size:	820 x 260mm



Wireline Drawing - Project Llyr with 325.5m turbine height

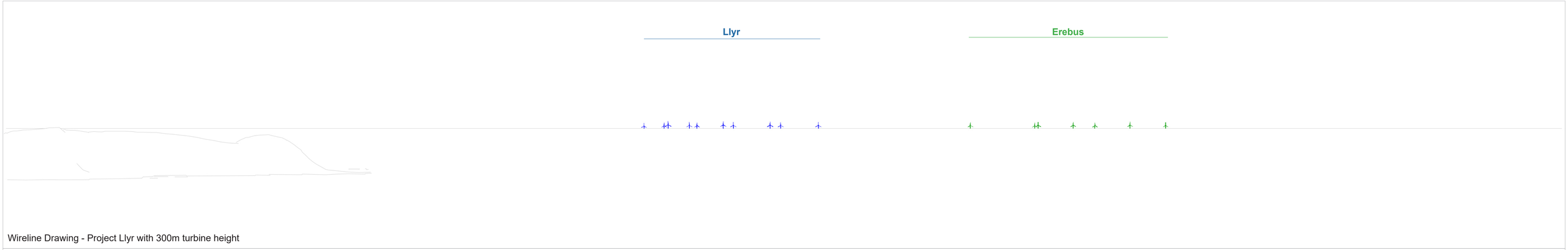


Wireline Drawing - Project Llyr with 300m turbine height

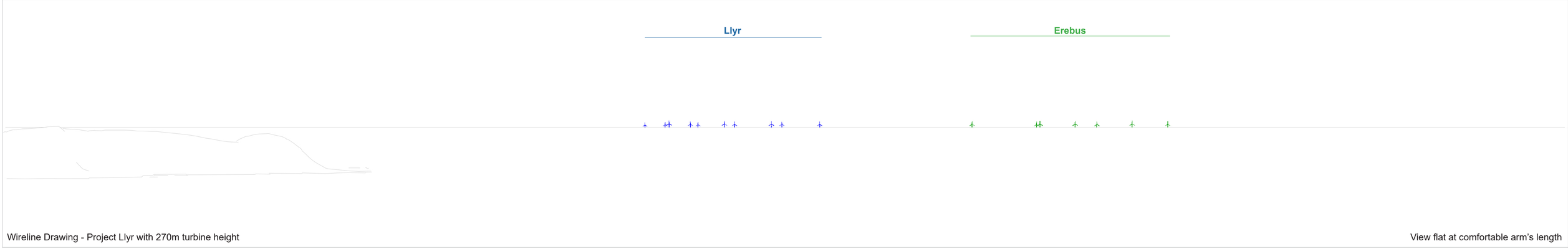
View flat at comfortable arm's length

Figure 5.1 - Comparative Wireline (325.5m and 300m tip heights)
Viewpoint 8: Castles Bay / Sheep Island

OS reference:	184315 E 202434 N	Horizontal field of view:	90° (cylindrical projection)
Eye Level:	40.7m AOD	Principal distance:	522 mm
Direction of view (Llyr):	215°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	38.8 km	Correct printed image size:	820 x 130mm



