5. Landscape and Visual

This report has been prepared by Mullin Design Associates, Chartered Landscape Architects, to establish potential landscape and visual impacts arising from a proposed residential development of 483 units at Haggardstown, Blackrock, Dundalk, Co Louth.

The lead author is Pete Mullin, BA (Hons) CMLI, Chartered Landscape Architect. He was over 25 years experience in the sector, in that time produced over 100 Landscape and Visual Impact Assessments.

This study has generally been structured and laid out in the following subsections:

- Methodology – explanation of how the assessment has been undertaken, with reference to methodology, terminology, assessment criteria, and planning policy.
- Landscape and Visual Context – baseline description, classification and evaluation of the existing landscape character containing the application site and an assessment of visual amenity, with identification of visual receptors.
- Project Description – description of aspects of the proposed development which have the potential to cause a landscape and/or visual impact and measures which will be incorporated to mitigate or avoid greater potential impacts.
- Potential Impacts – an outline of landscape and visual impacts along with any cumulative impacts and residual impacts.
- Summary and Conclusions – summary of assessment results and their magnitude of significance accompanied by a concluding discussion on the acceptability of the proposed development in landscape and visual terms.

5.1. Methodology

5.1.1. Method of Assessment & Guidelines

The assessment of the landscape and visual impacts for this development are based on the most up to date guidelines provided by The Landscape Institute, 'Guidelines for Landscape and Visual Impact Assessment', (3rd Edition) 2013, and 'The Countryside Agency and Scottish Natural Heritage – Landscape Character Assessment Guidance for England and Scotland' 2002.

This assessment has been prepared in accordance with Environmental Protection Agency (EPA) "Guidelines on the Information to be contained in Environmental Impact Assessments" May 2002, "Advice Notes on Current Practice (in the preparation of Environmental Impact Assessments)" June 2002.

The EPA are currently revising the Guidelines and Advice Notes; therefore, the assessment also follows the Draft Revised Guidelines on Information to be contained in Environmental Impact Assessments August 2017.

Finally, reference has been made to Louth County Council Development Plan 2015-2021 and specifically 'Louth County Landscape Character Assessment' completed in 2002.

This landscape and visual assessment incorporates both desk and field-based studies and has been compiled and interpreted by an experienced landscape professional.

5.1.2. Assessment Sequence

This landscape & visual Assessment was undertaken in the following stages:

- Desk Study (Stage 1)
  1. Analysis of Baseline data, maps and plans;
  2. Consultation of Policy Documentation;

	3	Zone of Visual Influence (Theoretical);
	4	Identification of Potential Visual Receptors;
• Field Study	5	Confirmation of Visual Receptors;
	6	Photo Survey from Visual Receptors;
	7	Zone of Visual Influence (Actual/Field);
	8	Confirmation of Landscape Character;
	9	Establish Landscape Sensitivity;
• Desk Study (Stage 2)	10	Analysis of Field Survey data;
	11	Viewpoint Analysis;
	12	Consider Mitigation & Restoration; and,
• Desk Study (Stage 3)	13	Report Preparation.

5.1.3. Assessment Criteria

The aim of this landscape and visual impact assessment is to identify, evaluate and predict potential key impacts arising from the proposed development. The assessment combines sensitivity with predicted magnitude of change, to establish the significance of residual landscape and visual impacts. These are based on pre-defined criteria as set out in Tables 5.1 to 5.5 below.

Note: Table 5.5 describes the categories of landscape and visual significance. Potential impact above the Moderate category are considered Significant.

