3D DESIGN BUREAU

Creative & Technical 3D Solutions
Design | Planning | Marketing

Clonburris Phase 1A

Verified Views and CGI

Applicant: Cairn Homes Properties Ltd

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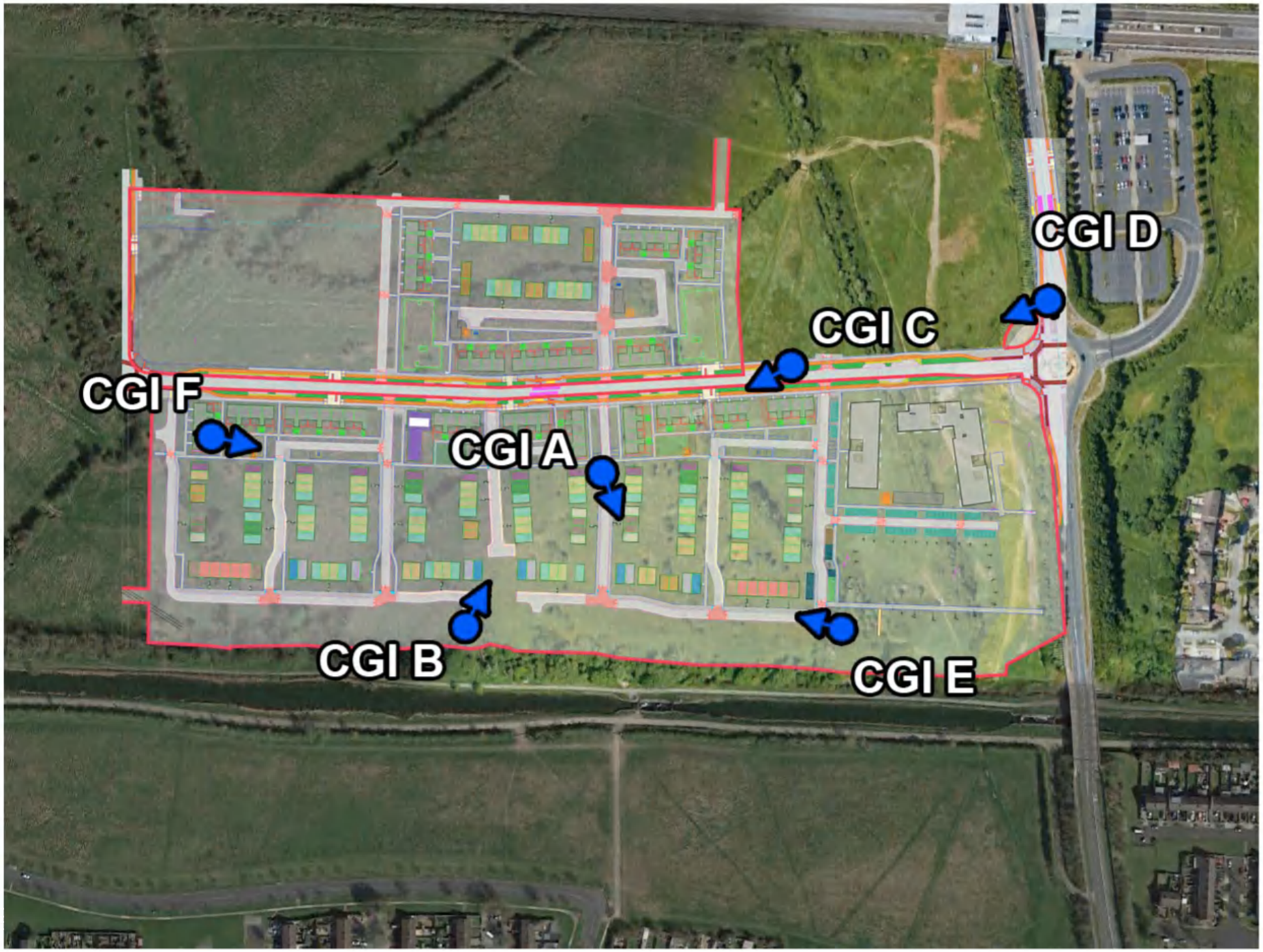
November 2021



