



# OLD WOOD ENERGY PARK, WYSALL, NOTTINGHAM

## TYPE 4 VISUALISATIONS

DATE : MARCH 2024

LANDMARK REF: 3702

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The information which we have prepared and provided is true, in accordance with Landscape Institute Technical Guidance Notes 06/19 Visual Representation of Development Proposals and were current at the time of the original set of views (February 2024).

Photographs/panoramas and GPS locations were provided by Exagen.

The following visualisations are based on Exagen's 'Site Layout Plan' drwg No WLL02A-EXG-04-00-D-K001-P0408, detail plans and elevations drwg No WLL02A-EXG-05-ZZ-D-(K001-K013)-P01 and Pegasus' Group 'Landscape Strategy' drwg no P21-2533\_EN\_06D.

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V1	WS	JS	AS	21/03/24
V2	WS	JS	AS	26/03/24

\*D denotes a Draft version



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# 1.0 Introduction

- 1.1. The purpose of this document is to present a set of technical visualisations that represent a new development proposal in context with its surroundings. It is imperative these visualisations are accurate, objective and non-biased. Visualisations are described as Types 1 to 4\*.
- 1.2. Type 4 visualisations were chosen to represent the highest level of accuracy and verifiability\*\* as described in the Landscape Institute's (LI) Technical Guidance Note 06/19 'Visual Representation of Development Proposals'. This is the latest professional guidance document released by the LI which outlines the recommended techniques to capture photography and produce visualisations.
- 1.3. The visualisations or Accurate Visual Representations\*\*\*(AVR) in this document are fully rendered Type 4, AVR Level 3 which present the location, size, degree of visibility and the use of materials of the intended development. The viewpoints were carefully selected due to their location and the potential effect of the new development on the existing view. These visualisations will help to inform developers and the relevant planning authority when considering a scheme's merits and/or impacts before a planning application is decided.
- 1.4. Each visualisation is accompanied by a dedicated viewpoint location plan, viewpoint description, tripod location and view information including (but not limited to) the ground elevation, camera/viewer height, focal length and recommended viewing distance. A written and technical methodology is appended to this document to warrant full procedural transparency.
- 1.5. The purpose and subsequent result of a verified Type 4 visualisation is a printed image mimicking what you see in situ with the new development superimposed. Alternatively, a true sense of scale can also be achieved by on-screen calibration using a scale rule with the scale bar we have provided on the right hand side of the image.
- 1.6. Visualisations can be an important part of the overall assessment process and they can in turn inform discussion into site design at an early stage of the planning process. They help evaluate the effect and quality of change on a particular landscape character and illustrate proposed mitigation strategies.

1.7. LI TGN-06-19 Para 1.2.13 page 2 of 58 states:

*'Two-dimensional visualisations, however detailed and sophisticated, can never fully substitute what people would see in reality. They should, therefore, be considered an approximation of the three-dimensional visual experiences that an observer might receive in the field.'*

