Knockrabo Phase 2

Photomontages and CGIs

October 2021

.MODEL WORKS

Photomontage Methodology

The photomontage methodology is based on the Landscape Institute advice note 01/11 Photography and Photomontage in Landscape and Visual Impact Assessment and 20 years' experience in photomontage production. The method has five main steps:

- Photography
- Survey
- 3D Modelling and Camera Matching
- Rendering and Finishing of Photomontages
- Presentation

Photography

Date, Time and Conditions
The photography is timed so that the scene conditions, weather conditions and sun position allow - as far as possible - for a clear and representative baseline photograph to be captured.
The objective is to ensure that all key elements of the view are clearly visible and unobscured by, for example, vehicular or pedestrian traffic in the foreground, precipitation, darkness/shade, sun glare, etc. The date and time of each photograph are recorded so that the sun position can be accurately portrayed in the 3D model ultimately montaged into the baseline photograph.

Camera and Camera Set-up
The photographs are taken using a Canon EOS5D Mark II camera with a 21 mega pixel sensor and image resolution of 5616 x 3744 pixels. At each viewpoint the camera was positioned on a tripod with the lens 1.65m above ground level (the level of the average adult's eyes), directed at the site and levelled in the horizontal and vertical axes.

Lenses
Prime lenses (fixed focal length with no zoom function) are used as this ensures that the image parameters for every photograph are the same and that all photographs taken with the same lens are comparable. For the close-up to middle distant views a 24mm prime lens is normally used. This lens captures a field of view of 73 degrees. This relatively wide field of view is preferred for the purpose of Landscape and Visual Impact Assessment as it shows more of the context landscape/townscape surrounding a site.

Survey
The coordinates of each viewpoint/camera position, including the elevation, are recorded using a survey grade GPS receiver, the Trimble Geo7X, which is accurate to within 1cm.
For each viewpoint, the coordinates of several static objects in the view are also surveyed (e.g. lamp posts,bollards, corners of buildings, etc.). The coordinates of these 'markers' are used as reference points later in the process, to ensure that the direction of view of the cameras in the 3D model matches the direction of view of the photographs.

