



AI#2 Appendix G

LVIA Technical Note



Technical note:

Landscape and Visual Impact Assessment

1. Introduction

The purpose of this Technical Note (TN) is to provide a verification of the Landscape and Visual Impact Assessment (LVIA) reported in the Environmental Impact Assessment Report 2019 (EIAR 2019) in response to the updated layout of the proposed Stornoway Wind Farm (hereafter referred to as the Revised Development).

1.1 The Revised Development (AI#2 Report)

- 1.1.1 The proposed section 36, Stornoway Wind Farm (Proposed development) is described in Chapter 4 of the Additional Information submitted in March 2020 (the 'AI March 2020' and 'AI Chapter 4') and comprises 35 turbines (25 turbines with a maximum turbine height of up to 180m to blade tip and 10 turbines with a maximum turbine height of up to 156m to blade tip).
- 1.1.2 The Revised Development comprises 33 turbines (24 turbines with a maximum turbine height of up to 180m to blade tip, and 9 turbines with a maximum turbine height of up to 156m to blade tip). The main changes are the omission of turbines 24 and 34, and micro-siting of turbines 5, 11, 13, 14, 15, 18, 19, 26, 27 and 32 to mitigate effects on peat. There are no changes to the turbine heights as set out in the EIA Report and AI 2020. Further details of the Revised Development are provided in AI#2 Report.
- 1.1.3 This TN is accompanied by comparative wirelines (illustrating the Proposed and Revised Developments) from key design viewpoints including viewpoints:
- 2 – Lewis War Memorial;
 - 4 – Cnoc na Croich (Gallows Hill);
 - 5 – Beinn Mholach;
 - 7 – A857 between Stornoway and Barvas;
 - 24 – Upper Newvalley; and
 - 25 – Newmarket.

1.2 Design Principles of Revised Development

- 1.2.1 Although the design of the Revised Development is ornithology led, a review of the landscape design principles set out in Section 6.5 of the EIAR LVIA has been undertaken against current Nature Scot and Capacity Study guidance, which continue to remain valid for the Revised Development.

1.2.2 The Revised Development continues to maintain all the landscape design principles set out in the EIAR LVIA, in particular the following:

- Simple and cohesive wind farm composition within the Boggy Moorland (Boggy Moor 1) LCT either on a solus basis or cumulatively, taking account of the existing and consented wind farm development;
- Turbines set-back as far as practical from the outer edge of Greater Stornoway;
- A minimum 1,800m set back from residential properties;
- The vertical and horizontal scale of the turbines has been limited to appear, as far as practical, compatible with the scale of the landscape;
- The turbine heights of turbines 7, 15, 16, 19, 20, 21, 29, 30 and 33 have been maintained to a maximum of 156m to blade tip, located in the east of the Development Site, to reduce their impact when viewed from Stornoway (including Greater Stornoway) and other receptors in the east and northeast;
- The Revised Development continues to maintain very limited visual effects from the Standing Stones of Calanais visitor attraction; and
- The Revised Development continues to avoid significant cumulative effects on the landscape character and the special qualities of the South Lewis, Harris and North Uist NSA.

1.2.3 In comparison with the Proposed Development, the Revised Development has slightly reduced the overall geographical footprint, particularly with the omission of turbine 34.

1.2.4 Whilst turbines 25 and 33 appear as potential outliers in viewpoints 4, 5 and 7, the overall horizontal field of view (FoV) remains the same as the Proposed Development, and the Revised Development does not extend this FoV from any of the viewpoints.

1.2.5 The removal of turbine 34 has particularly increased the distance between the Revised Development and the western edges of Newmarket and Upper Newvalley which was the closest turbine to these settlements. This has slightly reduced the overall vertical extent of the Revised Development in these views.

1.3 Verification of LVIA

1.3.1 The EIAR LVIA of the Proposed Development has been reconsidered in light of the Revised Development, and a summary of the likely effects is reported in this Technical Note.

Predicted Landscape Effects

1.3.2 There would be **no change** to the predicted landscape effects (landscape character and designated landscapes) of the Revised Development as set out in Section 6.7 of the EIAR LVIA.