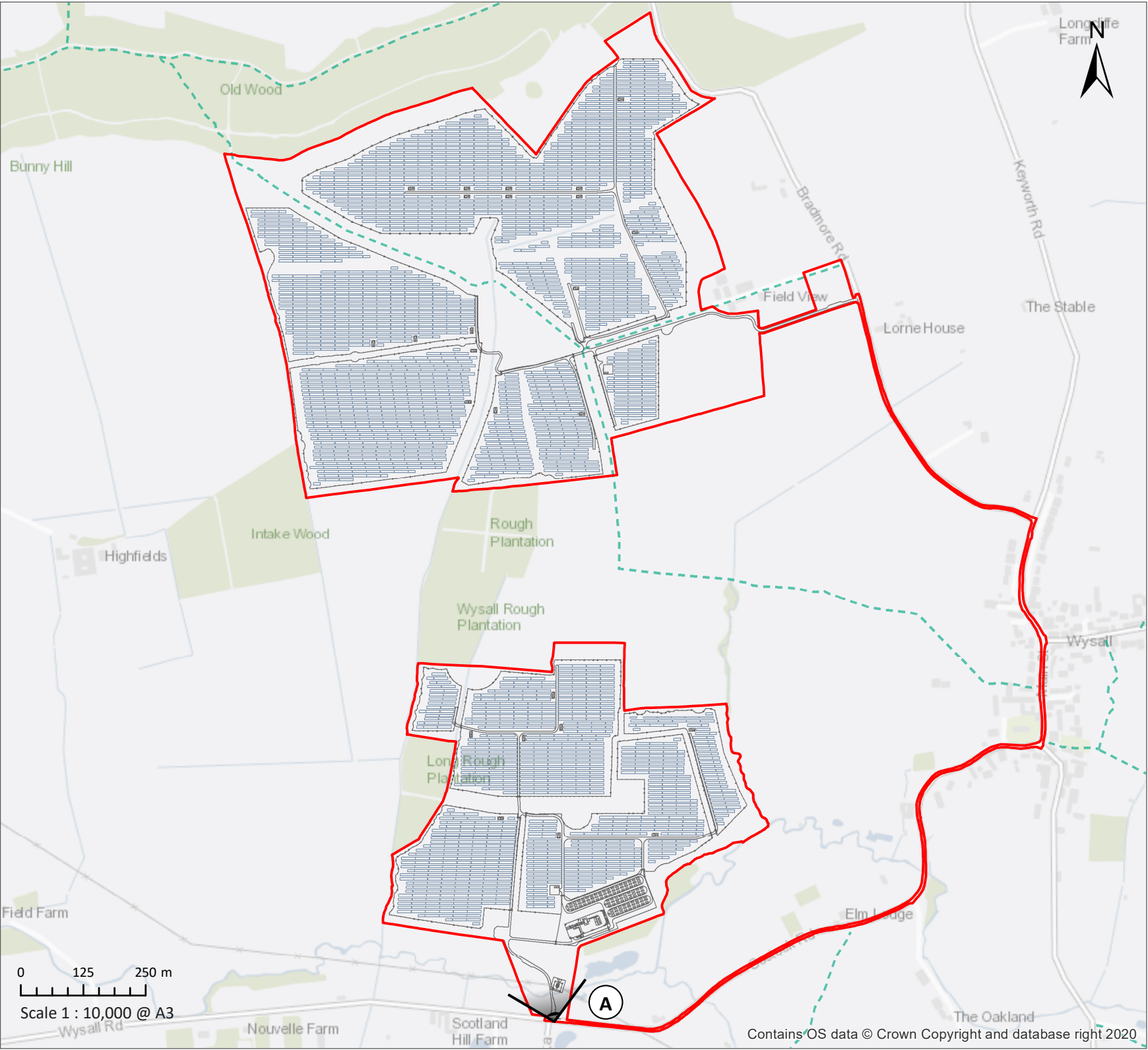
\*Landscape Institute (LI) Technical Guidance Note 06/19 'Visual Representation of Development Proposals'.

\*\*Verifiability means that the photographic process and image scaling is capable of being verified to agreed standards by reference to the original photograph with metadata. Precise survey of features and viewpoint / camera locations may be included where warranted. You can read our previous blog 'Visualisation – A Picture is Worth a Thousand Words', to find out more on visualisations and other presentation techniques we offer. If you have any queries on visual representation of development proposals, please do speak with a member of our graphics or landscape team who will be pleased to advise. Contact us on 0117 9230455 or email [enquiries@thelandmarkpractice.com](mailto:enquiries@thelandmarkpractice.com).

\*\*\*The London View Management Framework (2012) describes four levels of Accurate Visual Representations from Levels 0 to Level 3. AVR's are also known as Visual Verified Montages (VVM's) or just verified views.

# 2.0 Viewpoint A Data Sheet

Viewpoint location plan



## Viewpoint description

View from junction on Wysall Road looking northwest.

Viewpoint A tripod location



## View information

Visualisation Type:	4
Projection:	Cylindrical
Enlargement Factor:	96%
Date & time of photo:	23/02/2024 @ 08:08
Camera/sensor:	SONY ILCE-7M4 FFS
Camera lens:	50mm fixed
Camera height:	1.6m
Max aperture:	F8
HFOV:	90°
Distance to site:	15 m
Direction:	345° from north
Frame Type:	Panorama
Viewpoint location:	E: 459489 N: 326544
Viewpoint ground height:	60 m AOD
Sheet size:	A1
Weather:	Sunny intervals
Visibility:	Good
Page viewing distance:	400mm (comfortable arms length)





Viewpoint A Existing View

All scale representative views to be viewed at a comfortable arms length

Please note: To view this image digitally, calibrate this scale bar on screen, for a correct scale representation, view the printed A1 sheet at a comfortable arm's length





Viewpoint A Proposed View Year 1

All scale representative views to be viewed at a comfortable arms length

Please note: To view this image digitally, calibrate this scale bar on screen, for a correct scale representation, view the printed A1 sheet at a comfortable arm's length





