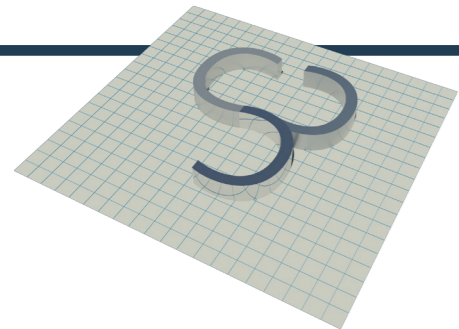


Photomontages

RESIDENTIAL DEVELOPMENT ON RATHMULLAN ROAD, DROGHEDA



Chris Shackleton Consulting
19 Waterside Crescent
Swords Road, Malahide, Co. Dublin, K36 DF74

email: chris@shackleton.ie
Tel: +353-1-5653289
Mob: +353-86-8206374

Photomontage Views

- PM01(A) Sheepphouse Road WHS buffer boundary looking NE
- Existing
 - Proposed



- PM02(B) Over gate near house cluster Sheepphouse Road looking NE
- Existing
 - Proposed



- PM03(D) Donore Cemetery looking NE
- Existing
 - Proposed



- PM04(E) Battle of the Boyne viewpoint, Oldbridge looking E
- Existing
 - Proposed



- PM05(G) Driveways Bloomsbury Cottage & 'Bouvinda' looking SE
- Existing
 - Proposed



- PM06(I) Oldbridge House Visitor Centre looking SE
- Existing
 - Proposed



PM07(K) Drybridge House looking SE
- Existing
- Proposed



PM08(L) Boyne River walkway at slipway looking S
- Existing
- Proposed



PM09(M) Road Bridge on Hill of Rath Road looking S
- Existing
- Proposed



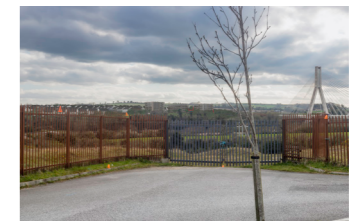
PM10(P) The Square (South) looking W
- Existing
- Proposed