Project Title: Clanburris Phase 1A	Applicant Name: Cairn Homes Properties Ltd	Image Title: CGI Map
	CGI & VVMs by	

Project Title: Clanbourne Phase 1A	Applicant Name: Cairn Homes Properties Ltd	Image Title: CGI A
	CGI & VVMs by	

Project Title: Glanbourne Phase 1A	Applicant Name: Cairn Homes Properties Ltd	Image Title: CGI B
	CGI & VVMs by	

Project Title: Clanbourne Phase 1A	Applicant Name: Cairn Homes Properties Ltd	Image Title: CGI C
	CGI & VVMs by	

Project Title: Clonburris Phase 1A	Applicant Name: Cairn Homes Properties Ltd	Image Title: CGI D
	CGI & VVMs by	

Project Title: Clanburris Phase 1A	Applicant Name: Cairn Homes Properties Ltd	Image Title: CGI 6
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Project Title: Clanburris Phase 1A	Applicant Name: Cairn Homes Properties Ltd	Image Title: CGI F
	CGI & VVMs by	

Methodology for Verified View Montages

1. Overview.
This summarised methodology has been prepared by 3D Design Bureau Ltd (3DDB) to explain the production of Verified View Montages (VVM). The preparation and presentation of reliable verifiable visual information is a key component to the writing of Landscape Visual Impact Assessment reports. It should be noted that VVMs are technical images and should be produced and used in a technically appropriate manner. Note: A full version of this methodology can be supplied in PDF upon request.

2. What is A Verified View Montage (VVM)?
Verified View Montages work by using the correct geospatial insertion of accurate 3d models in the existing landscape (photo) allowing for a photorealistic view of the planned model in its intended location.

3. Methodology

3.1 Project Planning
Following appointment a full list of suggested views are drawn up for review prior to visiting site between 3DDB, the client and the planning consultant. Note: If a LVIA report is being written by a 3rd Party planning consultant, the medium to long range views will be guided by them. After obtaining a full list, it is analysed and a plan for the taking of baseline photographs is put in place. Note: 3D modelling of the proposed scheme can, and usually is, commenced prior to the photographic site visit.

3.2 High resolution Baseline Photography
Every baseline photograph is captured in raw settings using a high-resolution digital SLR camera. This allows for the maximum possible information to be retained in the digital file. It also avoids the file from being altered by any internal camera processing definitions, allowing us to retain the maximum control and fidelity on the end results.
The focal lengths used depend on the surrounding context and proximity to the desired area. We use high quality lenses with focal lengths that allow us to capture enough surrounding context without compromising quality and fidelity, by avoiding excessive barrelling, distortion or aberrations. All shots are taken horizontally with the use of a 50mm lens (where possible). Note: Although the 50mm focal length represents the perceived scale of the human eye, it does NOT represent the human field of view and therefore should not necessarily be used to show the proposed development in its context.
On site and back in the studio, each photo location is correctly recorded and marked as follows
On-Site:

- The tripod location on site is paint marked and photographed in relation to existing elements.
- The location of each photo is manually marked on a printed map while on site.
- The camera height is recorded.

Upon completion of the baseline photo site visit all photographs go through post processing back in the studio. The full set of photos along with a viewpoint location map are issued to the client for review and to choose the best shots that will demonstrate the visual impact that the proposed scheme may/may not have.

3.3 Baseline Photo Surveying
When all baseline photos for the VVMs are chosen, each one is marked up in studio. The fixed reference points within each photo are coloured coded and all 'marked up' baseline photos are issued to our qualified topographical surveyor for surveying purposes.
The survey team records the camera/tripod position using GPS & Total Station to an accuracy of +-1cm Northing & Easting and to an accuracy of 2cm Elevation. The 'marked up' fixed reference points identified in each photo are then surveyed to establish exact orientation of the view and to verify the photomontage process.

Methodology for Verified View Montages

3.4 3D Modelling & Visualisation

Modelling

An accurate digital 3D model of the 'proposed' development is produced in Revit. This is carried out from a combination of the 3rd Party architectural, engineering and landscape drawings. All proposed model information is contained in the one file and it is ALWAYS positioned relative to the existing survey information.