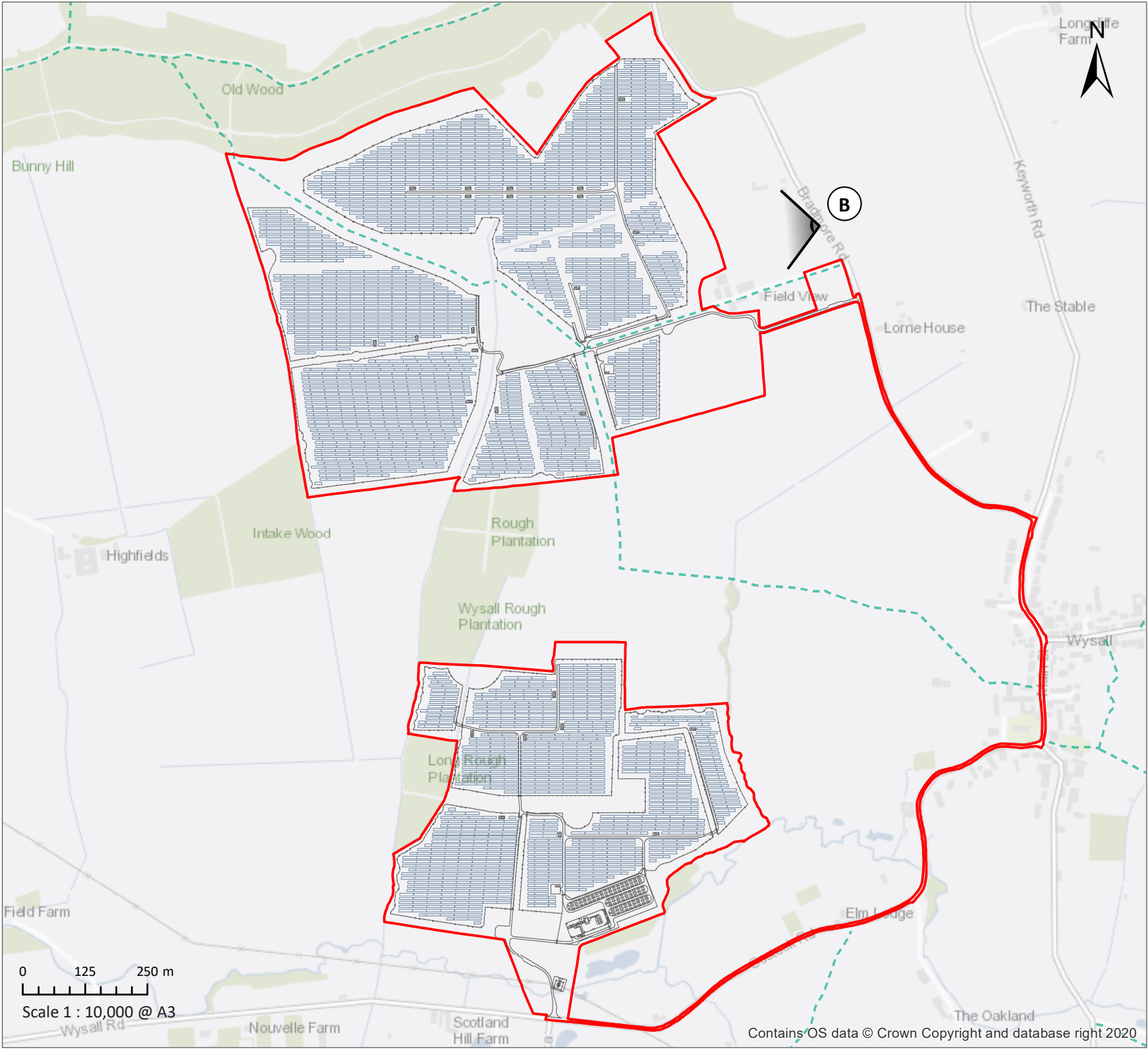
Viewpoint A Proposed View Year 15

All scale representative views to be viewed at a comfortable arms length



# 3.0 Viewpoint B Data Sheet

Viewpoint location plan



Viewpoint description

View from Bradmore Road looking west.

Viewpoint B tripod location



View information

Visualisation Type:	4
Projection:	Cylindrical
Enlargement Factor:	96%
Date & time of photo:	23/02/2024 @ 10:02
Camera/sensor:	SONY ILCE-7M4 FFS
Camera lens:	50mm fixed
Camera height:	1.6m
Max aperture:	F8
HFOV:	90°
Distance to site:	210 m
Direction:	345° from north
Frame Type:	Panorama
Viewpoint location:	E: 460028 N: 328145
Viewpoint ground height:	90 m AOD
Sheet size:	A1
Weather:	Sunny intervals
Visibility:	Good
Page viewing distance:	400mm (comfortable arms length)





Viewpoint B Existing View

All scale representative views to be viewed at a comfortable arms length

Please note: To view this image digitally, calibrate this scale bar on screen, for a correct scale representation, view the printed A1 sheet at a comfortable arm's length





