# Technical Appendix 5.2

## Residential Visual Amenity Assessment

## Contents

## 1.0 Introduction

1. In accordance with the third edition of 'Guidelines for Landscape and Visual Impact Assessment' (GLVIA3), the LVIA (EIA Report Chapter 5) assesses the visual impact of the Proposed Development on public views and public visual amenity. This Residential Visual Amenity Assessment (RVAA) goes a stage beyond the LVIA by assessing the visual impact of the Proposed Development on residential visual amenity in accordance with Technical Guidance Note 2/19 'Residential Visual Amenity Assessment' (Landscape Institute, 2019). This guidance sets out the steps to be followed when undertaking an RVAA and highlights how it should be informed by the principles and processes of GLVIA3. The purpose of the RVAA is to identify those properties where the effect of the Proposed Development leads to the 'Residential Visual Amenity Threshold' being reached or, in other words, where the effect is of such a nature and/or magnitude that it potentially affects living conditions. In relation to a wind farm development, this may occur as a result of the wind turbines giving rise to an 'overbearing' or 'overwhelming' magnitude of effect.
2. This assessment is carried out largely on site in order to observe and assess baseline factors such as the orientation of the property, the baseline views that may be gained, screening by vegetation and so on.
3. This RVAA assesses the likely effects of the Proposed Development on the visual component of residential amenity relating to individual properties within a localised study area. The term 'residential amenity' refers to the living conditions at a house, including its gardens and domestic curtilage, which are commonly interpreted to include visual amenity, noise amenity and other factors such as shadow flicker. In a RVAA OPEN, part of SLR Consulting Ltd (SLR), ('OPEN') addresses only the visual amenity aspect of residential amenity, as this is its area of expertise.
4. The purpose of the RVAA is to inform the planning process, as noted in guidance (Landscape Institute, 2019).

> *"It is not uncommon for significant adverse effects on views and visual amenity to be experienced by people at their place of residence as a result of introducing a new development into the landscape. In itself this does not necessarily cause particular planning concern. However, there are situations where the effect on the outlook/visual amenity of a residential property is so great that it is not generally considered to be in the public interest to permit such conditions to occur where they did not exist before."*

## 2.0 Approach

5. The approach to RVAA set out in guidance (Landscape Institute, 2019) is based on four steps:
    - Step 1: Definition of the study area and scope of the assessment, informed by the description of the Proposed Development, defining the study area extent and scope of the assessment with respect to the properties to be included.
    - Step 2: Evaluation of baseline visual amenity at properties to be included, having regard to the landscape and visual context and the potential influence of the Proposed Development.
    - Step 3: Assessment of likely change to visual amenity of included properties in accordance with GLVIA3 principles and processes.
    - Step 4: Further assessment of predicted change to the visual amenity of properties where a judgement in relation to the Residential Visual Amenity Threshold is required.

## 2.1 Step 1

6. Step 1 involves defining the extent of the study area and establishing the scope of the assessment. In respect of defining the extent of the study area, Technical Guidance gives the following advice (Paragraphs 4.6 and 4.7):

> *"Over the last few years a large number of RVAAs have been prepared, especially relating to wind energy proposals. Local Planning Authorities (LPA) have frequently requested 'study areas' of up to 3 or even 5 km. The logic for these (exceptionally) large study areas was based on certain findings of LVIAs which identified significant visual effects from 'settlements' or from clusters of residential properties within this range. This fails to recognise that RVAA is a stage beyond LVIA. Consequently, many RVAAs, including those of windfarms with large turbines (150m and taller), have included disproportionately extensive study areas incorporating too many properties. This appears to largely be based on the misconception that if a significant effect has been identified in the LVIA adjacent to a property at 2.5 km it will also potentially lead to reaching the Residential Visual Amenity Threshold.*
>
> *When assessing relatively conspicuous structures such as wind turbines, and depending on local landscape characteristics, a preliminary study area of approximately 1.5 to 2 km radius may initially be appropriate in order to begin identifying properties to include in a RVAA..."*

7. In line with this guidance, the study area for the Proposed Development has been drawn out to the larger 2km radius recommended, as shown on **Figure 5.2.1** of this Technical Appendix. All residential properties within the 2km study areas have been identified using AddressBase Plus data, and they are mapped in **Figure 5.2.1** and listed in **Table TA5.2-1** below. This includes residential properties that have potential to be occupied as dwelling houses or as holiday accommodation.

**Table TA5.2-1 Residential properties within 2km study area**

| Ref | Address | Easting | Northing | Distance |
|---|---|---|---|---|
| 1 | Banchoruan | 275177 | 822475 | 1.89 km |
| 2 | Strathnoon Cottage | 277846 | 824294 | 1.76 km |

## 2.2 Step 2

8. Step 2 involves carrying out an evaluation of the baseline visual amenity at the properties through a combination of desk study and field work. The key considerations of this evaluation are set out in the Technical Guidance as follows:

> *"The nature and extent of all potentially available existing views from the property and its garden/ domestic curtilage, including the proximity and relationship of the property to surrounding landform/ landcover and visual foci. This may include primary/main views from the property or domestic curtilage as well as secondary/peripheral views; and…Views as experienced when arriving or leaving the property, for example from private driveways/access tracks."*

9. There are two residential properties that lie within the 2km radius study area for the Proposed Development. RVAA sheets have been prepared for these properties, each incorporating an OS map and aerial photograph of the property that shows the viewshed towards the Proposed

Development, and a description of baseline views. Wireline views that illustrate the theoretical visibility of the Proposed Development from the properties that are included within the 2km radius study area are presented in **Figures 5.2.2a** to **5.2.2b** of this Technical Appendix.