PM11(R) Rathmullan Road looking W
- Existing
- Proposed



PM12(W) Tullybrook Housing looking S
- Existing
- Proposed

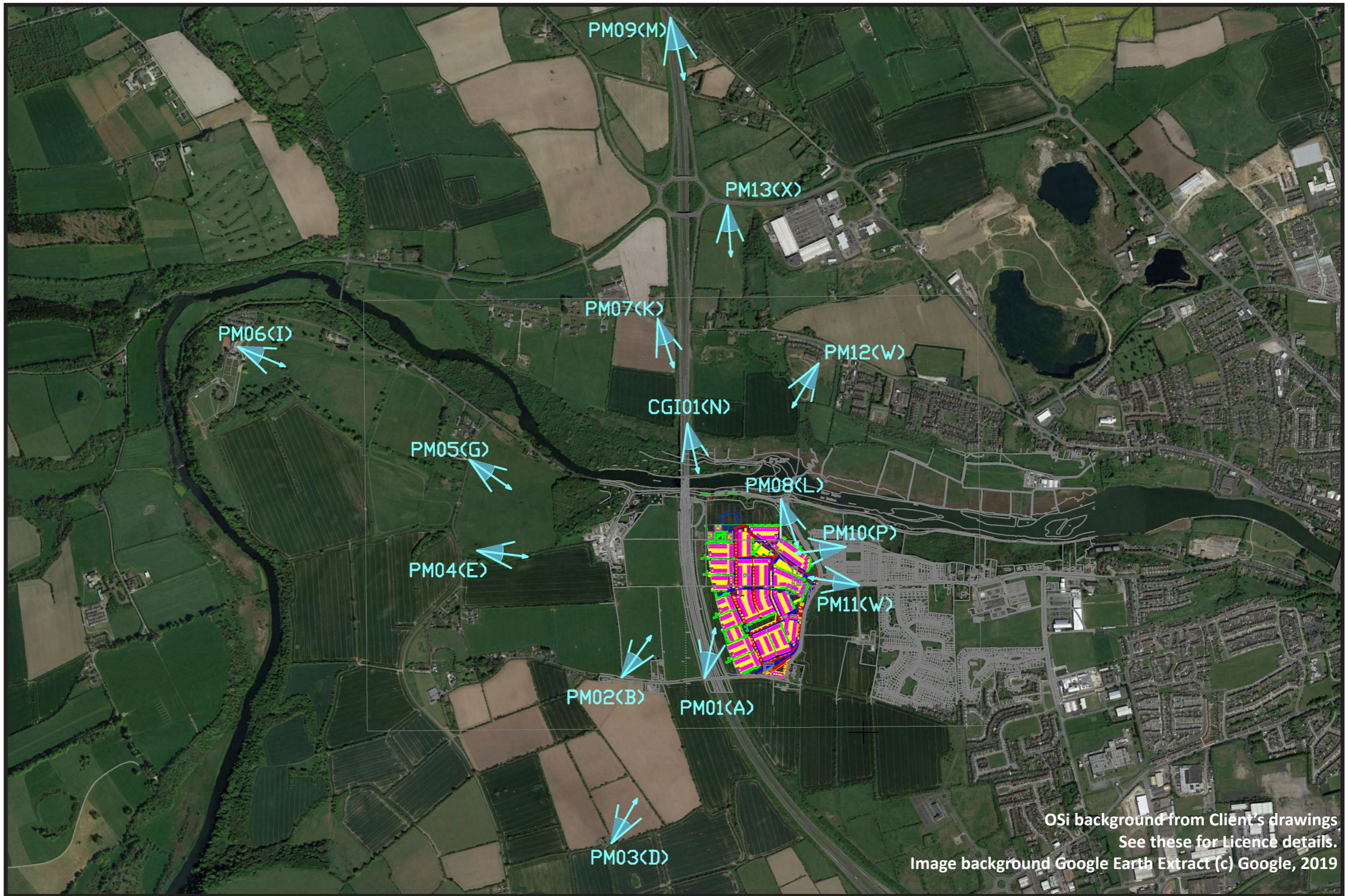


PM13(X) N51 at Mell looking S
- Existing
- Proposed



CGI01(N) From Mary McAleese Boyne Valley Bridge
Southbound Carriageway looking South
- Proposed

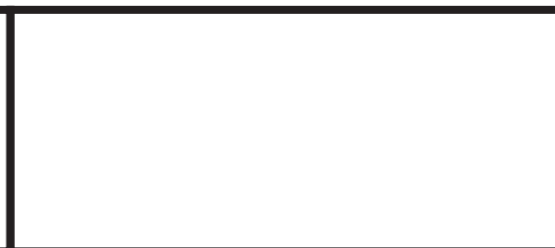





OSi background from Client's drawings
 See these for Licence details.
 Image background Google Earth Extract (c) Google, 2019

Name	Camera Locations
Status	Photomontage View Locations
Scale	Not to Scale
Residential Development on Rathmullan Road, Drogheda	
	Rev: 0


Trailford Ltd,
Kinvara, Westminster
Road, Foxrock, Dublin 18





<p>Name PM01(A) Status Existing Reference: Sheephouse Road WHS buffer boundary looking NE</p>	<p>Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18</p>	<p>Camera location 705887, 774714, 41.9 Target Direction 706762, 778783, 43.1</p>	<p>Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 10/04/2019 11:17 Recommended viewing distance with both eyes is 500mm.</p>	<p>www.shackleton.ie  Chris Shackleton Consulting</p>
<p>Residential Development on Rathmullan Road, Drogheda</p>				



<p>Name PM01(A) Status Proposed Reference: Sheephouse Road WHS buffer boundary looking NE</p>	<p>Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18</p>	<p>Camera location 705887, 774714, 41.9 Target Direction 706762, 778783, 43.1</p>	<p>Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 10/04/2019 11:17 Recommended viewing distance with both eyes is 500mm.</p>	<p>www.shackleton.ie  Chris Shackleton Consulting</p>
<p>Residential Development on Rathmullan Road, Drogheda</p>				



Name PM02(B)
 Status Existing
 Reference: Over gate near house cluster Sheephouse Road looking NE

Residential Development on Rathmullan Road, Drogheda

Rev:
0

**Trailford Ltd,
 Kinvara, Westminster
 Road, Foxrock, Dublin 18**

Camera location
705562, 774717, 32.7

Target Direction
706472, 775992, 32.3

Camera Canon 6D Mk 2
 Lens Canon EF 50mm
 HView Angle Nominal 40 degrees

Date/Time: 10/04/2019 10:57

Recommended viewing distance with both eyes is 500mm.





