



Environmental
Statement Volume IV –
Appendix 7-2:
Visualisations



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a Harbour Energy Company PINS Reference: EN070008 Planning Act 2008 (as amended)

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(a)

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1 Visualisations

1.1 Introduction

- 1.1.1 This appendix of the Environmental Statement (ES) provides an overview of the approach and methodology used to produce the visualisations which support the landscape and visual assessment, followed by a series of photo viewpoints from each of the visual assessment representative viewpoints for both summer and winter. Only one season of viewpoint photography was taken for viewpoints where there was limited vegetation in the view that would not change the context of the view in different seasons or for additional viewpoints identified through statutory consultation. The photo viewpoints are as listed below:
 - Figure 1: Viewpoint 1 (winter);
 - Figure 2: Viewpoint 2 (winter);
 - Figure 3: Viewpoint 3 (winter);
 - Figure 3A: Viewpoint 3 (summer);
 - Figure 4: Viewpoint 4 (winter);
 - Figure 4A: Viewpoint 4 (summer);
 - Figure 5: Viewpoint 5 (winter);
 - Figure 5A: Viewpoint 5 (summer);
 - Figure 6: Viewpoint 6 (winter);
 - Figure 6A: Viewpoint 6 (summer);
 - Figure 7: Viewpoint 7 (winter);
 - Figure 7A: Viewpoint 7 (summer);
 - Figure 8: Viewpoint 8 (winter);
 - Figure 9: Viewpoint 9 (winter);
 - Figure 9A: Viewpoint 9 (summer);
 - Figure 10: Viewpoint 10 (winter);
 - Figure 10A: Viewpoint 10 (summer);
 - Figure 11: Viewpoint 11(winter);
 - Figure 11A: Viewpoint 11 (summer);
 - Figure 12: Viewpoint 12 (winter);
 - Figure 12A: Viewpoint 12 (summer);
 - Figure 13A: Viewpoint 13 (summer);
 - Figure 14: Viewpoint 14 (winter);
 - Figure 14A: Viewpoint 14 (summer);
 - Figure 15: Viewpoint 15 (winter);
 - Figure 15A: Viewpoint 15 (summer);

2

- Figure 16: Viewpoint 16 (winter);
- Figure 16A: Viewpoint 16 (summer);
- Figure 17: Viewpoint 17 (winter);
- Figure 17A: Viewpoint 17 (summer);
- Figure 18: Viewpoint 18 (winter);
- Figure 18A: Viewpoint 18 (summer);
- Figure 19: Viewpoint 19 (winter);
- Figure 19A: Viewpoint 19 (summer);
- Figure 20: Viewpoint 20 (winter);
- Figure 20A: Viewpoint 20 (summer);
- Figure 21: Viewpoint 21 (winter);
- Figure 21A: Viewpoint 21 (summer);
- Figure 22: Viewpoint 22 (winter):
- Figure 22A: Viewpoint 22 (summer):
- Figure 23: Viewpoint 21 (winter);
- Figure 23A: Viewpoint 21 (summer);
- Figure 24: Viewpoint 24 (winter);
- Figure 24A: Viewpoint 24 (summer);
- Figure 25: Viewpoint 25 (winter);
- Figure 25A: Viewpoint 25 (summer);
- Figure 26: Viewpoint 26 (winter);
- Figure 26A: Viewpoint 26 (summer);
- Figure 27: Viewpoint 27 (winter);
- Figure 27A: Viewpoint 27 (summer);
- Figure 28: Viewpoint 28 (winter);
- Figure 28A: Viewpoint 28 (summer);
- Figure 29: Viewpoint 29 (winter);
- Figure 29A: Viewpoint 29 (summer);
- Figure 30A: Viewpoint 30 (summer); and
- Figure 31A: Viewpoint 31 (summer).

October 2023

- 1.1.2 Type 3 visualisations (photomontages) of the Block Valve Stations have been produced from the following locations:
 - Figure 32: Viewpoint 10 Thoroughfare Block Valve Station Baseline view winter;
 - Figure 33: Viewpoint 10 Thoroughfare Block Valve Station Baseline view summer;
 - Figure 34: Viewpoint 10 Thoroughfare Block Valve Station Photomontage Year 1;
 - Figure 35: Viewpoint 10 Thoroughfare Block Valve Station Photomontage Year 15;

- Figure 36: Viewpoint 22 Louth Road Block Valve Station

 Baseline view winter;
- Figure 37: Viewpoint 22 Baseline view summer;
- Figure 38: Viewpoint 22 Photomontage Year 1;
- Figure 39: Viewpoint 22 Photomontage Year 15;
- Figure 40: Viewpoint 27 Baseline view winter;
- Figure 41: Viewpoint 27 Baseline view summer;
- Figure 42: Viewpoint 27 –Wireline Theddlethorpe Facility Option 1;
- Figure 43: Viewpoint 27 –Wireline Theddlethorpe Facility Option 2;
- Figure 44: Viewpoint 27 –Photomontage Theddlethorpe Facility Year 1 Option 2;
- Figure 45: Viewpoint 30 Theddlethorpe Facility Option 1 Baseline view summer;
- Figure 46: Viewpoint 30 Theddlethorpe Facility Option 1 Photomontage Year 1;
- Figure 47: Viewpoint 30 Theddlethorpe Facility Option 1 Photomontage Year 15;
- Figure 48: Viewpoint 31 Washingdales Lane Block Valve Station Baseline view summer:
- Figure 49: Viewpoint 31 Washingdales Lane Block Valve Station Wireline Year 1;
- Figure 50: Viewpoint 31 Washingdales Lane Block Valve Station Photomontage Year
 1; and
- Figure 51 Viewpoint 31 Washingdales Lane Block Valve Station Photomontage Year
 15.
- 1.1.3 Type 3 visualisations have been produced for two scenarios, providing an indication of how the Block Valve Stations would appear at year 1 of operation, and year 15 of operation. These are linked to the temporal scope of the assessment, with the year 1 visualisations providing an impression of the likely worst case and year 15 visualisations demonstrating the influence of proposed mitigation planting as it becomes established and begins to mature.

1.2 Visualisation Method

Introduction

1.2.1 The following section sets out the approach to preparation of the visualisations and provides details of key assumptions and limitations in the use of visualisations.

Guidelines

- 1.2.2 The photomontages have been prepared with reference to the following good practice guidance publications:
 - Visual Representation of Development Proposals Technical Guidance Note 06/19, Landscape Institute, 2019;
 - Photography and Photomontage in Landscape and Visual Impact Assessment Advice Note 01-11, Landscape Institute, 2011; and
 - Guidelines for Landscape and Visual Impact Assessment, Third Edition, Landscape Institute, 2013.

- 1.2.3 In addition, reference has also been made to guidance published by NatureScot. Although specific to wind farms this offers additional guidance on photography and the presentation of visualisations.
 - Visual Representation of Wind Farms Version 2. 2, Scottish Natural Heritage, 2017.

Site Photography

- 1.2.4 The procedure for taking photography on site is described below:
 - Site visits are planned around time of day and taking the weather into consideration.
 The photographs are best taken with the sun behind or side on to the camera. This
 means views facing west are best taken in the morning and views facing east in the
 afternoon;
 - Photographs are taken using a full-frame FX format digital camera with a fixed 50mm focal length lens mounted to a panoramic head on a steady tripod;
 - The camera is levelled in both pitch and roll referencing a bubble level or electronic 'virtual horizon' feature in the camera;
 - Manual camera settings are used to ensure consistent exposure across all photos taken;
 - The camera position is captured using Global Navigation Satellite System (GNSS) smart antennae with real time kinematic correction for increased accuracy; and
 - The panoramic head is rotated to the next interval using the built-in step rotator and another photo is taken ensuring sufficient overlap of one image to the next. This is repeated until a full 360° sweep of photos is taken.

Photo Stitching and Postproduction

- 1.2.5 When dealing with panoramic views the photographs are loaded into specialist photo stitching software. The images are automatically corrected for lens distortion and stitched to create a full 360° image. Adjustments can be made to manually correct the blend between images where appropriate.
- 1.2.6 The resulting image is output as Spherical projection to correctly match the virtual camera to be used later in the 3D software. The software can remap images as cylindrical or planar projection in accordance with LVIA requirements.
- 1.2.7 A virtual camera is positioned in the 3D software according to the same real-world position and height as per the captured GNSS location data. This camera is set-up to match the same field of view as the stitched panorama. The stitched image is then loaded as the camera back plate.
- 1.2.8 The camera target is aligned to match existing elements visible in the photograph. For Type 3 photomontages a combination of Digital OS and 3D contours is used to match features in the photography. When the landscape is particularly flat Lidar Digital Surface Model (DSM) is used to obtain existing structures to aid a match.
- 1.2.9 The daylight settings in the scene are matched to the time and location of the original photography.
- 1.2.10 The proposed design is modelled and placed at the correct geo-referenced position. The virtual camera views are rendered and composited into the background photography. The images are adjusted to mask the correct parts of the render behind existing elements in the photography and to erase existing features from the view that will be removed as part of the project. Proposed mitigation planting and earthworks is then added, where relevant.

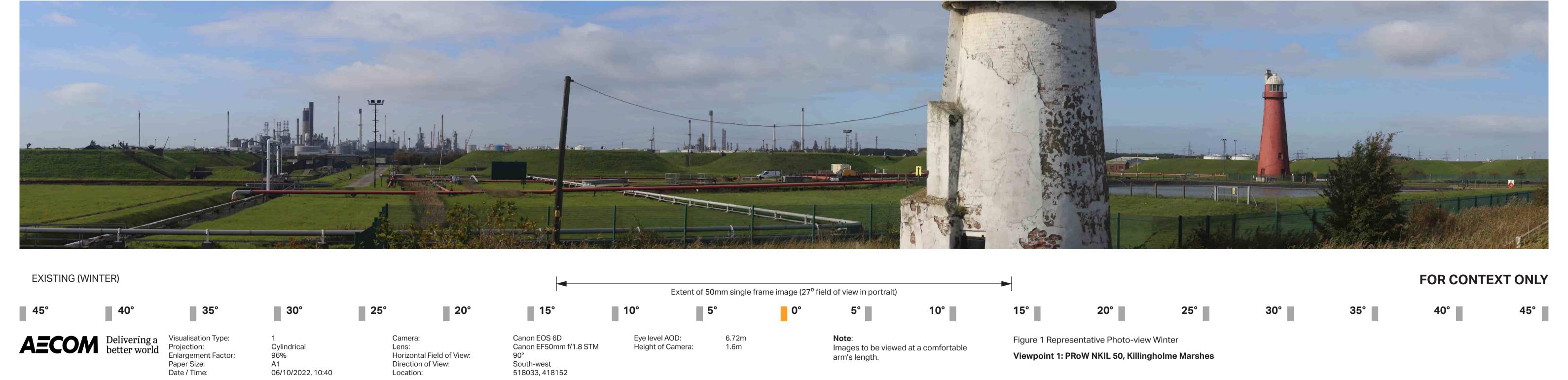
1.2.11 In accordance with TGN 06/19, the panoramic images, where required to show sufficient landscape context have been displayed using a cylindrical projection. As explained in TGN 06/19 Appendix 8, Section 8.3, cylindrical images can be difficult to view as a printed image especially for close viewpoints, where cylindrical panoramas will look unrealistic. Section 8.4 explains that using a planar projection can overcome the 'curved distortion' which can occur with a cylindrical image. Whilst TGN 06/19 advises that for planar projection a horizontal field of view (HFoV) of around 60° should be used to avoid the increasing distortion that can be present towards the edges of the panorama, this also loses the landscape context otherwise present in a wider HFoV. Consequently, for Viewpoint 10, a 90° HFoV has been used to maintain the landscape context whilst reducing the curved distortion which would otherwise be present with a cylindrical projection.

Assumptions and limitations

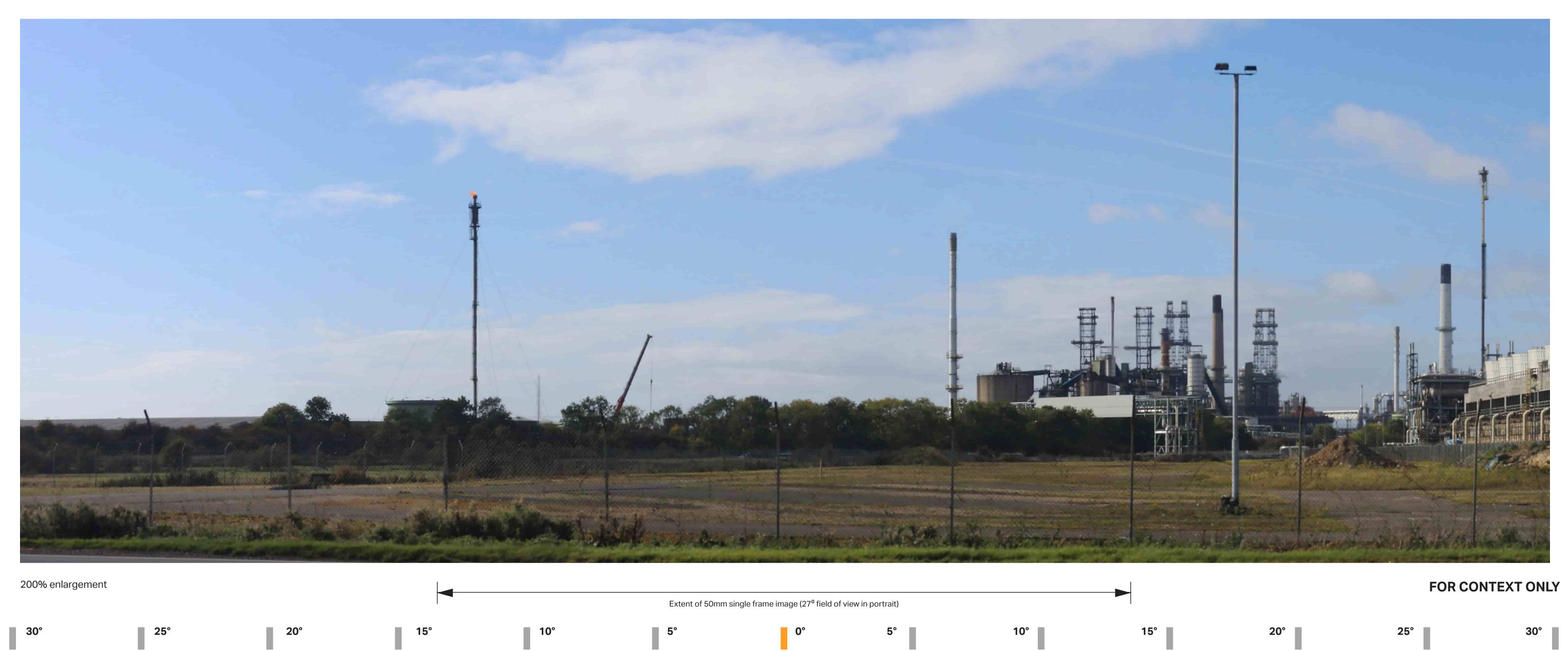
- 1.2.12 The photomontages for year 1 of operation assume that all construction activities would be completed, with all temporary structures and elements removed, earthworks reprofiling completed and grass seeding established.
- 1.2.13 The photomontages for year 15 of operation are intended to provide an indication of how the Proposed Development would appear in the longer term once proposed mitigation planting has established. Mitigation planting is based on that shown on the outline landscape plans within the Outline Landscape and Ecological Mitigation Plan (OLEMP) (Application Document 6.8). A conservative approach to tree heights (up to 8m) has been applied to proposed planting in the photomontages. In reality the planting may reach a greater height at year 15 and will continue to grow and mature beyond this timeframe.
- 1.2.14 It is important to note that visualisations are not able to show exactly what a proposed development will look like in reality but provide a reasonable representation of the scale and distance of the structures and their relationship to existing features in the view. Where existing features, such as vegetation and/or structures are removed from the existing view background features are added based on interpretation of photography and observations in the field. Visualisations should be reviewed in the field at the viewpoint location in order to form the best impression of the existing context and potential change.