3D Model and Camera Matching

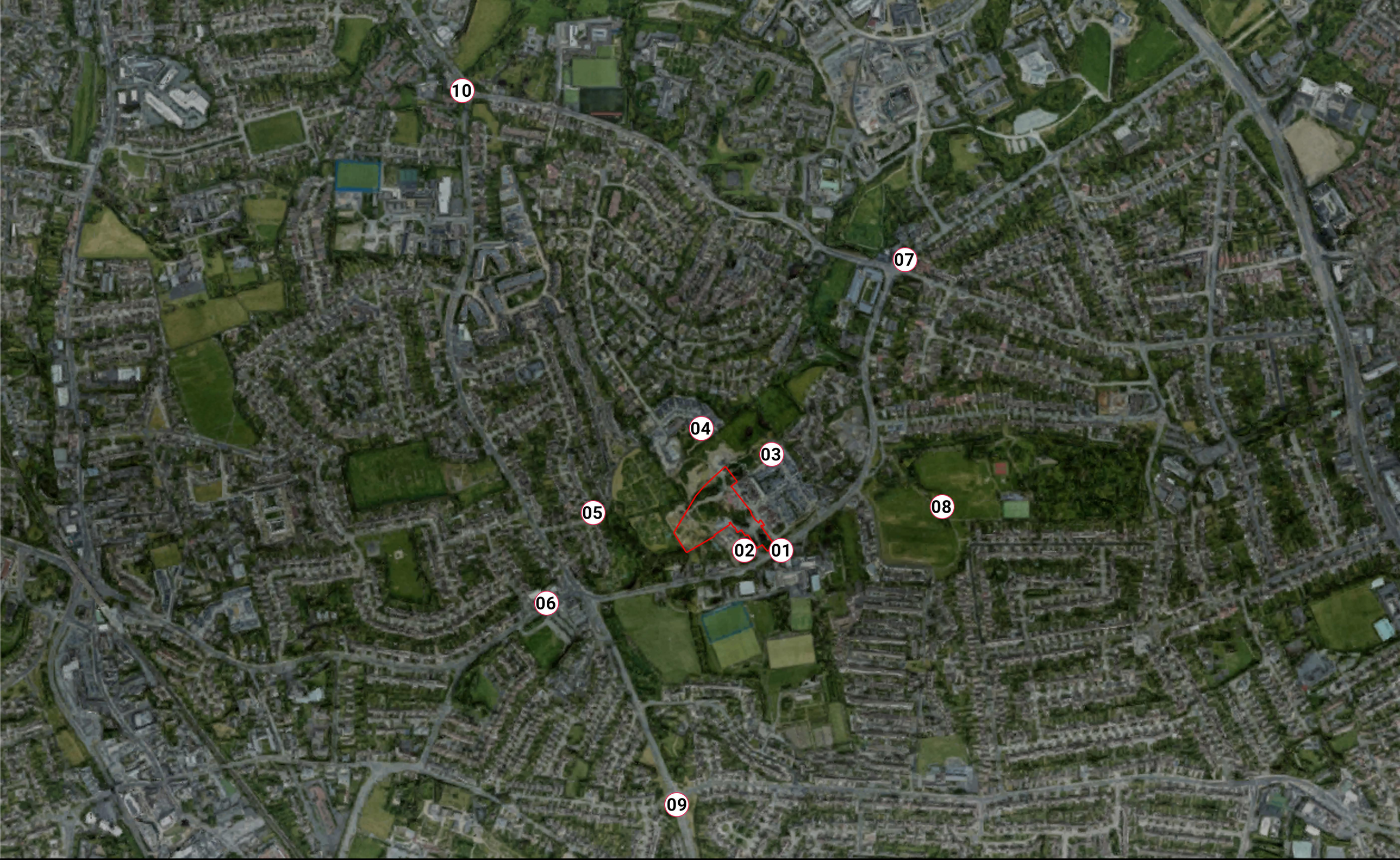
Creation of 3D Model
A 3D model is either built by Model Works from 2D CAD drawings provided by the architect, or a 3D model is supplied by the architect (e.g. as a Revit file) for the production of the photomontages. A 3D model of the proposed public realm/landscaping is also built from drawings supplied by the landscape architect. The model is exported into the software package Autodesk 3DS Max, in which materials are applied to the buildings and surfaces, and vegetation, street furniture, etc. is added.

3D Camera Positions
The surveyed camera positions and the markers for each view are inserted into the 3D model, with information on the focal length of the lens attributed to each camera. For each camera/view, the date and time is set to match those of the original photograph. This ensures that the direction of sunlight and shadows in the 3D model match those of the photographs.

Camera Matching
The photographs are then inserted as backdrops to the views of each camera in the 3D model. The direction of view of the cameras in the 3D model are matched with the direction of view of the photographs using the surveyed markers. This ensures that the camera positions, the direction of the views and the focal length of the cameras in the 3D model are accurate, so that the proposed development appears in the correct position and scale when montaged into the photographs.

Rendering of 3D Model and Finishing of Photomontages
For each view a render of the development is generated. This is the process of creating a photo-realistic image of the 3D model, as seen from each camera position, with sunlight and shadow applied to the model. The render of the development is then montaged into the photograph to create the photomontage.

Presentation and Viewing
The individual photomontages are presented on A3 pages in landscape format. For each photomontage the viewpoint number, location description, and the date and time of photography are provided on the page.



MODEL WORKS

project: Knockrabo Phase 2

View Location Map

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS	*project:*	Knockrabo Phase 2	*photography:*	08-01-2021 12:28 Canon 5D Mark II 24 mm Lens	*location:*	E 318541.505 N 228493.935	*viewpoint:* **View 01 Existing** *issued:* 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Knockrabo Phase 2

