Chapter 6:

Landscape and Visual Impact

6.0 LANDSCAPE AND VISUAL IMPACT

6.1 INTRODUCTION

This Landscape and Visual Impact Assessment (LVIA) chapter has been prepared by Luke Byrne MILI, Landscape Architect, of Dermot Foley Landscape Architects and forms part of the overall EIAR to assess the Landscape and Visual Impact Assessment of the Proposed Development at Colp West, Drogheda.

A Landscape and Visual Impact Assessment (LVIA) describes the existing receiving environment, contiguous landscape and the methodology utilised to assess the impacts. It assesses the visual extent of the proposed development and its visual effects on key views throughout the study area. It describes the landscape character of the application site, together with the visibility of the site from significant viewpoints in the locality. The report summarises the impact of the proposed development on the visual and landscape amenity of the application site and contiguous area.

The following visual receptors are addressed in this assessment:

- Designated protected views and views/scenic routes protected through development objectives in the Meath County Development Plan 2013-2019;
- Local Amenity and Heritage Features;
- Local community views to assess the landscape and visual impact of the proposals on those who live and work in proximity to the Proposed Development as well as those utilising local amenities;
- Relevant local settlement nodes; and
- Major routes adjacent to the site.

6.2 ASSESSMENT METHODOLOGY

A Landscape and visual impact assessments are two separate but closely related topics. The assessment of visual impact focuses on the extent to which new developments can be seen. Visual analysis forms one part of a Visual Impact Assessment (VIA), the process by which the potential significant effects of a Proposed Development on the visual resource of an area are methodically assessed. In turn, VIA forms just one part of a Landscape and Visual Impact Assessment (LVIA) and the wider process of Environmental Impact Assessment (EIA). Landscape assessment focuses on the character of the landscape, examining responses which are felt towards the combined effects of the new development.

6.2.1 Desktop Study

A site assessment was undertaken in July 2018. Desktop studies were undertaken to evaluate the existing site conditions such as topography, vegetation, settlement patterns, contiguous land use, drainage, landscape character as well as overall visibility of the site from surrounding areas. Information was also collated on protected views, scenic routes, special and protected landscapes etc.

The following documents and web resources were consulted for the desktop study:

- Meath County Development Plan 2013-2019;
- Southern Environs of Drogheda Local Area Plan 2009-2015;
- National Parks and Wildlife Service – Interactive Mapping and Aerial Photography - www.npws.ie;
- Ordnance Survey Ireland – Interactive Mapping and Aerial Photography – www.osi.ie;
- The National Monuments (Amendment) Act 1994, Section 12; and

This LVIA has been prepared utilising the following guidance documents:

- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment, Department of Housing, Planning and Local Government, 2018;
- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports, Environmental Protection Agency, Draft August 2017
- Guidelines on the Information to be contained in Environmental Impact Statements Environmental Protection Agency, Environmental Protection Agency, 2002;
- Revised Guidelines on the Information to be contained in Environmental Impact Statements. Draft 2015;
- Advice notes on current practices (in the preparation of an Environmental Impact Statement), Environmental Protection Agency, 2003;
- Advice notes for Preparing Environmental Impact Statements. Draft. Environmental Protection Agency, 2015;
- Landscape and Landscape Assessment Draft Guidelines, Department of Environment, Heritage and Local Government (DoEHLG) 2000;
- Guidelines for Landscape and Visual Impact Assessment, The Institute of Environmental Assessment / Landscape Institute (2nd & 3rd Ed 2002, 2013); and
- A Handbook on Environmental Impact Assessment – Guidance on the Environmental Impact, Scottish Natural Heritage (SHN) - Assessment 2009. Appendix 1: Landscape and Visual Impact Assessment.

6.2.2 Impact Significance Criteria

The impact significance and rating criteria used are those outlined in the EPA guidelines and have been modified to take account of other references used in the assessment methodology, see **Table 6.1**. This table is used as a guide. The assessor also uses professional judgement informed by their expertise, experience and common sense to arrive at a classification of significance.

		Existing Environment: Significance / Sensitivity			
		High	**Medium**	**Low**	**Negligible**
Magnitude of Change	**High**	Profound	Very Significant	Significant / Moderate	Moderate / Slight
	Medium	Very Significant / Significant	Significant / Moderate	Moderate	Slight / Not Significant
	Low	Significant / Moderate	Moderate / Slight	Slight / Not Significant	Not Significant / Imperceptible
	Negligible	Slight / Not Significant	Not Significant	Not Significant / Imperceptible	Imperceptible

Table 6.1: Classification of Significance of Impacts

The significance of impacts, which in quality may be positive, neutral or negative/adverse, are described as follows:

- **Imperceptible**: An impact capable of measurement but without noticeable consequences.
- **Not significant**: An impact which causes noticeable changes in the character of the environment but without noticeable consequences.
- **Slight**: An impact which causes noticeable changes in the character of the environment without affecting its sensitivities.
- **Moderate**: An impact that alters the character of the environment in a manner that is consistent with existing and emerging trends.
- **Significant**: An impact which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.

- **Very Significant**: An impact which, by its character, magnitude, duration or intensity significantly alters the majority of a sensitive aspect of the environment.
- **Profound**: An effect which obliterates sensitive characteristics.

In terms of duration, impacts are considered as follows:

- **Brief**: lasting up to one day
- **Temporary**: lasting up to one year
- **Short-term**: lasting one to seven years
- **Medium-term**: lasting seven to fifteen years
- **Long-term**: lasting fifteen to sixty years
- **Permanent**: lasting over sixty years

Impacts are considered at both the construction and operation stage and further aspects including do-nothing, worse-case, cumulative, interactive, indirect and residual impacts are also considered, where appropriate, in the assessment.

6.2.3 Definition of Visual Impacts

The following terminology, used in this visual assessment, is defined as follows:

Visual Intrusion: where a Proposed Development will feature in an existing view but without obstructing the view.

Visual Obstruction: where a Proposed Development will partly or completely obscure an existing view.

Sensitivity and Significance: The significance of impacts on the perceived environment will depend partly on the number of people affected, but also on value judgments about how much the changes will matter. In this respect it is important to identify actual visual and physical connections between the site, its adjacent occupiers/land owners and those who interact with it from further afield, in the context of the existing and the proposed situations.