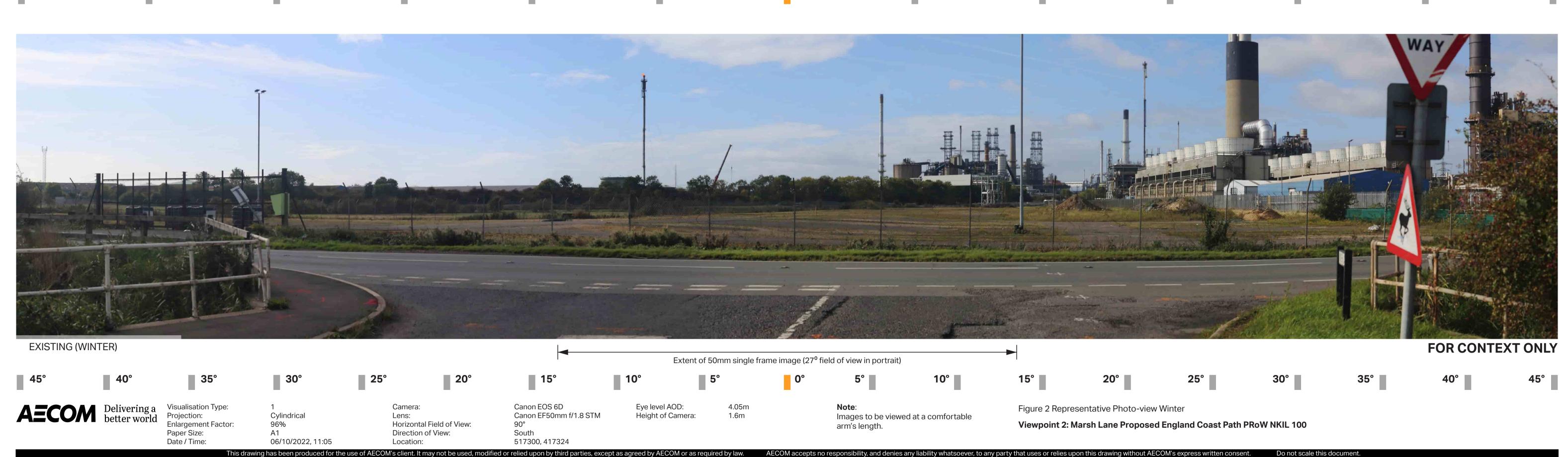
1.3 Photo-viewpoints and Photomontages

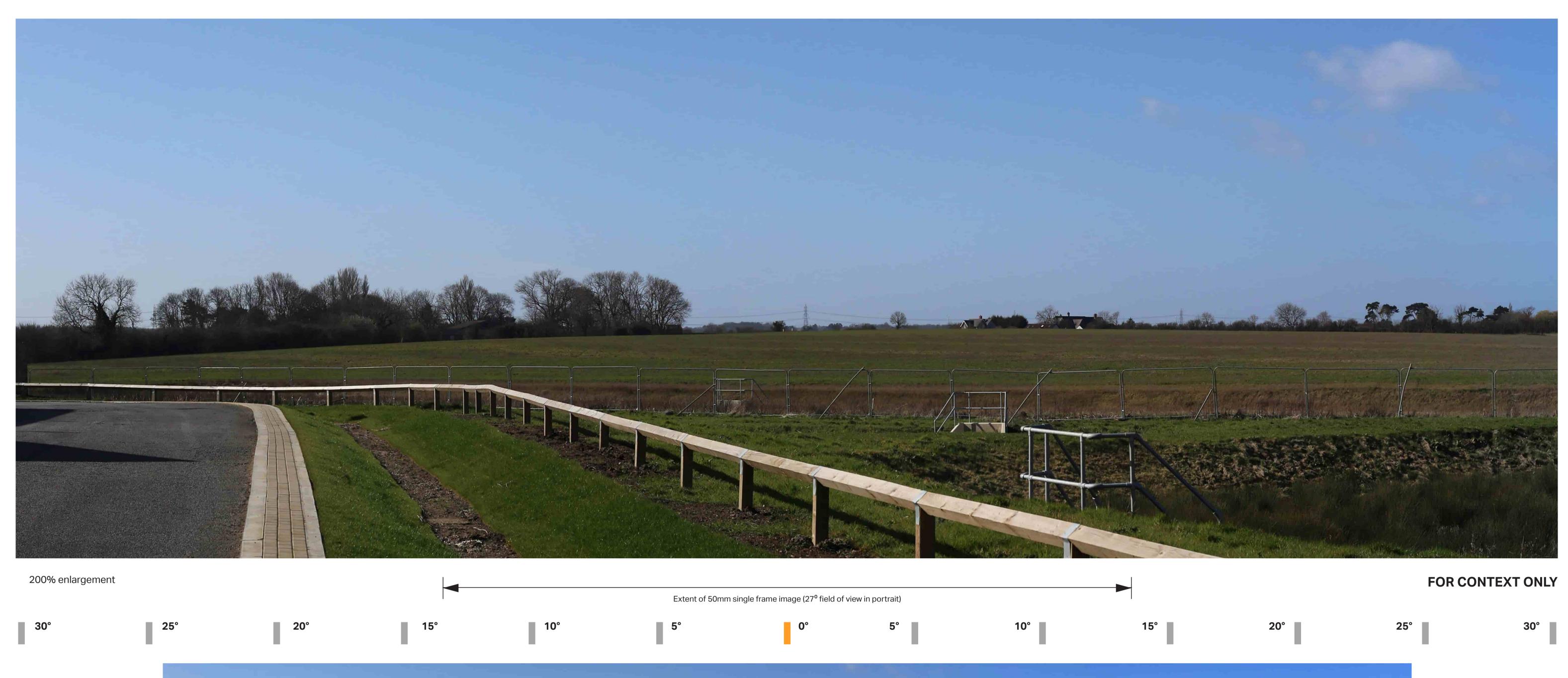




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Extent of 50mm single frame image (27° field of view in portrait)

Images to be viewed at a comfortable

arm's length.

1.6m

Figure 3 Representative Photo-view Winter

Viewpoint 3: Brocklesby Avenue, Immingham

FOR CONTEXT ONLY

EXISTING (WINTER)

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30°

Cylindrical

22/03/2023, 10:06

96% A1

Projection:
Enlargement Factor:
Paper Size:
Date / Time:

25°

Camera:

Location:

Horizontal Field of View: Direction of View:

Lens:

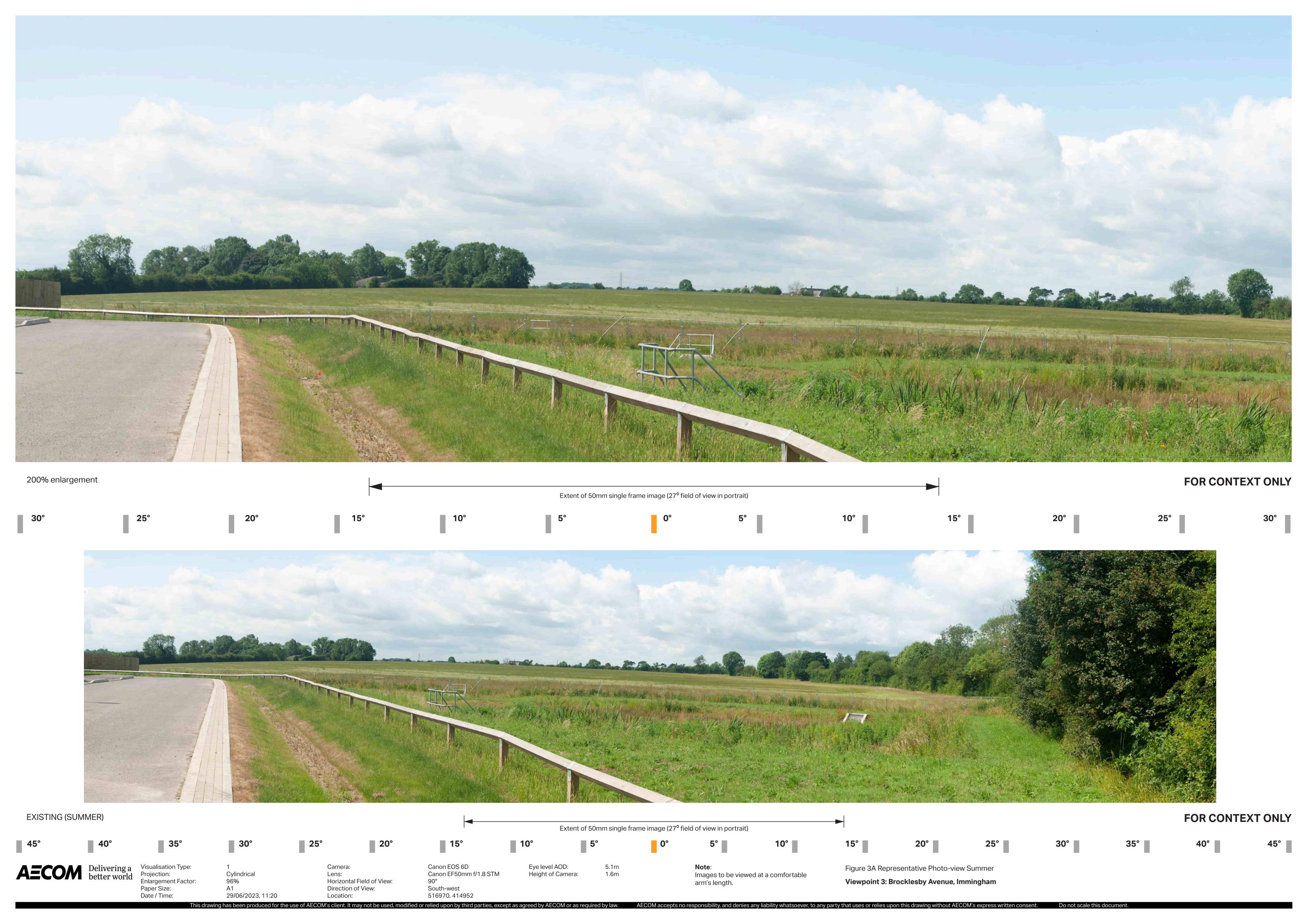
20°

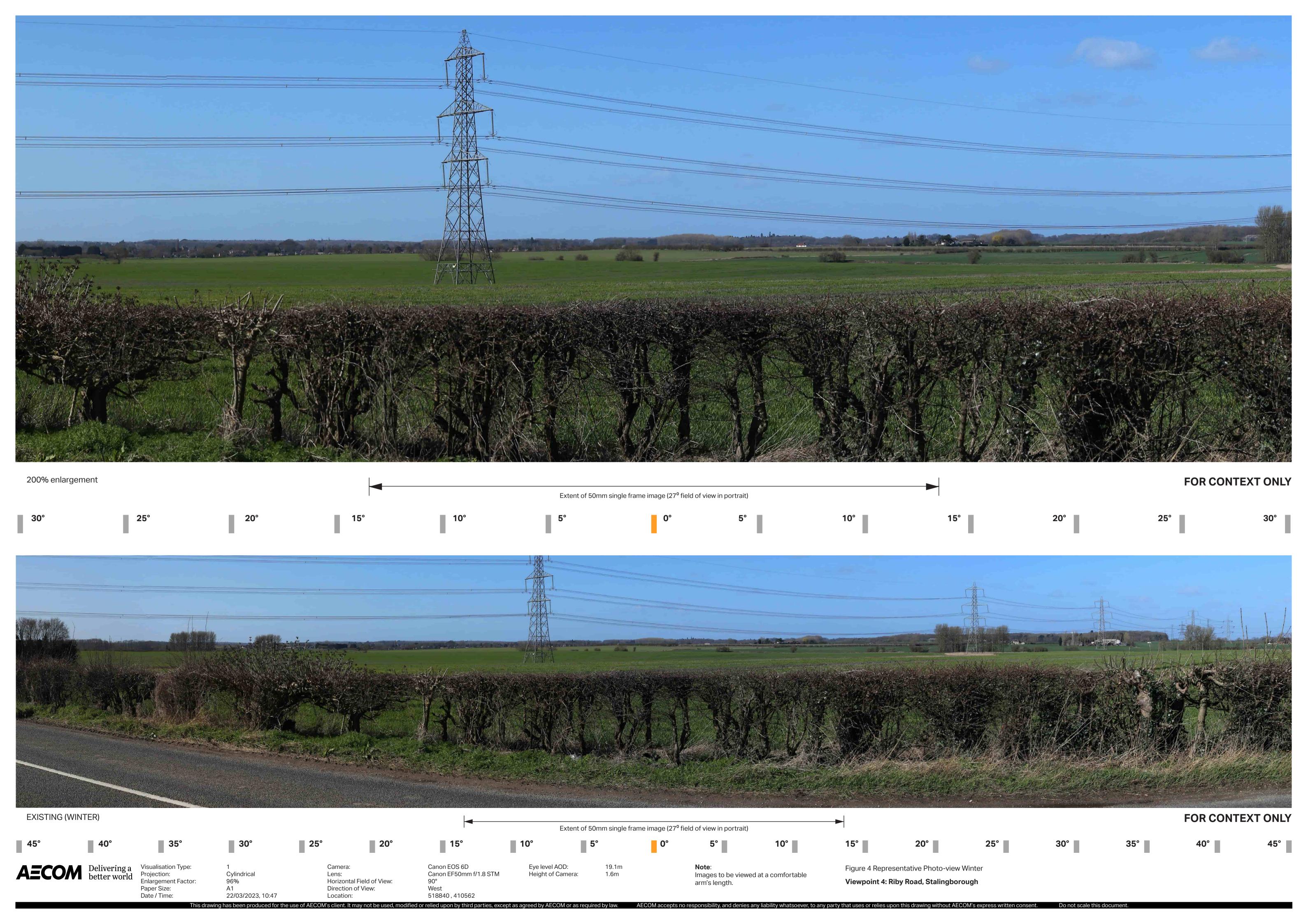
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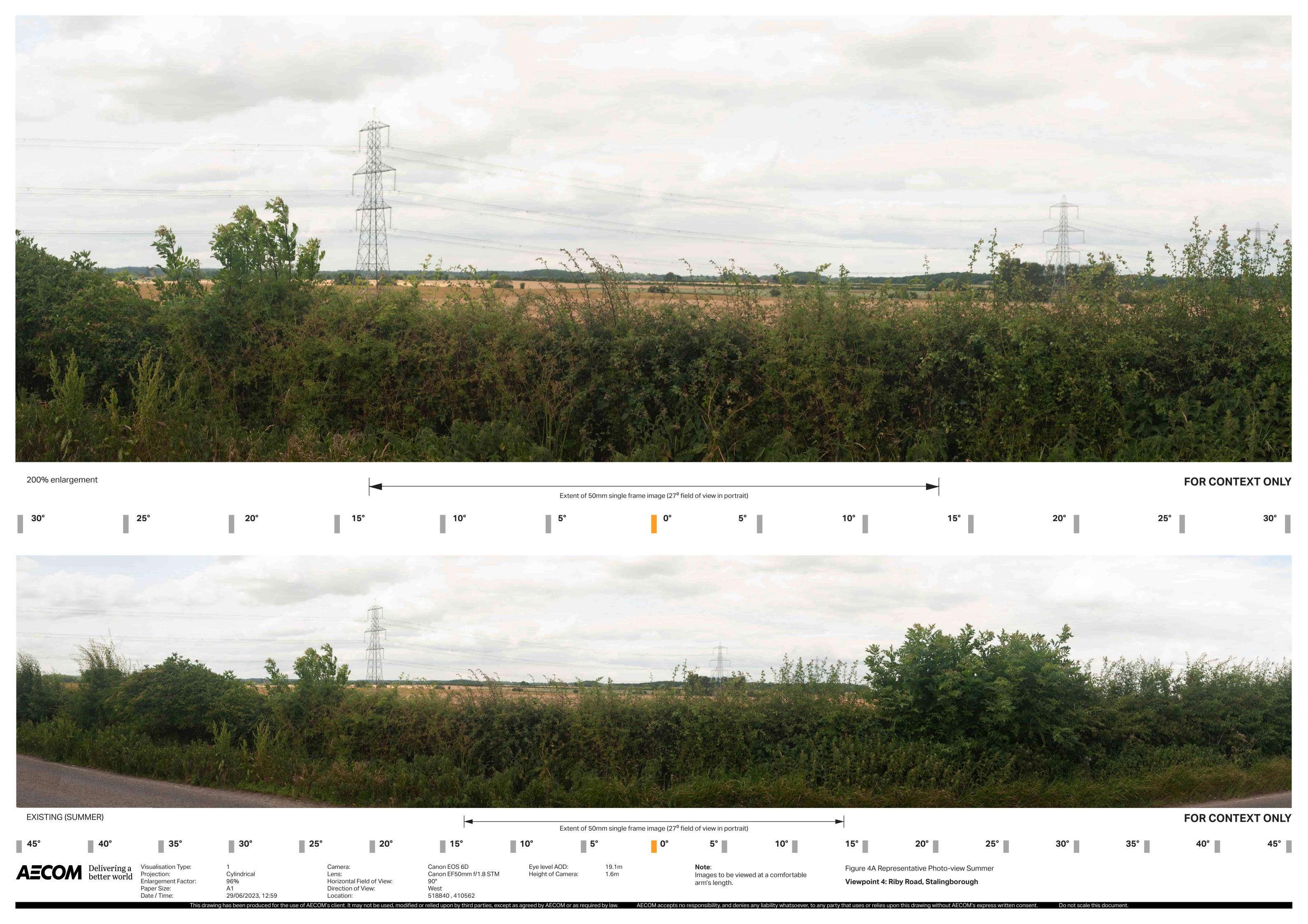
15°