## 2.3 Step 3

10. Step 3 involves carrying out an assessment of the likely change to the visual amenity of properties by applying the process of assessment described in GLVIA3, in which the sensitivity of the receptor is combined with the magnitude of change that will arise as a result of the Proposed Development to determine whether the effect will be significant or not significant. The aim of Step 3 is to identify those properties with potential to reach Residential Visual Amenity Threshold and therefore require further assessment in Step 4. This will generally only occur where a **high** or **medium-high** magnitude of change is assessed for a property, as the threshold reflects those effects that are at the extreme where they may become overwhelming or overbearing. The key considerations of this assessment are set out in the Technical Guidance as follows:

    - *'Distance of property from the proposed development having regard to its size/scale and location relative to the property (e.g. on higher or lower ground);*
    - *Type and nature of the available views (e.g. panoramic, open, framed, enclosed, focused etc.) and how they may be affected, having regard to seasonal and diurnal variations;*
    - *Direction of view / aspect of property affected, having regard to both the main/primary and peripheral/ secondary views from the property;*
    - *Extent to which development/landscape changes would be visible from the property (or parts of) having regard to views from principal rooms, the domestic curtilage (i.e. garden) and the private access route, taking into account seasonal and diurnal variations;*
    - *Scale of change in views having regard to such factors as the loss or addition of features and compositional changes including the proportion of view occupied by the development, taking account of seasonal and diurnal variations;*
    - *Degree of contrast or integration of new features or changes in the landscape compared to the existing situation in terms of form, scale and mass, line, height, colour and texture, having regard to seasonal and diurnal variations;*
    - *Duration and nature of the changes, whether temporary or permanent, intermittent or continuous, reversible or irreversible etc.; and*
    - *Mitigation opportunities - consider implications of both embedded and potential further mitigation.*'

11. OPEN's methodology assumes that all occupiers of local residential properties within the RVAA will have a high sensitivity. The significance of the effect on residential visual amenity experienced at each property is dependent on the factors considered in the sensitivity and the magnitude of change resulting from the Proposed Development. These judgements on sensitivity and magnitude are combined to arrive at an overall assessment as to whether the Proposed Development will have an effect on residential visual amenity that is significant or not significant.

12. The assessment process - the evaluation of magnitude of change and the significance of the effect - is described on the RVAA sheets in this Technical Appendix. Where properties are assessed as having a high magnitude of change, a Step 4 assessment is required to determine whether or not the Residential Visual Amenity Threshold has been reached.

## 2.4 Step 4

13. Step 4 of the RVAA is described as follows in Technical Guidance (Paragraphs 4.17 to 4.20):

> *"The final step of RVAA involves a more detailed examination of the predicted effects on the visual amenity at those properties identified for further assessment in the previous step.*
>
> *There is an important distinction between this concluding step of RVAA and the preceding one. In Step 3 the assessor has reached a conclusion with respect to magnitude and (EIA) significance of visual effect, and the change in visual amenity at the property. In this final step, and only for those properties where the largest magnitude of effect has been identified, a further judgement is required. This concluding judgement should advise the decision maker whether the predicted effects on visual amenity and views at the property are such that it has reached the Residential Visual Amenity Threshold, therefore potentially becoming a matter of Residential Amenity. This judgement should be explained in narrative setting out why the effects are considered to reach the Residential Visual Amenity Threshold. Equally, judgements should explain why the threshold has not been reached.*
>
> *The Residential Visual Amenity Threshold judgement should be communicated in a coherent manner, using text with clear descriptions, employing terminology which is commonly understood and descriptors which may have previously been used. Assessors should ensure that their judgements are unambiguous and have a clear, rational conclusion. Some examples of descriptions and descriptors that might be used include: 'blocking the only available view from a property', or 'overwhelming views in all directions'; and 'unpleasantly encroaching' or being 'inescapably dominant from the property'. It may also be useful to employ bespoke graphics such as annotated aerial photographs and wireframe visualisations to aid this further assessment in Step 4.*
>
> *The key point regarding Step 4 is that the judgement required in this final, concluding step goes beyond the assessment undertaken in Step 3 which is restricted to judging the magnitude and significance of visual effect, typically as a supplement to the accompanying LVIA."*

14. The Step 4 assessment is included on the RVAA sheets for each of the relevant properties. Where this RVAA identifies any properties at the threshold in Step 4, this does not imply an unacceptable effect, as any finding of acceptability requires to be undertaken as part of the wider planning balance. The 'threshold' acts to identify those properties where a predicted change to visual amenity is of such magnitude that it should be weighed in the planning balance, along with other EIA effects.

## 3.0 RVAA Sheets

| **Property 1: Banchoruan** Wireline view shown on TA 5.2 Figure 2a | | |
|---|---|---|
| **Location of property:** at the end of a private access track adjoining a minor road east of the River Findhorn and west of the Proposed Development | **Property description:** detached 1.5-storey house with outbuildings to south-east | **Grid reference:** 275177, 822475<br>**Distance from nearest turbine:** 1.89km |

**Step 2: Baseline Visual Amenity**

The property has not been internally accessed and the assessment is drawn from roadside views and aerial photography.

The house is located on the floor of Strathdearn, approximately 8.3 km south-west of Tomatin. The building's principal orientation is north-west with the rear of the property oriented south-east in the general direction of the Proposed Development. The 1.5 storey tall building extends to its rear. The building's relatively traditional form ensures that the majority of the property's windows are either oriented in a north-western or south-eastern direction. The house has a scattering of deciduous and coniferous trees to the front, broadly aligning the access adjoining the minor road. Its context is heavily influenced by nearby conifer forestry plantation to the north-east and south-west.

The outlook of the property is generally contained by a mixture of landform and vegetation, with the slopes of Creag Bheag and Creag Dhubh, to the immediate west with Carn Bad an Daimh beyond; and Creag Gharbh and Cnoc Thulagain across the river, to the west. These hills enclose the house restricting views east and west. There are longer-range views up and down Strathdearn, but these are also subject to some screening by vegetation. Views most likely to be affected by the Proposed Development are likely to be those experienced from the rear of the property either through the building's windows or from the rear curtilage. These easterly views are largely uninterrupted by vegetation with little seasonal change throughout the year.