While our visual sense is generally acknowledged to represent the dominant contribution to our perception of place and its context, other factors also contribute. Hearing/sound, smell and a variety of social/cultural factors relating to the land-use, function or business conducted on the land (or indeed, memory) can sometimes over-rule or outweigh the visual aspects and lead to individual perceptions which could be described as relatively subjective. The relevance of these non-visual aspects to our perception of our environment and the impact made by proposed changes is considered in other sections of this assessment document. The purpose of this section is to objectively examine and assess the nature and extent of the visual impact created as a result of the development proposal.

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6.2.4 Choice of Views

The views were chosen to accurately represent the likely visual impact from all directions. Views are from the public domain, particularly those from main roads and access routes. The views submitted are considered to be the most important and representative, having regard to the requirement to examine the greatest likely impacts.

6.2.3 Photomontage Methodology

The photography, survey, 3d modelling, photomontage and presentation methodology is summarised in the method statement issued by Modelworks included as Appendix 6.1 to this chapter of the EIAR.

6.3 THE EXISTING ENVIRONMENT

6.3.1 Site Description and Context

The site is located in Co. Meath, in the townland of Colp West, on the southern fringe of Drogheda town. Drogheda town centre lies approximately 3km to the northwest. Donnacarney village lies approximately 1.5km east of the site and Southgate retail centre is situated approximately 1km to the southwest of the site. The site is located approximately 1.2km from the River Boyne, which runs through the centre of Drogheda town. The coastline of the Irish Sea is located approximately 4km east of the site.

The subject site is irregular in shape and comprises of the main site area which is located north of Colpe Road, however is segregated from this road for the most part by agricultural fields. Mill Road runs to the east of the site but is segregated from the site by a private residential dwelling and Gaelscoil an Bhradain Feasa. The site is bordered to the southwest by the Dublin-Belfast Railway. The existing Grangerath residential development lies further southwest on the other side of the railway line. The site is bordered directly to the north by agricultural fields and associated agricultural roads. The R150 Marsh Road, which runs along the River Boyne Estuary is located approximately 1km north of the site.

The subject site extends to the southeast to Colpe Road and incorporates a portion of Mill Road, Colpe Road and the existing bridge over the Dublin-Belfast railway.

The site itself is primarily grassland at present. It is made up of two agricultural fields, predominantly bounded by hedgerows with a single hedgerow running in a northeast to southwest direction segregating the agricultural fields. With the exception of this hedgerow, the site is relatively open at the centre.

6.3.2 Architectural Conservation Areas

There are three Architectural Conservation Areas (ACA)s in the wider vicinity of the site. The Laytown ACA lies approximately 5km south east of the subject site. The Julianstown ACA is located approximately 5km south of the subject site. The Oldbridge Estate ACA is located approximately 5.5km to the northwest of the site.

6.3.3 Protected Structures

There are several protected structures located in the wider vicinity of the site. Protected Structure MH020-124 is the outbuildings to Stameen House, and is located approximately 0.5km west of the subject site.
Protected Structure MH021-104, Colpe Church of Ireland and castle site c.1790, is located approximately 0.6km southeast of the main site area, however is located approximately 0.1km east of the site boundary at the existing junction of Colpe Road and Mill Road. Protected Structure MH021-103, Colpe House c.1900, is located in relatively close proximity to Protected Structure MH020-104 and is located approximately 0.6km southwest of the main site area, however is located approximately 0.16km northeast of the site boundary at the existing junction of Colpe Road and Mill Road.

Protected Structure MH021-100, Eden View – The Grammar School is located approximately 1km north of the subject site. Protected Structure MH021-101 Bay View c.1860 is located east of Mill Road and lies approximately 1km north east of the site. Protected Structure MH021-102 Glen House c. 1852 is also located east of Mill road and lies approximately 0.8km northeast of the subject site.

6.3.4 Topography and Drainage

The topography within the site slopes gently on a southwest northeast axis. The highest point of the site lies on the southern boundary at approximately +28.00 OD. The site level at the boundary in the northeast corner of the site is approximately +21.50 OD. Ground conditions vary. The lands are mostly free draining.

The site is located approximately 1.2km from the River Boyne, which runs through the centre of Drogheda town. The coastline of the Irish Sea is located approximately 4km east of the site.

6.3.5 Vegetation

The existing trees are located within boundary hedgerows and within the central hedgerow running in a northeast southwest direction through the site.

To the north and south the wider context is predominantly agricultural with field boundaries consisting of hedgerows and small groups of both deciduous and coniferous tree plantings. To the west there are existing tree plantings along the railway line and there is a significant tree group further west of the railway line, in areas in an area of open space. To the east tree planting is located within private gardens and within the grounds of Gaelscoil an Bhradain Feasa.

The land within the site boundary is consistent with the wider context and is comprised of grassed fields, bounded and segregated by mixed hedgerows. *Fraxinus excelsior* (Ash) is the predominant species on the site. The hedgerows species on site comprise mainly of *Sambuccus nigra* (Elder), *Rosa canina* (Dog-rose), *Fraxinus excelsior* (Ash), *Acer pseudoplatanus* (Sycamore) and *Hedera helix* (Ivy).

Figure 6.1: Photograph taken centrally in the subject site looking north. The existing central hedgerow is visible on the left of the photograph.

A detailed Tree Survey and Arboricultural Assessment has been carried out by Charles McCorkell Arboricultural Consultancy and is included separately within the planning submission.

6.3.6 Contiguous Land Uses

The contiguous lands uses adjacent to the subject site are dominated by agricultural fields and rail infrastructure.

The eastern boundary is composed of Gaelscoil an Bhradain Feasa and a private residential dwelling. To the north and south there are agricultural fields adjacent to the site. The western boundary is formed by the Dublin – Belfast railway line.

6.3.7 Visual Analysis

There are no structures on the subject site. The lands are predominantly greenfield in character. The built fabric of the contiguous lands are contained to the east and west of the subject site. These built structures are a mix of single storey and two storey residential properties west of the Dublin-Belfast railway line and along Mill Road. Gaelscoil an Bhradain Feasa lies to the east of the site, off Mill Road and is a two-storey structure. The lands to the south and north are comprised of series of agricultural fields compartmentalised by tree and hedgerow plantings.

Figure 6.2: Photograph taken on Mill road looking northwest towards the subject site. The existing hedgerow along the western side of Mill road is visible.