The 'marked up' fixed reference points which have been surveyed, are also modelled along with any other relevant survey information from the supplied topo survey drawings. As stated above, the proposed model and survey model information are geospatially positioned relative to one another. This is imperative to ensure the accurate positioning / camera matching of the proposed digital 3D model within each chosen photo.

Visualisation

Once the digital 3D Revit model is complete, our 3D visualisation team take over the project for the visualisation process. This involves the matching of textures, lighting conditions and asset population. This ensures that the 3D model is visually as close as possible to the intended future 'As Built' development.

Software used for the visualisation process is called 3D Studio Max. This is accepted as the industry standard for architectural visualisation work and production of VVMs.

3.5 Camera Matching / Rendering / Post Production

Following the completion the 3D visualisation process (but in some instances prior to this) the following methodology is applied in order for views to be verifiable.

Camera Matching

All of the information recorded at the time of the baseline photographic site visit, that is, camera co-ordinates, angle of view, and direction of view, is programmed into the virtual cameras within our 3D software package of choice - 3D studio Max. Insertion of digital cameras within the software with matching attributes of the physical camera is carried out. This careful method ensures that the size, position and height, of the proposed development in each VVM is correct to an accuracy of 0.33% i.e. +/- 1mm on an A3 print.

Rendering

Following the camera matching and visualisation process the view is 'rendered' at high resolution and is superimposed onto its matching baseline photograph using Adobe Photoshop software. The mathematical accuracy is then double checked and verified by ensuring that existing 'marked up' fixed reference point features which were also rendered line up exactly in the photo.

Post Production

Next, the VVM specialist establishes, which existing features, such as buildings, landscape and trees, are in the foreground of the proposed development and those that are in the background, i.e. which features will mask the development and which ones will appear behind the development. When it is found that the development is not visible due to foreground features, its extremities will be indicated with a red outline.

4. RESULTS

The resulting VVM having gone through this extensive procedure is an accurate and verifiable representation of the proposed development as viewed from the selected camera positions. This shows as closely as possible any future impact the proposed development may have on the surrounding environment and existing buildings, presenting a truly valuable tool for planning purposes.

Project Title: Clanbourne Phase 1A

Applicant Name: Cairn Homes Properties Ltd

Image Title: Viewpoint Location Map

CGI & VVMs by

Canon EOS 5D Mark IV | Lens EF24-70mm f/4L IS USM | Focal Length 35 mm | Date 13/06/2021 09:46:58

Project Title: Clanburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Baseline VVM 1

CGI & VVMs by

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Project Title: Clonburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed VVM 1

CGI & VVMs by

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Project Title: Clonburris Phase 1A	Applicant Name: Cairn Homes Properties Ltd	Image Title: Proposed & Neighbouring VVM 1
	CGI & VVMs by	

Canon EOS 5D Mark IV | Lens EF24-70mm f/4L IS USM | Focal Length 35 mm | Date 13/06/2021 09:47:53

Project Title: Clonburris Phase 1A

Applicant Name: Cairn Homes Properties Ltd

Image Title: Baseline VVM 2

CGI & VVMs by

Canon 5DS 5D Mark IV | Lens EF24-70mm f/4L IS USM | Focal Length 35 mm | Date 13/06/2021 09:47:53

Project Title: Clanburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed VVM 2

CGI & VVMs by

Canon EOS 5D Mark IV | Lens EF24-70mm f/4L IS USM | Focal Length 35 mm | Date 13/06/2021 09:47:33

Project Title: Clanburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed & Neighbouring VVM 2

CGI & VVMs by

Canon 5DS 5D Mark IV | Lens EF24-70mm f/4L IS USM | Focal Length 24 mm | Date 13/06/2021 16:33:27

Project Title: Clonburris Phase 1A

Applicant Name: Cairn Homes Properties Ltd

Image Title: Baseline VVM 3

CGI & VVMs by 3D Design Bureau

Canon EOS 5D Mark IV | Lens EF24-70mm f/4L IS USM | Focal Length 24 mm | Date 13/08/2021 16:33:27

Project Title: Clonburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed VVM 3