Viewpoint B Proposed View Year 1

All scale representative views to be viewed at a comfortable arms length





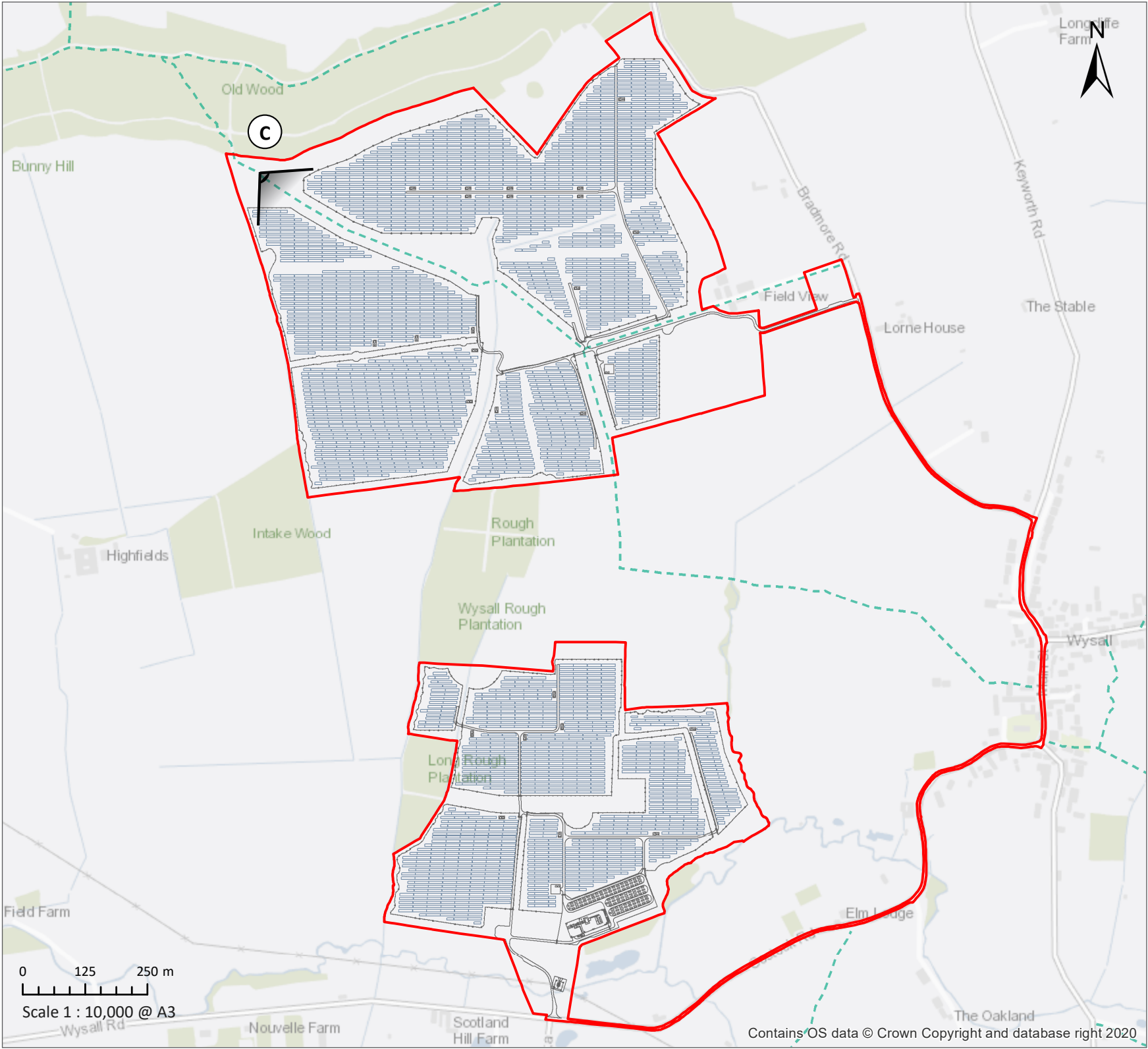
Viewpoint B Proposed View Year 15

All scale representative views to be viewed at a comfortable arms length



# 4.0 Viewpoint C Data Sheet

Viewpoint location plan



Viewpoint description

From PRoW NT|Costock|FP7 and Midshires Way long distance footpath and bridleway looking southeast.