Table 5.1 - Landscape Sensitivity Criteria

Class	Criteria
High	Landscape characteristics or features with little or no capacity to absorb change without fundamentally altering their present character. Landscape designated for its international or national landscape value. Outstanding example in the area of well cared for landscape or set of features.
High-Medium	Landscape characteristics or features with a low capacity to absorb change without fundamentally altering their present character. Landscape designated for regional or county-wide landscape value where the characteristics or qualities that provided the basis for their designation are apparent. Good example in the area of reasonably well cared for landscape with notable landscape features.
Medium	Landscape characteristics or features with moderate capacity to absorb change without fundamentally altering their present character. Landscape designated for its local landscape value or a regional designated landscape where the characteristics and qualities that led to the designation of the area are less apparent or are partially eroded or an undesignated landscape which may be valued locally – for example an important open space. An example of a landscape or a set of features which is neutral or mixed character.
Medium-Low	Landscape characteristics or features which are reasonably tolerant of change without detriment to their present character. No landscape designation present or of medium to low local value, or an example of a common or un-stimulating landscape or set of features and conditions.
Low	Landscape characteristics or features which are tolerant of change without detriment to their present character. No designation present or of low local value. An example of monotonous unattractive visually conflicting or degraded landscape or set of features.

Table 5.2 - Visual Sensitivity Criteria

Class	Criteria
High	Users of outdoor recreational facilities, on recognised national cycling or walking routes or in national designated landscapes. Dwellings with views orientated towards the proposed development.
High-Medium	Users of outdoor recreational facilities, in locally designated landscapes or on local recreational routes that are well publicised in guide books. Road and rail users in nationally designated landscapes or on recognised scenic routes, likely to be travelling to enjoy the view.
Medium	Users of primary transport road network, orientated towards the Development, likely to be travelling for other purposes than just the view. Dwellings with oblique views of the proposed development.
Medium-Low	People engaged in active outdoor sports or recreation and less likely to focus on the view. Primary transport road network and rail users likely to be travelling to work with oblique views of the Development or users of minor road network.
Low	People engaged in work activities indoors, with limited opportunity for views of the Development. Road users on minor access roads travelling for other purposes than just the view.

Table 5.3 - Landscape Magnitude Criteria

Class	Criteria
Very High	Very extensive, highly noticeable change, affecting most key characteristics and dominating the experience of the landscape; and, Introduction of highly incongruous development.
High	Extensive, noticeable change, affecting many key characteristics and the experience of the landscape; and, Introduction of many incongruous elements.
Medium	Noticeable change to a significant proportion of the landscape, affecting some key characteristics and the experience of the landscape; and Introduction of some uncharacteristic elements.
Low	Minor change, affecting some characteristics and the experience of the landscape to an extent; and, Introduction of elements that are not uncharacteristic.
Very Low	Little perceptible change.

Table 5.4 - Visual Magnitude Criteria

Class	Criteria
Very High	The development would dominate the existing view.
High	The development would cause a considerable change to the existing view over a wide area or an intensive change over a limited area.

Medium	The development would cause moderate changes to the existing view over a wide area or noticeable change over a limited area.
Low	The development would cause minor changes to the existing view over a wide area or moderate changes over a limited area.
Very Low	No real change to perception of the view. Weak, not legible, and/ or indiscernible.

Table 5.5 - Categories of Landscape and Visual Significance of Impact

Degree of significance	Description of Landscape Impact	Description of Visual Impact
Major	Substantial alteration to elements/features of the baseline (pre-development) conditions. Notably affect an area of recognised national landscape quality. Substantial alteration to the character, scale or pattern of the landscape.	Major/substantial alteration to elements/features of the baseline (pre-development) conditions. Where the proposed development would cause a very noticeable alteration in the existing view. This would typically occur where the proposed development closes an existing view of a landscape of regional or national importance and the proposed development would dominate the future view.
Moderate-Major	This category is a combination of descriptions of Major listed above and Moderate below. These combinations are discussed within the assessment of each landscape or visual receptor when they occur.	
Moderate	Alteration to elements/features of the baseline conditions. Affects an area of recognised regional landscape quality. Alteration to the character, scale or pattern of the local landscape.	Alteration to one or more elements/features of the baseline conditions such that post development character/attributes of the baseline will be materially changed. This would typically occur where the proposed development closes an existing view of a local landscape and the proposed development would be prominent in the future view.
Moderate-Minor	This category is a combination of descriptions of Moderate listed above and Minor below. These combinations are discussed within the assessment of each landscape or visual receptor when they occur.	
Minor	A minor shift away from baseline conditions. The Development partially changes the character of the site without compromising the overall existing landscape character area.	A minor shift away from baseline conditions. This occurs where change arising from the alteration would be discernible but the underlying character / composition / attributes of the baseline condition will be similar to the pre-development. It would also occur where the proposed development newly appears in the view but not as a point of principal focus or where the proposed development is closely located to the viewpoint but seen at