Predicted Visual Effects

- 1.3.3 A verification of the viewpoints analysis indicates that the threshold of potentially significant landscape and visual effects of the Revised Development remains the same in comparison to the Proposed Development.
- 1.3.4 There would be **no change** to the predicted visual effects on settlements and residential properties within the study area as set out in Section 6.8 (Table 6.13) and Appendix 6C of the EIAR LVIA.
- 1.3.5 There would be **no change** to the predicted visual effects on transport routes within the study area as set out in Section 6.8 (Tables 6.14-17) of the EIAR LVIA.
- 1.3.6 There would be **no change** to the predicted visual effects on recreational routes within the study area as set out in Section 6.8 (Tables 6.18-19) of the EIAR LVIA.
- 1.3.7 There would be **no change** to the predicted visual effects on tourist destinations within the study area as set out in Section 6.8 (Tables 6.20) of the EIAR LVIA.
- 1.3.8 There would be **no change** to the predicted visual effects on anglers as set out in Section 6.8 of the EIAR LVIA.

1.4 Conclusion

- 1.4.1 The Revised Development continues to maintain all the landscape design principles set out in the EIAR LVIA. In comparison with the Proposed Development, the Revised Development has slightly reduced the overall geographical footprint, particularly with the omission of turbine 34. The overall horizontal field of view (FoV) remains the same as the Proposed Development, and the Revised Development does not extend this FoV from any of the viewpoints. The removal of turbine 34 has particularly increased the distance between the Revised Development and the western edges of Newmarket and Upper Newvalley which was the closest turbine to these settlements. This has slightly reduced the overall vertical extent of the Revised Development in these views.
- 1.4.2 In summary, there would be **no change** to the landscape and visual effects as a result of the Revised Development. The assessment results indicate that the threshold of potentially significant landscape and visual effects of the Revised Development remains the same in comparison to the Proposed Development.

Issued by

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Rohan Sinha

Approved by

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Sue Birnie

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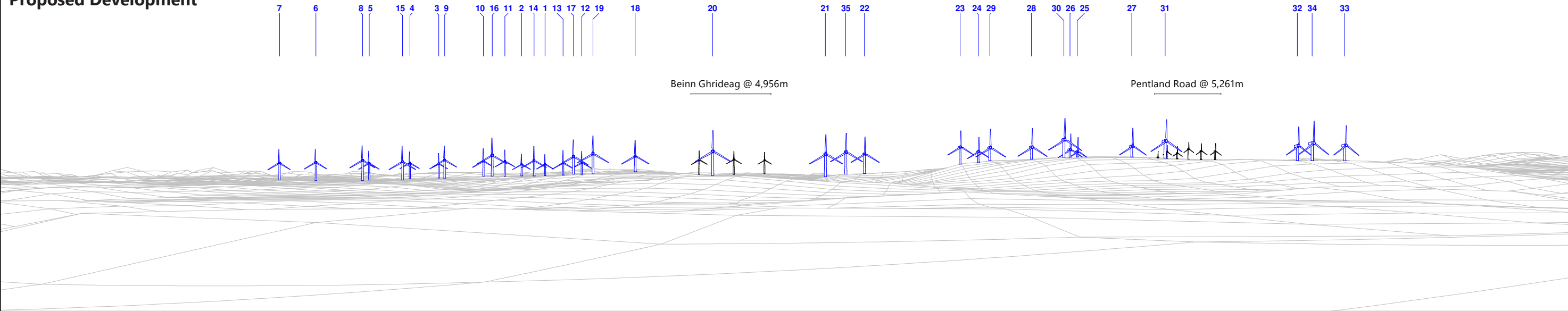