Wireline Drawing - Project Llyr with 300m turbine height

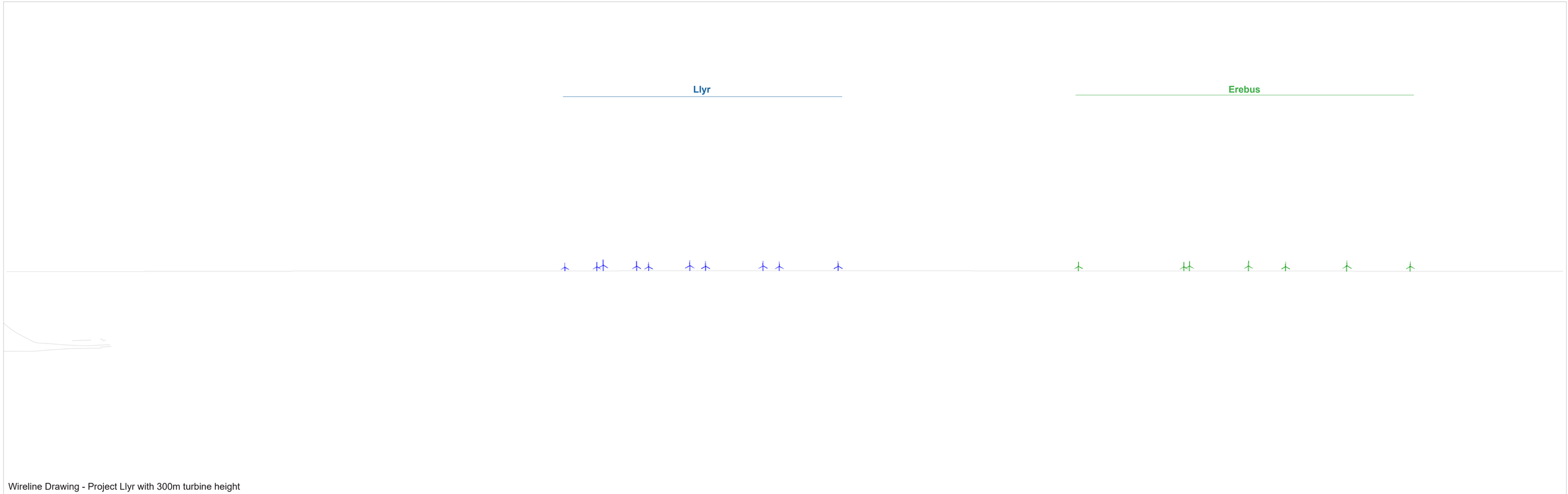


Wireline Drawing - Project Llyr with 270m turbine height

View flat at comfortable arm's length

Figure 5.2 - Comparative Wireline (300m and 270m tip heights)
Viewpoint 8: Castles Bay / Sheep Island

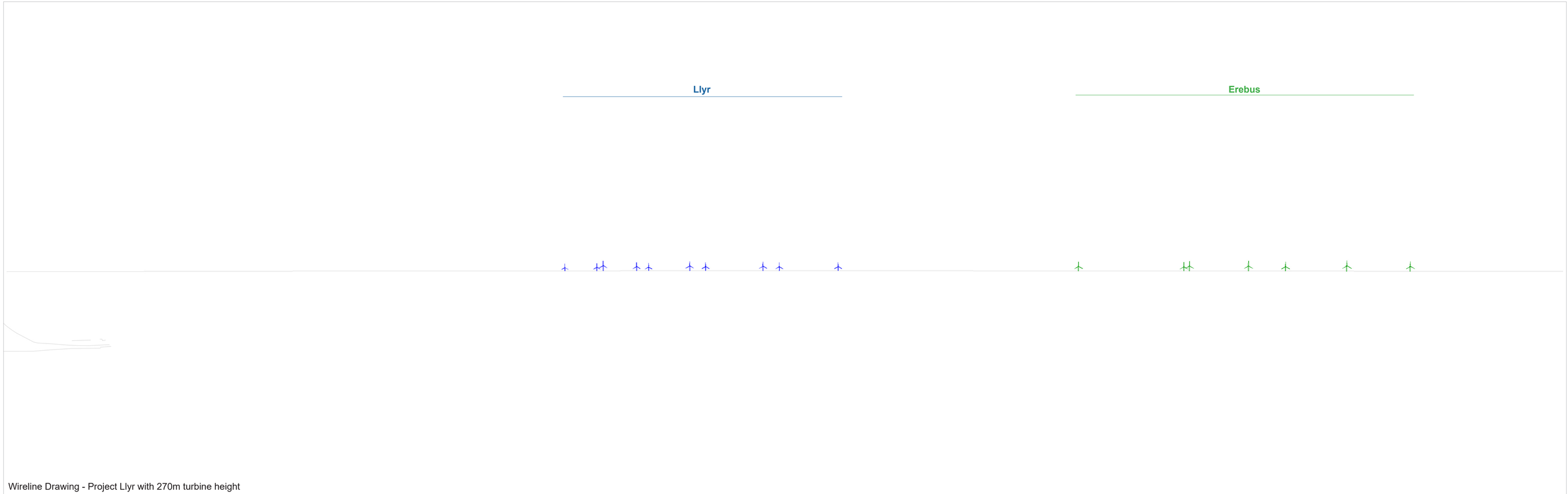
OS reference:	184315 E 202434 N	Horizontal field of view:	90° (cylindrical projection)
Eye Level:	40.7m AOD	Principal distance:	522 mm
Direction of view (Llyr):	215°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	38.8 km	Correct printed image size:	820 x 130mm