		an acute angle and at the extremity of the overall view.
Negligible	No or very little change from baseline conditions. Change not material, barely distinguishable or indistinguishable.	Where there is no discernible improvement or deterioration in the existing view.
No Impact	The Development would not affect the landscape receptor.	The Development would not affect the view.

The significance of identified landscape and visual impacts is established through a simple matrix, which measures the magnitude of change against landscape or visual sensitivity. The resulting impacts are classed Major, Moderate-Major, Moderate, Minor, Negligible/None.

Therefore, as the sensitivity of a landscape increases from Low to High, and the Magnitude of Change increases from Very Low to Very High the predicted impacts also increase.

The example matrix table below is used to summarise the findings from the criteria tables. By combining sensitively (along the top) with predicted magnitude of change (along the side) a predicted impact/ effect is reached. This format is applicable to both landscape impacts and visual impacts.

Example Matrix (Professional judgement applied at every stage of assessment and matrix only used to check consistency.)		Sensitivity				
		High	**High / Medium**	**Medium**	**Medium - Low**	**Low**
Magnitude	**Very High**	Major	←→	Major	←→	Mod-major
	High	Major	←→	Mod-major	←→	Moderate
	Medium	Mod-major	←→	Moderate	←→	Minor
	Low	Moderate	←→	Minor	←→	Negligible
	Very Low	Minor	←→	Negligible	←→	Negligible / None

Intermediate sensitivity ratings (as per the criteria) would lead to a series of impacts that lie between those stated above if a matrix was applied to the assessment. Professional judgement is then used to determine the degree of impact. e.g. high-medium sensitivity combined with medium magnitude would equate to a Moderate+ impact and a decision needs to be made to determine if this impact is Moderate or Moderate-Major. Intermediate magnitude ratings can also be arrived at during the assessment and a similar method is also applied here.

Impacts above Moderate are considered Significant (presented in dark grey in the example matrix).

Where intermediate impacts are arrived at, particular care should be taken at the upper and lower limits of the significance threshold i.e. between Moderate and Moderate-Major (presented in lighter grey in the example matrix). These impacts may require additional explanation as to why the decision was made to judge the impact as either significant or not significant.

In addition to the impacts which sensitivity combined with the magnitude of change generate, there are a number of other factors which are taken into account when preparing the landscape and visual assessment.

Development is often viewed as permanent and/or perceived to have a negative impact, it is therefore important to emphasise that change created by development can result in beneficial outcomes, and may also be temporary, short-term or indeed reversible.

This assessment also considers and identifies both the 'Type' and 'Duration' of the potential impacts. The following terminology has been used were appropriate.

5.1.3.1. Type of Visual Impacts

- **Beneficial**: A positive impact which will improve or enhance the landscape character or viewpoint.
- **Neutral**: A neutral impact which will neither enhance nor detract from the landscape character or viewpoint.
- **Adverse**: A negative impact which will have an adverse impact on the existing landscape character or viewpoint.

5.1.3.2. Duration of Impacts

- **Temporary**: Impacts lasting one year or less.
- **Short–term**: Impacts lasting one to seven years.
- **Medium-term**: Impacts lasting seven to twenty years.
- **Long-term**: Impacts lasting twenty to fifty years.
- **Permanent**: Impacts lasting over fifty years.