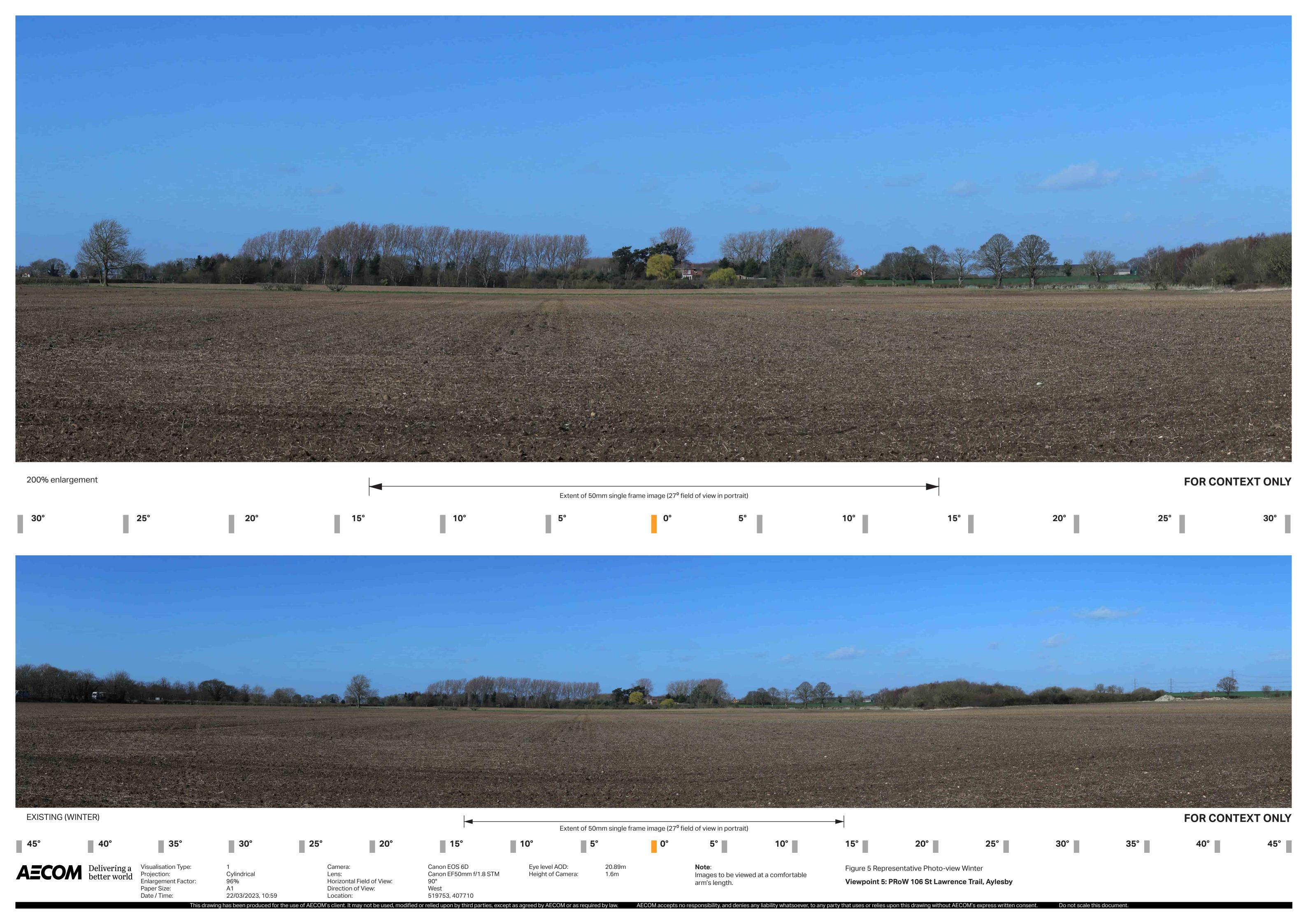
Canon EOS 6D Canon EF50mm f/1.8 STM 90° South-west 516970, 414952

Eye level AOD: Height of Camera:

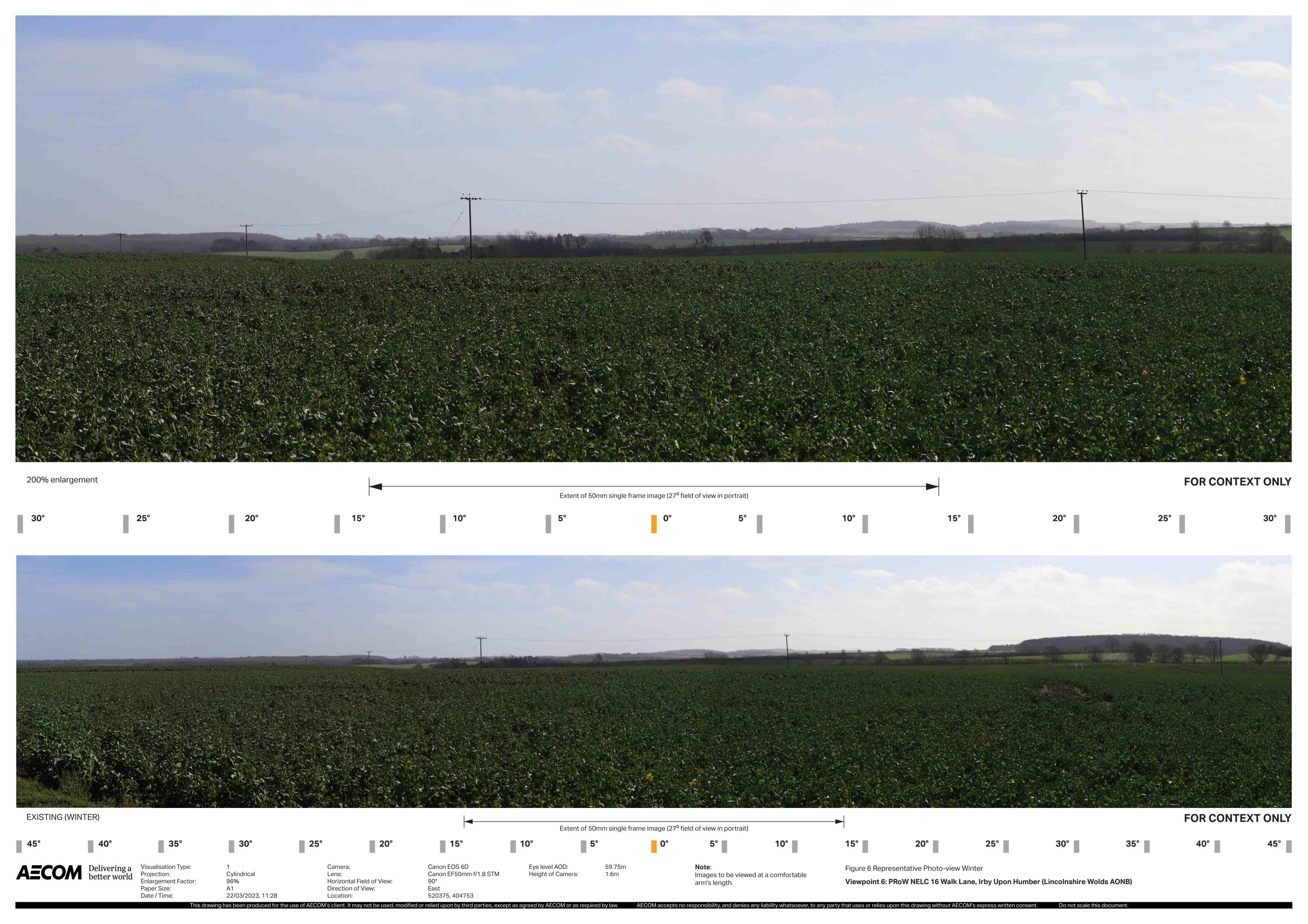






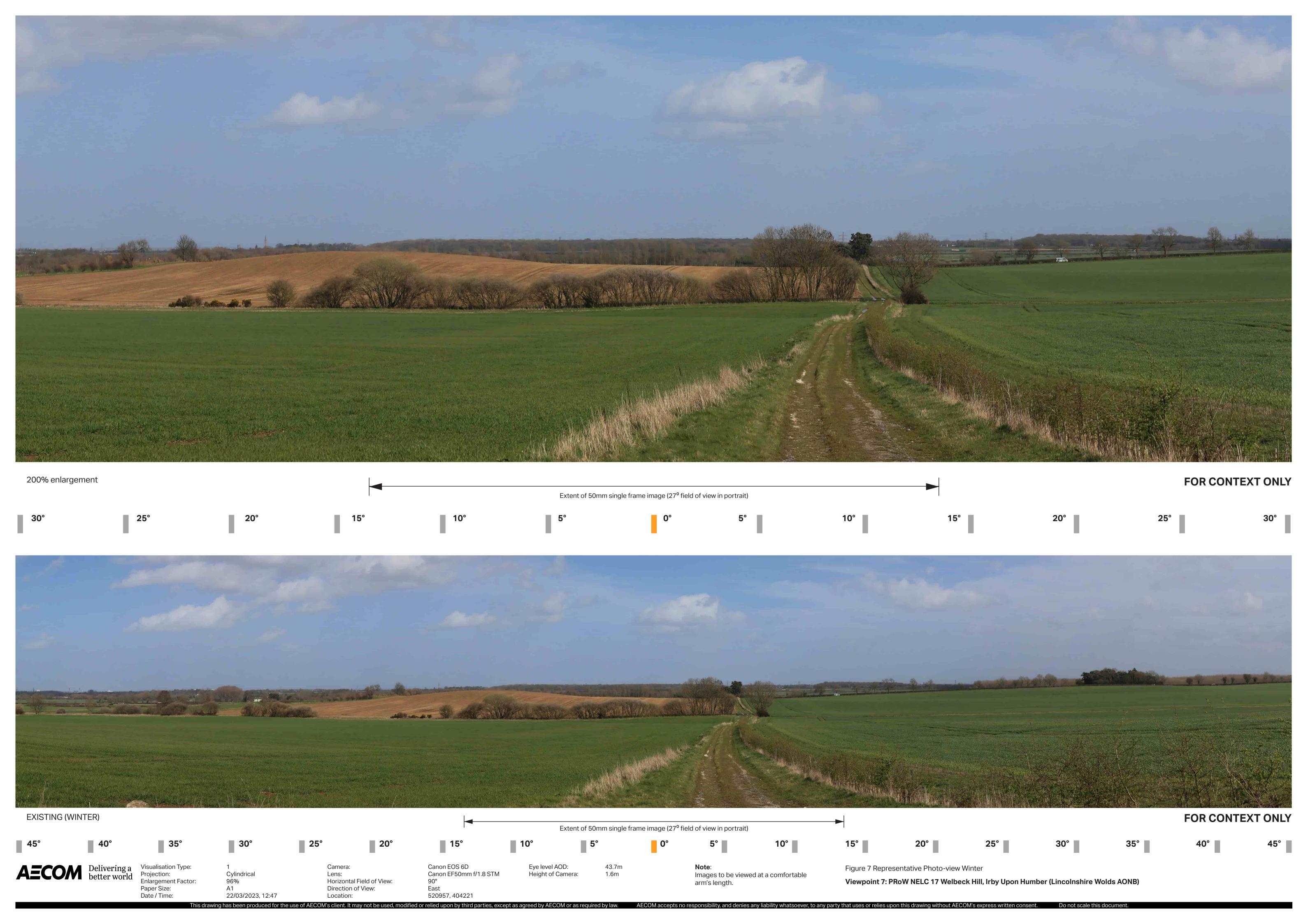


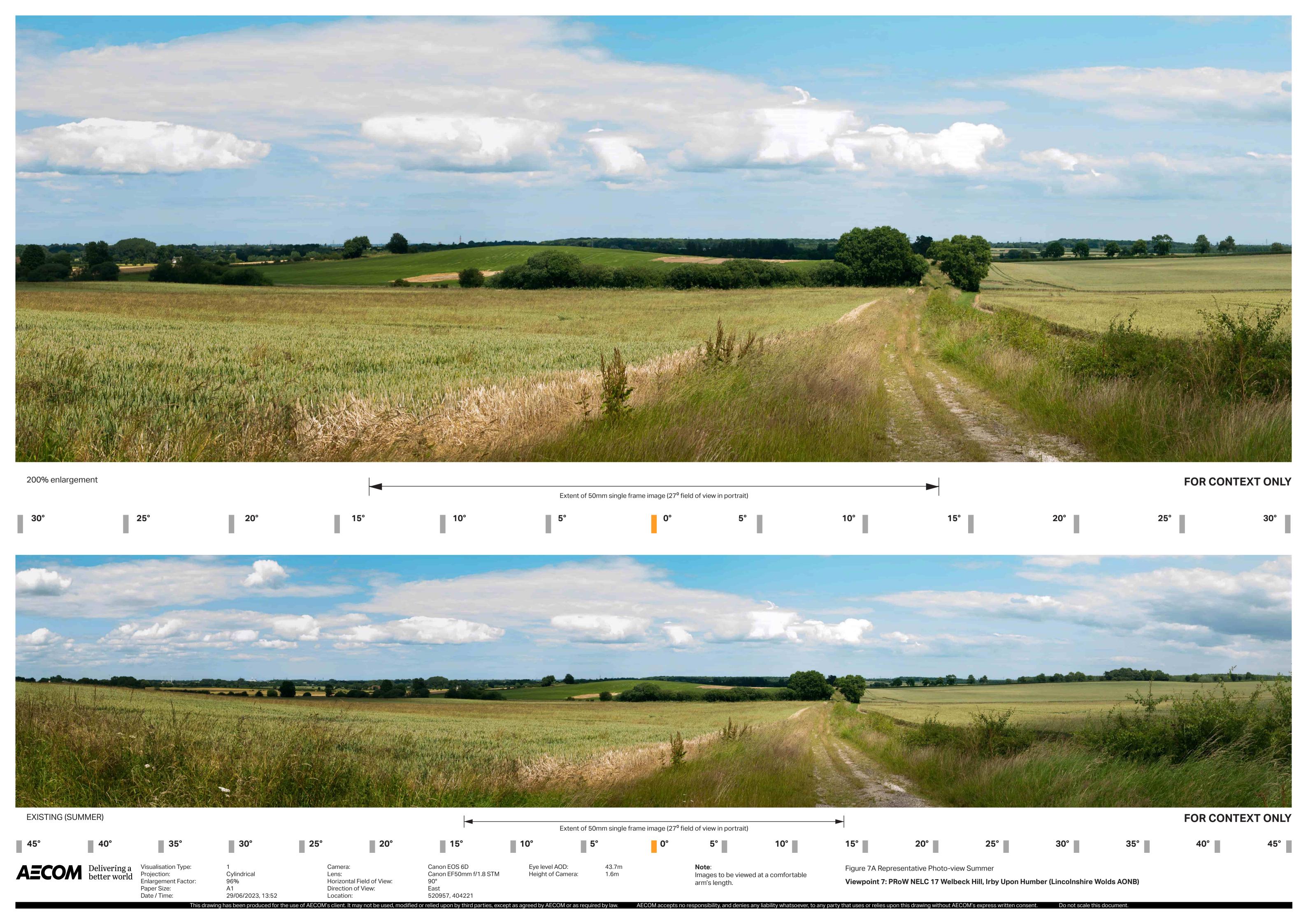


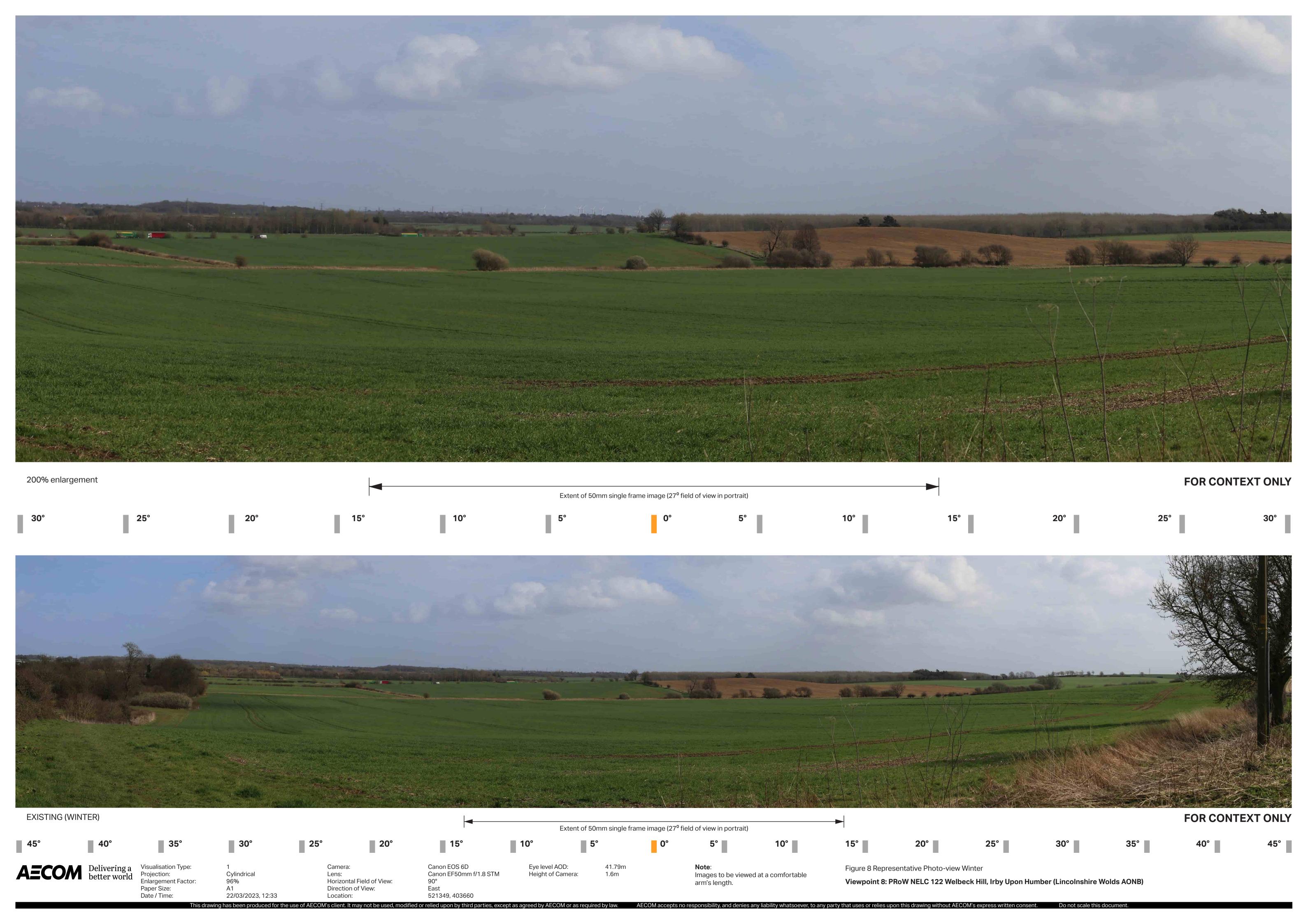


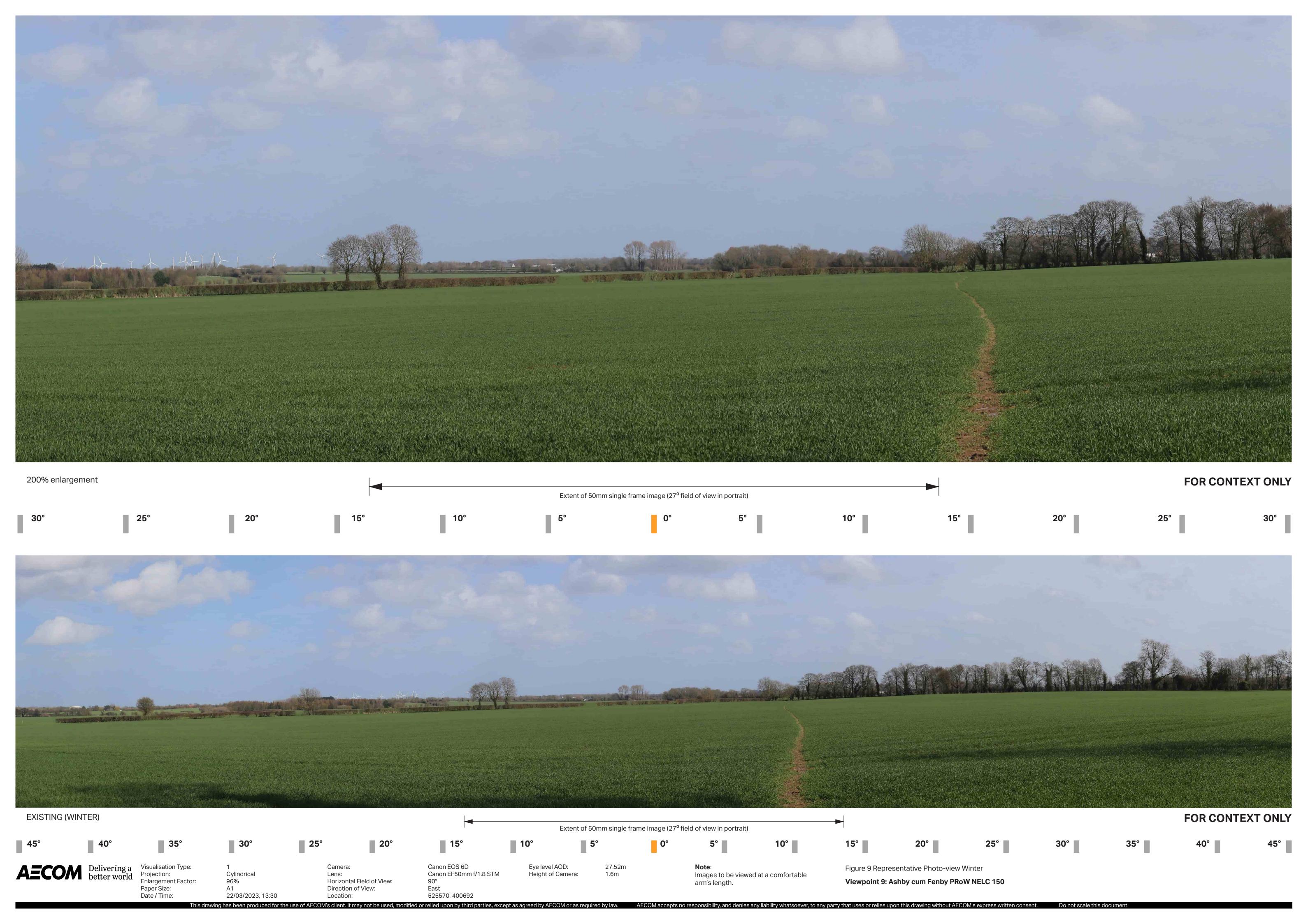


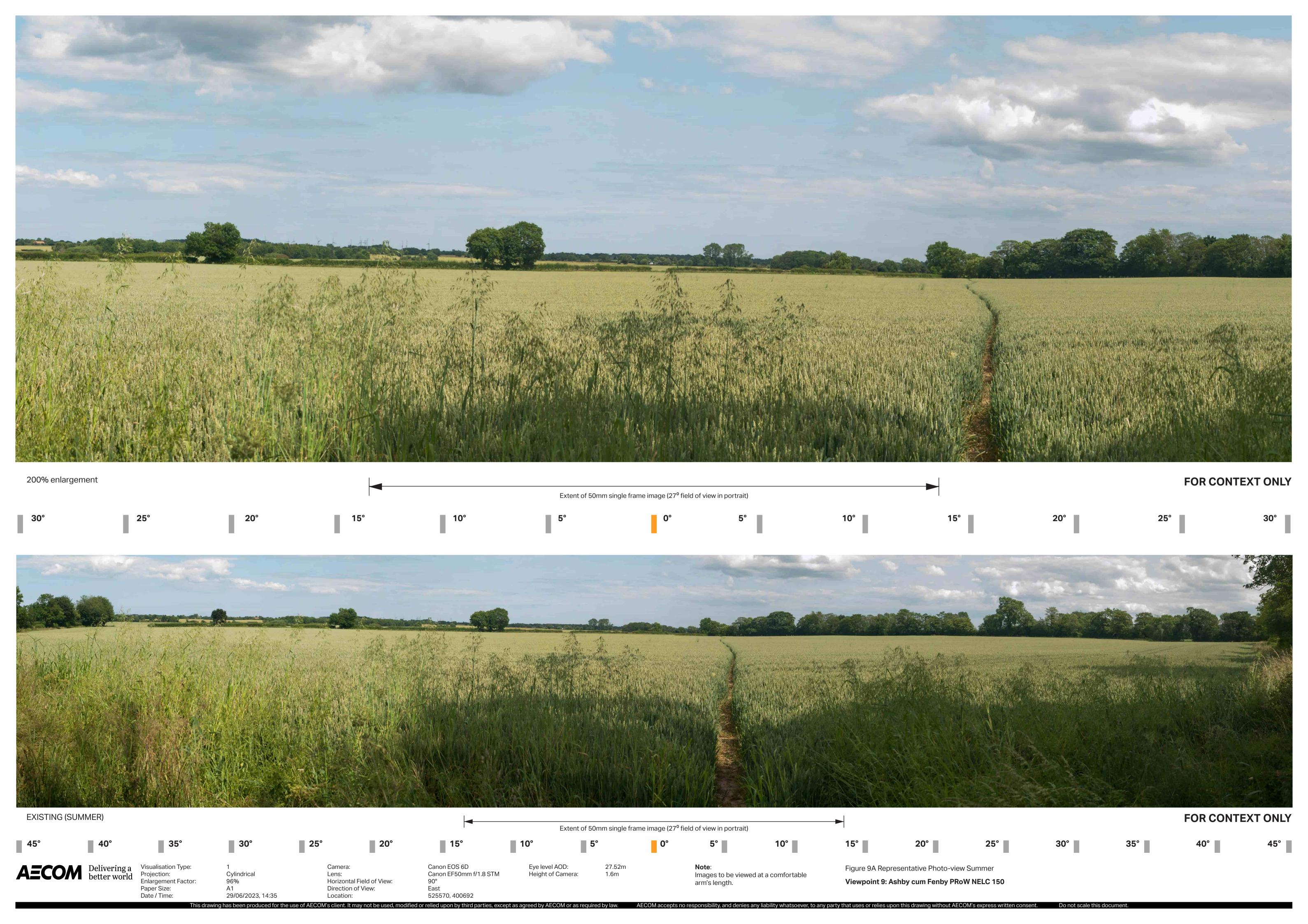






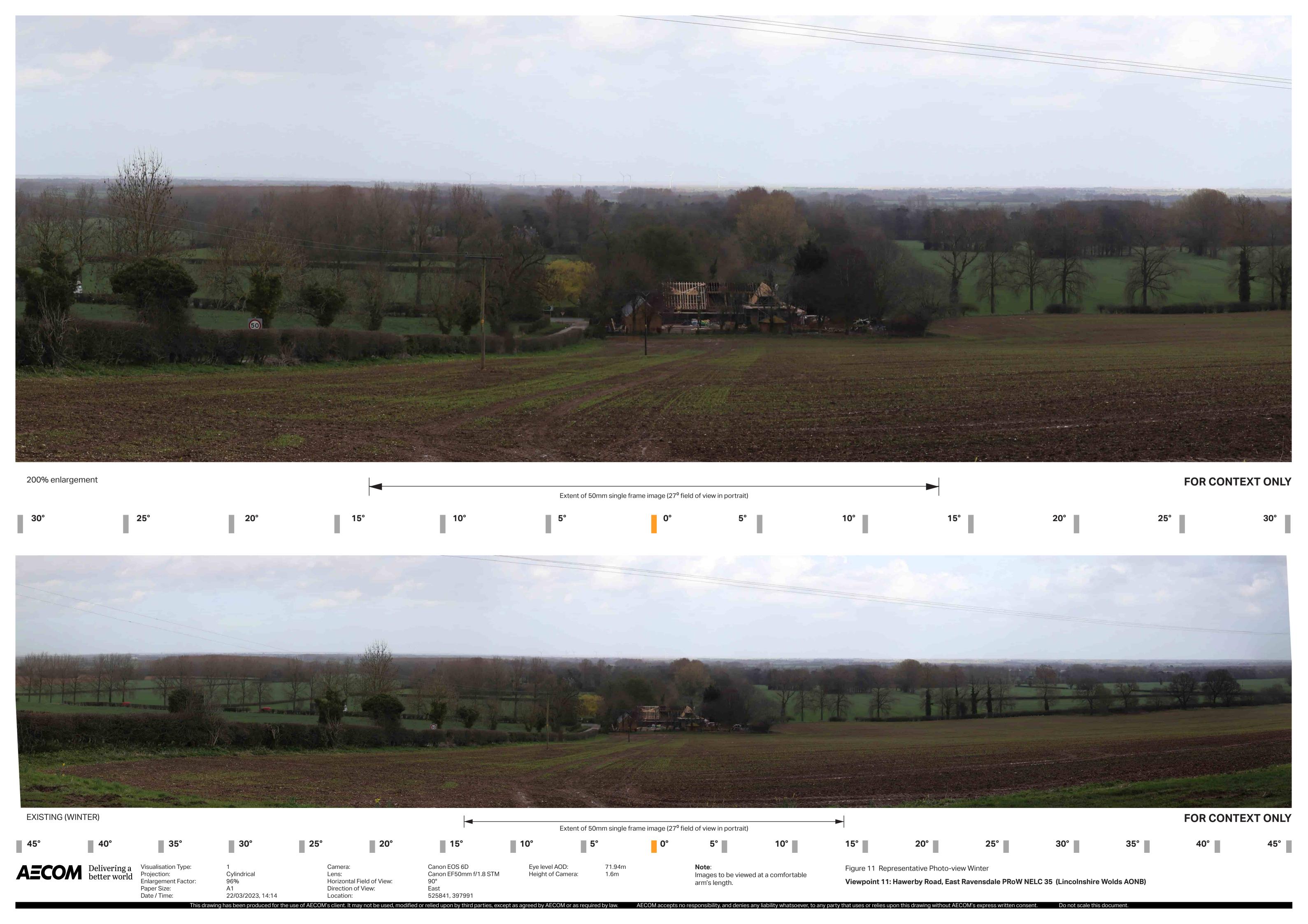


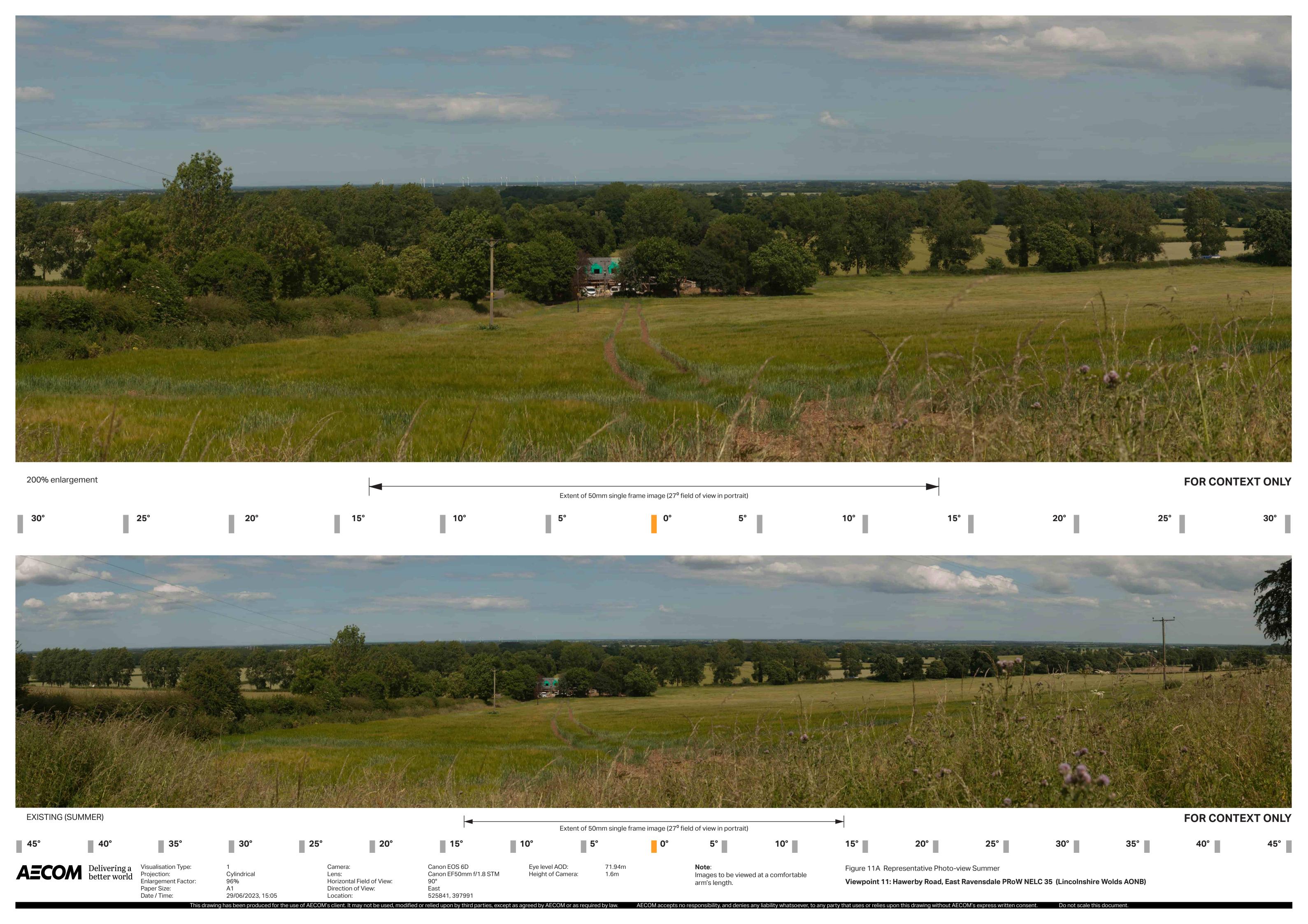
















Images to be viewed at a comfortable

arm's length.

Figure 12 Representative Photo-view Winter