Name PM02(B)
 Status Proposed
 Reference: Over gate near house cluster Sheephouse Road looking NE

Residential Development on Rathmullan Road, Drogheda

Rev:
0

**Trailford Ltd,
 Kinvara, Westminster
 Road, Foxrock, Dublin 18**

Camera location
705562, 774717, 32.7

Target Direction
706472, 775992, 32.3

Camera Canon 6D Mk 2
 Lens Canon EF 50mm
 HView Angle Nominal 40 degrees

Date/Time: 10/04/2019 10:57

Recommended viewing distance with both eyes is 500mm.





Name PM03(D)
 Status Existing
 Reference: Donore Cemetery
 looking NE

**Trailford Ltd,
 Kinvara, Westminster
 Road, Foxrock, Dublin 18**

Camera location
 705523, 774068, 82.1
Target Direction
 705892, 774703, 86.4

Camera Canon 6D Mk 2
 Lens Canon EF 50mm
 HView Angle Nominal 40 degrees
 Date/Time: 26/03/2019 12:23



**Residential Development on
 Rathmullan Road, Drogheda**

Rev:
 0

Recommended viewing distance with both eyes is 500mm.



Name PM03(D)
 Status Proposed
 Reference: Donore Cemetery
 looking NE

**Residential Development on
 Rathmullan Road, Drogheda**

Rev:
 0

**Trailford Ltd,
 Kinvara, Westminster
 Road, Foxrock, Dublin 18**

Camera location
 705523, 774068, 82.1

Target Direction
 705892, 774703, 86.4


Camera Canon 6D Mk 2
 Lens Canon EF 50mm
 HView Angle Nominal 40 degrees

Date/Time: 26/03/2019 12:23

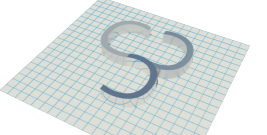
Recommended viewing distance with both eyes is 500mm.



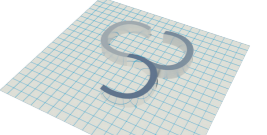


Name PM04(E) Status Existing Reference: Battle of the Boyne viewpoint, Oldbridge looking E	<p style="text-align: center;">Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18</p>	Camera location 704996, 775214, 31.3 Target Direction 706472, 775031, 24.7	Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 07/04/2019 15:22 Recommended viewing distance with both eyes is 500mm.	 <p style="text-align: center; font-size: small;">www.shackleton.ie Chris Shackleton Consulting</p>
Residential Development on Rathmullan Road, Drogheda				

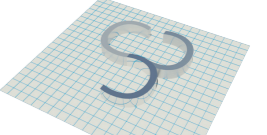


Name PM04(E) Status Proposed Reference: Battle of the Boyne viewpoint, Oldbridge looking E	<p style="text-align: center;">Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18</p>	Camera location 704996, 775214, 31.3 Target Direction 706472, 775031, 24.7	Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 07/04/2019 15:22	<p style="text-align: right; font-size: small;">www.shackleton.ie</p>  <p style="text-align: right; font-size: x-small;">Chris Shackleton Consulting</p>
Residential Development on Rathmullan Road, Drogheda		Rev: 0	Recommended viewing distance with both eyes is 500mm.	