Figures

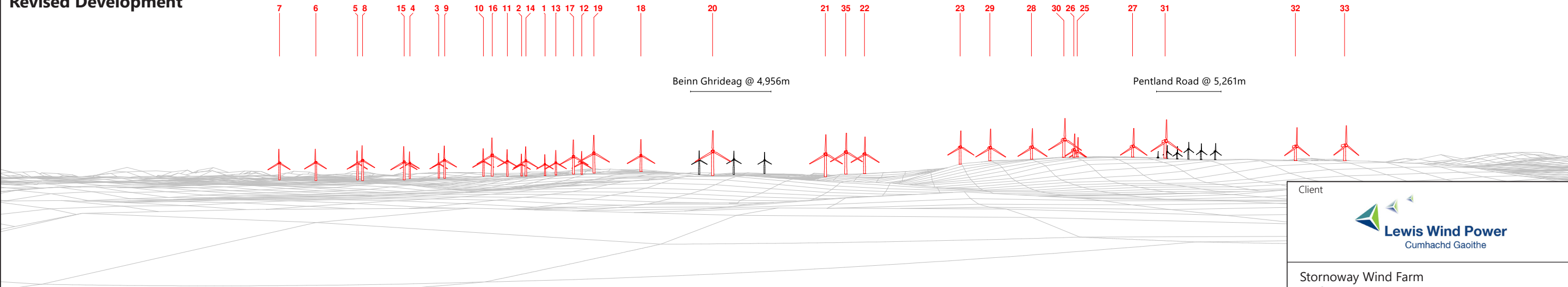
Existing View



Proposed Development



Revised Development



View flat at a comfortable arm's length

- Wind Farm Key:
- Proposed Development
 - Revised Development
 - Existing
 - Consented

OS reference:	E141 716, N934 331	Horizontal field of view:	90° (cylindrical projection)	Camera:	Canon EOS 5D Mk2
Eye level:	75.5m AOD	Principal distance:	522mm	Lens:	50mm (Canon EF 50mm f/1.8)
Direction of view:	262°	Paper size:	420mm x 297mm (A3)	Camera height:	1.5m AGL
Nearest turbine:	3,035m	Correct printed image size:	390 x 82mm	Date and time:	29/10/2018 14:50



Stornoway Wind Farm
AI#2 Report

Comparative Wireframes
Viewpoint 2: Lewis War Memorial

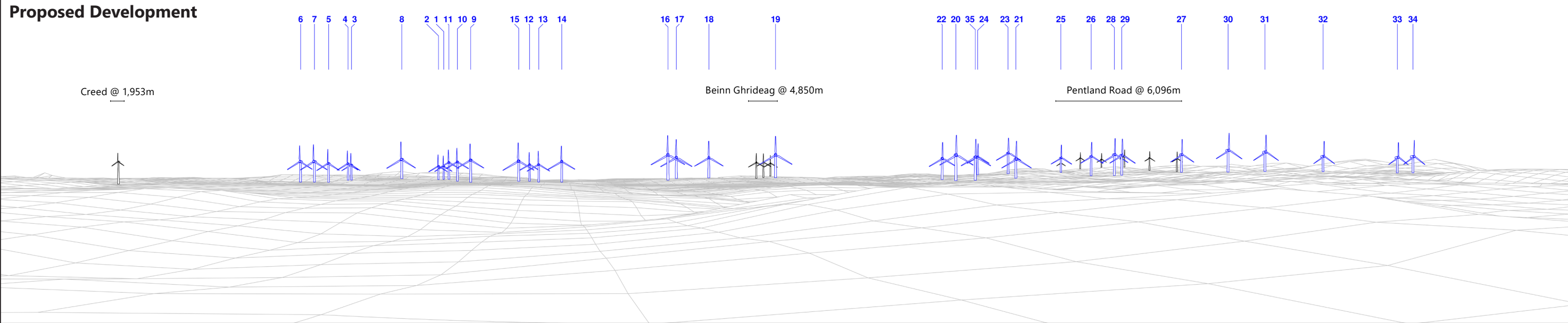
October 2020



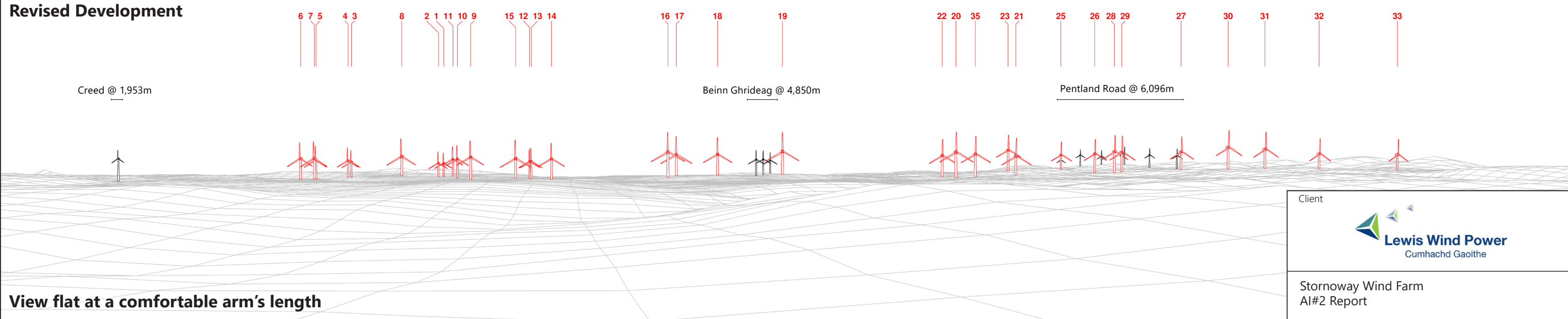
Existing View



Proposed Development



Revised Development



View flat at a comfortable arm's length

- Wind Farm Key:
- Proposed Development
 - Revised Development
 - Existing
 - Consented