photography: 08-01-2021 12:28
Canon 5D Mark II
24 mm Lens

location:
E 318541.505 N 228493.935

viewpoint: **View 01 Proposed**

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Knockrabo Phase 2

photography: 01-02-2021 11:16
Canon 5D Mark II
24 mm Lens

location:
E 318458.121 N 228471.179

viewpoint: **View 02 Existing**

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Knockrabo Phase 2

photography: 01-02-2021 11:16
Canon 5D Mark II
24 mm Lens

location:
E 318458.121 N 228471.179

viewpoint: **View 02 Proposed**

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Knockrabo Phase 2

photography: 08-01-2021 12:14
Canon 5D Mark II
24 mm Lens

location:
E 318500.125 N 228713.746

viewpoint: **View 03 Existing**

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Knockrabo Phase 2

photography: 08-01-2021 12:14
Canon 5D Mark II
24 mm Lens

location:
E 318500.125 N 228713.746

viewpoint: **View 03 Proposed**

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

.MODEL WORKS

project: Knockrabo Phase 2

photography: 08-01-2021 14:12
Canon 5D Mark II
24 mm Lens

location:
E 318361.395 N 228774.808

viewpoint: **View 04 Existing**

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

.MODEL WORKS

project: Knockrabo Phase 2

photography: 08-01-2021 14:12
Canon 5D Mark II
24 mm Lens

location:
E 318361.395 N 228774.808

viewpoint: **View 04 Proposed**

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

.MODEL WORKS

project: Knockrabo Phase 2

photography: 08-01-2021 13:15
Canon 5D Mark II
24 mm Lens

location: E 318141.732 N 228573.708

viewpoint: **View 05 Existing**

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

.MODEL WORKS

project: Knockrabo Phase 2

photography: 08-01-2021 13:15
Canon 5D Mark II
24 mm Lens

location:
E 318141.732 N 228573.708

viewpoint: **View 05 Proposed**

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

.MODEL WORKS	*project:* Knockrabo Phase 2	*photography:* 08-01-2021 14:33 Canon 5D Mark II 24 mm Lens	*location:* E 318040.897 N 228365.600	*viewpoint:* **View 06 Existing**	*issued:* 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS	*project:*	Knockrabo Phase 2	*photography:*	08-01-2021 14:33 Canon 5D Mark II 24 mm Lens	*location:*	E 318040.897 N 228365.600	*viewpoint:* **View 06 Proposed** *issued:* 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