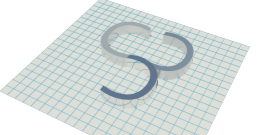


<p>Name PM05(G) Status Existing Reference: Driveways Bloomsbury Cottage & 'Bouvinda' looking SE</p>	<p>Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18</p>	<p>Camera location 704966, 775570, 8.1 Target Direction 706472, 774512, 23.7</p>	<p>Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 07/04/2019 15:39 Recommended viewing distance with both eyes is 500mm.</p>	<p>www.shackleton.ie  Chris Shackleton Consulting</p>
<p>Residential Development on Rathmullan Road, Drogheda</p>				




<p>Name PM05(G) Status Proposed Reference: Driveways Bloomsbury Cottage & 'Bouvinda' looking SE</p>	<p>Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18</p>	<p>Camera location 704966, 775570, 8.1 Target Direction 706472, 774512, 23.7</p>	<p>Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 07/04/2019 15:39 Recommended viewing distance with both eyes is 500mm.</p>	<p>www.shackleton.ie  Chris Shackleton Consulting</p>
<p>Residential Development on Rathmullan Road, Drogheda</p>				



Name PM06(I) Status Existing Reference: Oldbridge House Visitor Centre looking SE	<p style="text-align: center;">Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18</p>	Camera location 704059, 776012, 16.4 Target Direction 705865, 775259, 28.3	Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 26/03/2019 13:45 Recommended viewing distance with both eyes is 500mm.	<p style="text-align: right; font-size: small;">www.shackleton.ie</p>  <p style="text-align: center; font-size: x-small;">Chris Shackleton Consulting</p>
Residential Development on Rathmullan Road, Drogheda				




Name PM06(I) Status Proposed Reference: Oldbridge House Visitor Centre looking SE	<p style="text-align: center;">Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18</p>	Camera location 704059, 776012, 16.4 Target Direction 705865, 775259, 28.3	Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 26/03/2019 13:45 Recommended viewing distance with both eyes is 500mm.	 <p style="text-align: center;"><small>www.shackleton.ie</small> Chris Shackleton Consulting</p>
Residential Development on Rathmullan Road, Drogheda				

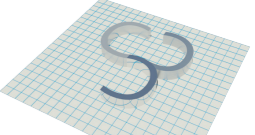


Name PM07(K) Status Existing Reference: Drybridge House looking SE	Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18	Camera location 705704, 776121, 17.9 Target Direction 706236, 774512, 15.4	Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 07/04/2019 14:43 Recommended viewing distance with both eyes is 500mm.	 <p>www.shackleton.ie Chris Shackleton Consulting</p>
Residential Development on Rathmullan Road, Drogheda				



Name PM07(K) Status Proposed Reference: Drybridge House looking SE	<p style="text-align: center;">Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18</p>	Camera location 705704, 776121, 17.9 Target Direction 706236, 774512, 15.4	Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 07/04/2019 14:43 Recommended viewing distance with both eyes is 500mm.	 <p style="text-align: center; font-size: small;">www.shackleton.ie Chris Shackleton Consulting</p>
Residential Development on Rathmullan Road, Drogheda				



<p>Name PM08(L) Status Existing Reference: Boyne River walkway at slipway looking S</p>	<p>Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18</p>	<p>Camera location 706187, 775415, 5.2 Target Direction 706440, 774703, 83.4</p>	<p>Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 26/03/2019 14:37</p>	<p>www.shackleton.ie  Chris Shackleton Consulting</p>
<p>Residential Development on Rathmullan Road, Drogheda</p>				



Name PM08(L)
 Status Proposed
 Reference: Boyne River walkway at slipway
 looking S

**Residential Development on
 Rathmullan Road, Drogheda**

Rev:
 0

**Trailford Ltd,
 Kinvara, Westminster
 Road, Foxrock, Dublin 18**

Camera location
 706187, 775415, 5.2

Target Direction
 706440, 774703, 83.4


Camera Canon 6D Mk 2
 Lens Canon EF 50mm
 HView Angle Nominal 40 degrees

Date/Time: 26/03/2019 14:37


Recommended viewing distance with both eyes is 500mm.