OS reference:	E141 648 N932 337	Horizontal field of view:	90° (cylindrical projection)	Camera:	Nikon D810
Eye level:	63.5m AOD	Principal distance:	522mm	Lens:	50mm (Sigma 50mm 1:2.8 DG)
Direction of view:	288°	Paper size:	420mm x 297mm (A3)	Camera height:	1.5m AGL
Nearest turbine:	3,401m	Correct printed image size:	390 x 82mm	Date and time:	11/11/2018 11:10

Client



Lewis Wind Power
Cumhachd Gaoithe

Stornoway Wind Farm
AI#2 Report

Comparative Wireframes
Viewpoint 4: Cnoc na Croich (Gallows Hill)

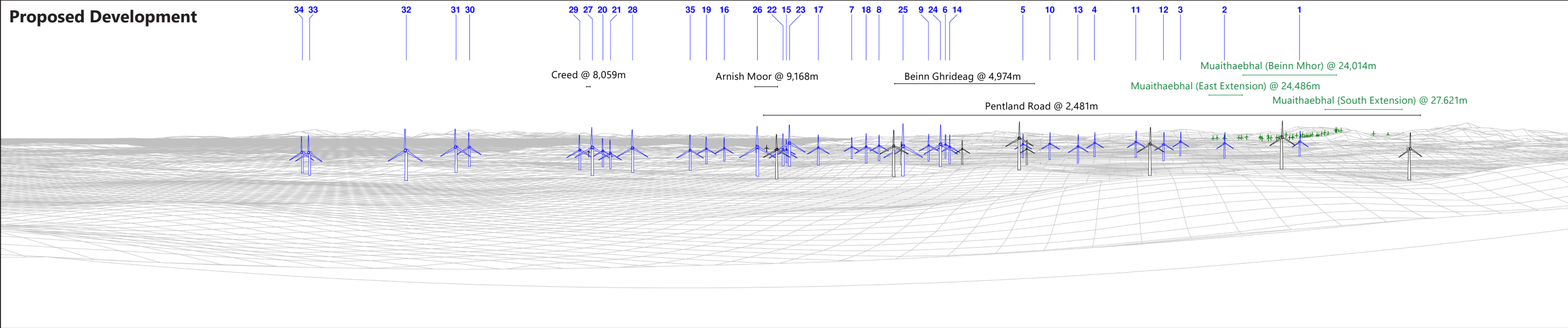
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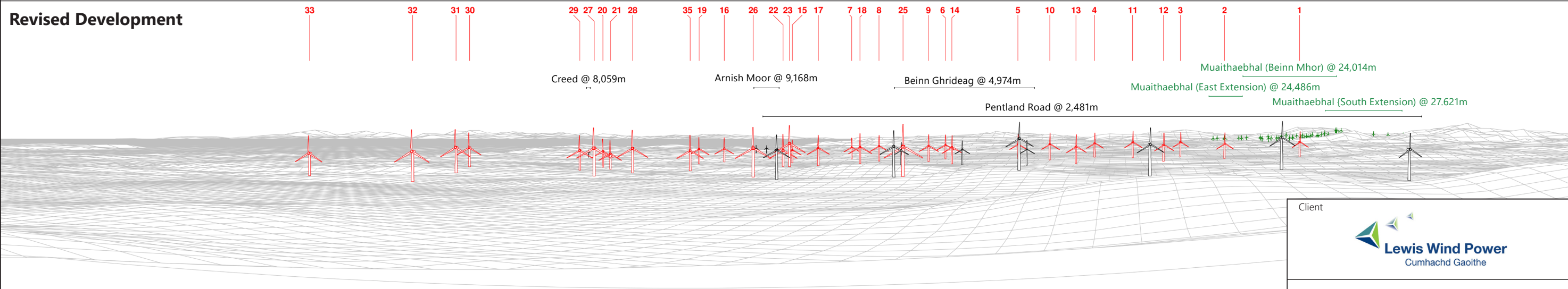
Existing View