Generally, views into the site are restricted from Mill road to the east by residential properties, Gaelscoil an Bhradain Feasa and existing trees and hedgerows along the western side of Mill Road. There are a number of glimpse views into the site over the hedgerow at select locations only. Views from the west are blocked for the most part due to the Dublin – Belfast railway line and the residential developments west of the railway line. Views from the R150 Marsh Road to the north of the site are blocked by the topography directly south of the R150 Marsh Road and existing trees.

The landscape to the immediate south of the main application site area is relatively open. There are open views into the site from the Colpe Road to the site, over agricultural fields. In particular the view from the existing railway bridge on Colpe Road, south of the subject site looking north towards the site are extensive.

Figure 6.3: Photograph taken from existing bridge over railway line on Colpe road looking north towards the subject site

6.4 PLANNING CONTEXT

6.4.1 Landscape Planning Policy Context

Landscape Planning Policy for the subject site is laid out within the Meath County Development Plan 2013-2019. Other relevant planning policy for the subject site is contained in the Southern Environs of Drogheda Local Area Plan 2009-2015.

6.4.2 Landscape Character

There are several Landscape Character Areas (LCA's) identified in the Meath County Development Plan 2013-2019. The subject site is located with the Coastal Plains LCA.

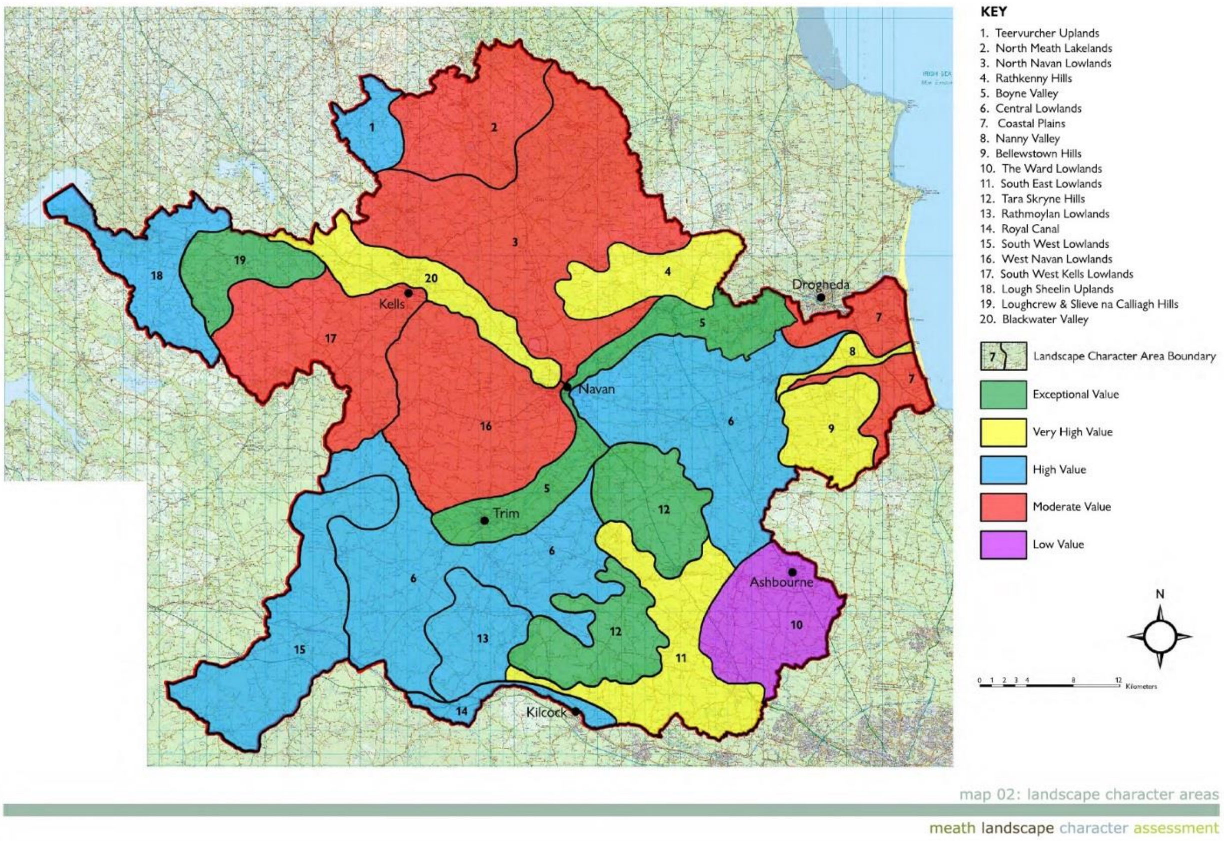

Figure 6.4: Plan showing landscape character areas, extracted from Meath County Development Plan 2013-2019

6.4.3 Landscape Sensitivity

Each of the Landscape Character Areas has been assigned a landscape sensitivity rating. Landscape sensitivity is a measure of the ability of the landscape to accommodate change or intervention without undue effects to its character/values based on factors such as topography, slope, ridgeline, water bodies, land use and prior development. The Coastal Plains LCA is stated to have a High Sensitivity rating within the Meath County Development Plan 2013-2019.

6.4.4 Local Settlements

6.4.4.1 Drogheda

Drogheda town is a settlement on the Dublin-Belfast railway line and is located to the northwest of the subject site. Drogheda is on the River Boyne and is a town with a population of approximately 41,000 people. The towns planning policy is set down in the Louth County Development Plan 2015 – 2021 and the Drogheda Development Plan 2011-2017.

6.4.4.2 Donacarney

Donacarney is a relatively small village located east of the subject site. The towns planning policy is set down in the Meath County Development Plan 2013 – 2019.

6.4.4.3 Mornington, Bettystown and Laytown

Mornington, Bettystown and Laytown are three coastal villages on coastline of the Irish Sea. Extending from the estuary of the River Boyne to the north to the River Nanny to the south. The villages are located to the east of the subject site. The planning policy for the towns is set down in the Meath County Development Plan 2013 – 2019. Together with neighbouring coastal villages of Bettystown and Laytown the three villages have a combined population of approximately 10,000 people.

6.4.5 Environmental Designations

The site lies approximately 1.3km south of the River Boyne estuary, a Special Protection Area (SPA). The River Boyne itself is designated a Special Area of Conservation (SAC). The River Boyne Coast and Estuary is also a proposed Natural Heritage Area (pNHA). The River Boyne Coast is located approximately 4km northeast and east of the subject site. Approximately 5km southeast of the subject site, the River Nanny Estaury and Shore is designated a Special Protection Area (SPA) and the Nanny Estuary and Laytown Dunes are a proposed Natural Heritage Area (pNHA).