Wireline Drawing - Project Llyr with 300m turbine height

Figure 5.3 - Wireline Drawing
Viewpoint 8: Castles Bay / Sheep Island

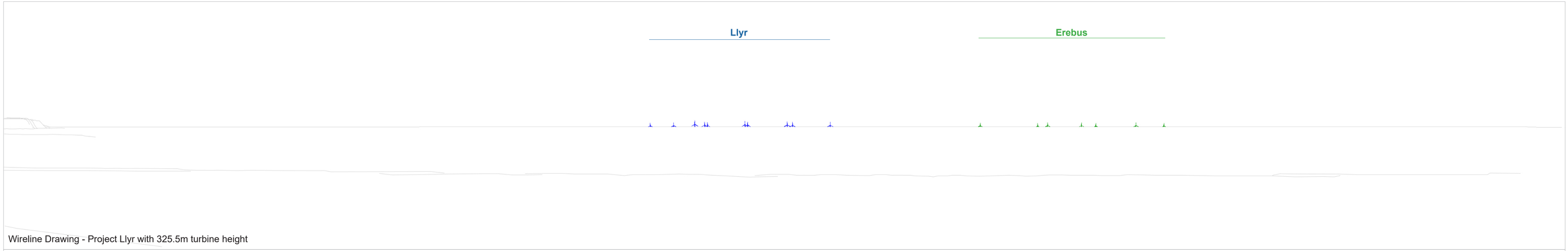
OS reference:	184315 E 202434 N	Horizontal field of view:	53.5° (planar projection)
Eye Level:	40.7m AOD	Principal distance:	812.5 mm
Direction of view (Llyr):	215°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	38.8 km	Correct printed image size:	820 x 260mm



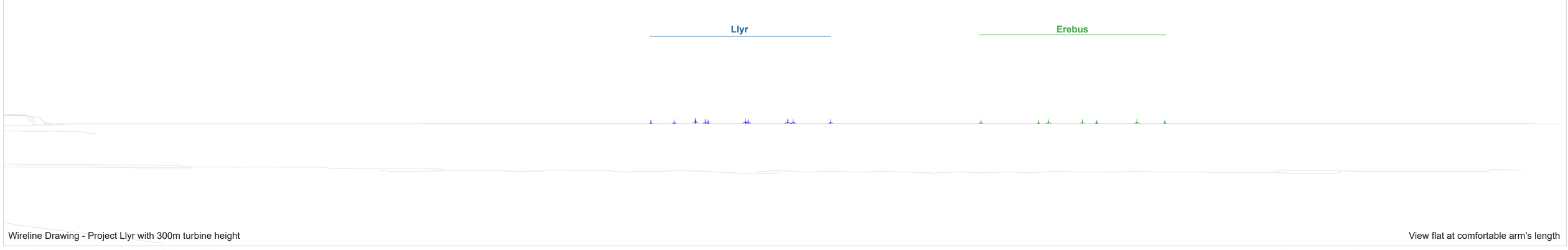
Wireline Drawing - Project Llyr with 270m turbine height

Figure 5.4 - Wireline Drawing
Viewpoint 8: Castles Bay / Sheep Island

OS reference:	184315 E 202434 N	Horizontal field of view:	53.5° (planar projection)
Eye Level:	40.7m AOD	Principal distance:	812.5 mm
Direction of view (Llyr):	215°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	38.8 km	Correct printed image size:	820 x 260mm