5.2. Receiving Environment

This section establishes the landscape and visual context (or baseline) of the proposed development. Through a combination of desk study and field assessment the extent of the survey area is established and examined.

5.2.1. Desk Study

Desk studies generally involve analysis and interpretation of available print material relating to a sites context and the proposed development within that context. It is a way of focusing the study prior to detailed field work and landscape assessment. In this instance, variable scale Ordnance Survey maps and satellite imagery were studied along with 3D Data Terrain Models. In addition, the LCC Landscape Character Assessment was also consulted.

Although general in nature the desk study stage of the project assists in the clarification of the following considerations;

- **The general topography, vegetative cover, visible ground water, and sites of potential historic or cultural interest.**

  Study of the available map information indicates that the site is located in a coastal area of rolling low lying topography. In terms of significant woodland cover, there are occasional clusters particularly along the Fane River. Dundalk Bay forms the obvious visible waterbody with Castletown River to the North and Fane River to the south. There are various sites of historic or cultural interest noted on the survey maps including Souterrains, standing stones and castles. Refer to Chapter 11 – Cultural Heritage for specific detail of locations within and around the subject site considered to be of particular historic importance.

  Of cultural interest is the belief that Bóthar Maol which adjoins the northern boundary of the site formed part of the Táin Bó Cúailnge route through County Louth.

- **Identification of primary investigation area or Zone of Theoretical Visual Influence (ZTVI).**

  The ZTVI is determined using topographical data only and does not account for the influence of intervening vegetation, fences, buildings, localised topographic variation etc. It is therefore generally accepted that refinement is required through field survey and analysis.

  As a low lying eastern aspect site with views across the open water of Dundalk Bay, it is expected that distant views of the site could be achieved, particularly from the Cooley Peninsula to the east.

- **The potential relationship between the development and any residential settlements, dwellings and the surrounding transportation network.**

  The main road transport corridor of interest is the Blackrock Coastal Road which passes the site and which will be accessed directly by the future development.

  Residential properties along Bóthar Maol are located directly adjacent to the proposed development site and therefore will potentially experience the greatest magnitude of change in landscape and visual terms.

  Residential properties and settlement beyond the boundaries of the subject site will be less impacted.

- **Landscape & Visual Designations, Protected areas and significant viewpoints.**

  The site is not within or adjacent to any landscape and visual designations. The closest designation within the vicinity of the development site is the Cooley Peninsula. At its nearest point the Cooley 'Area of High Scenic Quality' is located approximately 4km to the south, while the Cooley 'Area of Outstanding Natural Beauty' is located c. 7km south west of the subject site. In addition to Landscape designations described above, there are several 'views & prospects' designated for their visual quality, along with a number of scenic routes.

5.2.2. Field Study

Desk studies are important to establish the basic approach to landscape and visual assessment, and to set out principal issues/ areas to be investigated. However, it is only through field work that an accurate understanding of the potential influence of a proposed development can be fully determined.

Most importantly, field study helps to clarify the eye level visual envelope of the proposed development. This exercise refines the computer generated ZTVI models to more accurately reflect the actual visual envelope of the proposed development.

The area was visited and surveyed during spring with foliage cover at its lightest. It should be noted as foliage cover increases into the Summer and Autumn, the subject site would potentially be less visible than the viewpoint images illustrate. However, the influence of foliage cover has been broadly factored into the findings, with the worst-case scenario considered – i.e. vegetation cover at its lightest.