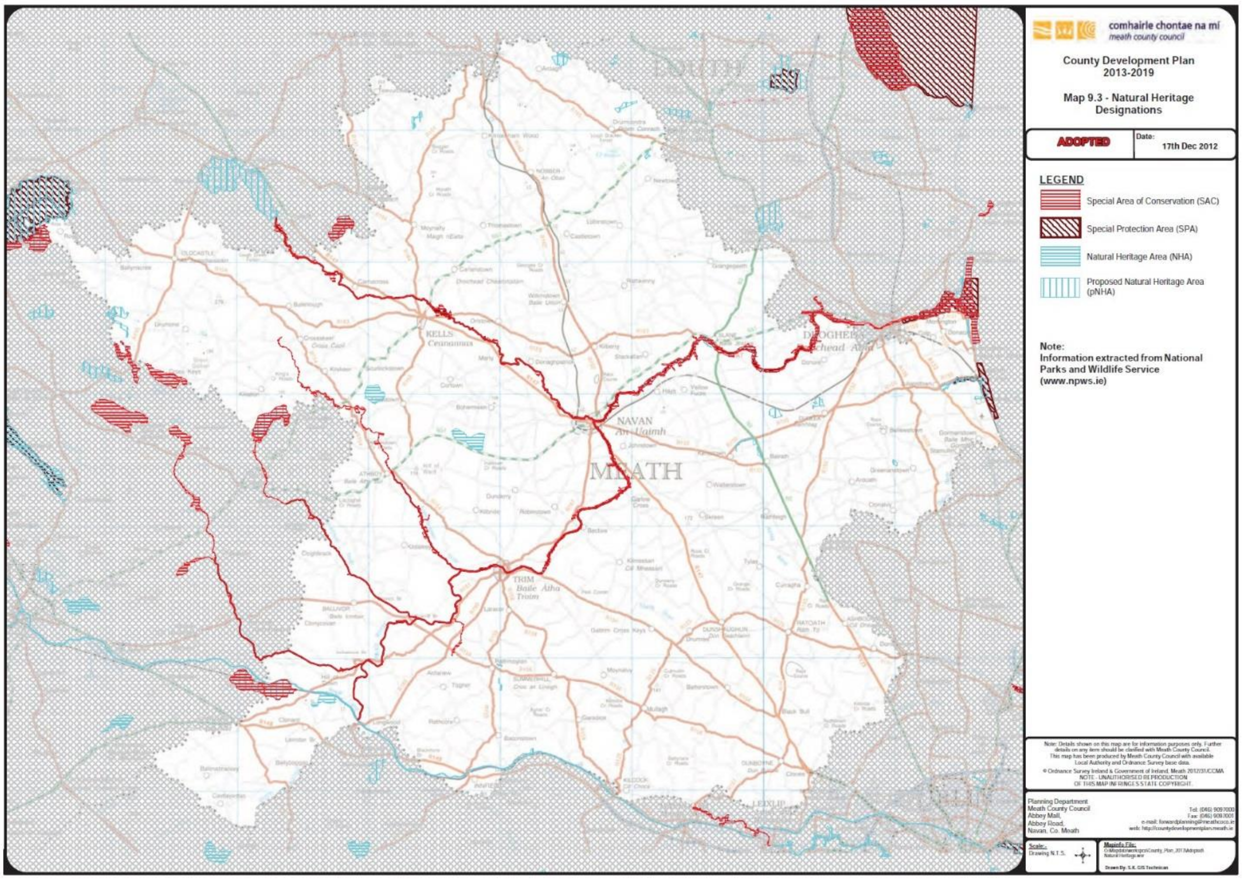

Figure 6.5: Plan showing environmental designations, extracted from Meath County Development Plan 2013-2019

6.4.6 Protected Views and Prospects

The Meath County Development Plan 2013-2029 does not identify any views to be protected in the immediate vicinity of the site. The closest view in the direction of the subject site to be protected is noted as View 69 from a county road at Bellewstown looking northeast. It is noted as an 'extensive north-eastward view to sea, Mourne Mountains and horizon north of Boyne. View encompasses a settled landscape with industry, infrastructure, settlement and sea to the east. Views to the north and east most important. This viewpoint is approximately 8lm southwest of the subject site.