Wireline Drawing - Project Llyr with 325.5m turbine height

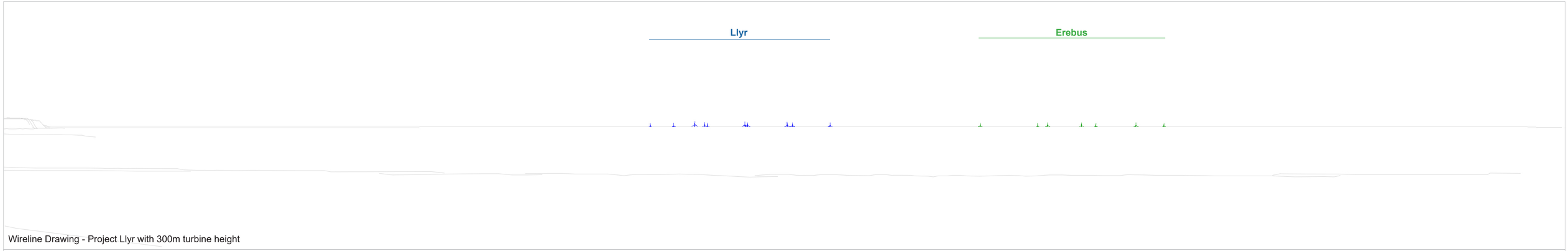


Wireline Drawing - Project Llyr with 300m turbine height

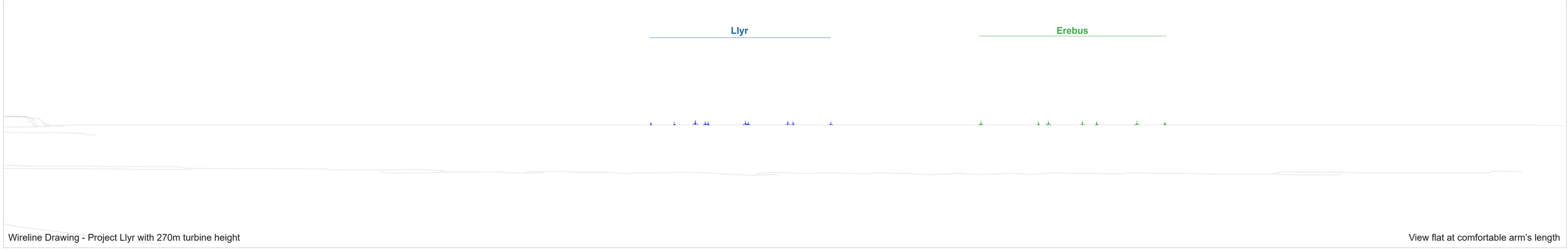
View flat at comfortable arm's length

Figure 6.1 - Comparative Wireline (325.5m and 300m tip heights)
Viewpoint 9: Freshwater West Beach

OS reference:	188260 E 200278 N	Horizontal field of view:	90° (cylindrical projection)
Eye Level:	7.3m AOD	Principal distance:	522 mm
Direction of view (Llyr):	220°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	36.4 km	Correct printed image size:	820 x 130mm