**Step 3: Assessment of Residential (Visual) Amenity Effects**

- **Magnitude of change:** No Change
- **Significance of effect**: No Effect

The wirelines show no theoretical visibility of the proposed turbines.

**Step 4: Residential Visual Amenity Threshold Assessment**

Step 4 involves making a judgement as to whether the predicted effects on visual amenity and views at the property are such that it has reached the Residential Visual Amenity Threshold, as described in the introduction. This property does not have potential to reach the Residential Visual Amenity Threshold due to there being no change on the view.

| **Property 2: Strathnoon,** Wireline view shown on TA 5.2 Figure 2b | | |
|---|---|---|
| **Location of property:** at the end of a private access track, east of the River Findhorn and west of the Proposed Development | **Property description:** detached 1.5-storey house with outbuildings to south-east | **Grid reference:** 277846, 824294<br>**Distance from nearest turbine:** 1.76km |

**Step 2: Baseline Visual Amenity**

The property has not been internally accessed and the assessment is drawn from roadside views and aerial photography.

The house is located on the southern side of Strathdearn, approximately 5.2 km south-west of Tomatin. The building's principal orientation is north-west with the rear of the property oriented south-east, in the general direction of the Proposed Development. The 1.5 storey tall building has a porch to its rear. The building's relatively traditional form ensures that the majority of the property's windows are either oriented in a north-westerly or south-easterly direction. While the curtilage of the house is free of trees, its context is influenced by clumps of woodland to the east and south.

The outlook of the property is predominantly contained by landform and less so by nearby vegetation, with Carn a Seanalaich and Carn Meadhonach to the north-west, across the river; and the lower slopes of Carn Coire na Cluanaich and An Sochach, to the immediate south. These hills enclose the house and restrict views to the south. There are longer-range views across the valley, where the operational Glen Kyllachy Wind Farm is apparent on the ridgeline, and up and down Strathdearn. Views most likely to be affected by the Proposed Development are likely to be those experienced from the rear of the property either through the building's windows or from the rear curtilage. These southerly views are largely uninterrupted by vegetation with little seasonal change throughout the year.

**Step 3: Assessment of Residential (Visual) Amenity Effects**

- **Magnitude of change:** Low
- **Significance of effect**: Minor and Not Significant visual effect

The wirelines show theoretical visibility of four distinctly separate turbines (T17, T18. T25 and T26), one to hub height (T25) and the other three as blades only, with the nearest turbine 1.76km away. The majority of T25's tower is screened by landform. The Proposed Development would affect approximately 58° of the view.

The Proposed Development would not be visible in the principal view from the house to the north-west but would be visible through the windows of the house and the curtilage close to the south-eastern facade of the property. From these locations, only Turbines 17, 18, 25 and 26 would be visible with the other proposed turbines screened by landform. The resulting magnitude of change would be low, due to the movement of the wind turbines above the ridgeline, the relatively wide angle of the view affected by the Proposed Development, the wind turbines relatively close proximity to the property, and the extent of screening by landform.

**Step 4: Residential Visual Amenity Threshold Assessment**

Step 4 involves making a judgement as to whether the predicted effects on visual amenity and views at the property are such that it has reached the Residential Visual Amenity Threshold, as described in the introduction. This property does not have potential to reach the Residential Visual Amenity Threshold due to the low magnitude of change on the view (a high magnitude of change is required to trigger potential for the Residential Visual Amenity Threshold to be reached).

## 4.0 RVAA Summary and Conclusions

15. The RVAA sheets in this Technical Appendix detail the assessments for the two properties that have been evaluated through this assessment, and Table TA5.2-2 below provides a summary of the results of this assessment. The RVAA indicates that neither property included is likely to experience a significant visual effect as a result of the Proposed Development. Of these two properties, one would have a low magnitude of change, and one would have no change to their views. In accordance with the methodology, a Step 4 Assessment is therefore not required for either property, and effects would not reach the Residential Visual Amenity Threshold.

**Table TA5.2-2 RVAA Summary**

| Ref | Address | Sensitivity | Magnitude of Change | Significance of Effect | Threshold Reached? |
|---|---|---|---|---|---|
| 1 | Banchoruan | High | No change | Not Significant | No |
| 2 | Strathnoon | High | Low | Not Significant | No |

## 5.0 Figures

- Figure TA5.2-1: Blade Tip ZTV with Residential Properties
- Figure TA5.2-2a: Property 1 Banchoruan Wireline View
- Figure TA5.2-2b: Property 2 Strathnoon Cottage Wireline View

# CLUNE WIND FARM
# EIA REPORT

## FIGURE TA5.2-1
## Residential Properties with Blade Tip Theoretical Visibility

## LVIA



- Proposed Turbine Location
- Site Boundary
- 2km Buffer
- Cairngorms National Park
- Residential Property
  - 1. Banchoruan
  - 2. Strathnoon

Number of Blade Tips Theoretically Visible

- 1 - 5
- 6 - 10
- 11 - 16
- 17 - 23
- 24 - 26

| | |
|---|---|
| LAYOUT DWG | TBC |
| T-LAYOUT NO. | PSCOCLU041 |

DRAWING NUMBER
**405.064807.00001.0103.0**

**SCALE - 1:30,000 @ A3**

**ENVIRONMENTAL IMPACT ASSESSMENT REPORT 2024**



| | | | |
|---|---|---|---|
| Blade Tip: | 200m | Observer height: | 2m |
| DTM: | OS T50 DTM | Surface features: | Excluded |
| DTM resolution: | 50m | Earth curvature: | Included |