Proposed Development



Revised Development



View flat at a comfortable arm's length

- Wind Farm Key:
- Proposed Development
 - Revised Development
 - Existing
 - Consented

OS reference: E135 770, N938 416
Eye level: 286.5m AOD
Direction of view: 157°
Nearest turbine: 3,324m

Horizontal field of view: 90° (cylindrical projection)
Principal distance: 522mm
Paper size: 420mm x 297mm (A3)
Correct printed image size: 390 x 82mm

Camera: Nikon D810
Lens: 50mm (Sigma 50mm 1:2.8 DG)
Camera height: 1.5m AGL
Date and time: 26/11/2018 14:30

Client



Stornoway Wind Farm
AI#2 Report

Comparative Wireframes
Viewpoint 5: Beinn Mholach

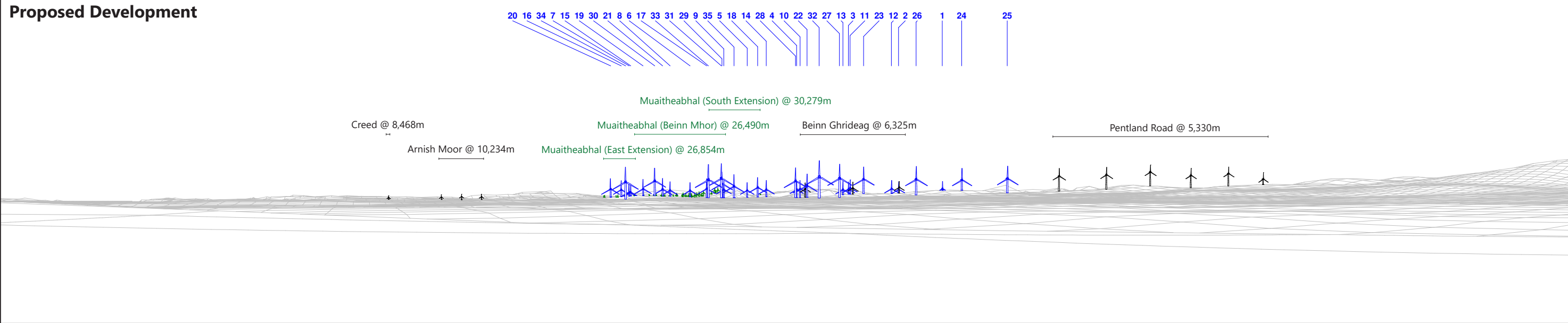
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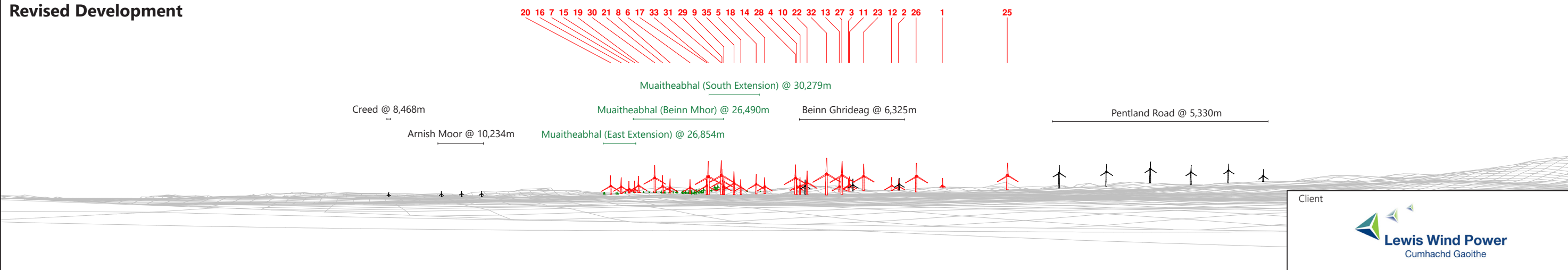
Existing View



Proposed Development



Revised Development



View flat at a comfortable arm's length

- Wind Farm Key:
- Proposed Development
 - Revised Development
 - Existing
 - Consented

OS reference: E140 128, N939 953
Eye level: 114.5m AOD
Direction of view: 217°
Nearest turbine: 4,462m