Viewpoint C tripod location



View information

Visualisation Type:	4
Projection:	Cylindrical
Enlargement Factor:	96%
Date & time of photo:	23/02/2024 @ 08:56
Camera/sensor:	SONY ILCE-7M4 FFS
Camera lens:	Sigma 50mm f/1.4 HSM Art Lens for Sony
Camera height:	1.6m
Max aperture:	F8
HFoV:	90°
Distance to site:	On site
Direction:	112° from north
Frame Type:	Panorama
Viewpoint location:	E: 458890 N: 328249
Viewpoint ground height:	87 m AOD
Sheet size:	A1
Weather:	Sunny intervals
Visibility:	Good
Page viewing distance:	400mm (comfortable arms length)





Viewpoint C Existing View

All scale representative views to be viewed at a comfortable arms length

Please note: To view this image digitally, calibrate this scale bar on screen, for a correct scale representation, view the printed A1 sheet at a comfortable arm's length





Viewpoint C Proposed View Year 1

All scale representative views to be viewed at a comfortable arms length

Please note: To view this image digitally, calibrate this scale bar on screen, for a correct scale representation, view the printed A1 sheet at a comfortable arm's length





Viewpoint C Proposed View Year 15

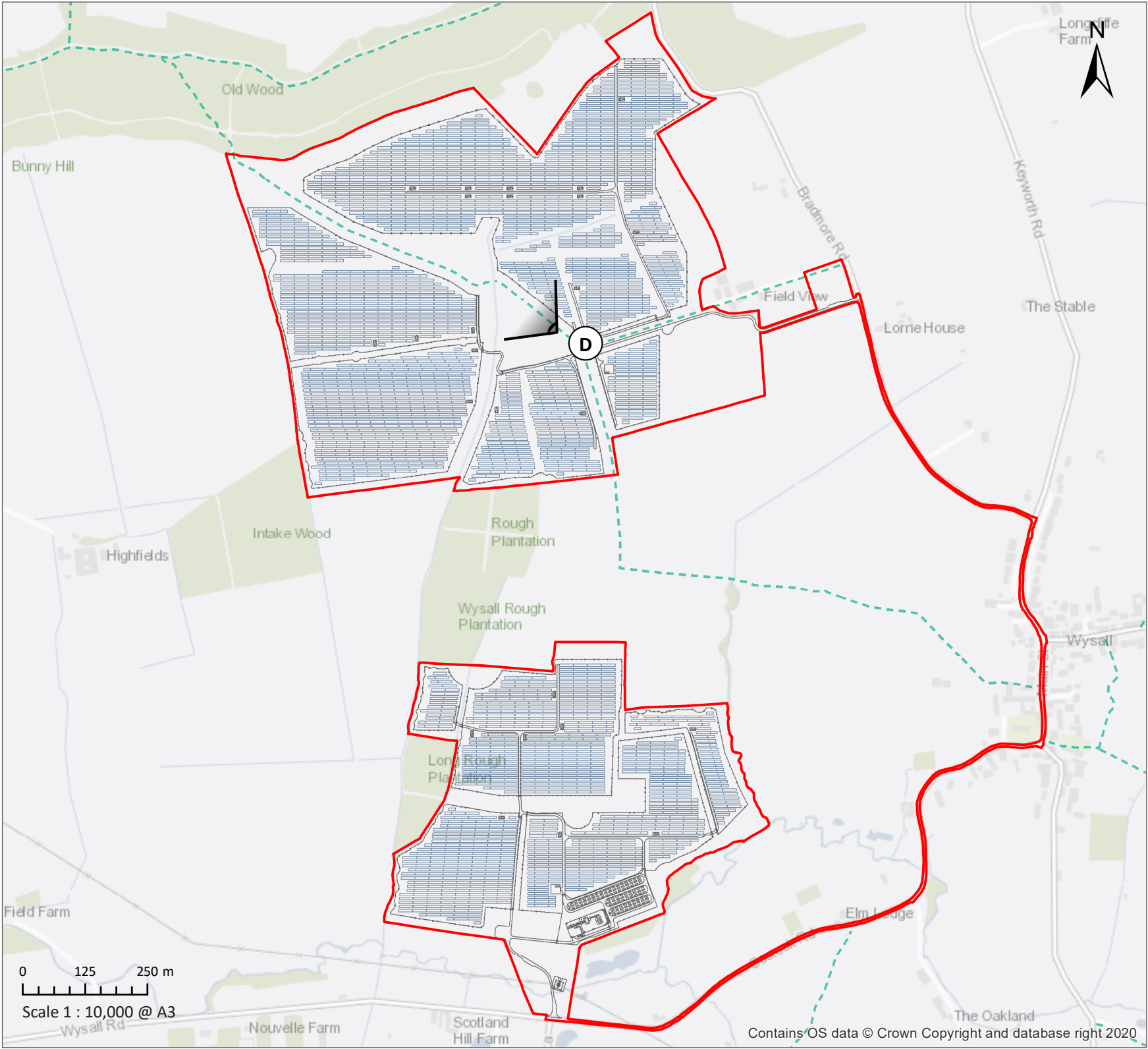
All scale representative views to be viewed at a comfortable arms length

Please note: To view this image digitally, calibrate this scale bar on screen, for a correct scale representation, view the printed A1 sheet at a comfortable arm's length



# 5.0 Viewpoint D Data Sheet

Viewpoint location plan



Viewpoint description

From Asheldham Youth Church (Church of St Lawrence- Grade II Listed), looking south-west.