CGI & VVMs by 3D Design Bureau

Canon 5DS 5D Mark IV | Lens EF24-70mm f/4L IS USM | Focal Length 24 mm | Date 13/06/2021 16:33:27

Project Title: Clonburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed & Neighbouring VVM 3

CGI & VVMs by

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Project Title: Clanburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Baseline VVM 4

CGI & VVMs by 3D Metric

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Project Title: Clanburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed VVM 4

CGI & VVMs by 3D Metric

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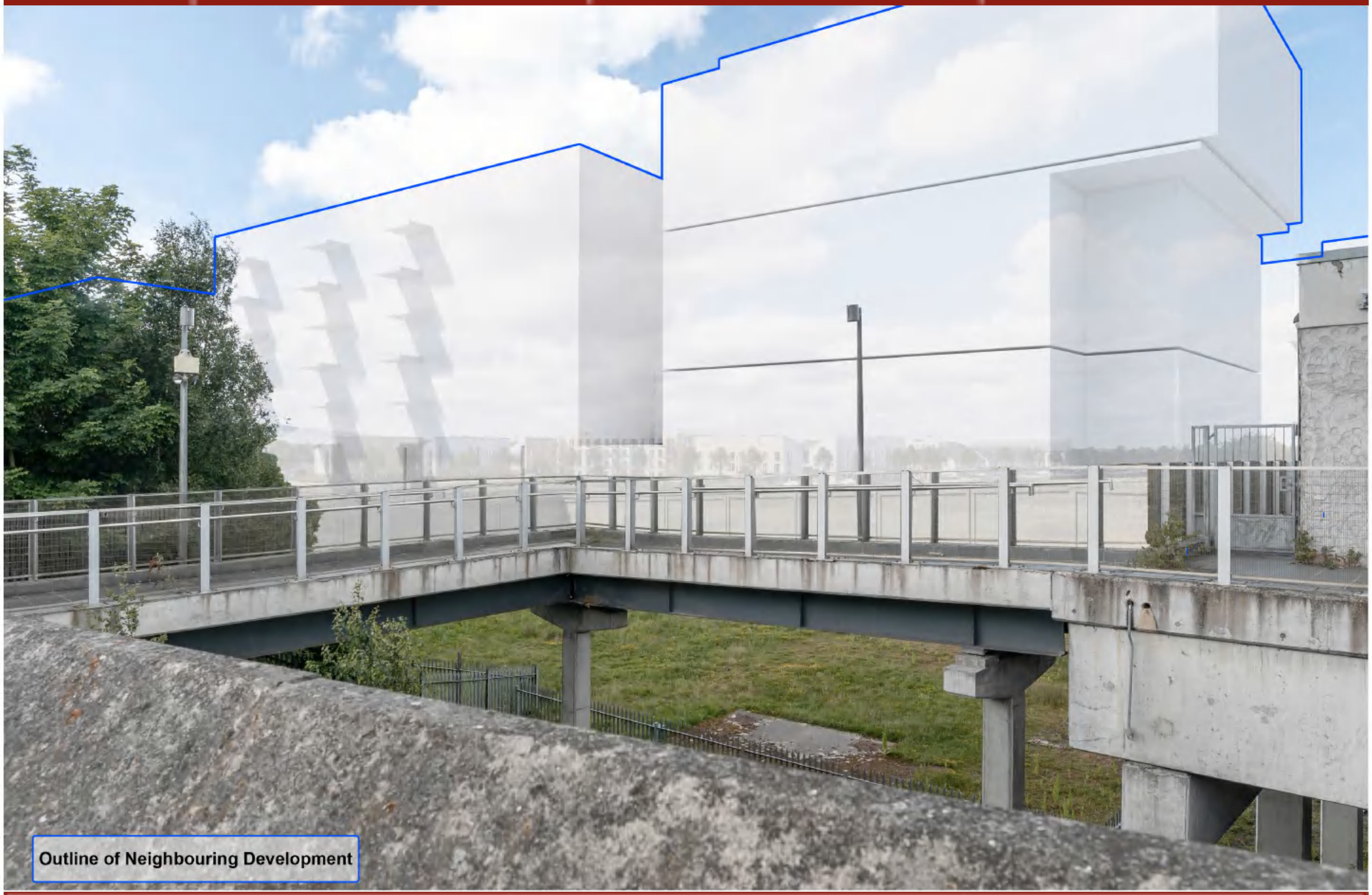