In addition to the information revealed during the desktop analysis, the field study work investigated and considered a number of critical issues, which have been factored into the assessment conclusions:

- Confirmation of the landscape character and sense of place, quality and value of the surrounding landscape as described in the published Louth County Council materials;
- Localised topography variation and woodland / hedgerow cover;
- Impacts of localised planting, stone wall, earthworks and boundaries associated with residential properties;
- Orientation of key residential properties;
- Relationship of other developments throughout the area and in particular how the development would integrate with the existing settlement pattern;
- Potential eye level perceptions (local residents – frequent, passive tourism – occasional); and,
- General landscape dynamic (assessing the potential pressures and evolution of the surrounding landscape).

5.2.3. Baseline Study – Site description

The subject site which is currently good quality rolling agricultural land, occupies an area of c. 17.9ha. In plan the site is generally square in form and comprises two large field enclosures. The northern boundary is defined by a variety of private residential properties which front Bóthar Maol (a historic route). The western and a portion of the southern boundary of the site adjoins Dundalk Golf Course and practice range. The majority of this boundary is fenced and planted with non-native conifer trees. The remainder of the southern boundary joins with lands which are currently in agricultural use but zoned for residential use. Along much of the eastern boundary (particularly to the north east) are mature hedgerows and well-established trees which separate the site from two large privately owned

residential properties. The topographical survey illustrates land which although low lying, undulates significantly, with a general rolling transition from the lowest point to the northeast corner at c.6.08mAOD (where it meets Bóthar Maol) to a high point of c. 23.78mAOD to the southwest (at the boundary with the golf course / practice area). A single fragmented native hedgerow divides the two large fields.

5.2.4. Baseline Study - Landscape Character

The Landscape is about the relationship between people and place. Understanding the character of a landscape allows us to identify its 'sense of place', and what distinguishes it from other places. All landscape has economic, social and environmental value; landscape characterisation provides a mechanism and baseline from which landscapes can be valued and their sensitivity and capacity to accommodate various development typologies gauged.

As outlined previously, an accurate description of the landscape character areas associated with the subject site was prepared by Louth County Council in 2002 and whilst this is a little dated, it provides a reasonable landscape baseline – the following text is extracted from this document.

As set out in this document the subject site is located centrally within the Landscape Character Area (LCA) classified as '*Dundalk Bay Coast'*.

The key characteristics of this LCA are described as follows:

- *Land is relatively flat and not higher than 20m O.D;*
- *Seashore is mainly of marsh at the Northern end, which gives way to sand beaches in the south. Coastal erosion is evident;*
- *Well defined hedgerows with larger fields. Some examples of old county house estates with broadleaf planting;*
- *Main settlements are Blackrock, Drumiskin, Castlebellingham/Kilsaran, and Annagassan;*
- *Motorway to the west has reduced the traffic on the old N1;*
- *The area is rich in archaeological features;*
- *Dundalk Bay is a designated Special Protection Area (SPA); and,*
- *Isolated housing is very evident.*

Landscape description

The area extends from the marshes in Dundalk to Dunany Point and varies from 1/2km to 2 1/2kms in width, inland from the coastlines. The landscape is quite flat and seldom rises above the 20m O.D. contour.

The predominate land use are non-irrigated arable land and pastures. Due to the shallowness of Dundalk Bay the intertidal area presents an expansive landscape at low tide of salt marshes and sand and has the potential for increased recreational use. The old N1 (Dublin-Belfast) has been downgraded to regional route status following the opening of the new motorway to the west, which adds to the landscape quality of the Castlebellingham / Kilsaran area.
Two of the rivers that drain the Muirhevna plain pass through this area before discharging to the sea; via. The Fane at Blackrock, and the confluence of the Glyde and Dee at Annagassan.

Landscape and Landcover

The bedrock between Dundalk and Castlebellingham is mixture of turbidite with a mixture of red shale, and red mica from the Ordovician/Silurian period, along with a few igneous intrusions. At Salterstown there is a band of calcareous red mica greywackes with other greywackes and mudstone as Dunany. Above that there is the glacial drift of raised marine deposits of gravel extending along the coastline. Inland from that boulder clay which covers the greater part of South Louth can be found. The landscape is flat in the north and just above sea level with the exception of Dunany Point where there are cliff faces down to the shoreline.
The major division of soils area Acid Brown Earths with a mixture of Gleys and Brown Podzolics which are well drained and have a wide use range for tillage and pasture. There are 3 pockets of gley soils with a mixture of brown earths and peaty Gleys at Dundalk, Dromiskin and Salterstown.