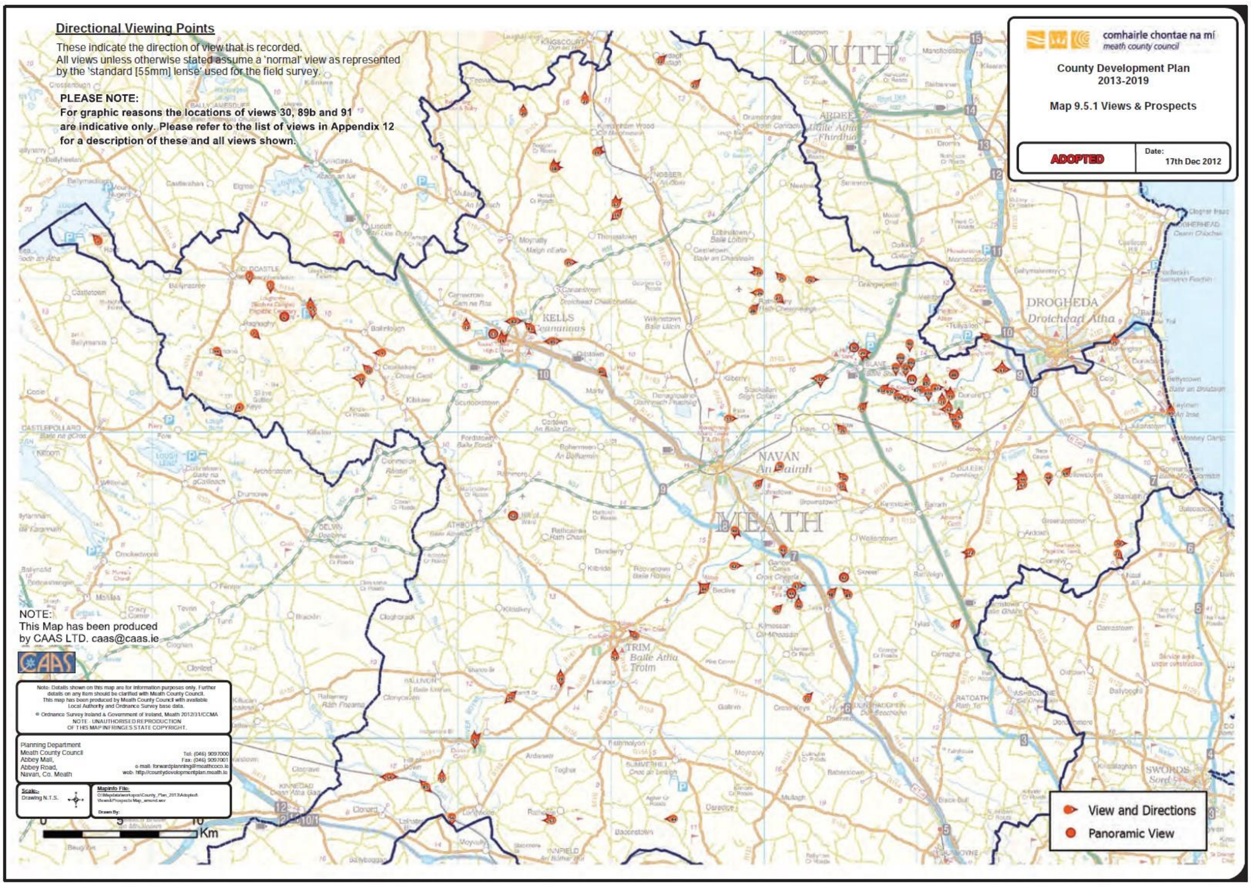

Figure 6.6: Plan showing protected views and prospects, extracted from Meath County Development Plan 2013-2019

6.5 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

The proposed development consists of a residential development comprising of 357 no. residential units, a childcare facility and associated outdoor play area, road infrastructure, a pedestrian bridge over the railway line and associated pathways, all associated open space, cycle and pedestrian infrastructure, services and all other associated development on a site of c. 13.44 hectares

The proposed childcare facility is a two storey building with a GFA of 439 sq.m. The proposed houses are 2/3 storeys in height and the duplex/apartment blocks are 3 - 6 storeys in height.

The development includes road infrastructure comprising of a link street approximately 652m in length (including changes to the previously permitted road infrastructure under Reg. Ref.: LB/180620), including bus stops, 1 no. roundabout, pedestrian crossings and c. 246m long connection of the link street to the east to facilitate a connection to the existing school on Mill Road (Gaelscoil an Bhradáin Feasa). The road infrastructure also includes the realignment of a section of Colpe Road and the realignment of the southern section of Mill Road, and includes proposed cycle lanes/paths, footpaths, grass verge, and the provision of a footpath and cyclepath / cycle lane on Colpe Road to tie-in with the existing shared footpath / cyclepath, to the south-west of the railway line.

The proposed new pedestrian bridge will cross the existing Dublin to Belfast railway line and will link the proposed SHD development to the existing Grange Rath housing development to the south-west.

6.6 Potential Impact of the Proposed Development

6.6.1 Impacts on Existing Vegetation

6.6.1.1 Construction Phase

The Proposed Development integrates a significant portion of the existing trees and hedgerows on site within the proposed landscape plans by Dermot Foley Landscape Architects included separately as part of this submission. However existing trees and hedgerows will need be removed to facilitate the development. Charles McCorkell Arboricultural Consultancy have assessed and produced a Tree Survey Report and Arboricultural Assessment included separately as part of this planning submission. The proposal requires the removal of forty-six trees, five groups of trees and four hedgerows. The part removal of one group of trees and four hedgerows is also required. Of the sixty survey entries proposed to be removed or part removed, six are of moderate quality and value (B Category); thirty-eight are of low quality and value (C Category) and sixteen are of poor quality (Category U). The impact on existing trees will be *negative, moderate and permanent.*

6.6.1.2 Operational Phase

There are no predicted impacts on the existing vegetation in the operational phase.

6.6.2 Impact on Landscape Character

6.6.2.1 Construction Phase

The removal of existing trees and hedgerows will have a negative, moderate and permanent impact on existing landscape character.

Site hoarding, construction traffic, ground disturbance and temporary structures required for construction will have a negative moderate and short-term impact.

6.6.2.2 Operational Phase

Where the landscape is not maintained appropriate in accordance with horticultural best practice there may be a negative, moderate and permanent impact.

6.6.3 Impact on Views

6.6.3.1 Construction Phase

Site hoarding, construction traffic, ground disturbance and temporary structures required for construction will have a *negative, moderate and short-term impact.*

6.4.6 Protected Views and Prospects

6.6.3.2 Operational Phase

Thirteen key views were chosen to illustrate the visual impact of the Proposed Development. The views are numbered 1 to 13 and include long, mid and short-distant views. Refer to the photomontage document by Modelworks included separately as part of this planning submission.

Each Photomontage view includes the following versions:

- **'Existing'** view
- **'Permitted'** view showing the relevant permitted developments near the site; the temporary school permitted under MCC Reg. Ref. LB 190739 and the office development permitted under MCC Reg. Ref. LB 180620
- **'Proposed'** view showing the Proposed Development and the permitted developments near the site; the temporary school permitted under MCC Reg. Ref. LB 190739 and the office development permitted under MCC Reg. Ref. LB 180620

The Proposed Development does not constitute a visual obstruction, but is a visual intrusion in some of the views.

- **View 1**: *From existing bridge over railway line looking north towards the main site area*

The Proposed Development is largely screened due to existing topography, however selected apartment blocks are visible above the line of existing vegetation. The proposed pedestrian bridge over the railway is not visible in the view as it is blocked by existing vegetation. Due to the distance of the view the impact is considered negative, moderate and permanent.

The permitted commercial development and associated carpark (MCC Reg. Ref. LB 180620) is visible in the foreground of the view.

- **View 2**: *From junction of Colpe Road and Mill Road looking northwest towards the site*

The proposed development on the main site area is largely screened by existing vegetation and topography, however the proposed roundabout and associated road realignment works are visible in the foreground of the view. The removal of existing trees and hedgerows to facilitate the proposed road realignment works is also evident in the view. The impact is considered negative, moderate and permanent.

The permitted commercial development and associated carpark (MCC Reg. Ref. LB 180620) is partly visible on the left of the view.