Wireline Drawing - Project Llyr with 300m turbine height

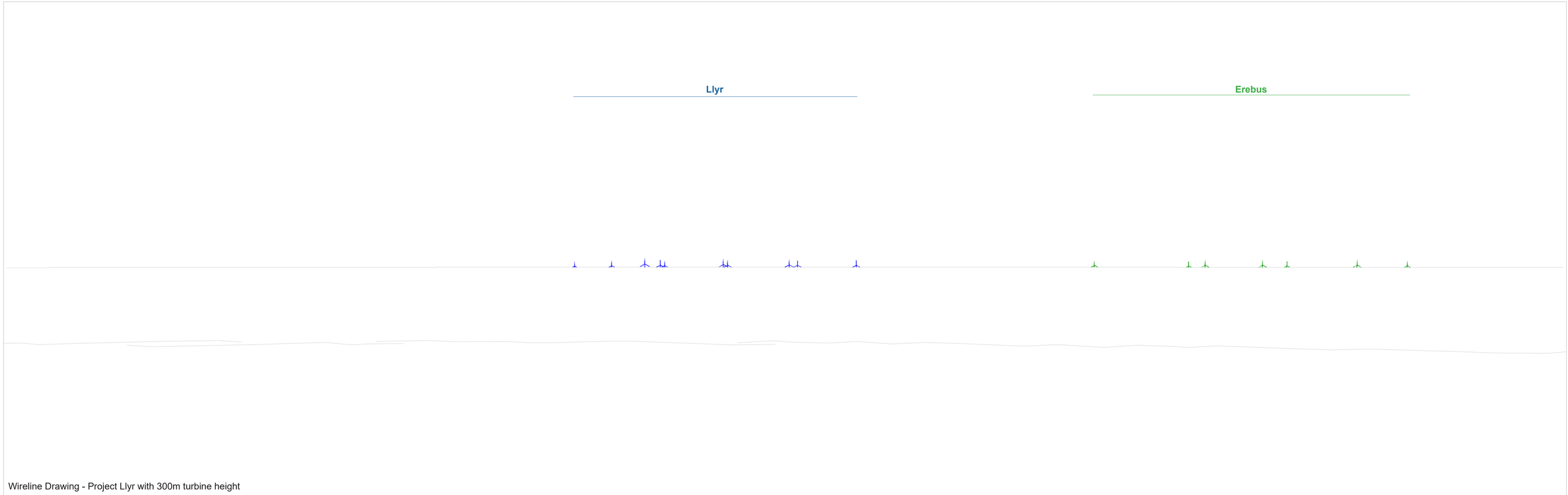


Wireline Drawing - Project Llyr with 270m turbine height

View flat at comfortable arm's length

Figure 6.2 - Comparative Wireline (300m and 270m tip heights)
Viewpoint 9: Freshwater West Beach

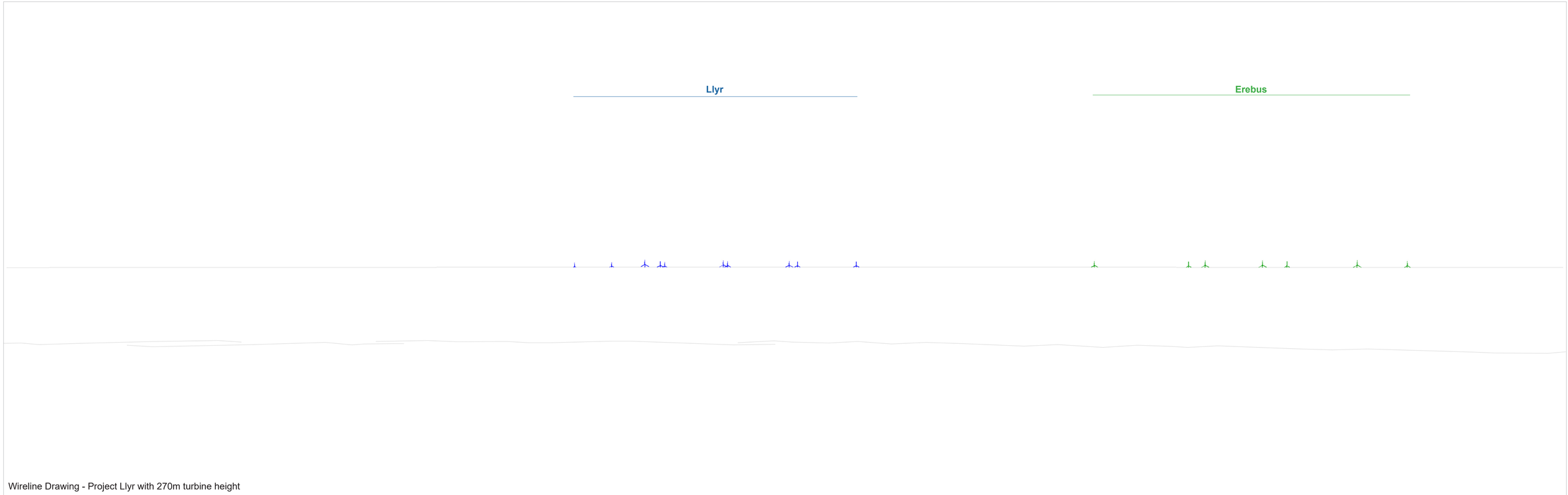
OS reference:	188260 E 200278 N	Horizontal field of view:	90° (cylindrical projection)
Eye Level:	7.3m AOD	Principal distance:	522 mm
Direction of view (Llyr):	220°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	36.4 km	Correct printed image size:	820 x 130mm