0 2 4 Kilometres

# Contents



October 2024

## Residential Visual Amenity Assessment

# Clune Wind Farm

## Property 1: Banchoruan

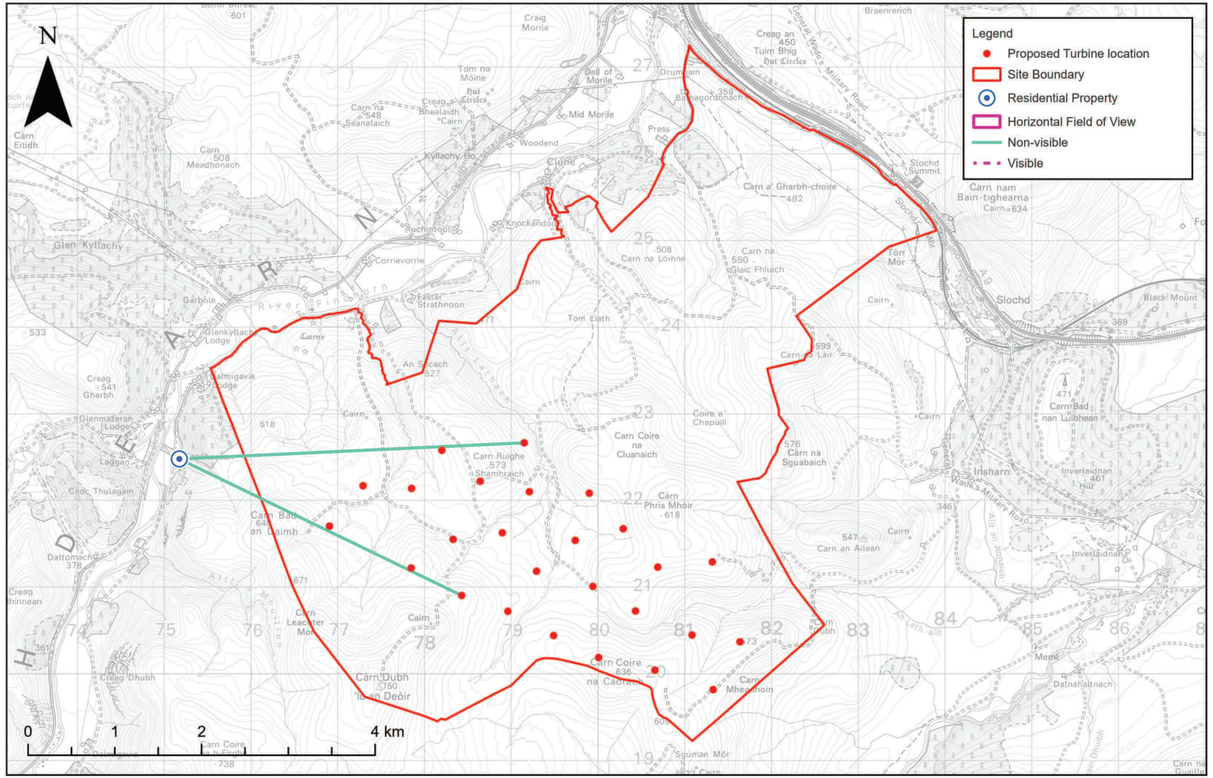
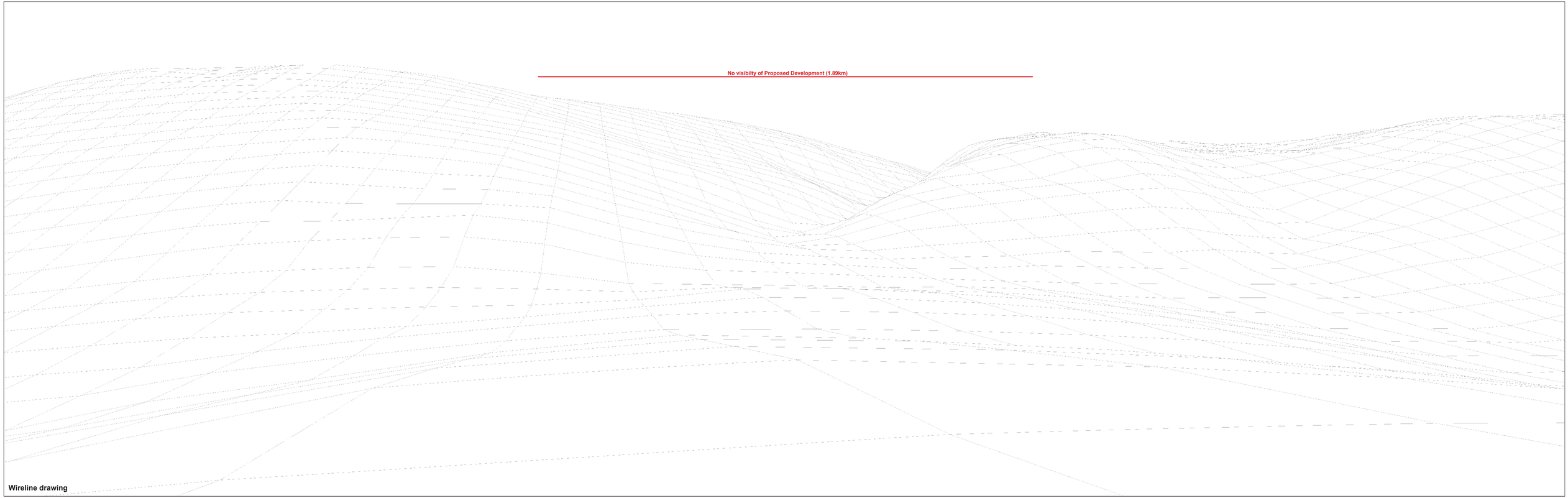