Viewpoint 12: Lane near Hawerby PRoW NELC 35 (Lincolnshire Wolds AONB)

Canon EOS 6D Canon EF50mm f/1.8 STM 90° West 526480, 397691

Camera:

Location:

Horizontal Field of View: Direction of View:

Lens:

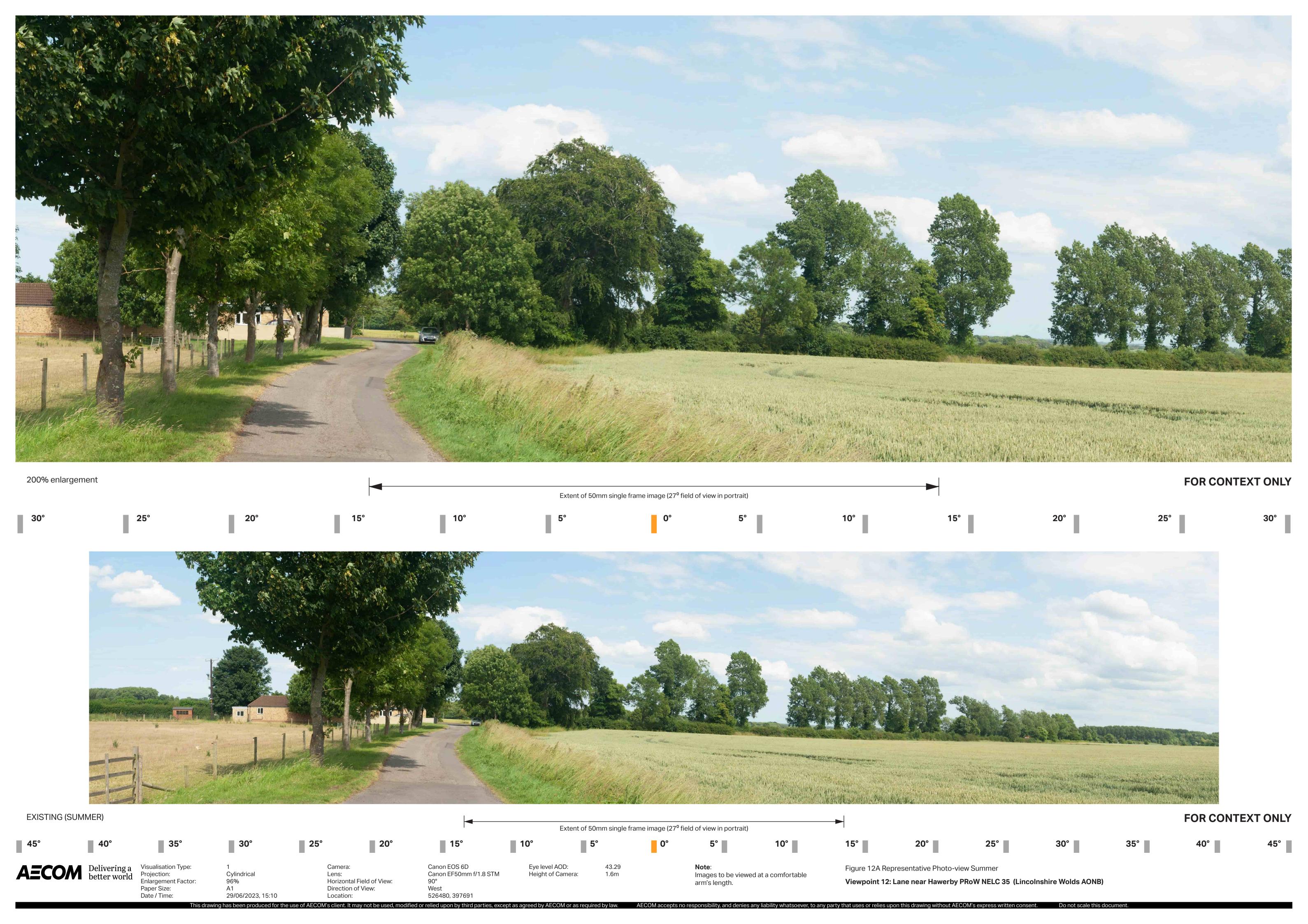
Eye level AOD: Height of Camera:

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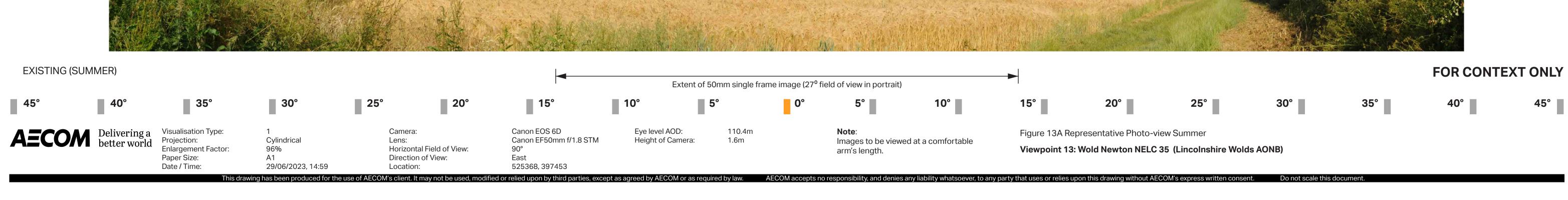
Projection:
Enlargement Factor:
Paper Size:
Date / Time:

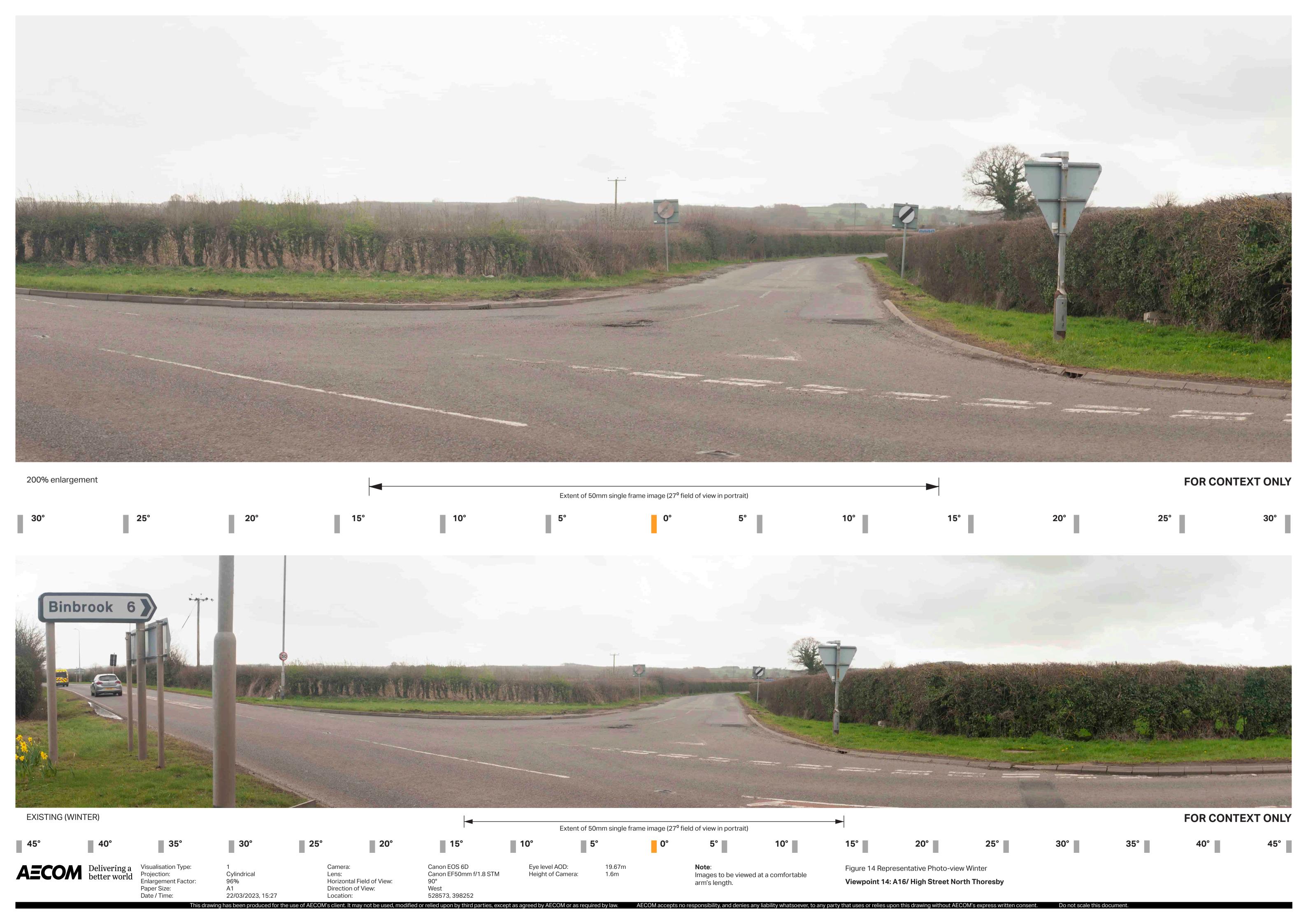
Cylindrical

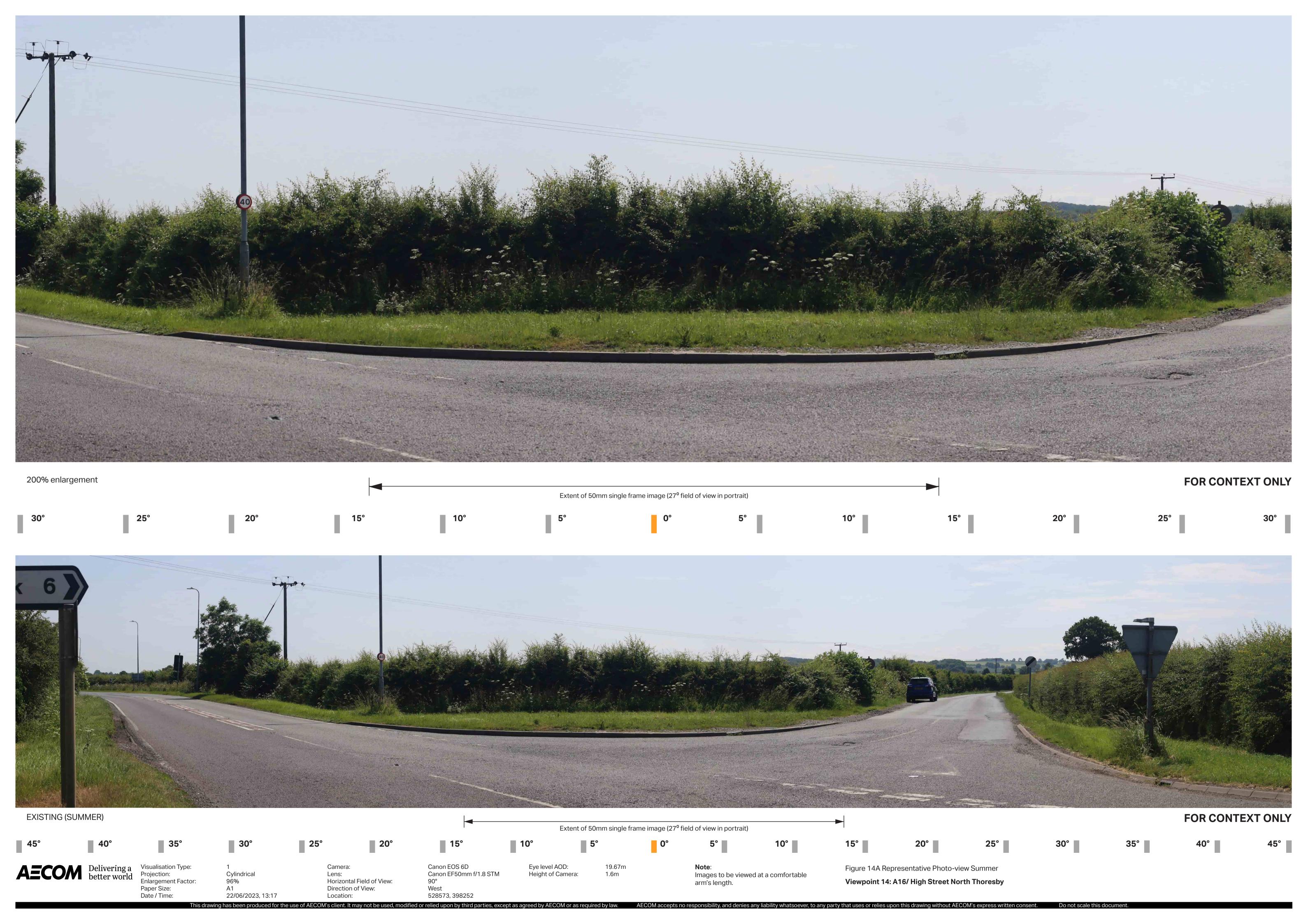
22/03/2023, 14:21



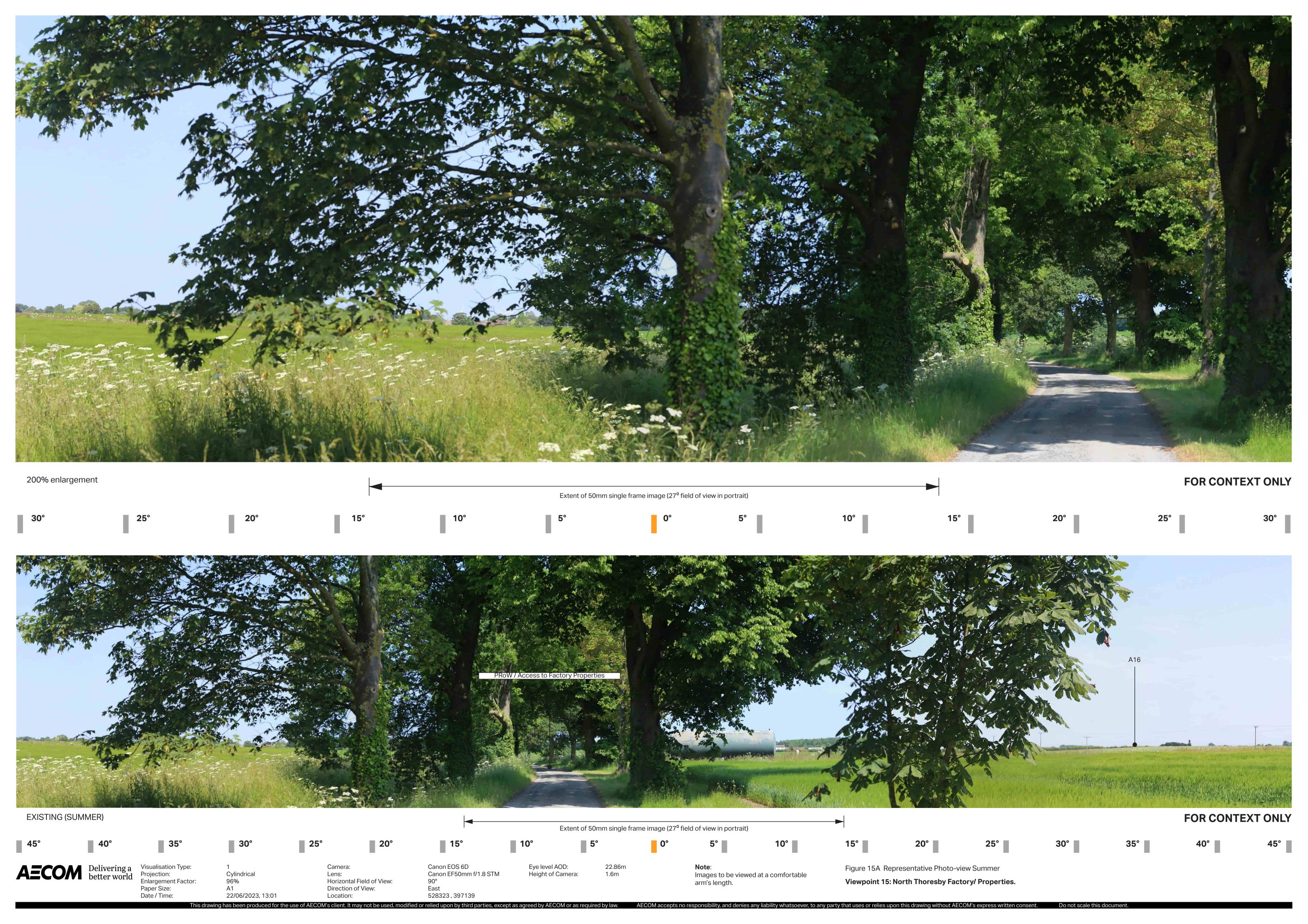


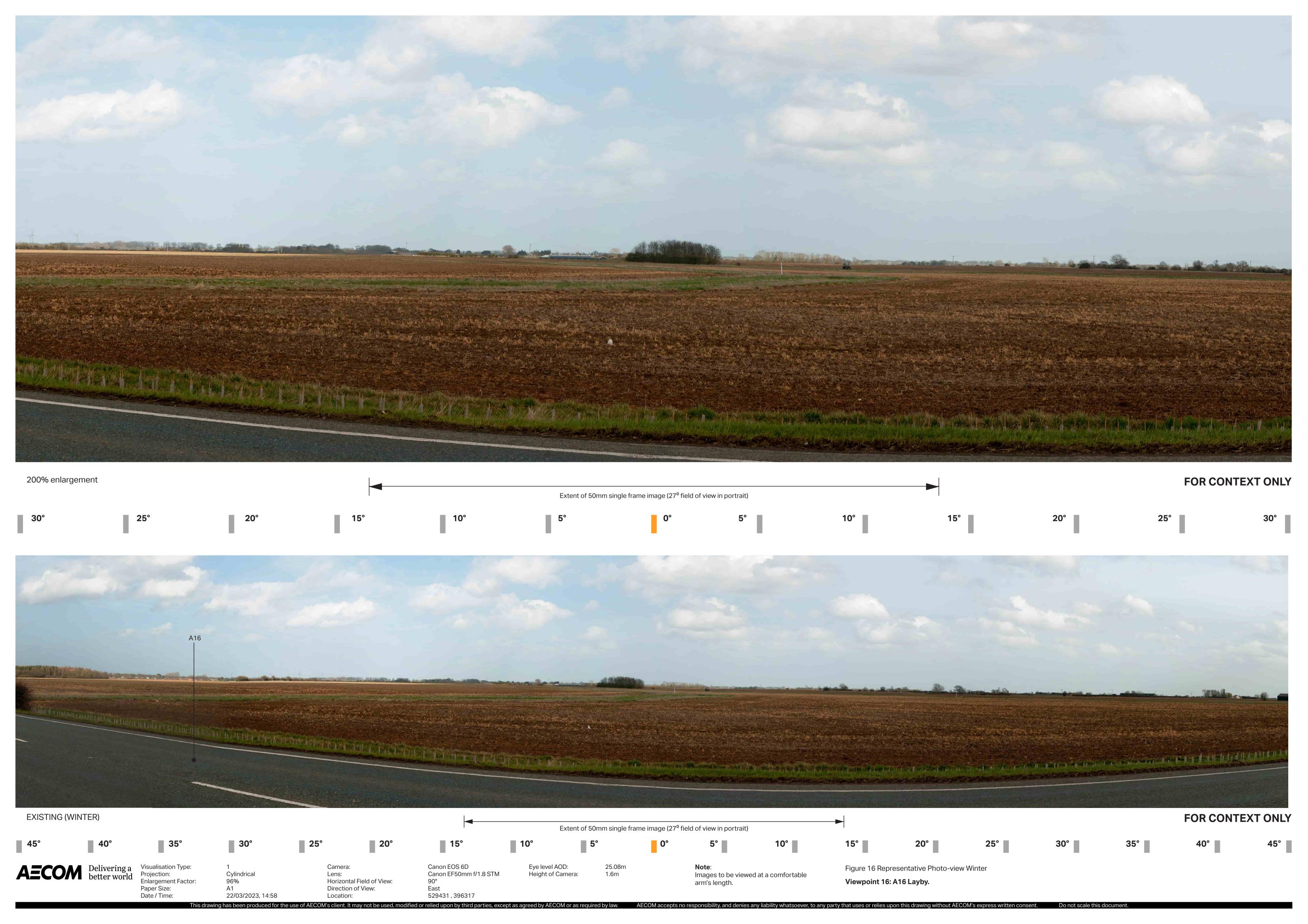


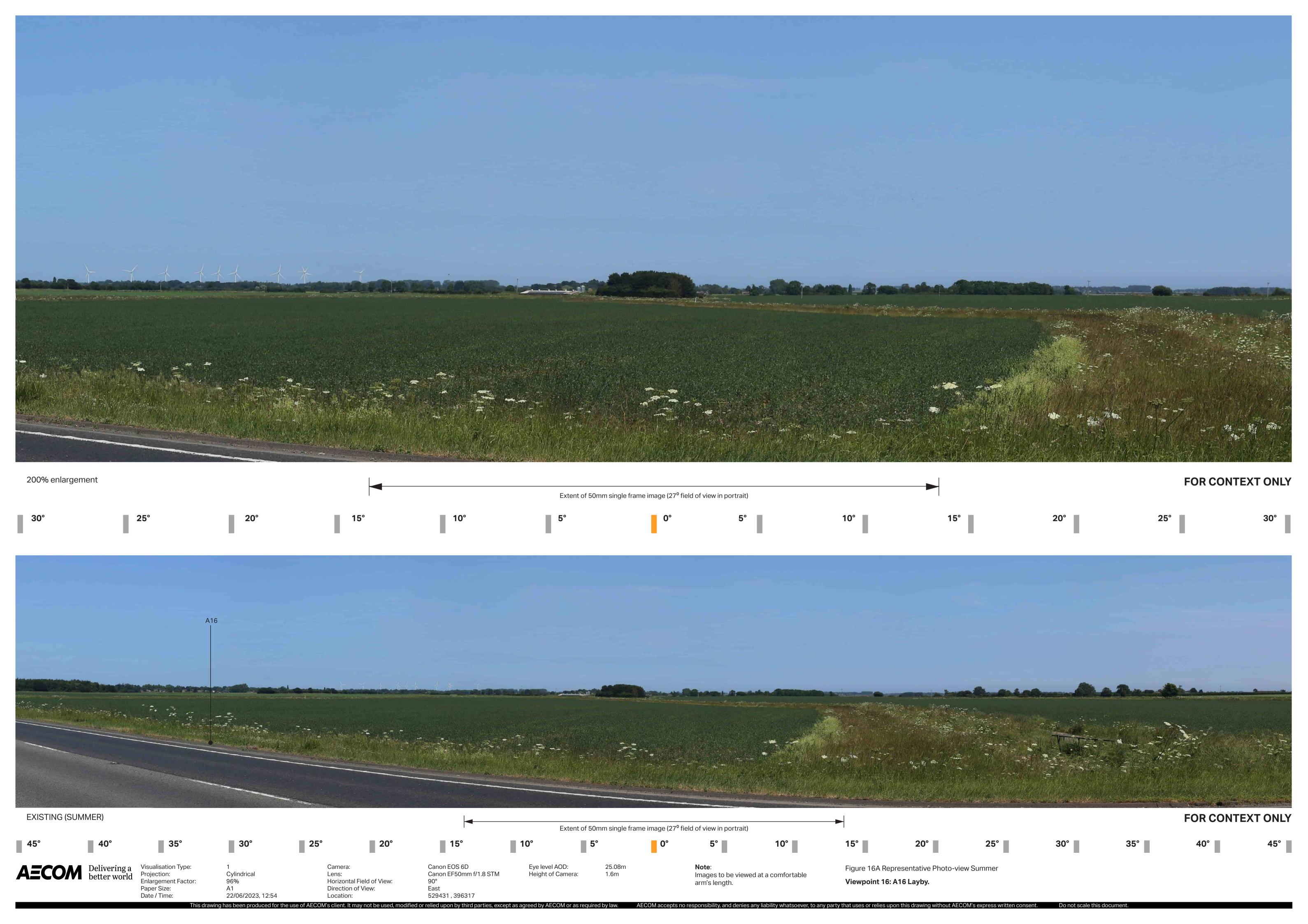


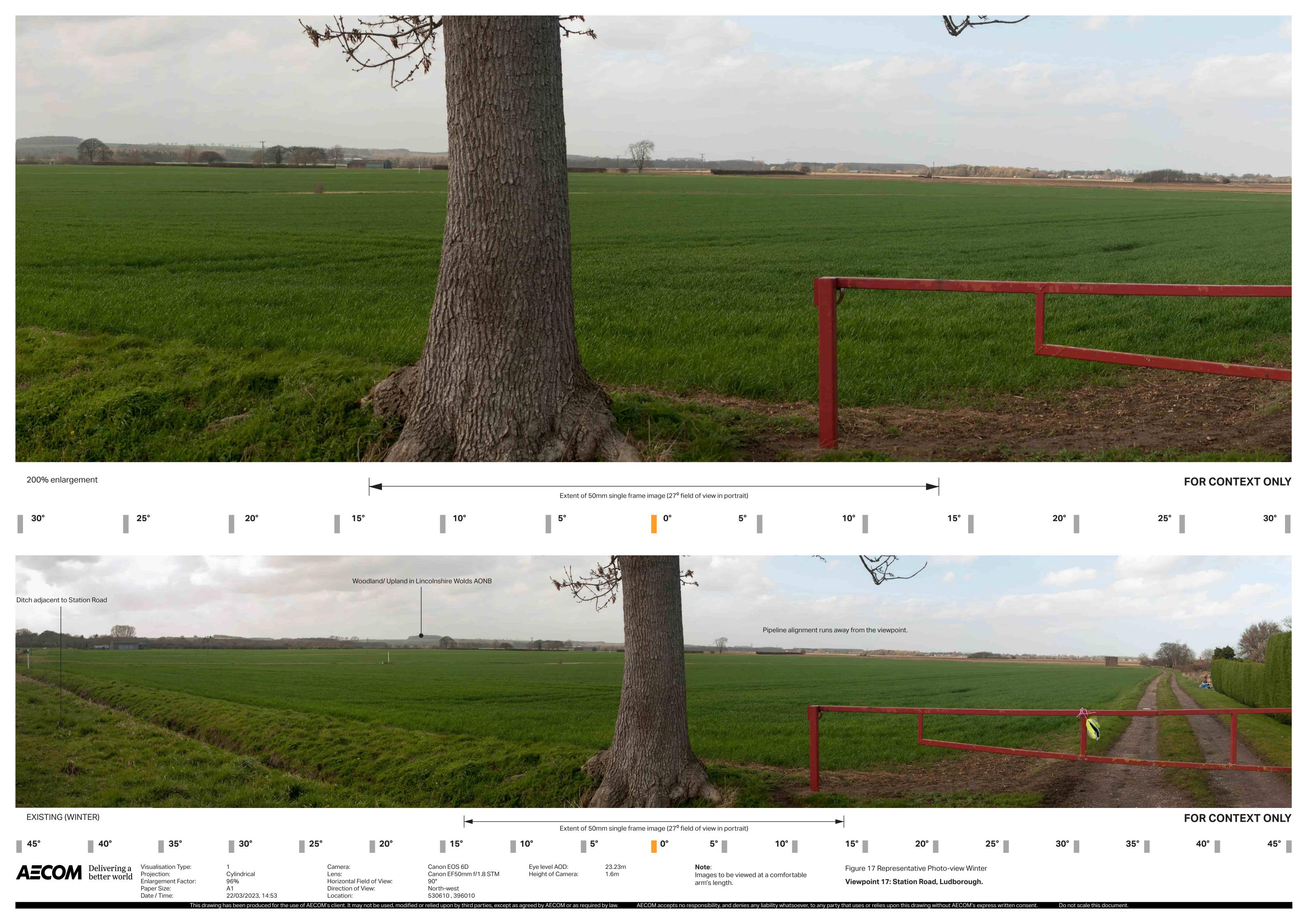


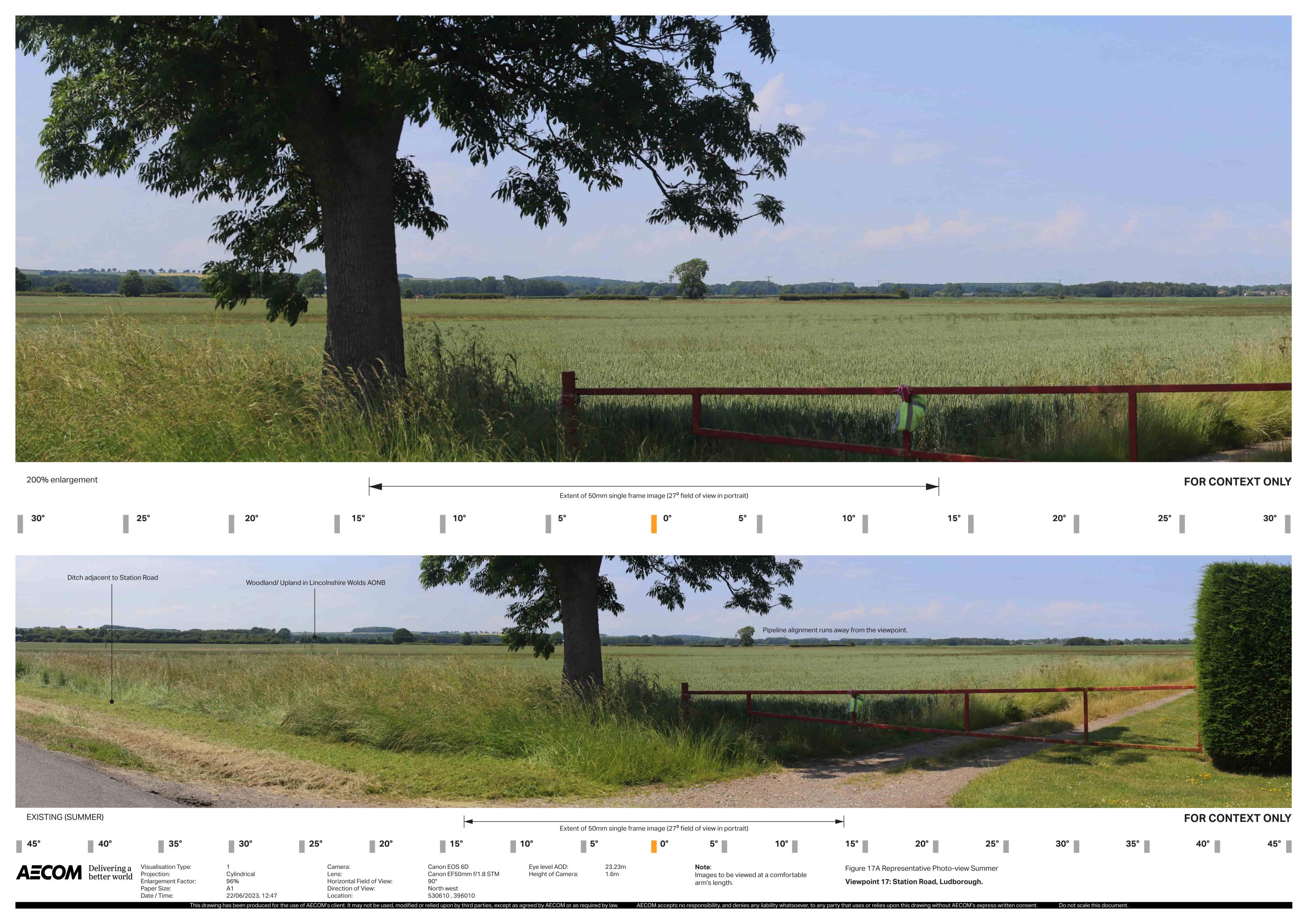






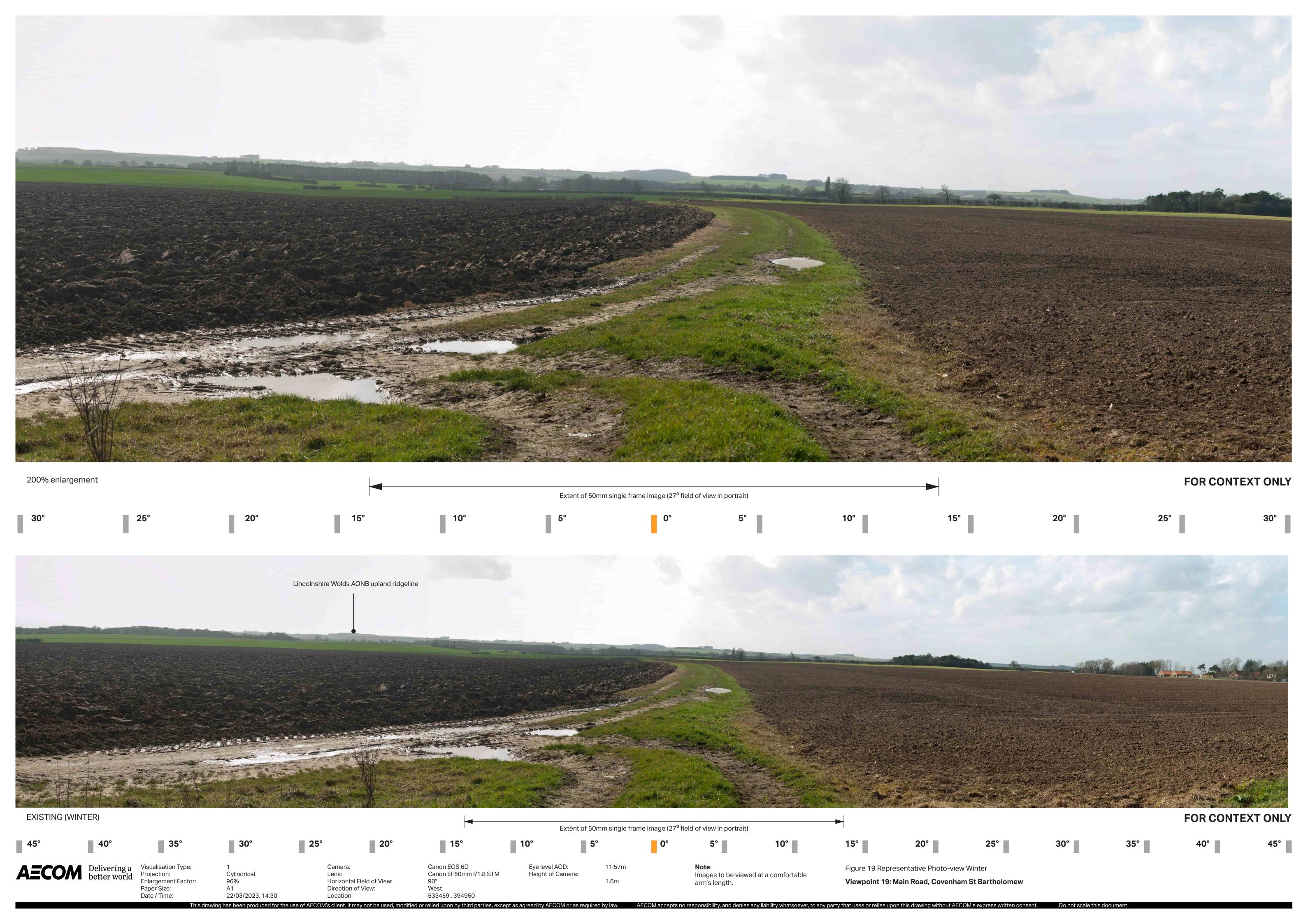