Viewpoint D tripod location



View information

Visualisation Type:	4
Projection:	Cylindrical
Enlargement Factor:	96%
Date & time of photo:	23/02/2024 @ 09:31
Camera/sensor:	SONY ILCE-7M4 FFS
Camera lens:	50mm fixed
Camera height:	1.6m
Max aperture:	F8
HFoV:	90°
Distance to site:	On site
Direction:	345° from north
Frame Type:	Panorama
Viewpoint location:	E: 459494 N: 327934
Viewpoint ground height:	83 m AOD
Sheet size:	A1
Weather:	Sunny intervals
Visibility:	Good
Page viewing distance:	400mm (comfortable arms length)





Viewpoint D Existing View

All scale representative views to be viewed at a comfortable arms length





Viewpoint D Proposed View Year 1

All scale representative views to be viewed at a comfortable arms length

Please note: To view this image digitally, calibrate this scale bar on screen, for a correct scale representation, view the printed A1 sheet at a comfortable arm's length





Viewpoint D Proposed View Year 15

All scale representative views to be viewed at a comfortable arms length

Please note: To view this image digitally, calibrate this scale bar on screen, for a correct scale representation, view the printed A1 sheet at a comfortable arm's length



## 6.0 Methodology

- 6.1. The purpose of the visual representations is to accurately and objectively demonstrate the proposed development in-situ, using standardised and best practice guidelines. This is to aid and facilitate in the planning and decision-making process.
- 6.2. The following information is true, and has been prepared and provided in accordance with the current professional guidelines\*
- 6.3. The viewpoint photographs panoramas and camera GPS locations were created by FTR Visuals in consultation with Exagen.
- 6.4. The following visualisations are based on Exagen's 'Site Layout Plan' drwg No WLL02A-EXG-04-00-D-K001-P0408, detail plans & elevations drwg Nos WLL02A-EXG-05-ZZ-D-(K001-K013)-P01 and Pegasus' Group 'Landscape Strategy' drwg no P21-2533\_EN\_06D.

### Site photography & equipment

- SONY ILCE-7M4
- Sigma 50mm f/1.4 DG HSM Art Lens for Sony
- GPS: Iphone 15- App: GPS OS
- Tripod: ARTCISE AS80C 63.8", Carbon Fiber Bowl Tripod.
- Panoramic Tripod Head: Andoer
- Precision Leveller: Andoer LP-64
- L-Bracket: Pig Iron LB-1
- Slide Plate: MENGES FNR-200 200mm 1/4"
- Quick Release Plate Clamp: Sequpr 50mm

### Site verified photography

- 6.5. Using the Pegasus Group LVIA baseline viewpoints as a reference point, the camera body and lens were attached to a panoramic head with a leveller. A tripod was used and set to a height of 1.6m to represent the average height of the human eye. A fixed 50mm lens was used to ensure a consistent 50mm focal length across all photographs. 50mm is the industry standard for the visual representation of a development. 50mm has been chosen as the focal length which closely matches human eyesight and minimising optical distortion (please read the Landscape Institutes' guidance for more information)
- 6.6. Photographs were taken on 'Raw' and the camera metadata is stored with each photo. The photographs taken from the site visit were stitched together in PTGui to create the panoramas using the cylindrical layout method.

### Modelling & visualisation production process

- 6.7. The photographs taken from the site visit were stitched together in Photoshop to create the panoramas using the cylindrical layout method.
- 6.8. An accurate geo-referenced 3D model was created by precisely combining the information mentioned in paragraph 8.4 with 1m LiDAR DSM (Digital Surface Model) terrain, a topographic survey (dwg No WLL02A- K- TopographicSurvey 3D\_levels) and high resolution aerial photography into one universal 3D model.
- 6.9. FTR Visuals provided a Excel spreadsheet containing the viewpoint photograph coordinates (0134\_Old Wood Energy Park.xlsx), these were input into the 3D model space using the OS British National Grid system (OS GB 1936). Virtual 'cameras' were then created and aligned to these coordinates, replicating the position, focal length/field of view and elevation of the original viewpoint photographs.
- 6.10. Common reference points were then added to the model. These reference points locate elements that can be seen in the view such as; existing building corners, roof apexes and lampposts. This method was used to aid in aligning the model to the real photographic image and to further increase the accuracy of the proposal's scale and position.
- 6.11. Exagen's Exagen's 'Site Layout Plan' drwg No WLL02A-EXG-04-00-D-K001-P0408 provided the development parameters and the FFL's were based on existing site levels.
- 6.12. Typical material solar PV finishes were applied to the 3D model. These materials and textures were applied using Sketchup, Vray and 3Ds Max software. This rendering system also incorporates realistic lighting, by matching the same date, time of day and weather conditions as the viewpoint photographs. The resolution of the rendered image was matched to that of the viewpoint photographs, to allow for direct overlay, without further size adjustment.
- 6.13. At post-production stage, Photoshop software was used to allow for fine tuning of the integration of the proposed rendered image into the viewpoint photograph. This was where masking of the proposal, by existing obscuring features (including foreground vegetation and buildings) occurred.