Figure 5.2.2a

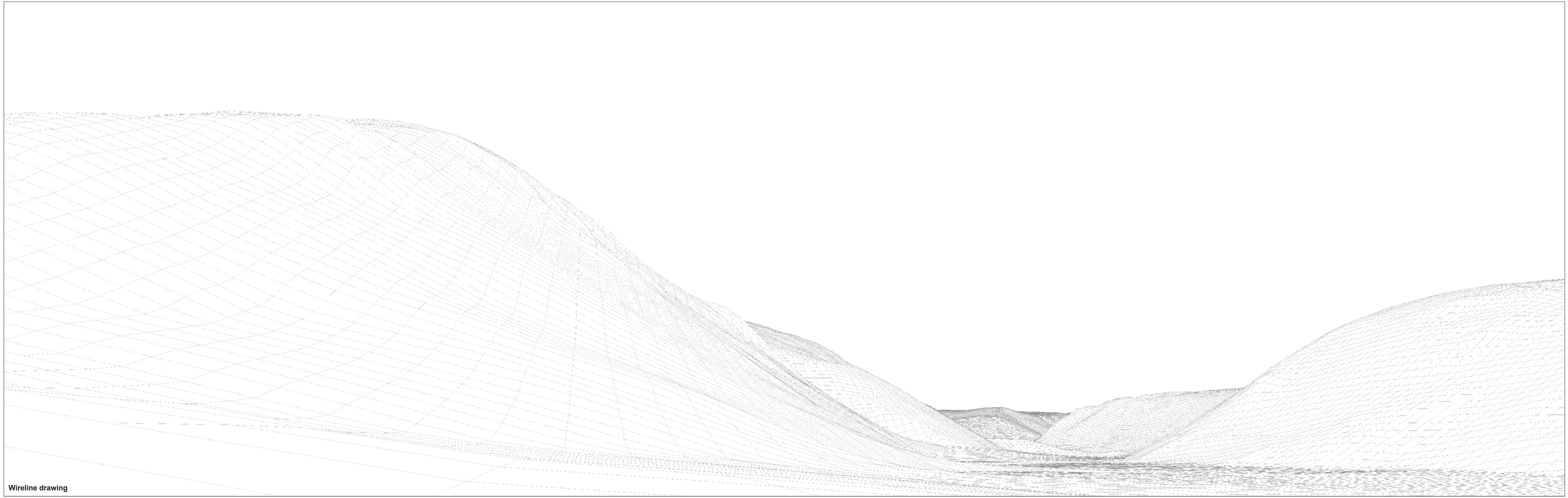
Scale: 1:50,000


Scale: 1:10,000




**Wireline drawing**

| | | | | | |
|---|---|---|---|---|---|
| **OS reference:** | 275177 E 822475 N | **Horizontal field of view:** | 90° (cylindrical projection) | | |
| **Eye level:** | 350.0m AOD | **Principal distance:** | 522 mm | | |
| **Direction of view:** | 101.5° | **Paper size:** | 841 x 297 mm (half A1) | **Camera height:** | 1.5 m |
| **Nearest turbine:** | 1.89 km | **Correct printed image size:** | 820 x 130 mm | | |

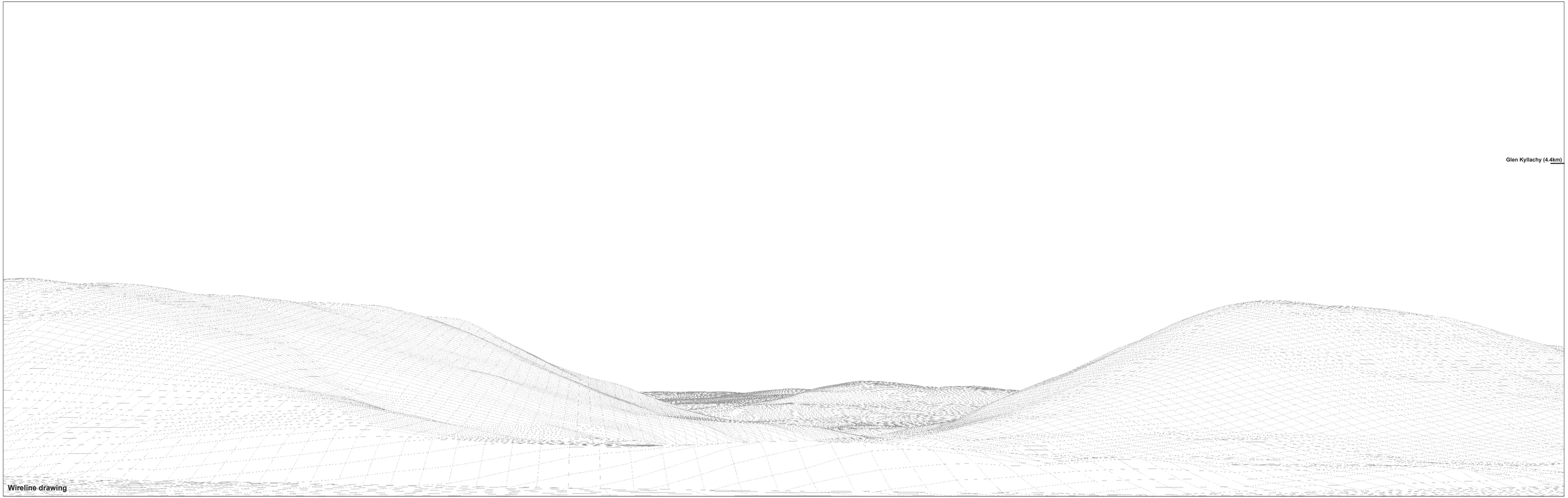


**Wireline drawing**

**OS reference:** 275177 E 822475 N
**Eye level:** 350.0m AOD
**Direction of view:** 191.5°
**Nearest turbine:** 1.89 km

**Horizontal field of view:** 90° (cylindrical projection)
**Principal distance:** 522 mm
**Paper size:** 841 x 297 mm (half A1)
**Correct printed image size:** 820 x 130 mm