Horizontal field of view: 90° (cylindrical projection)
Principal distance: 522mm
Paper size: 420mm x 297mm (A3)
Correct printed image size: 390 x 82mm

Camera: Nikon D810
Lens: 50mm (Sigma 50mm 1:2.8 DG)
Camera height: 1.5m AGL
Date and time: 01/11/2018 10:00

Client



Lewis Wind Power
Cumhachd Gaoithe

Stornoway Wind Farm
AI#2 Report

Comparative Wireframes
Viewpoint 7: A857 between Stornoway
and Barvas

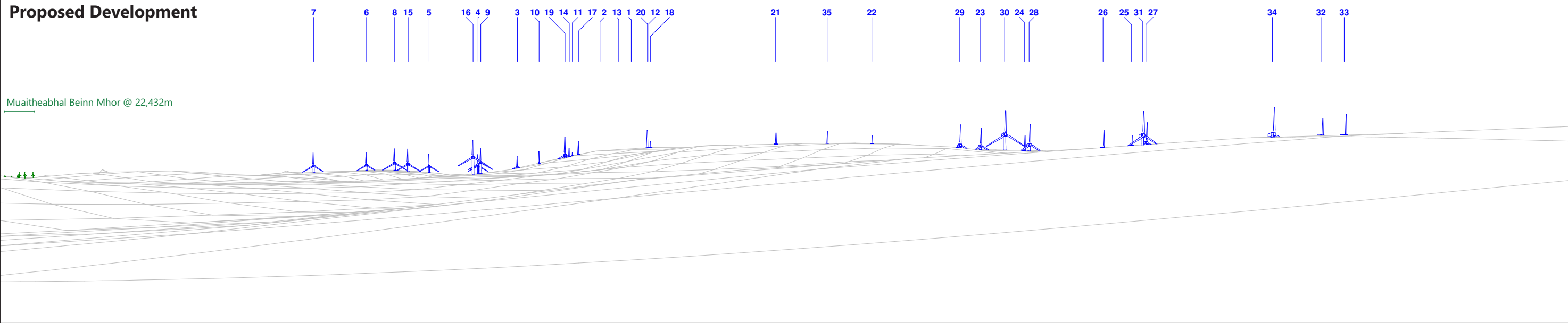
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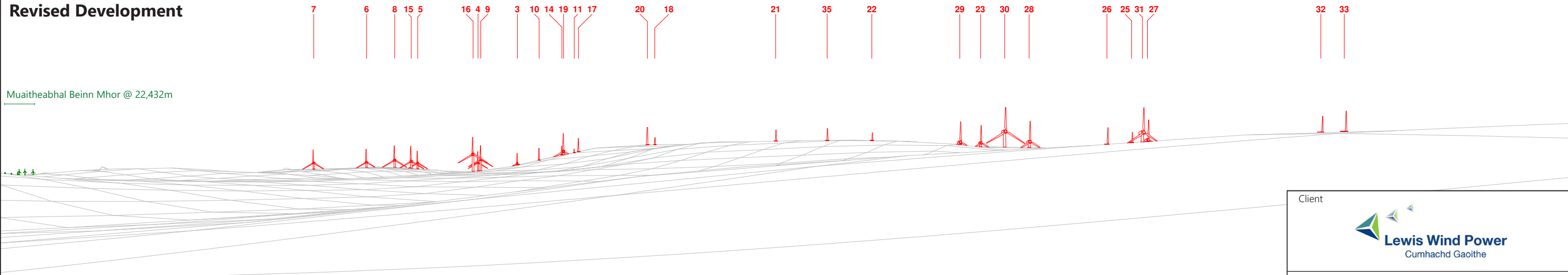
Existing View



Proposed Development



Revised Development



View flat at a comfortable arm's length

- Wind Farm Key:
- Proposed Development
 - Revised Development
 - Existing
 - Consented

OS reference: E141 415, N935 136
Eye level: 51.5m AOD
Direction of view: 237°
Nearest turbine: 2,527m

Horizontal field of view: 90° (cylindrical projection)
Principal distance: 522mm
Paper size: 420mm x 297mm (A3)
Correct printed image size: 390 x 82mm

Camera: Canon EOS 5D Mk2
Lens: 50mm (Canon EF 50mm f/1.8)
Camera height: 1.5m AGL
Date and time: 29/10/2018 14:20