- **View 3**: *From Colpe Church (protected structure) looking northwest towards the site*

The proposed development on the main site area is predominately screened by existing trees and hedgerows, however glimpse views are possible through the existing vegetation. The impact is considered negative, slight and permanent.

- **View 4**: *From Gaelscoil an Bhradain Feasa looking west towards the main site area*

The proposed development on the main site area is completely blocked by the Gaelscoil an Bhradain Feasa building and is not visible. There will be no impact.

- **View 5**: *From Drogheda Grammar School looking south towards the site*

The proposed development is predominately screened by existing trees, hedgerows and existing topography. However, glimpse views are possible through the existing vegetation. The impact is considered negative, slight and permanent.

- **View 6**: *From R150 / Marsh Road looking southeast towards the site*

The proposed development is completely blocked by existing topography and is not visible. There will be no impact.

- **View 7**: *From Boyne Valley Hotel (protected outbuilding structures) looking east towards the main site area*

The proposed development is completely blocked by existing topography and existing trees and the existing vegetation along the railway corridor. The proposed development is not visible. There will be no impact.

- **View 8**: *From roundabout to Park Glen within the Grangerath residential development looking north east towards the main site area*

The proposed development is completely blocked by the existing residential dwellings in the foreground of the view and the existing tree group behind. The development is not visible. There will be no impact.

- **View 9**: *From open space within the Grangerath residential development adjacent to Park Wood looking north towards the main site area*

The proposed development on the main site area is predominantly blocked by the existing residential dwellings in the foreground of the view and the existing vegetation along the railway line. The proposed footpath the proposed pedestrian bridge over the railway line is visible in the foreground of the view. The impact is considered negative, slight and permanent.

- **View 10**: *From roundabout to the Park Wood within the Grangerath residential development looking north towards the main site area*

The proposed development is completely blocked by the existing residential dwellings in the foreground of the view. The development is not visible. There will be no impact.

- **View 11**: *From central open space of Grangerath residential development looking north towards the main site area*

The proposed development is completely blocked by the existing residential dwellings within the Grangerath residential development. The development is not visible. There will be no impact.

- **View 12**: *From Colpe Road looking northeast towards the bridge over the railway line*

The proposed development on the main site area is not visible in the view. However, the proposed works to Colpe road including the proposed cycle lanes are visible in the view. The impact is considered neutral, moderate and permanent.

- **View 13**: *From Mill Road looking south towards the of junction of Colpe Road and Mill Road*

The proposed development on the main site area is not visible in the view. However, the proposed realignment works to the junction at Colpe Road and Mill Road are visible in the view including the removal of existing trees and hedgerows west of Mill Road. The impact is considered negative, moderate and permanent.

Glimpse views are possible through the existing hedgerow of the permitted commercial development (MCC Reg. Ref. LB 180620).

6.7 POTENTIAL CUMULATIVE IMPACTS

A number of the identified impacts can also act cumulatively with other impacts from developments in the locality. The subject site forms only a portion of the Southern Environs of Drogheda Local Area Plan 2009 - 2015. The lands to the east of the railway line, north of Colpe Road and west of Mill Road are zoned for development with a combination of amenity areas and housing proposed. The likely cumulative impacts on the landscape include the further loss of existing vegetation; tree and hedgerows.

The LAP zoned lands will also have an impact on views. The Proposed Development on the subject site will partly visible from the south generally, particularly from the existing bridge over the railway line on Colpe Road. The other LAP zoned lands, making up the remainder of the will also be visible from the existing bridge over the railway line on Colpe road, but also from further east along Colpe Road. It is expected that views would be restricted from the north due to the topography of the area and screening provided by existing trees. It is expected views from Mill Road and further west would be screened by the existing hedgerow vegetation along the western side of Mill Road. It is expected that view from the east would be largely screened or completely blocked by the railway line and associated existing vegetation along this corridor.

The potential effect of Cumulative Landscape and Visual impacts with relevant the permitted developments; the temporary school permitted under MCC Reg. Ref. LB 190739 and the office development permitted under MCC Reg. Ref. LB 180620.

6.8 'DO NOTHING' IMPACT

The lands are agricultural in use at present but are earmarked for re-development in the Southern Environs of Drogheda Local Area Plan 2009-2015. Therefore, in the do-nothing scenario (*i.e.* should this development not proceed), it is considered most likely that some form of broadly similar primarily residential development will take place on these lands at some stage in the foreseeable future. Any such development will likely have a broadly similar range of landscape and visual effects and opportunities. If development was not to proceed on these lands, the lands would remain in agricultural use, i.e. there would be no change to the lands.

6.9 MITIGATION MEASURES

6.9.1 Existing Vegetation

6.9.1.1 Construction Phase

L&V CONST 1: Existing vegetation was considered from the outset of the design process in order to minimise the impact of the development, particularly on existing trees. Site engineering, drainage, ducts and other infrastructure has been designed to minimise impact. Replacement planting is proposed as part of the landscape plans issued by Dermot Foley Landscape Architects and included separately as part of this planning submission. The following mitigation measures are proposed:

- To protect trees to be retained, fell adjacent trees to be removed and grind out stumps in accordance with BS5837:2012;
- Implement tree protection measures for trees to be retained in accordance with BS5837:2012 before any demolition or construction works proceed;
- Where required strip and store topsoil in accordance with BS4428:1989 and BS3882:2007;
- Install proposed replacement and additional proposed planting and seeded areas in accordance with the Typical Soft Landscape Details issued by Dermot Foley Landscape Architects and included separately as part of this planning submission.

6.9.1.2 Operational Phase

L&V OPER1: The following mitigation measures are proposed:

- Maintain all vegetation in accordance with the Design Rationale by Dermot Foley Landscape Architects, included separately as part of this planning submission.
- Install replacement planting for any plants that fail during the 18-month maintenance and defects liability period;
- Site to be monitored regularly for signs of invasive species

6.9.2 Landscape Character

6.9.2.1 Construction Phase

L&V CONST 2: The following mitigation measures are proposed:

- Maintain the character of the site by installing proposed planting in accordance with the proposed landscape plans by Dermot Foley Landscape Architects, included separately as part of this planning submission.

6.9.2.2 Operational Phase

L&V OPER2: The following mitigation measures are proposed:

- Maintain and manage proposed specimen tree planting to ensure that it matures to match existing trees on site.
- Site to be monitored regularly for signs of invasive species.