\*Landscape Institute (LI) Technical Guidance Note 06/19 'Visual Representation of Development Proposals'.



## Reproduction

- 6.14. Due to the proximity of the views, the linear nature of the development and to capture enough context, A1 paper size was selected.
- 6.15. For these visual representations, the printed result allows for the viewer to make direct comparisons between the proposed viewpoint visualisations and the real-life existing view. This can be achieved by standing in-situ at the relevant viewpoint location and holding up the printed images at a comfortable arm's length. Please be sure the printed image is to scale
- 6.16. Each viewpoint is supplied with a viewpoint map, tripod location and the following metadata:
- Visualisation Type
  - Projection
  - Enlargement Factor
  - Date & time of photo
  - Camera/sensor
  - Camera lens
  - Camera height
  - Max aperture
  - HFoV
  - Distance to site
  - Direction
  - Frame Type
  - Viewpoint location
  - Viewpoint ground height
  - Sheet size
  - Weather
  - Visibility
  - Page viewing distance

## Limitations

- 6.17. TGN-06-19 Para 1.2.13 page 2 of 58 *“Two-dimensional visualisations, however detailed and sophisticated, can never fully substitute what people would see in reality. They should, therefore, be considered an approximation of the three-dimensional visual experiences that an observer might receive in the field.”*
- 6.18. Photograph locations were not surveyor measured as this was not considered proportionate.
- 6.19. The following visualisations are based on the layout submitted with the planning application and this may not be the same as the final as built design