Wireline Drawing - Project Llyr with 300m turbine height

Figure 6.3 - Wireline Drawing
Viewpoint 9: Freshwater West Beach

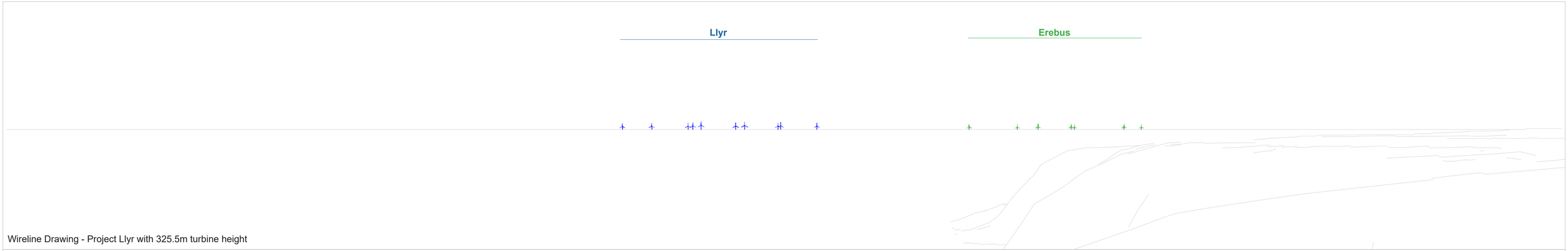
OS reference:	188260 E 200278 N	Horizontal field of view:	53.5° (planar projection)
Eye Level:	7.3m AOD	Principal distance:	812.5 mm
Direction of view (Llyr):	220°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	36.4 km	Correct printed image size:	820 x 260mm



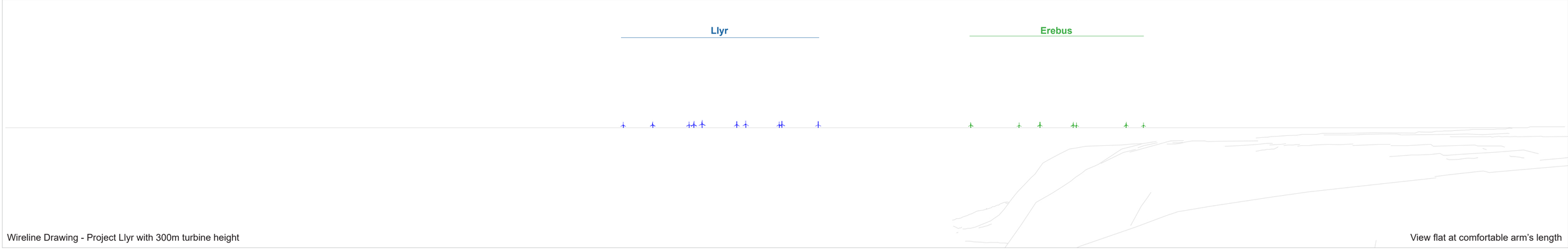
Wireline Drawing - Project Llyr with 270m turbine height

Figure 6.4 - Wireline Drawing
Viewpoint 9: Freshwater West Beach

OS reference:	188260 E 200278 N	Horizontal field of view:	53.5° (planar projection)
Eye Level:	7.3m AOD	Principal distance:	812.5 mm
Direction of view (Llyr):	220°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	36.4 km	Correct printed image size:	820 x 260mm