6.9.3 Views

6.9.3.1 Construction Phase

L&V CONST 3: Substantial tree planting is proposed, as illustrated in the proposed landscape plans issued by Dermot Foley Landscape Architects included separately as part of this planning submission.

The following mitigation measures are proposed:

- Maintain restricted views of the site by installing proposed planting in accordance with the proposed landscape plans;

6.9.3.2 Operational Phase

L&V OPER3: The following mitigation measures are proposed:

- Maintain all existing retained and proposed vegetation to ensure that restricted views are retained into the sit;
- Maintain and manage proposed specimen tree planting to ensure that it matures to match existing trees on site.

6.10 PREDICTED IMPACTS OF PROPOSED DEVELOPMENT

The proposed development is located on appropriately zoned lands. The layout and design of the proposed development is also consistent with the principles set out in Southern Environs of Drogheda Local Area Plan 2009-

2015. The site layout forms part of a wider masterplan to include the on adjoining lands, included separately as part of this planning submission.

Notwithstanding the land use zoning and wider masterplan for the area, it is considered that the initial development will have a moderate effect on the existing predominantly greenfield character of the site. The landscape and visual change will be most pronounced during the mobilisation and construction stage, when activity is unfamiliar and when the existing character of the lands is altered by the removal of existing trees and vegetation. The changes arising from the initial site development and construction works will have moderate negative landscape and visual effects from the south, however the effects will be slight or negligible from other directions.

The completed development provides for positive response to the existing predominantly greenfield site, in the context of the masterplan for the lands. It provides for a detailed, permeable and site-specific response to the provision of high-quality public open spaces. The open space network provides for an attractive and diverse range of amenity and recreational opportunities. Equally the open space network enhances the strong urban design framework for the site. As a whole the proposed development will make a significant and positive contribution to the townscape of wider area and the future context of the surrounding lands. Likewise, the proposed network of open spaces will make a significant and positive contribution to the emerging landscape character, biodiversity, amenity and recreational opportunities of the area.

6.11 INTERACTIONS

6.11.1 Biodiversity

Existing trees and hedgerows are to be removed to facilitate the Proposed Development. This impacts on habitats supported by this existing vegetation and the biodiversity value of the site at present. Proposed planting, including native species, is shown in the landscape plans by Dermot Foley Landscape Architects, included separately as part of this planning submission. All mitigation measures are included in Section 6.8 of this document.

6.11.2 Land, Soils & Geology

There is a potential for importation of soil to the subject site to impact on the land in terms of quality of soil however suitable mitigation measures, i.e. working in accordance with the industry best practice BS4428:1989 and BS3882:2007, will avoid this impact.

6.11.3 Air, Dust and Climatic Factors

Proposed trees and vegetation, illustrated in the proposed Landscape Plans by Dermot Foley Landscape Architects, included as Appendices 6.C and 6.D may have a positive impact on the air quality and climate in the surrounding area.

6.11.4 Cultural Heritage & Archaeology

The development will not be visible or only have a slight impact from protected structures as outlined in section 6.6 of this document.

6.12 DIFFICULTIES ENCOUNTERED IN COMPILING

No significant difficulties were encountered in the preparation of this assessment.

6.13 REFERENCES

Southern Environs of Drogheda Local Area Plan 2009-2015

Meath County Development Plan 2013-2019;

National Parks and Wildlife Service – Interactive Mapping and Aerial Photography - www.npws.ie;

Ordnance Survey Ireland – Interactive Mapping and Aerial Photography – www.osi.ie;

The National Monuments (Amendment) Act 1994, Section 12

Guidelines on the information to be contained in Environmental Impact Statements Environmental Protection Agency, Environmental Protection Agency, 2002

Revised Guidelines on the Information to be contained in Environmental Impact Statements. Draft 2015;
Advice notes on current practices (in the preparation of an Environmental Impact Statement), Environmental Protection Agency, 2003

Advice notes for Preparing Environmental Impact Statements. Draft. Environmental Protection Agency, 2015

Landscape and Landscape Assessment Draft Guidelines, Department of Environment, Heritage and Local Government (DoEHLG) 2000

Guidelines for Landscape and Visual Impact Assessment, The Institute of Environmental Assessment / Landscape Institute (2nd& 3rd Ed 2002, 2013)

A Handbook on Environmental Impact Assessment – Guidance on the Environmental Impact, Scottish Natural Heritage (SHN) - Assessment' 2009 . Appendix 1: Landscape and Visual Impact Assessment.

APPENDIX 6.1 – PHOTOMONTAGES

Mill Road, Drogheda

Verified Photomontages

October 2019

MODEL WORKS

METHOD STATEMENT FOR VERIFIED PHOTOMONTAGES

1. SCOPE OF WORK

Model Works Ltd was appointed by the applicant Shannon Homes to produce verified photomontages to inform the Landscape and Visual Impact Assessment carried out by Dermot Foley Landscape Architects (DFLA), for a proposed residential development at Mill Road, Drogheda.

2. INFORMATION RECEIVED

The following information was received:

- A map of 13 no. viewpoint locations (source: DFLA);
- AutoCAD drawings including the existing site survey (georeferenced to ITM), proposed road layout, site plan and buildings (source: Duignan Dooley Architects and Planning Consultants);
- AutoCAD drawing of proposed pedestrian bridge and footpath (source: DBFL Consulting Engineers);
- AutoCAD drawing of proposed landscape masterplan (source: DFLA);
- Autodesk 3DS Max model of a permitted development on adjacent site (Colpe Road) (KMD Architecture).

3. PHOTOMONTAGE PRODUCTION

The Model Works photomontage methodology is based on the Landscape Institute advice note 01/11, *Photography and Photomontage in Landscape and Visual Impact Assessment*, and over 20 years' experience in photomontage production in Ireland and the UK.

The method has five main steps:

1. Photography
2. Survey
3. 3D Modelling and Camera Matching
4. Rendering and Finishing of Photomontages
5. Presentation

3.1 Photography

Date and Conditions

Using the map of viewpoints provided by DFLA, the photographs were taken over the course of two days, the 7th and 8th of August, 2019. The conditions were partly cloudy, dry and generally bright.

The photographs were timed – as far as possible – to ensure that the sun was behind the direction of view of the camera at all viewpoints.

The date and time of each photograph are recorded by the camera. This allows for the position of the sun to be reflected in the photomontages (i.e. for the sunlight/shadows to be shown falling at the correct angle on montaged buildings and landscape elements).