Client



Lewis Wind Power
Cumhachd Gaoithe

Stornoway Wind Farm
AI#2 Report

Comparative Wireframes
Viewpoint 24: Upper Newvalley

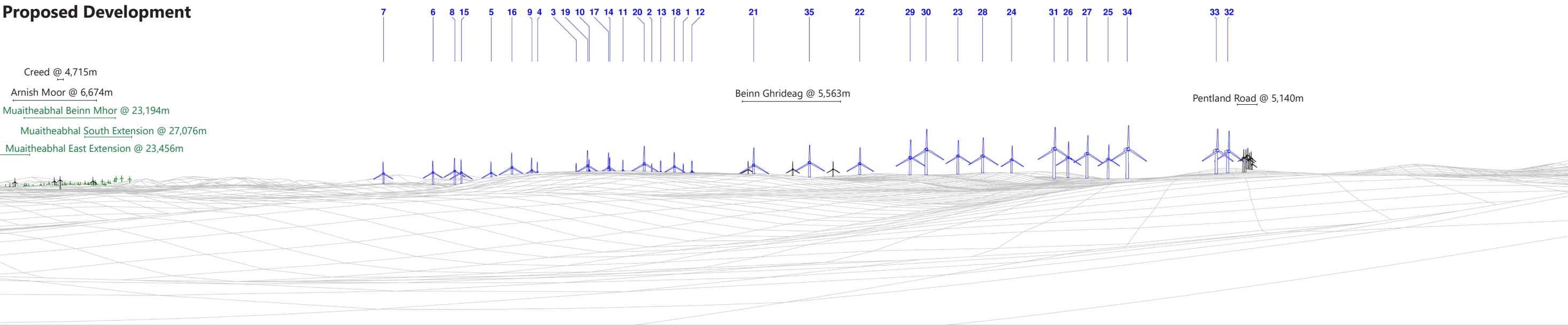
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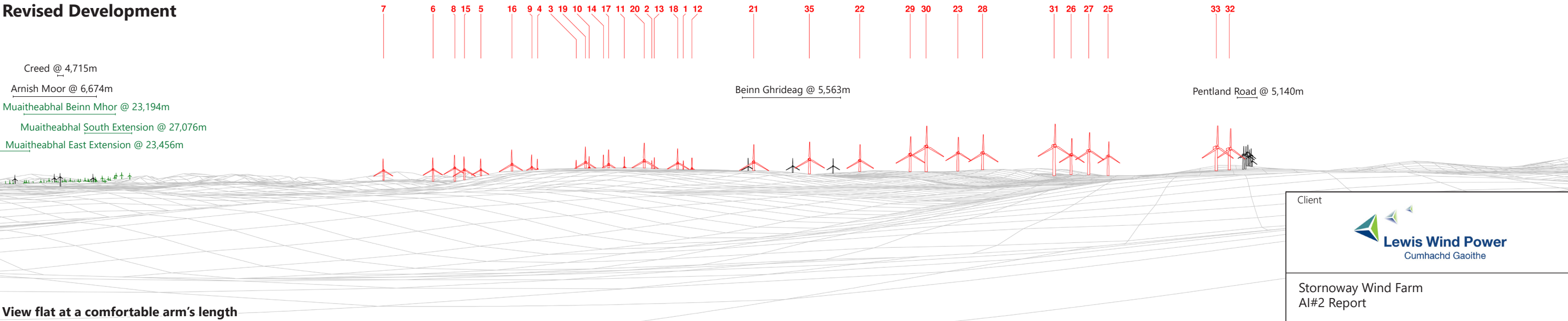
Existing View



Proposed Development



Revised Development



View flat at a comfortable arm's length

- Wind Farm Key:
- Proposed Development
 - Revised Development
 - Existing
 - Consented

OS reference:	E141 828, N935 786	Horizontal field of view:	90° (cylindrical projection)	Camera:	Canon EOS 5D Mk2
Eye level:	68.5m AOD	Principal distance:	522mm	Lens:	50mm (Canon EF 50mm f/1.8)
Direction of view:	257°	Paper size:	420mm x 297mm (A3)	Camera height:	1.5m AGL
Nearest turbine:	2,926m	Correct printed image size:	390 x 82mm	Date and time:	29/10/2018 13:35



Stornoway Wind Farm
AI#2 Report

Comparative Wireframes
Viewpoint 25: Newmarket

October 2020