There are several groups of broadleaf trees at Salterstown, Castlebellingham and Dunany and one small commercial forest.

Dundalk Bay is designated as an S.P.A. and is recognised as being of special ornithological value. Bird flight paths at dawn and dusk between the bay and the marshes at Stabannon/Braganstown (approx. 5kms distance) are well documented. Despite the fact that Dundalk Bay is very shallow, coastal erosion is a problem at Annagassan and Salterstown.

Three scenic routes have been listed in the 1997 Development Plan via. Coast Road Annagassan/Salterstown, Seabank/Castlebellinham and Blackrock Village. Three viewing points are similarly listed at Hermitage, Annagassan and Salterstown which provide panoramic views across Dundalk Bay towards the Cooley Mountains.

With the recent completion and commission of the new Dundalk Sewerage Scheme the environmental quality of Dundalk Bay will be greatly enhanced.

Human Intervention

The area is rich in archaeological items (approx. 80). The important sites are the Round Tower, Cross and Church at Dromiskin and the Motte at Greenmount. Salterstown has been designated as a settlement worthy of special architectural interest.

Field patterns and hedgerows are those found commonly throughout the county and have largely remained unchanged for the past few hundred years. There is evidence of hedgerows being removed. Loose stone walls occur in some areas which indicates the shallowness of the overburden above the underlying geology.

Blackrock has developed from being a holiday resort to a dormitory suburb of Dundalk. The ambience and tranquillity of Castlebellingham/ Kilsaran has dramatically improved with the new motorway. The former village is described as a 'land lord' village with its castle, gatehouse and widows cottages. Annagassan has a small quay and continues to be used albeit in a small way.
The bridge in the village is a listed structure. Dromiskin village has experienced a massive 30% increase in population in the past six years.

The road network in the Dunany promontory comprises a series of cul-de-sacs leading to the shoreline giving a sense of remoteness and inaccessibility.

Isolated housing is very prevalent and conspicuous in the flat landscape.

Landscape Sensitivity

The existing farming practices are unlikely to change. Further removal of hedgerows and stone walls, whilst extending the panoramic views available in the area, would alter the landscape character.

However further diversification in the horticulture sector is possible where there is easy access to Dublin markets. Accommodation for rural tourism can be expected to expand. The expansion of mariculture is possible between Salterstown and Dunany.

The road network in the Dunany area is not capable of sustaining significant increase in physical development in that it would interfere with existing tree cover in the area.
Broadleaf and mixed forestry (30% broadleaf 70% conifer) would be sustainable in this L.C.A and particularly in the Salterstown-Dunany area.

There is no serious threat to the area for the introduction of further telecommunication masts given the existing coverage in the areas.
Windfarms in the present economic energy climate are not likely to emerge in the immediate future due to the low theoretical windspeeds in this area. However, offshore masts may be a possibility in the shallow reaches at Dundalk Bay.

Landscape Values & Classification

Key Value	*Objective*
• *Dundalk Bay (S.P.A) Saltmarsh and mudflats with full range of plant communities. Vary important for wintering and migrating wading birds* • *Some fine groups of broadleaf trees* - • *Impressive coastal routes of high scenic quality* - • *Dunany Point area where there is a sense of tranquillity due to the low levels of the built environment, traffic and noise.* - • *Opportunities for recreational pursuits with particular emphasis on the river edges and coastline.* - • *Rich in archaeological features.* - • *Landlord village at Castlebellingham* - • *Existing hedgerows and stone walls.* -	*Conserve* *Conserve* *Conserve / Restore* *Conserve / Restore* *Conserve / Enhance / Restore* *Conserve* *Conserve / Enhance / Restore* *Conserve*
Overall Classification	*Regional*