Camera Set-up

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 towards the site and levelled in the horizontal and vertical axes (using spirit levels mounted on the camera).

Camera and Lens

The photographs were taken using a Canon EOS5D Mark II camera with a 21 mega pixel sensor and image resolution of 5616 x 3744 pixels.

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.

A 24mm prime lens was used for the photographs, capturing a horizontal field of view of 73 degrees. This wider field of view (than the 39 degrees of a 50mm lens) is preferred for the purpose of Landscape and Visual Impact Assessment as it shows more of the context landscape.

Post-processing

In post-processing, the foreground of the photographs was cropped so that the scale of the foreground matches that of a 50mm view.

This is because traditionally the 50mm view was considered to best represent what is seen by the human eye when the photograph is printed at a particular size and held a particular distance from the eyes. However, it is now accepted that a wider field of view showing more context is generally more useful for assessing the visual effects of a development.

3.2 Survey

The coordinates of each viewpoint/camera position, including the elevation, were 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 were also surveyed (lamp posts, bollards, fence posts, manholes, 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.

3.3 3D Model and Camera Matching

Creation of 3D Model

Using the information contained in the architect's, landscape architect's and engineer's drawings, a 3D model of the proposed development was built using AutoCAD and then exported into the software package Autodesk 3DS Max.

Materials were allocated to each surface of the model (walls, windows and doors, roads, footpaths, soft landscaping, etc.) and furniture (e.g. lighting) and vegetation added.

The 3D model was georeferenced to the survey drawing of the site and receiving environment (i.e. the proposed buildings were positioned accurately in the digital landscape).

3D Camera Positions

The surveyed camera positions and the markers for each view were inserted into the 3D model, with information on the focal length of the lens, and the time of day and date of the photograph attributed to each camera.

Camera Matching

The photographs were 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 were 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 buildings appear in the correct position and scale when montaged into the photographs.

3.4 Rendering of 3D Model and Finishing of Photomontages

The digital view for each camera position was then rendered. This is the process of generating a photo-realistic view of the 3D model, combining the sun position at the time of the photograph with the materials applied to the model.

The render for each was then inserted (or montaged) into the photograph using the Photoshop software package. This may involve masking parts of the development with existing objects in the foreground (e.g. buildings and vegetation) and masking distant objects with the development – so that it takes its place seamlessly in the view.

Where the development is largely screened by foreground elements in the view, a red line is drawn around the outline of the structures to show their position in the landscape.

4. PRESENTATION

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

project: Mill Road, Drogheda	*photography:*	*location:*	*viewpoint:* **View Location Map** *issued:* 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens)
Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 14:04
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 01** **Baseline**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 14:04
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 01** **Permitted**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 14:04
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 01** **Proposed**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

project:	Mill Road, Drogheda	*photography:*	07-08-2019 13:49 Canon 5D Mark II 24 mm Lens	*location:*		*viewpoint:*	**View 02** **Baseline**
						issued:	07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 13:49
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 02** **Permitted**

issued: 07-10-2019

MODEL WORKS

Angle of View 73^{O} Horizontal (24 mm Lens) Angle of View 39^{O} Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 13:49
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 02** **Proposed**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens)
Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 13:44
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 03** **Proposed**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens)   Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 13:44
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 03** **Permitted**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 13:44
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 03** **Proposed**

issued: 07-10-2019

MODEL WORKS

Angle of View 73^{O} Horizontal (24 mm Lens) | Angle of View 39^{O} Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 13:34
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 04** **Baseline**

issued: 07-10-2019

MODEL WORKS

Angle of View 73^{O} Horizontal (24 mm Lens) Angle of View 39^{O} Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 13:34
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 04** **Permitted**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens)

Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 13:34
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 04** **Proposed**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

project:	Mill Road, Drogheda	*photography:*	07-08-2019 12:32 Canon 5D Mark II 24 mm Lens	*location:*		*viewpoint:* *issued:*	**View 05** **Baseline** 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 12:32
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 05** **Permitted**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 12:32
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 05** **Proposed**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 17:12
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 06** **Baseline**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 17:12
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 06 Proposed**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 16:46
Canon 5D Mark II
24 mm Lens

location:

viewpoint: View 07 Baseline

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 16:46
Canon 5D Mark II
24 mm Lens

location:

viewpoint: View 07 Proposed

issued: 07-10-2019

MODEL WORKS

Angle of View 73^{O} Horizontal (24 mm Lens) Angle of View 39^{O} Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 16:29
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 08** **Baseline**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 16:29
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 08** **Proposed**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens)   Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 15:49
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 09** **Baseline**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 15:49
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 09 Proposed**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 16:19
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 10** **Baseline**

issued: 07-10-2019

MODEL WORKS

Angle of View 73^{O} Horizontal (24 mm Lens)   Angle of View 39^{O} Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 16:19
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 10** **Proposed**

issued: 07-10-2019

MODEL WORKS

Angle of View 73^{O} Horizontal (24 mm Lens) | Angle of View 39^{O} Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 15:37
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 11** **Baseline**

issued: 07-10-2019

MODEL WORKS

Angle of View 73^{O} Horizontal (24 mm Lens) Angle of View 39^{O} Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 15:37
Canon 5D Mark II
24 mm Lens

location:

viewpoint: View 11 Proposed

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 14:10
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 12** **Baseline**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) | Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 14:10
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 12** **Permitted**

issued: 07-10-2019

MODEL WORKS

Angle of View 73^{o} Horizontal (24 mm Lens) Angle of View 39^{o} Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 07-08-2019 14:10
Canon 5D Mark II
24 mm Lens

location:

viewpoint: View 12 Proposed

issued: 07-10-2019

MODEL WORKS

Angle of View 73^{O} Horizontal (24 mm Lens) Angle of View 39^{O} Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 08-08-2019 11:28
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 13** **Baseline**

issued: 07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens) Angle of View 39° Horizontal (50 mm Lens)

project:	Mill Road, Drogheda	*photography:*	08-08-2019 11:28 Canon 5D Mark II 24 mm Lens	*location:*	*viewpoint:*	View 13 Permitted
					issued:	07-10-2019

MODEL WORKS

Angle of View 73° Horizontal (24 mm Lens)   Angle of View 39° Horizontal (50 mm Lens)

project: Mill Road, Drogheda

photography: 08-08-2019 11:28
Canon 5D Mark II
24 mm Lens

location:

viewpoint: **View 13** **Proposed**

issued: 07-10-2019

MODEL WORKS