## 7.0 Technical Methodology

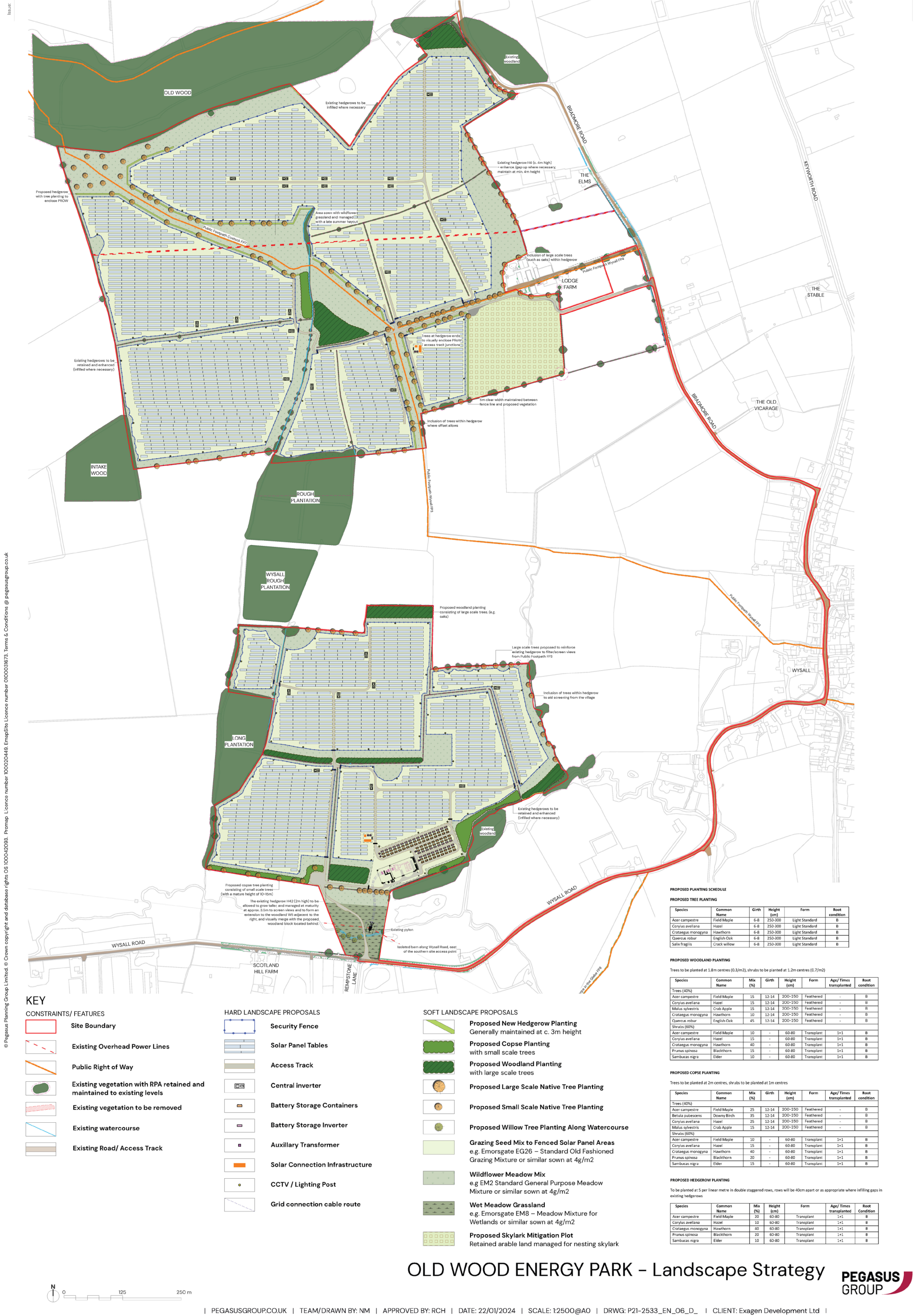
Visualisation Types				Photography	Responses
1	2	3	4		
✓	✓	✓	✓	Visualisation Types Methodology	Yes- see page viewpoint location plan and view information page prior to visualisations.
		✓	✓	Method used to establish the camera location (e.g. handheld GPS/GNSS, GNSS/RTK, survey point, visual reference)	GPS: Iphone 15- App: GPS OS
		✓	✓	Likely level of accuracy of location (#m, #cm etc)	≤ 1m
		✓	✓	If lenses other than 50mm have been used, explain why a different lens is appropriate	N/A
			✓	Written description of procedures for image capture and processing	Yes- see section 8.0 Methodology
			✓	If panoramas used: make and type of Pano head and equipment used to level head	Panoramic Tripod Head: Andoer, Precision Leveller: Andoer LP-64
			✓	If working outside the UK, geographic co-ordinate system (GCS) used (e.g. WGS-84)	N/A
				<b>3D Model / Visualisation</b>	
		✓	✓	Source of topographic height data and its resolution	LiDAR 1m DSM (Digital Surface Model) and a topographical survey.
		✓	✓	How have the model and the camera locations been placed in the software?	Point coordinates added to geo-referenced dwg file containing topo survey and proposed layout. Points loaded into 3D program and camera added to points.
			✓	Elements in the view used as target points to check the horizontal alignment	Multiple existing features in photograph/view matched to topo plan, used a reference points/markers, camera automatically set to level horizontally
			✓	Elements in the view used as target points to check the vertical alignment	Multiple existing features in photograph/view are matched to topo plan, used a reference points/markers, camera automatically set to level vertical alignment
				<b>Generally</b>	
✓		✓	✓	Any limitations in the overall methodology for preparation of the visualisations?	The visual representations are based on an outline planning layout rather than a fully detailed scheme.



Visualisation Types				Photography	Responses
1	2	3	4		
✓	✓	✓	✓	Visualisation Type	Type 4
		✓	✓	Projection	Cylindrical (A1 panoramas)
		✓	✓	Enlargement factor for intended sheet size	96% (A1 panoramas)
		✓	✓	Date and Time of captured photography	23/02/2024, times vary, see view information page prior to visualisations
			✓	Make and model of camera, and its sensor format	SONY ILCE-7M4
			✓	Make, focal length of the camera lens(es) used.	Sigma 50mm f/1.4 DG HSM Art Lens for Sony
			✓	Horizontal Field of View (HFOV) of photograph / visual	90° (A1 panoramas)
		✓	✓	Direction of View: bearing from North (0°) or Compass Direction	Bearings vary, see view information page prior to visualisations
		✓	✓	Camera location grid coordinates: eastings & northings to relevant accuracy; height of ground in mAOD	See view information page prior to visualisations
			✓	Distance to the nearest site boundary, or key development feature, as most appropriate.	See view information page prior to visualisations
			✓	Height of the camera lens above ground level and, if above 1.65m or below 1.5m, why?	1.6m
				<b>Additional imagery</b>	
✓		✓	✓	Baseline photograph	Existing view / baseline photograph included prior to visualisations
			✓	A composite view generated by overlaying multiple layers of image data: the photograph, 3D model of terrain (LiDAR DTM) and / or 3D model of LiDAR DSM, 3D model of proposed development, 3D model of landscape mitigation. This can explain how the photomontage has been generated.	Included to generate the visualisations
			✓	A photograph of the tripod location to confirm the camera / tripod location	Yes- see page viewpoint location plan and tripod location prior to visualisations



8.0 Appendix A



OLD WOOD ENERGY PARK – Landscape Strategy