**Camera height:** 1.5 m




**OS reference:** 275177 E 822475 N
**Eye level:** 350.0m AOD
**Direction of view:** 281.5°
**Nearest turbine:** 1.89 km

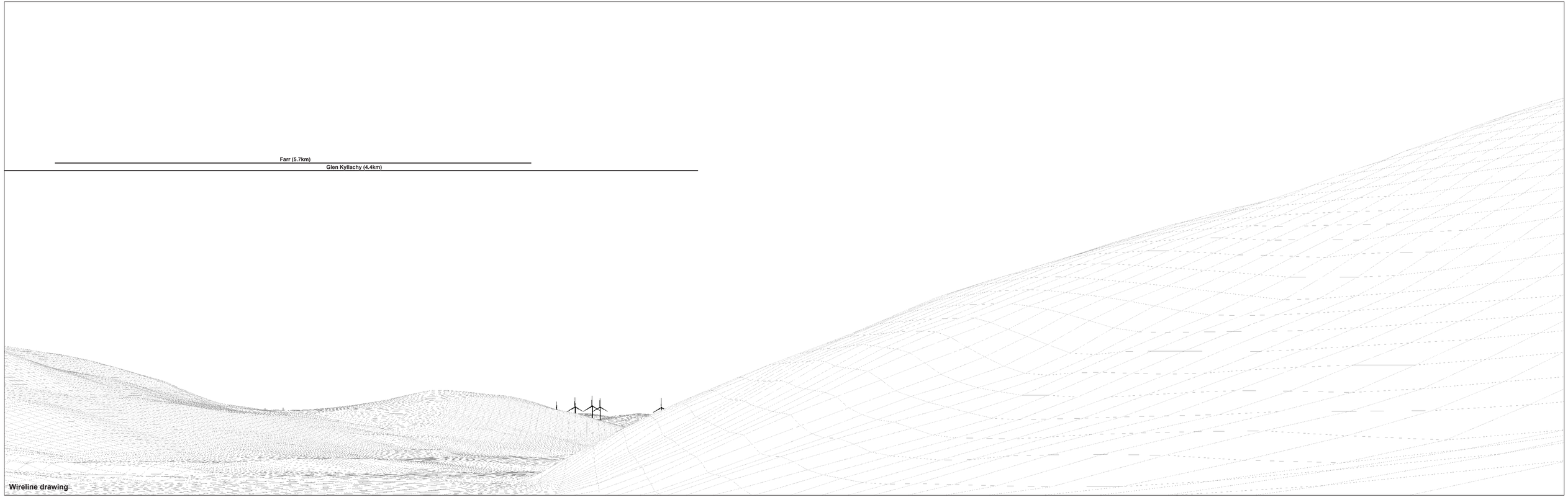
**Horizontal field of view:** 90° (cylindrical projection)
**Principal distance:** 522 mm
**Paper size:** 841 x 297 mm (half A1)
**Correct printed image size:** 820 x 130 mm

**Camera height:** 1.5 m



**Property 1: Banchoruan Wireline View 3 of 4**

Clune Wind Farm Residential Visual Amenity Assessment




**OS reference:** 275177 E 822475 N
**Eye level:** 350.0m AOD
**Direction of view:** 11.5°
**Nearest turbine:** 1.89 km

**Horizontal field of view:** 90° (cylindrical projection)
**Principal distance:** 522 mm
**Paper size:** 841 x 297 mm (half A1)
**Correct printed image size:** 820 x 130 mm