.MODEL WORKS

project: Knockrabo Phase 2

photography: 08-01-2021 11:17
Canon 5D Mark II
24 mm Lens

location:
E 318796.082 N 229141.536

viewpoint: **View 07 Existing**

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

.MODEL WORKS

project: Knockrabo Phase 2

photography: 08-01-2021 11:17
Canon 5D Mark II
24 mm Lens

location:
E 318796.082 N 229141.536

viewpoint: **View 07 Proposed**

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Knockrabo Phase 2

photography: 08-01-2021 11:44
Canon 5D Mark II
24 mm Lens

location: E 318884.987 N 228587.135

viewpoint: **View 08 Existing**

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Knockrabo Phase 2

photography: 08-01-2021 11:44
Canon 5D Mark II
24 mm Lens

location:
E 318884.987 N 228587.135

viewpoint: **View 08 Proposed**

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Knockrabo Phase 2

photography: 08-01-2021 10:55
Canon 5D Mark II
24 mm Lens

location:
E 318317.827 N 227924.725

viewpoint: **View 09 Existing**

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

MODEL WORKS

project: Knockrabo Phase 2

photography: 08-01-2021 10:55
Canon 5D Mark II
24 mm Lens

location:
E 318317.827 N 227924.725

viewpoint: **View 09 Proposed**

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

.MODEL WORKS

project: Knockrabo Phase 2

photography: 08-01-2021 13:45
Canon 5D Mark II
24 mm Lens

location:
E 317803.269 N 229526.943

viewpoint: **View 10 Existing**

issued: 26-10-2021

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

.MODEL WORKS

project: Knockrabo Phase 2

photography: 08-01-2021 13:45
Canon 5D Mark II
24 mm Lens

location:
E 317803.269 N 229526.943

viewpoint: **View 10 Proposed**

issued: 26-10-2021

13
16
17
18
14
11
15
19
20
12
PUBLIC OPEN SPACE
LAWN
SHARED PRIVATE OPEN SPACE
BLOCK G COMMUNAL OPEN SPACE
SHARED SURFACE
BLOCK H
BLOCK E COMMUNAL OPEN SPACE
SEATING AREA
COACH HOUSE
CEDAR MOUNT HOUSE
NEW GATE HOUSE
GATE LODGE (WEST)
MAIN ENTRANCE
PALISADE FENCE
BITUMINOUS MACADAM SURFACE TO ENGINEER'S DETAIL
PROPOSED BUFF COLOUR ROAD SURFACE TO ENGINEER'S DETAIL
PROPOSED LOOSE GRAVEL SURFACE
PROPOSED SELECTED NATURAL STONE PAVING
PROPOSED IN-SITU REINFORCED CONCRETE WITH SELECTED FINISH
PROPOSED SELECTED PERMEABLE PRECAST CONCRETE BLOCK PAVING
PROPOSED SELECTED BUFF COLOUR PERMEABLE PRECAST CONCRETE BLOCK PAVING
PROPOSED VENTILATION TO BASEMENT STRUCTURE BELOW
PROPOSED CIRCULAR SEATING UNITS
PROPOSED NATURAL STONE PAVING
PROPOSED SELF BINDING GRAVEL SURFACE
PROPOSED DECK WITH SLIP RESISTANT INSERTS
PROPOSED IMPACT ABSORBING PLAY SURFACE
PROPOSED PAVING SLABS LAID FLUSH IN SOFT LANDSCAPE
PROPOSED LAWN
PROPOSED MANAGED MEADOW/ GROUNDCOVER PLANTING
PROPOSED WOODLAND GROUNDCOVER PLANTING
PROPOSED HEDGE PLANTING
PROPOSED TREE PLANTING
EXISTING TREE RETAINED AND PROTECTED IN ACCORDANCE WITH BS5837:2012 ORANGE DASHED LINE REPRESENTS RPA (ROOT PROTECTION AREA). REFER TO TREE SURVEY AND ARBORICULTURAL IMPACT STATEMENT BY ARBORIST
PROPOSED LEVEL
PROPOSED CONTOUR
EXISTING CONTOUR
SCHEDULE OF PROPOSED SPORTS EQUIPMENT
REF. QUANTITY PRODUCT
S1 1 'Dip bar' BY LAPPSET., REF.081007M
S2 1 'Pull-up' BY LAPPSET., REF.081003M
S3 1 'Sit-up' BY LAPPSET., REF.081004M
REF. QUANTITY
P1 1
P2 2
P3 1
P4 1
P5 1
P6 1
TREE REF. QUANTITY
Sg 8
Ag 21
Qp 19
PsA 29
Ca 42
Sf 12
Ao 35
Fs 12
Mk 11

MODEL WORKS

project: Knockrabo Phase 2

viewpoint: **View Location Map**

issued: 26-10-2021

.MODEL WORKS

project: Knockrabo Phase 2

viewpoint: **View 11 Proposed**

issued: 26-10-2021

.MODEL WORKS

project: Knockrabo Phase 2

viewpoint: **View 12 Proposed**

issued: 26-10-2021

.MODEL WORKS

project: Knockrabo Phase 2

viewpoint: **View 13 Proposed**

issued: 26-10-2021

MODEL WORKS

project: Knockrabo Phase 2

viewpoint: **View 14 Proposed**

issued: 26-10-2021

.MODEL WORKS

project: Knockrabo Phase 2

viewpoint: **View 15 Proposed**

issued: 26-10-2021

MODEL WORKS

project: Knockrabo Phase 2

viewpoint: **View 16 Proposed**

issued: 26-10-2021

.MODEL WORKS

project: Knockrabo Phase 2

viewpoint: **View 17 Proposed**

issued: 26-10-2021

MODEL WORKS

project: Knockrabo Phase 2

viewpoint: **View 18 Proposed**

issued: 26-10-2021

.MODEL WORKS

project: Knockrabo Phase 2

viewpoint: **View 19 Proposed**

issued: 26-10-2021

.MODEL WORKS

project: Knockrabo Phase 2

viewpoint: **View 20 Proposed**

issued: 26-10-2021