Wireline Drawing - Project Llyr with 325.5m turbine height

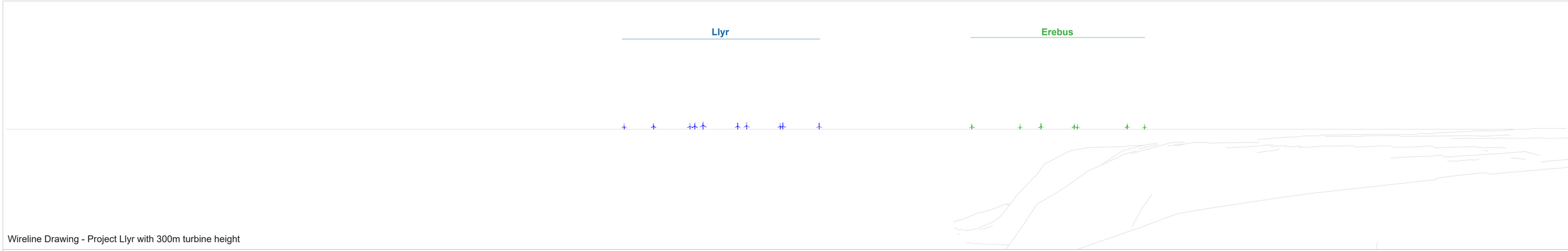


Wireline Drawing - Project Llyr with 300m turbine height

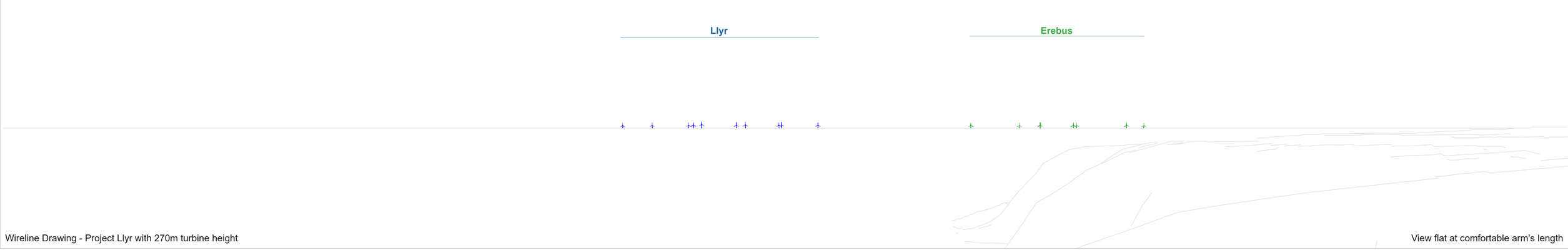
View flat at comfortable arm's length

Figure 7.1 - Comparative Wireline (325.5m and 300m tip heights)
Viewpoint 11: Elegug Stacks

OS reference:	192385 E 194458 N	Horizontal field of view:	90° (cylindrical projection)
Eye Level:	48.725m AOD	Principal distance:	522 mm
Direction of view (Llyr):	230°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	38.2 km	Correct printed image size:	820 x 130mm