Project Title: Clanburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed & Neighbouring WVM 4

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Project Title: Clanburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Baseline VVM 5

CGI & VVMs by

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Project Title: Clonburris Phase 1A

Applicant Name: Cairn Homes Properties Ltd

Image Title: Proposed VVM 5

CGI & VVMs by

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Project Title: Clonburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed & Neighbouring VVM 5

CGI & VVMs by

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Project Title: Clonburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Baseline VVM 6

CGI & VVMs by 3D Design Bureau

Canon EOS 5D Mark IV | Lens EF24-70mm f/4L IS USM | Focal Length 24 mm | Date 13/08/2021 16:26:49

Project Title: Clonburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed VVM 4

CGI & VVMs by 3D Design Bureau

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Project Title: Clonburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed & Neighbouring VVM 6

CGI & VVMs by

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Project Title: Clonburris Phase 1A

Applicant Name: Cairn Homes Properties Ltd

Image Title: Baseline VVM 7

CGI & VVMs by

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Project Title: Clonburris Phase 1A

Applicant Name: Cairn Homes Properties Ltd

Image Title: Proposed VVM 7

CGI & VVMs by 3D Design Bureau

Canon 5DS 5D Mark IV | Lens EF16-35mm f/4L IS USM | Focal Length 16 mm | Date 13/06/2021 11:16:31

Project Title: Clonburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed & Neighbouring VVM 7

CGI & VVMs by

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Project Title: Clonburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Baseline VVM 8

CGI & VVMs by 3D Design Bureau

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Project Title: Clonburris Phase 1A

Applicant Name: Cairn Homes Properties Ltd

Image Title: Proposed VVM 8

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Project Title: Clonburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed & Neighbouring WWM 8

CGI & VVMs by

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Project Title: Clonburris Phase 1A

Applicant Name: Cairn Homes Properties Ltd

Image Title: Baseline VVM 9

CGI & VVMs by

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Project Title: Clonburris Phase 1A

Applicant Name: Cairn Homes Properties Ltd

Image Title: Proposed VVM 9

CGI & VVMs by

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Project Title: Clanburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed & Neighbouring WVM 9

CGI & VVMs by

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Project Title: Cranburrie Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Baseline VWM 10

CGI & VVMs by

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Project Title: Cranburrie Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed VWM 10

CGI & VVMs by 3D Metrix

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Project Title: Cranburrie Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed & Neighbouring VVM 13

CGI & VVMs by

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Project Title: Clonburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Baseline VWM 11

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Project Title: Clonburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed VWM 11

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Project Title: Clonburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed & Neighbouring VWM 11

CGI & VVMs by

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Project Title: Clanburn Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Baseline VVM 12

CGI & VVMs by

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Project Title: Clanburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed VWM 12

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Project Title: Clonburris Phase 1A

Applicant Name: Cairn Homes Properties Ltd

Image Title: Baseline VWM 13

CGI & VWMs by

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Project Title: Clonburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed VWM 13

CGI & VWMs by

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Project Title: Clonburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed & Neighbouring VWM 13

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Project Title: Danbury Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Baseline VVM 14

CGI & VVMs by

Canon EOS 5D Mark IV | Lens EF24-70mm f/4L IS USM | Focal Length 38 mm | Date 13/06/2021 13:34:36

Project Title: Clanburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed VWM 14