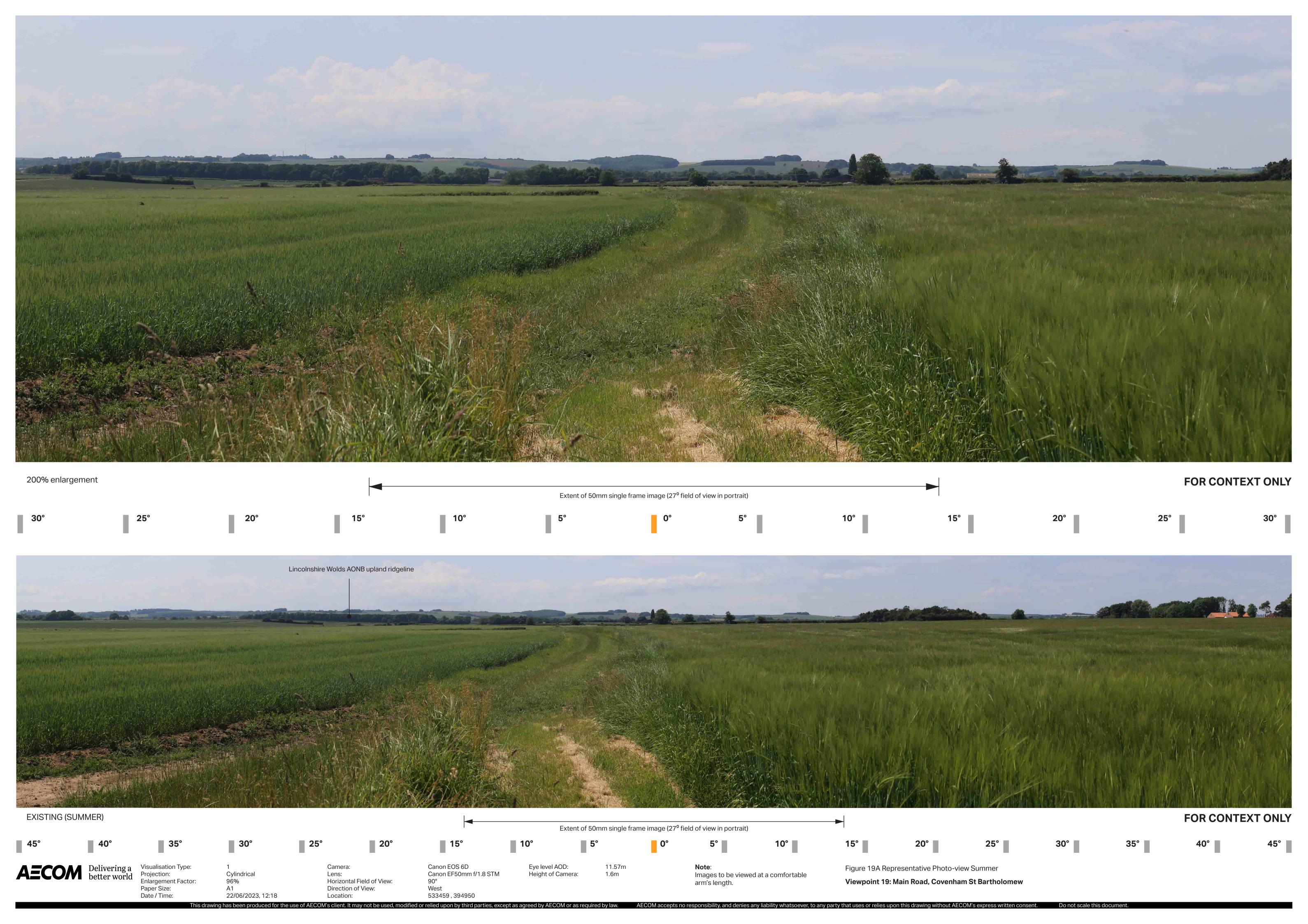




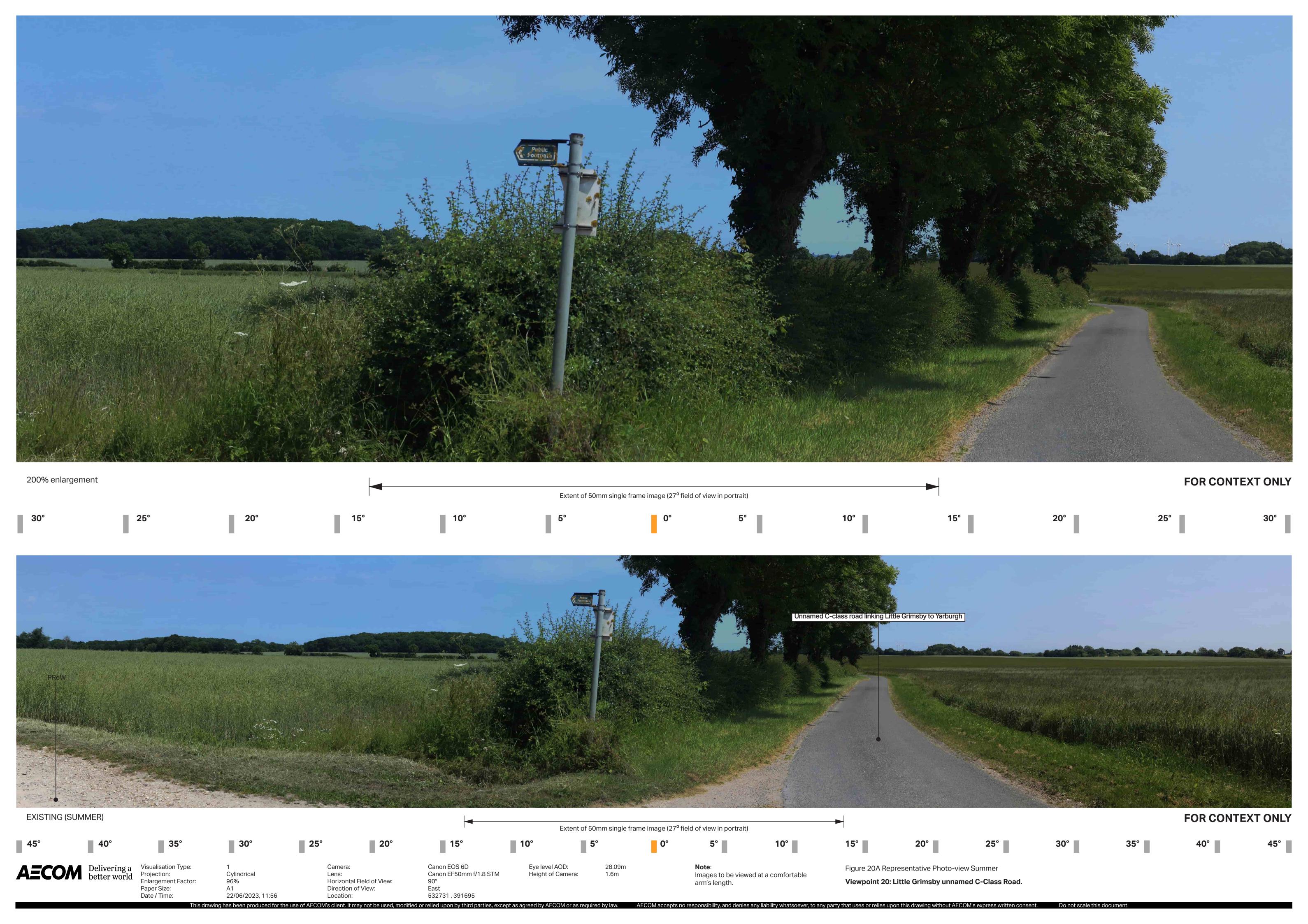


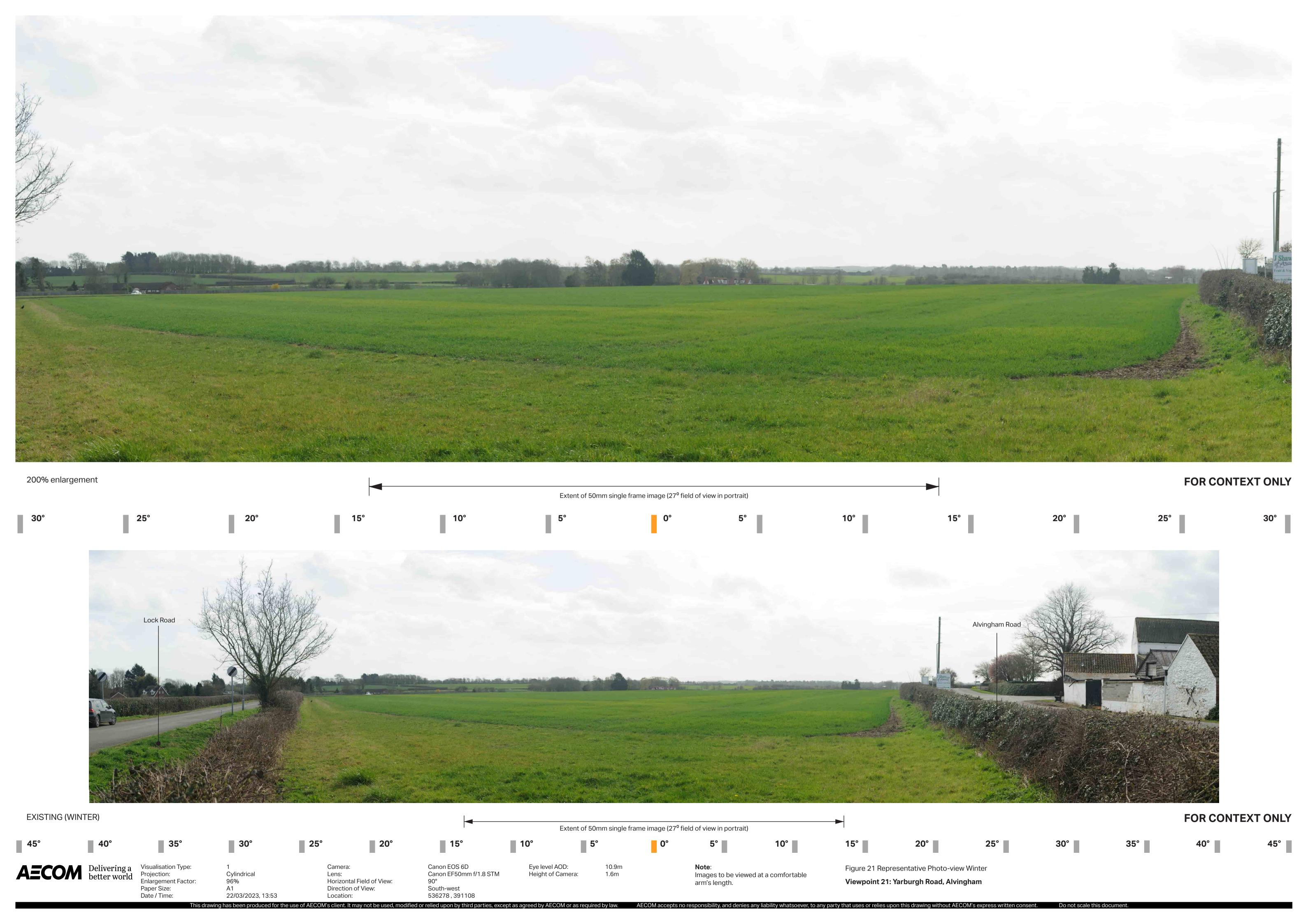


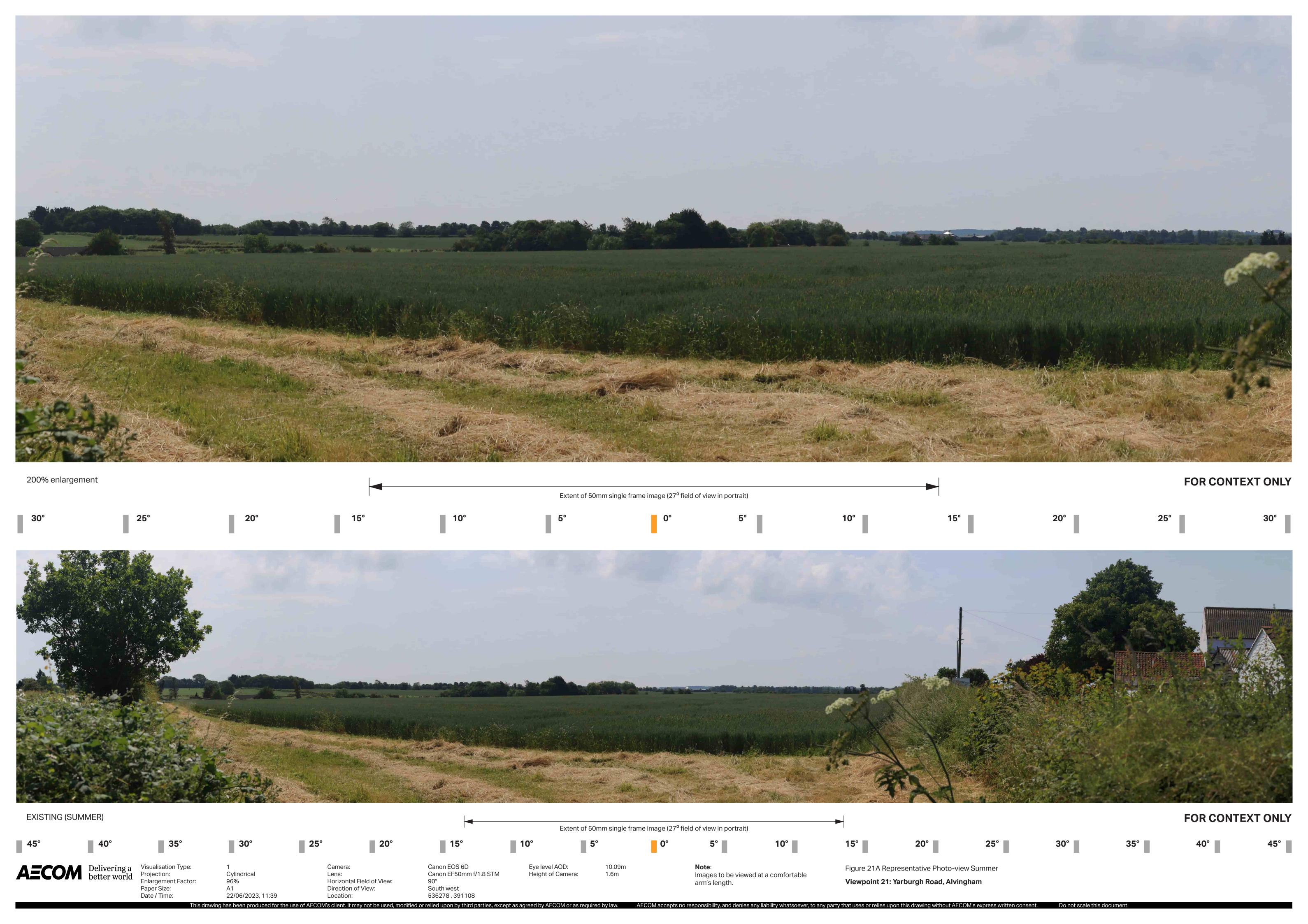


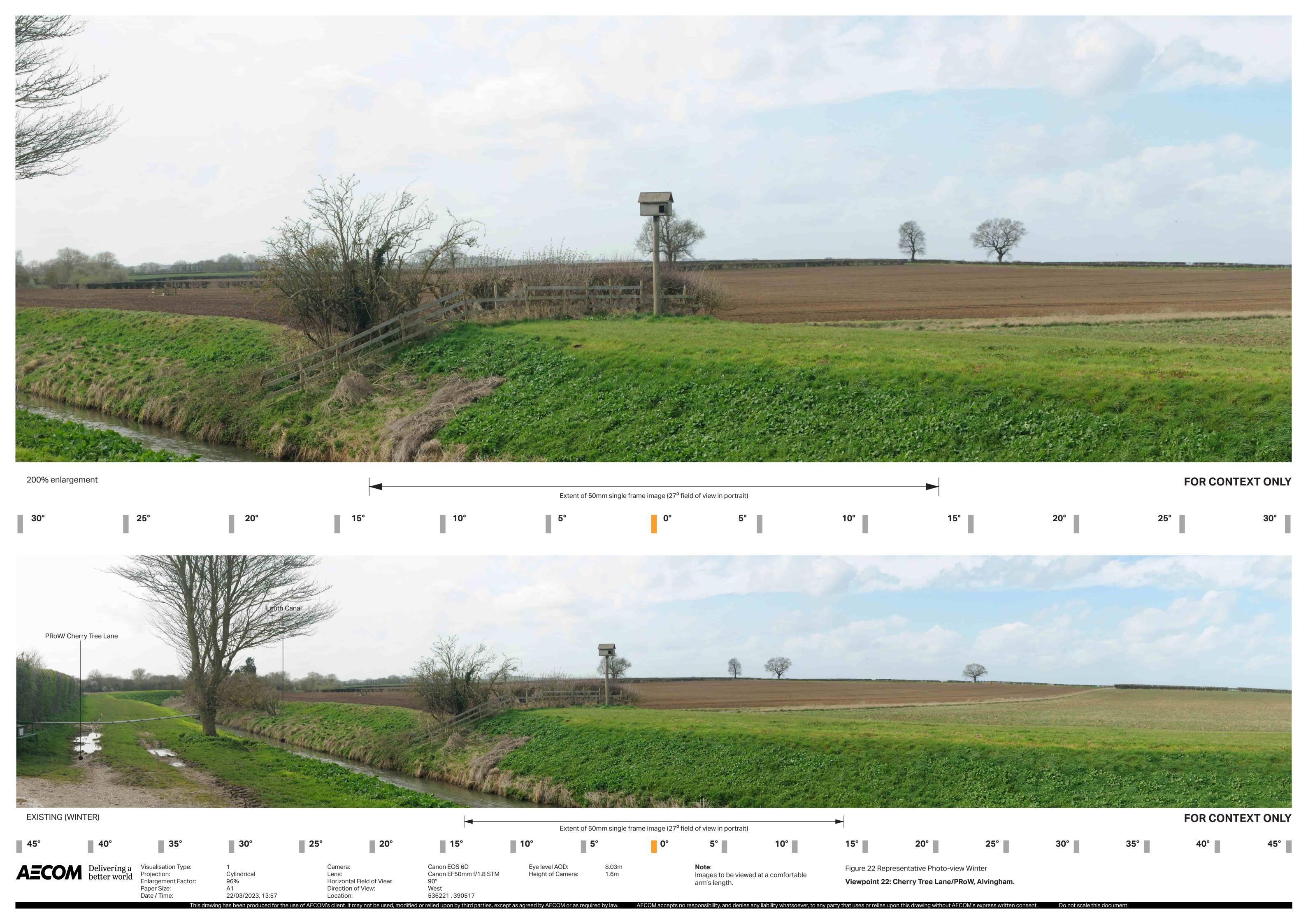


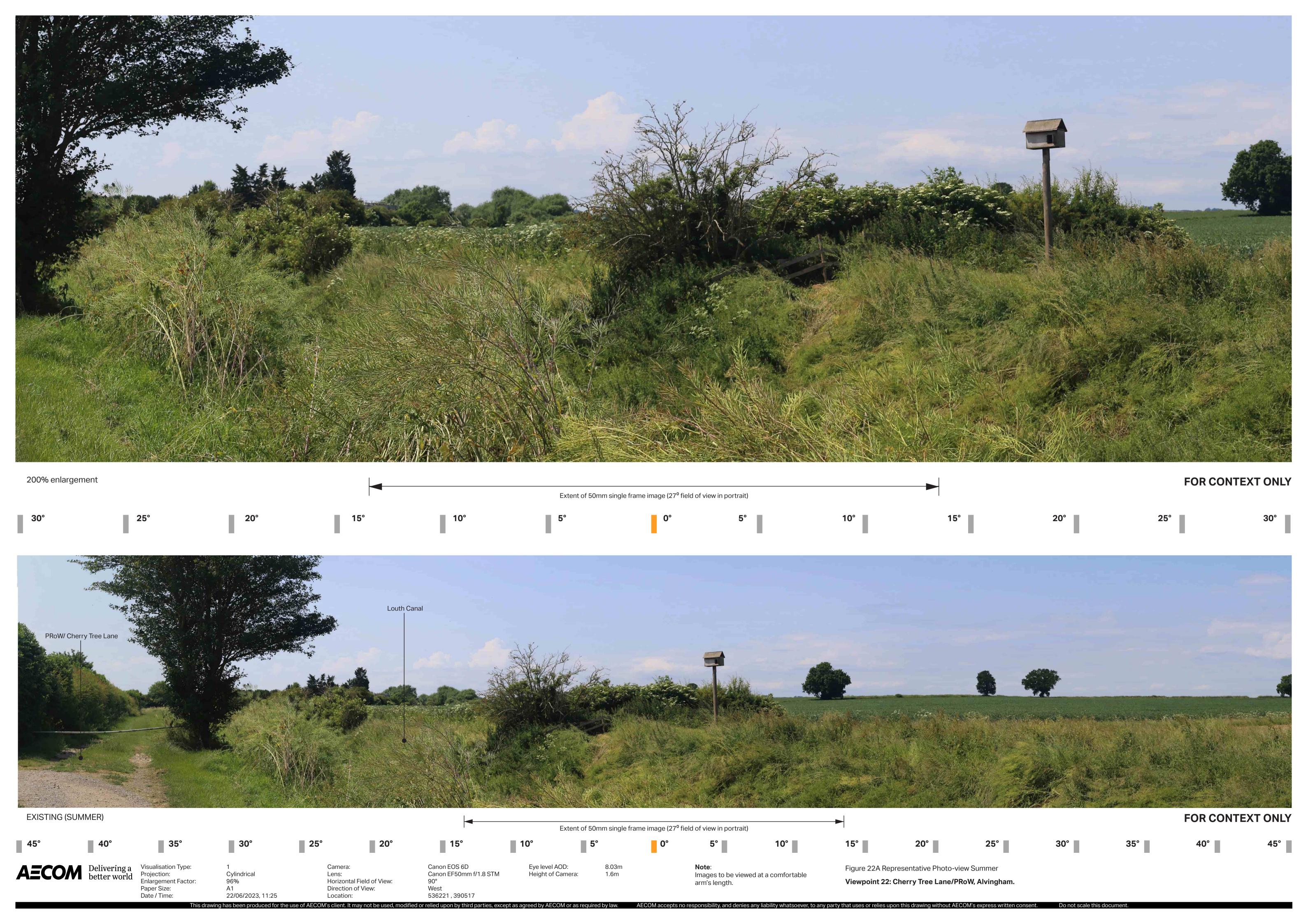


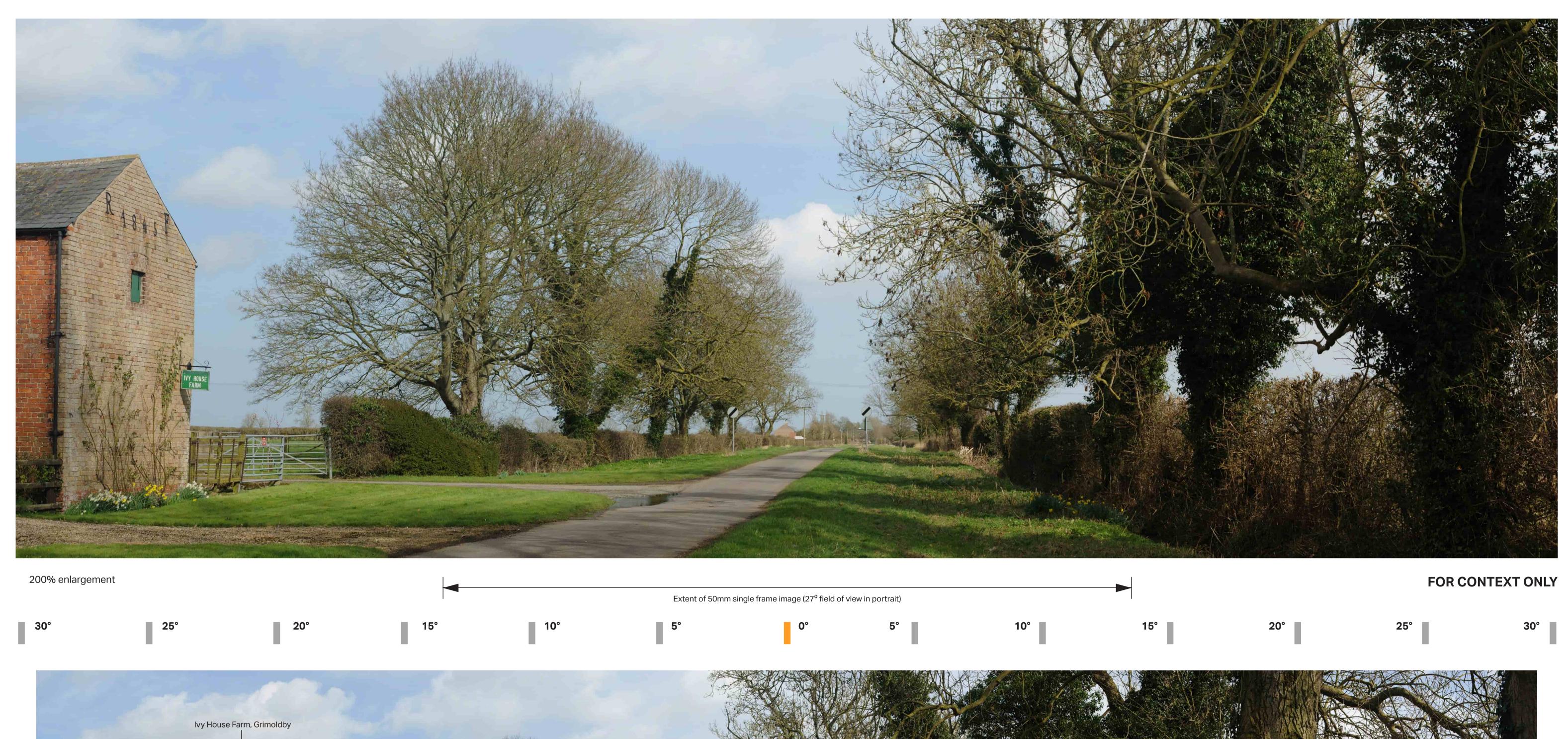














Images to be viewed at a comfortable

arm's length.

Figure 23 Representative Photo-view Winter

Viewpoint 23: Pick Hill Lane, Grimoldby

Canon EOS 6D Canon EF50mm f/1.8 STM 90° North-east 539270 , 388974

Horizontal Field of View: Direction of View:

Location:

Height of Camera:

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Visualisation Type: Projection: Enlargement Factor: Paper Size: Date / Time:

Cylindrical

22/03/2023, 13:35

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