5.2.5. Baseline Study - Visual

When establishing the extent of a development proposals visibility there are a number of recognised stages:

- The first is generally conducted through desk study via. utilisation of digital terrain models or printed mapping to generate a ZTVI. This provides the assessor with a worst-case scenario of potential visibility, recognising that the exercise does not account for potential screening influence of vegetation, manmade structures or indeed low level localised topographical variation.
- With ZTVI prepared, the next stage is to consider potential visual receptors. Again, this can initially be carried out as a desk study to identify potential properties, road intersections, historic sites or OS marked viewpoints etc which may be important to the assessment.
- The next stage generally is to test and refine desk study analysis in the field. Consideration of the surrounding landscape from a high point within the proposed development site is often a logical starting point for field work. From an elevated location, the assessor (comparing with ZTVI mapping) can identify points in the wider landscape from which the site is most likely to be visible. This exercise is known as intervisibility and forms the basis of defining the actual visual envelope. Refer to Figure 5.3 -5.4 in Appendix D.
- The final stage is to consider visibility of the subject site from the surrounding landscape. This generally involves assessment and photography from fixed key locations as identified, along with sequential views experienced along pedestrian and vehicle routes.

It would obviously be impossible (indeed unnecessary) to assess potential visibility from every angle or potential viewpoint. Therefore, the recognised practice is to identify a selection of viewpoints considered representative of a range of views and viewer types, including residences, transport routes, recreational routes, visitor attractions, main landscape character types and a variety of distances, aspects, elevations, extents, and sequential routes. These are known as ‘key visual receptors’ and provide a reliable sample of impressions across the study area. Based on field survey and analysis, Figure 5.4 (Appendix D) illustrates the identified ZTVI created by the proposed development with Figure 5.5 (Appendix D) illustrating the location of key visual receptors identified

for the study. It should be noted as a basic visual principle, any type of development in the landscape will become less perceptible with distance. This simply equates to a reduction of the significance of potential visual impacts as one moves further away. The following distance categories have been considered appropriate.

Viewpoint Distance 0-2km

It is generally accepted that a development located approximately 2km or less from a viewer would be close enough to allow identification of significant detail. Any positions within this range with open uninterrupted views of a development would generally receive the greatest visual impacts.

Viewpoint Distance 2-5km

At this distance, visibility of a development site becomes more general, with viewers in open uninterrupted positions able to identify general form, colour/tone and textural contrast, but losing the more focused detail achievable from closer positions. Impacts at this distance are generally less than those found between 0-2km.

Viewpoint Distance 5-15km+

Beyond 5km visual prominence quickly diminishes. Certain circumstances/light conditions etc. have potential to allow certain types of development and material finishes to be perceived. The development increasingly becomes part of the general background/distance views. Upwards of 15km distance, developments quickly become minor features within the landscape and considered imperceptible to the average human eye. The impact of the development diminishes as the developments becomes part of the general background/distance views.

The visibility assessment in this case has concentrated on publicly accessible areas primarily within the first (0-2km) and most sensitive distance category.

The level topography, frequency and density of boundary hedgerows and woodland blocks and even existing buildings may greatly reduce the potential extent of visibility of the proposed development. Careful consideration is therefore required at fieldwork stage. The intervisibility images illustrated on Figure 5.3 (Appendix D) were taken on the western side of the site at its highest elevation (c.23m AOD). This provides a good indication on the potential visibility, although only of the higher portion of the site; however, development on lower lands will be less visible from the surrounding landscape. It is also important to note that the intervisibility is based on an eyelevel position c.1.5m above ground level (c.24.5m AOD) and that the proposed development includes buildings of up to 4 storeys in height.