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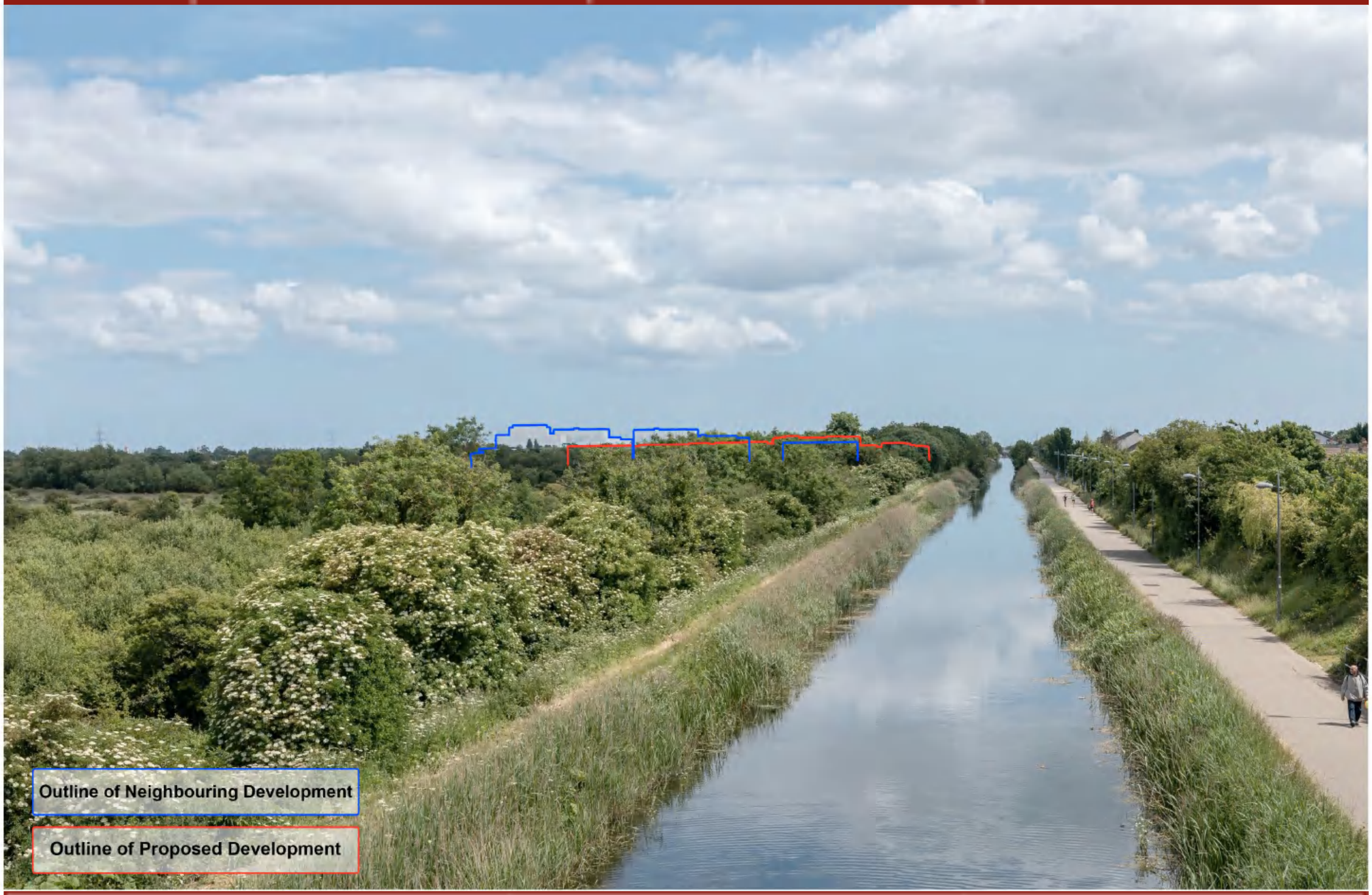

Project Title: Clonburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed & Neighbouring VWM 14

CGI & VVMs by

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Project Title: Clanburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Baseline VWM 15

CGI & VVMs by 3D Metric

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Project Title: Clanburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed VWM 15

CGI & VVMs by

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Project Title: Clanburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed & Neighbouring VWM 15

CGI & VVMs by

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Project Title: Cranbourne Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Baseline VVM 16

CGI & VVMs by 3D Metrix

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Project Title: Danburrin Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed VWM 16

CGI & VVMs by

Canon EOS 5D Mark IV | Lens EF24-70mm f/4L IS USM | Focal Length 35 mm | Date 13/06/2021 13:13:39

Project Title: Clanburris Phase 1A | Applicant Name: Cairn Homes Properties Ltd | Image Title: Proposed & Neighbouring VVM 15

CGI & VVMs by