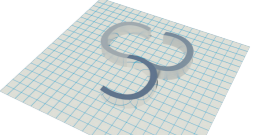


Name PM09(M) Status Existing Reference: Road Bridge on Hill of Rath Road looking S	Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18	Camera location 705754, 777303, 54.3 Target Direction 706373, 774512, 49.0	Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 07/04/2019 14:09 Recommended viewing distance with both eyes is 500mm.	 <p>www.shackleton.ie Chris Shackleton Consulting</p>
Residential Development on Rathmullan Road, Drogheda				




Name PM09(M) Status Proposed Reference: Road Bridge on Hill of Rath Road looking S	Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18	Camera location 705754, 777303, 54.3 Target Direction 706373, 774512, 49.0	Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 07/04/2019 14:09 Recommended viewing distance with both eyes is 500mm.	 <p>www.shackleton.ie Chris Shackleton Consulting</p>
Residential Development on Rathmullan Road, Drogheda				




<p>Name PM10(P) Status Existing Reference: The Square (South) looking W</p>	<p>Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18</p>	<p>Camera location 706441, 775228, 29.8 Target Direction 704273, 774960, 22.4</p>	<p>Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 10/04/2019 12:06</p>	<p>www.shackleton.ie  Chris Shackleton Consulting</p>
<p>Residential Development on Rathmullan Road, Drogheda</p>	<p>Rev: 0</p>	<p>Recommended viewing distance with both eyes is 500mm.</p>		




Name PM10(P) Status Proposed Reference: The Square (South) looking W	Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18	Camera location 706441, 775228, 29.8 Target Direction 704273, 774960, 22.4	Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 10/04/2019 12:06 Recommended viewing distance with both eyes is 500mm.	 <p>www.shackleton.ie Chris Shackleton Consulting</p>
Residential Development on Rathmullan Road, Drogheda				



Name PM11(R) Status Existing Reference: Rathmullan Road looking W	Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18	Camera location 706493, 775078, 32.5 Target Direction 704273, 775419, 35.0	Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 10/04/2019 11:38 Recommended viewing distance with both eyes is 500mm.	 <p>www.shackleton.ie Chris Shackleton Consulting</p>
Residential Development on Rathmullan Road, Drogheda				

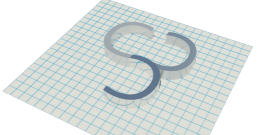


Name PM11(R) Status Proposed Reference: Rathmullan Road looking W	Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18	Camera location 706493, 775078, 32.5 Target Direction 704273, 775419, 35.0	Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 10/04/2019 11:38 Recommended viewing distance with both eyes is 500mm.	 <p>www.shackleton.ie Chris Shackleton Consulting</p>
Residential Development on Rathmullan Road, Drogheda				




<p>Name PM12(W) Status Existing Reference: Tullybrook Housing looking S</p>	<p>Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18</p>	<p>Camera location 706335, 775947, 21.6 Target Direction 705694, 774878, 21.2</p>	<p>Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 26/03/2019 16:17 Recommended viewing distance with both eyes is 500mm.</p>	<p>www.shackleton.ie  Chris Shackleton Consulting</p>
<p>Residential Development on Rathmullan Road, Drogheda</p>				




Name PM12(W) Status Proposed Reference: Tullybrook Housing looking S	Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18	Camera location 706335, 775947, 21.6 Target Direction 705694, 774878, 21.2	Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 26/03/2019 16:17	 <p>www.shackleton.ie Chris Shackleton Consulting</p>
Residential Development on Rathmullan Road, Drogheda		Rev: 0	Recommended viewing distance with both eyes is 500mm.	

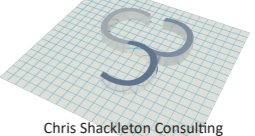


Name PM13(X) Status Existing Reference: N51 at Mell looking S	Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18	Camera location 705978, 776566, 35.5 Target Direction 706092, 774878, 35.4	Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 26/03/2019 15:34 Recommended viewing distance with both eyes is 500mm.	<small>www.shackleton.ie</small>  <small>Chris Shackleton Consulting</small>
Residential Development on Rathmullan Road, Drogheda				



Name PM13(X) Status Proposed Reference: N51 at Mell looking S	Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18	Camera location 705978, 776566, 35.5 Target Direction 706092, 774878, 35.4	Camera Canon 6D Mk 2 Lens Canon EF 50mm HView Angle Nominal 40 degrees Date/Time: 26/03/2019 15:34 Recommended viewing distance with both eyes is 500mm.	 <p>www.shackleton.ie Chris Shackleton Consulting</p>
Residential Development on Rathmullan Road, Drogheda				