**Camera height:** 1.5 m



**Property 1: Banchoruan Wireline View 4 of 4**

Clune Wind Farm Residential Visual Amenity Assessment

# Property 2: Strathnoon

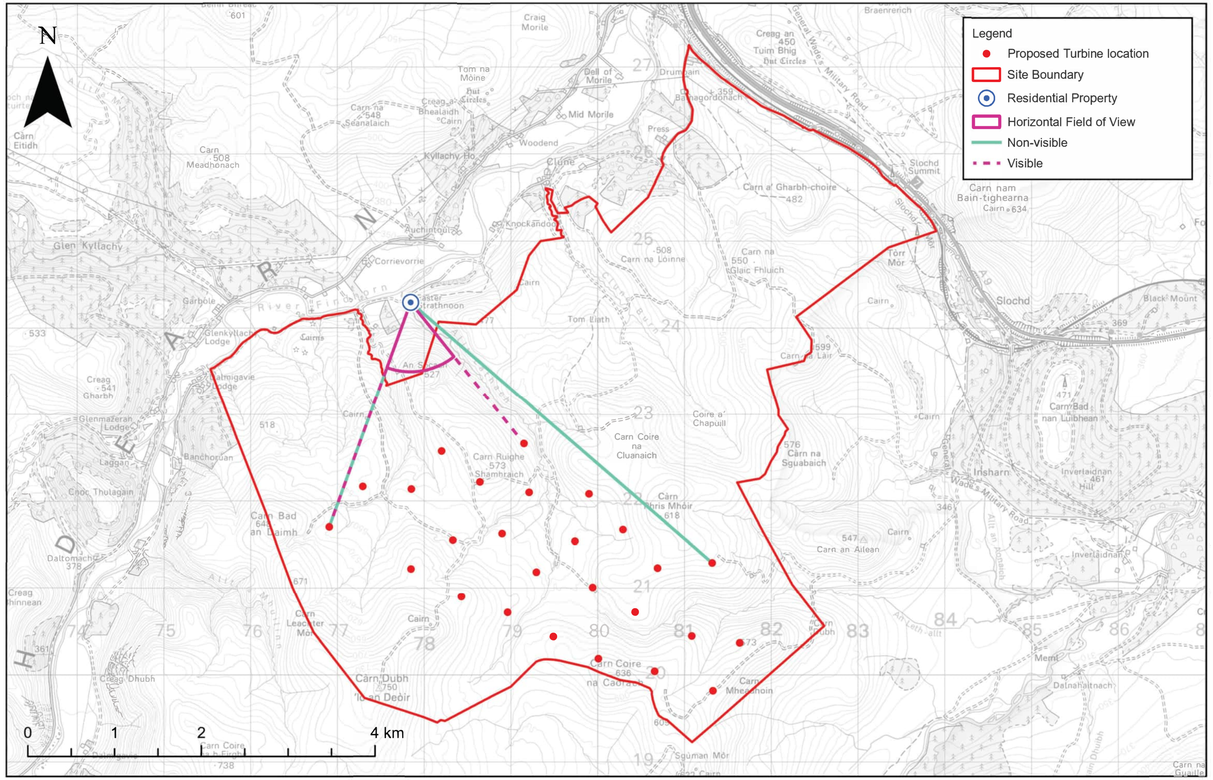



Figure 5.2.2b

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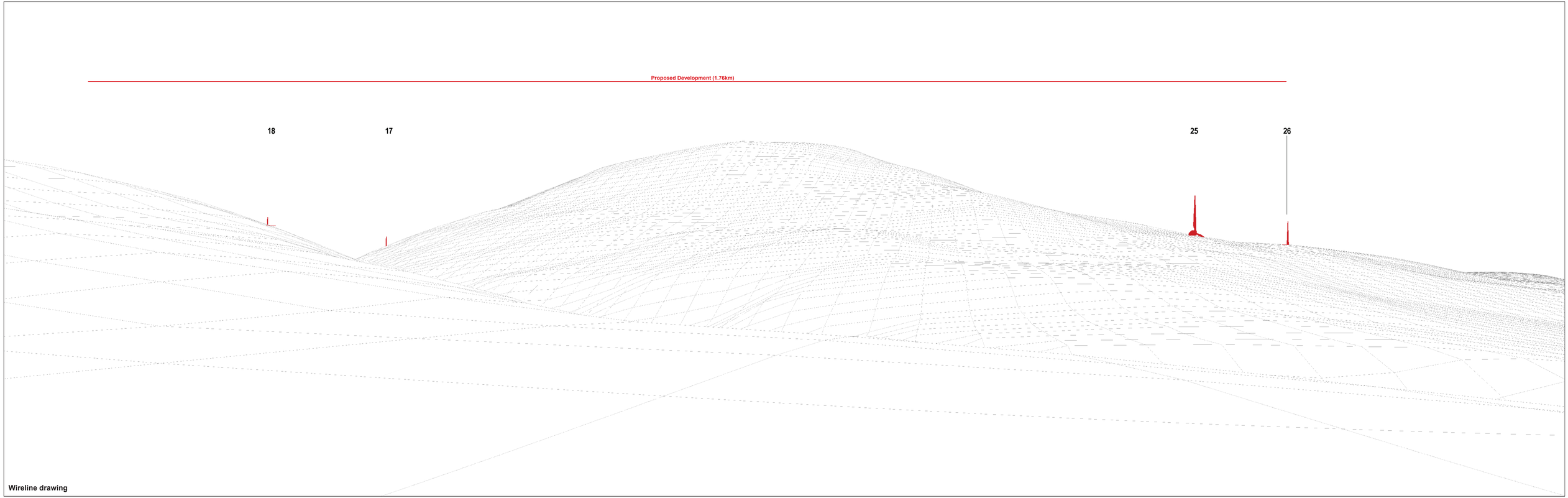
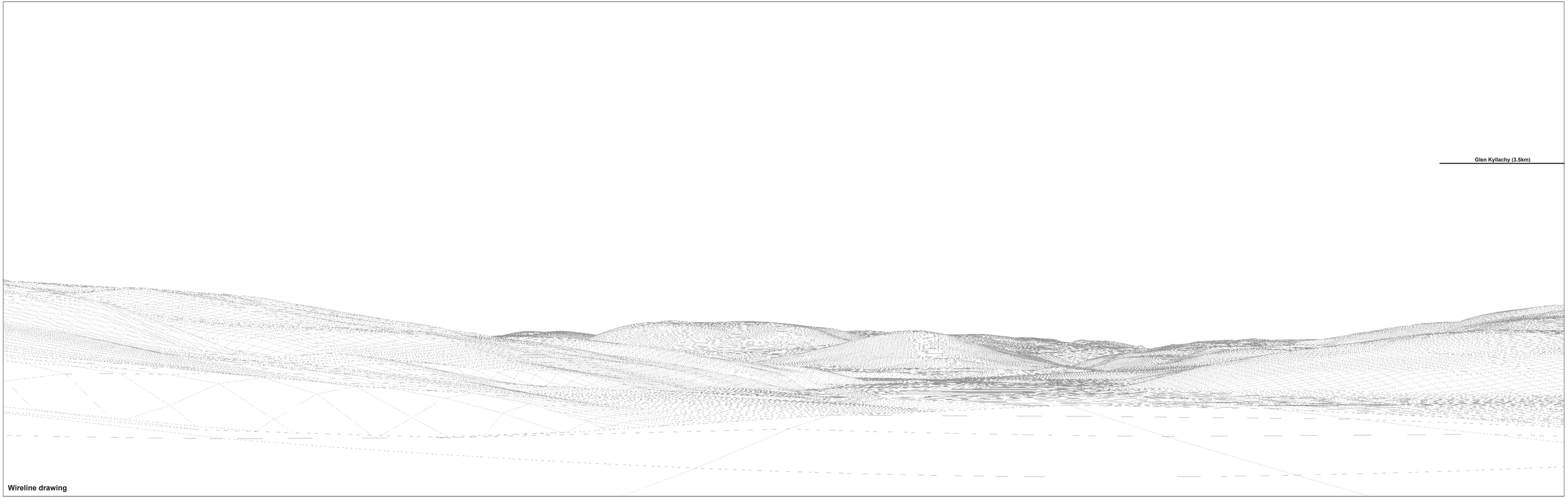
Scale: 1:10,000