Wireline Drawing - Project Llyr with 300m turbine height

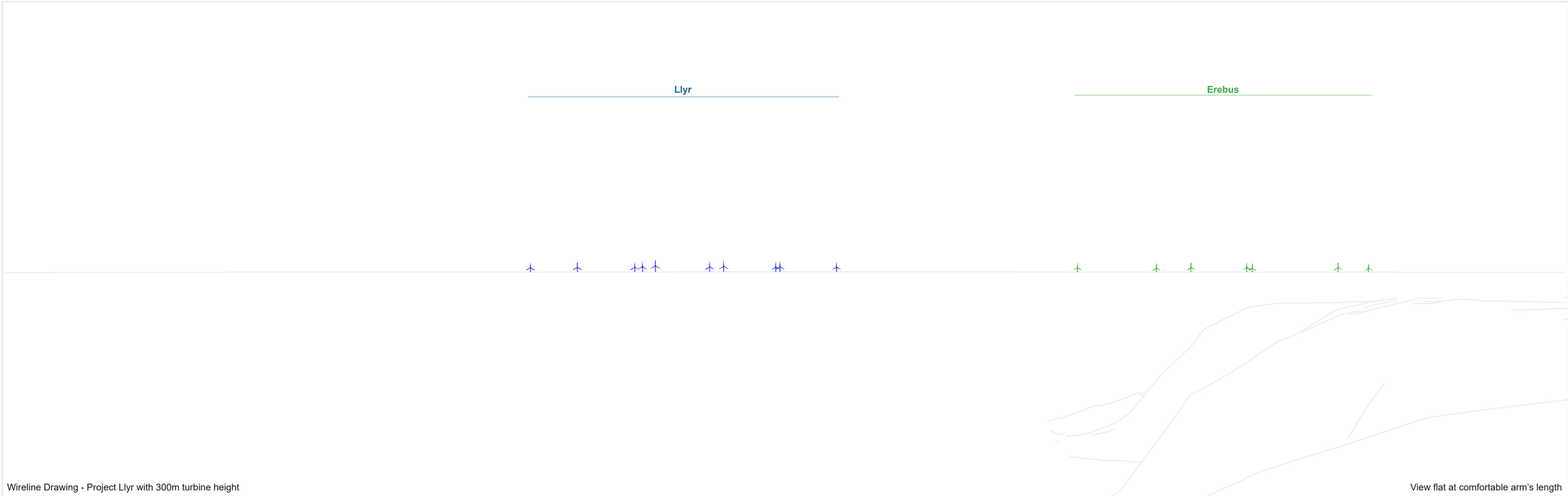


Wireline Drawing - Project Llyr with 270m turbine height

View flat at comfortable arm's length

Figure 7.2 - Comparative Wireline (300m and 270m tip heights)
Viewpoint 11: Elegug Stacks

OS reference:	192385 E 194458 N	Horizontal field of view:	90° (cylindrical projection)
Eye Level:	48.725m AOD	Principal distance:	522 mm
Direction of view (Llyr):	230°	Paper size:	841 x 297 mm (half A1)
Nearest turbine:	38.2 km	Correct printed image size:	820 x 130mm



Wireline Drawing - Project Llyr with 300m turbine height

View flat at comfortable arm's length

Figure 7.3 - Wireline Drawing
Viewpoint 11: Elegug Stacks

OS reference:	192385 E 194458 N	Horizontal field of view:	53.5° (planar projection)
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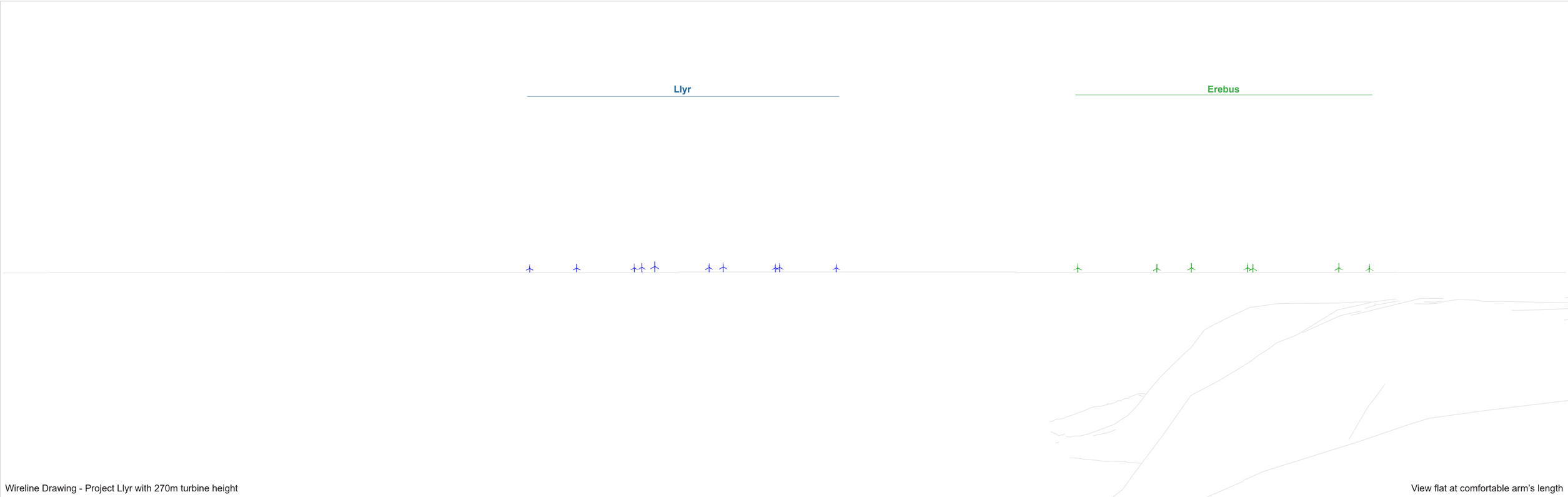

Wireline Drawing - Project Llyr with 270m turbine height

View flat at comfortable arm's length

Figure 7.4 - Wireline Drawing
Viewpoint 11: Elegug Stacks

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