<p>Name CGI01(N) Status Proposed CGI Reference: From Mary McAleese Boyne Valley Bridge Southbound Carriageway looking South</p>	<p>Trailford Ltd, Kinvara, Westminster Road, Foxrock, Dublin 18</p>	<p>Camera location 705820, 775713, 21.0 Target Direction 706089, 774512, 15.4</p>	<p>Camera Virtual CGI Lens Virtual 50mm HView Angle Nominal 40 degrees Viewer Height Car Recommended viewing distance with both eyes is 500mm.</p>	<p>www.shackleton.ie  Chris Shackleton Consulting</p>
<p>Residential Development on Rathmullan Road, Drogheda</p>				

Photomontage Methodology / Method Statement

Work has been completed in accordance with best practice guidelines a summary of which are provided below.

Preparation

Prior to site visit camera locations were identified and located on digital map to enable GPS routing to the correct locations. The site was “scouted” for access using Google Streetview (c) Google.

Photography

- Photographs were taken on site at locations specified using a high-resolution professional digital camera. The Camera a Canon 6D is a full frame format (which corresponds to a traditional 35mm film format) as recommended by best practice guidelines.
- Images will be taken in RAW format which provides the maximum flexibility in adjustment along with the best quality available, and with bracketed exposure. The images were stored with embedded camera/photo exif data.
- The camera was tripod mounted, spirit leveled and set at a nominal 1.6m above ground level
- The lens used as a Canon prime (fixed) 50mm or normal lens. The 50mm lens provides a similar magnification to the human eye and will provide an image which is accepted.

Control

A series of survey points were captured on site for each photograph using Trimble R8 survey grade RTK-GPS. The following were measured:

- The camera position, plan and height
- Measured points of detail visible when the photograph was taken. On streetscape scenes points of detail (corners of buildings, poles, sign, white lines, structures, etc) are surveyed to provide an accurate orientation base where insufficient existing detail is available we supplement with either with red/white ranging rods or smaller orange cones placed in the camera’s field of view while taking the photograph.
- Regardless of the type of control the configuration shall be non-collinear with a good photogrammetric geometry. This ensures that computational analysis is convergent.

Setting up AVR Images

- Survey and OS mapping is imported into 3D software
- A calibrated virtual 50mm camera is created to match the physical one used to capture the image. These are snapped to the surveyed locations. The individual photograph frames are loaded into the viewport.
- Using in-built software algorithms the virtual camera is adjusted so the points of detail on the photograph and the surveyed points in real-life coalesce in the camera viewport. Once complete the virtual camera will be orientated so that it is identical to the physical camera that took the base photograph.
- Checks are made using the surveyed information and project mapping and cross referenced with the photographs to ensure they align.
- A Daylight system is then accurately introduced into the scene at it correct geo-referenced coordinates. Once the time/date and time zone is set the digital sky will match the position of the sun and shadows created by the same in the base photograph.

Verifiable Photomontage & Proposed development modelling

- The proposed development, structure, road works and earthworks is modeled up in 3D from the drawings provided by the Client / Design Team.
- The building is located in accordance with surveyed location and at the correct FFL.
- True life digital materials are designed and assigned to the 3D model elements using reference imagery provided by the client. Sophisticated real world rendering shaders are used in conjunction with the daylight system to produce final renders which will react in a verifiable manner to match the reference photographic base images.
- Finally, the new development image and the existing original photograph are merged with due care for any demolitions/removals, foreground / background existing objects, landscaping, lighting, shadows, etc. to produce a single believable and verifiable composite image.

Viewing instructions

These images are designed to be printed at A3 and taken to site to evaluate the impact of the development.

Images should be viewed with both eyes open from the locations indicated and held 500mm from the viewers eyes. (Arms length). When held at arms length the viewer should be able to effectively focus not only on the photomontage in hand but also on the surrounding landscape which will give them a much wider field of view.

When used in this fashion the existing landscape will line-up and the photomontage will provide similar perspective and thus enable the viewer to visually evaluate the proposal.