**Wireline drawing**

| | | | | | |
|---|---|---|---|---|---|
| **OS reference:** | 277846 E 824294 N | **Horizontal field of view:** | 90° (cylindrical projection) | | |
| **Eye level:** | 342.4m AOD | **Principal distance:** | 522 mm | | |
| **Direction of view:** | 171° | **Paper size:** | 841 x 297 mm (half A1) | **Camera height:** | 1.5 m |
| **Nearest turbine:** | 1.76 km | **Correct printed image size:** | 820 x 130 mm | | |




**Wireline drawing**

**OS reference:** 277846 E 824294 N
**Eye level:** 342.4m AOD
**Direction of view:** 261°
**Nearest turbine:** 1.76 km

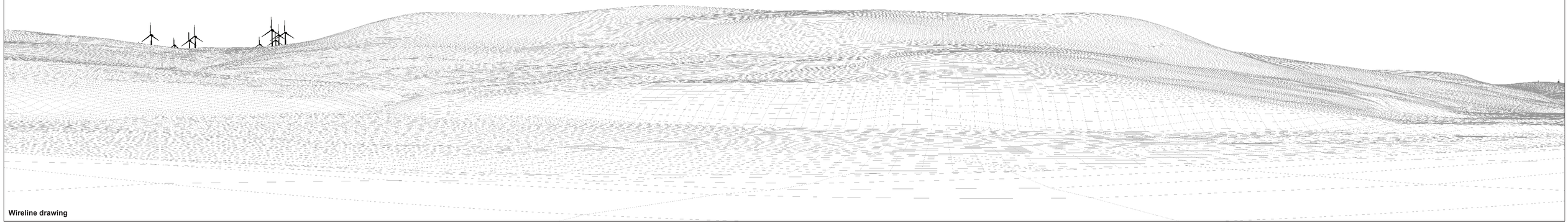
**Horizontal field of view:** 90° (cylindrical projection)
**Principal distance:** 522 mm
**Paper size:** 841 x 297 mm (half A1)
**Correct printed image size:** 820 x 130 mm

**Camera height:** 1.5 m

Farr (5.4km)

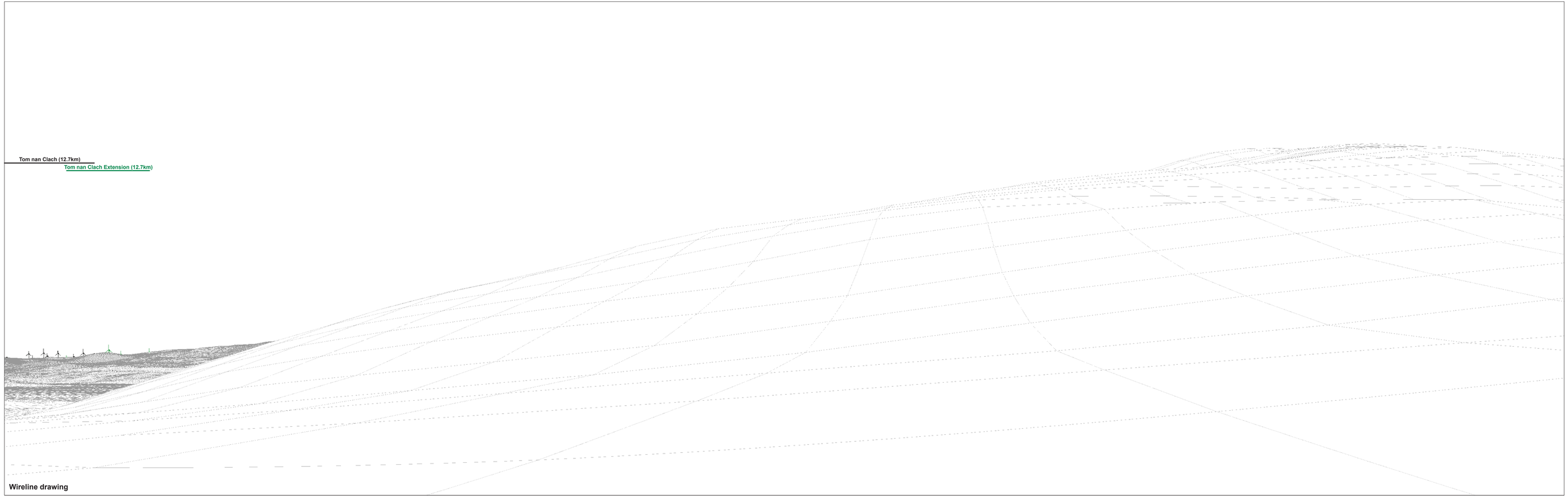
Glen Kyllachy (3.5km)

Tom nan Clach (12.7km)



Wireline drawing

| | | | | | |
|---|---|---|---|---|---|
| **OS reference:** | 277846 E 824294 N | **Horizontal field of view:** | 90° (cylindrical projection) | | |
| **Eye level:** | 342.4m AOD | **Principal distance:** | 522 mm | | |
| **Direction of view:** | 351° | **Paper size:** | 841 x 297 mm (half A1) | **Camera height:** | 1.5 m |
| **Nearest turbine:** | 1.76 km | **Correct printed image size:** | 820 x 130 mm | | |




**OS reference:** 277846 E 824294 N
**Eye level:** 342.4m AOD
**Direction of view:** 81°
**Nearest turbine:** 1.76 km

**Horizontal field of view:** 90° (cylindrical projection)
**Principal distance:** 522 mm
**Paper size:** 841 x 297 mm (half A1)
**Correct printed image size:** 820 x 130 mm

**Camera height:** 1.5 m