Within the first distance category (0-2km) the subject site is visually well concealed from the surrounding area. This is due primarily to a combination of the flat low-lying topography, high boundary hedgerows and woodland blocks. With the exception of the proposed access road, the development would offer very low perception from the R172 (Blackrock Road) the main road serving Blackrock from the north. Indeed, as illustrated within Figure 5.4 (Appendix D) from a relatively short distance beyond the site boundary, visibility of the development would be negligible.

Due to the openness across Dundalk Bay, there is potential for extensive uninterrupted views of the site from receptors in this direction. Indeed, as the land rises on the Cooley Peninsula there is obvious potential for open visibility. However as described above, for those receptors located within the Cooley Peninsula the influence of distance from the development site will play a major role in diminishing potential impacts.

5.3. Potential Impact of the Proposed Development

5.3.1. Description of Development

The subject site is located on lands currently zoned '*Residential 2'* (refer to Dundalk Development Plan 2009-2015 Map 1) with a significant portion zoned as '*Class 2 Open Space'*.

The sequence of development, house types etc. are illustrated and described in some detail within Chapter 2 – Project Description; however, in relation to landscape and visual matters, the following are considered of relevance:

The application layout is divided broadly into two distinct types of use comprising:

1. Residential (including apartments, houses, roads, parking & gardens); and,
2. Public Open Space.

The proposal is for the sustainable development of 483 units in a new community on a 17.9ha parcel of lands c. 1.3km north of Blackrock Village Centre and c. 3km south of the central core of Dundalk. The proposed dwellings are located within a series of proposed character areas that respond to the zoned open space, the existing topography of the site, the surrounding landscape character and to views to the wider landscape beyond.

The five proposed character areas are illustrated in Chapter 2 – Project Description, namely:

- Cooley View;
- Meadow & Field;
- The Birches & Pine;
- Bóthar Maol; and,
- Mill End.

Each proposed character area has specific landscape related responses designed to reinforce placemaking principles and integrate the development into the site in a positive way. Table 2.1 (Chapter 2 – Project Description) illustrates the proposed mix of building types across the site which would be constructed according to the preliminary phasing plan outlined in Section 2.2.

There are 11no. preliminary development phases proposed for this site (Refer to Chapter 2 – Project Description), which would be implemented over a five year period.

The most important proposed feature of this development in landscape terms would be the creation of a large open space which would form a central spine running east-west. This would accommodate a variety of landscape typologies and features including wetlands, woodland, hedgerows, wildflower meadow and orchard, along with active amenity features including equipped play areas, cycleways, trim trails and walkways.

An existing fragmented hedgerow which runs north south through the site would be largely protected and augmented with additional tree and hedgerow species to create a strong linear green infrastructure intervention. This will be intersected by an east west spine of green infrastructure that would deliver almost continuous tree canopy across the site. This not only would offer ecological and amenity value, in combination with earthworks, it would offer robust internal screening and softening of apartments located at the large central open space.

Existing hedgerows around the site boundary will be augmented with additional planting where possible and as appropriate.

5.4. Assessment of Impacts

5.4.1.1. Summary of Landscape Impacts

Landscape assessments attempt to measure the sensitivity of specific landscape resources and describe the significance of changes to that landscape occurring as a result of a proposed development. More importantly, they should also identify opportunities during the design process focused on minimising potential landscape and visual impacts (mitigation) through positive iterative design intervention. This can include exerting influence on the development layout and arrangement, determining sympathetic approaches to realising the development proposal, i.e. suggested phasing, direction and sequence etc.

Landscape and visual impacts are intrinsically linked; therefore, measures to reduce landscape impacts such the introduction of green infrastructure will generally assist with reduction of visual impacts and vice versa.

It is understood that development of this type results in permanent change and may fundamentally alter the appearance of a landscape. However, it should be clarified that, altered appearance does not necessarily equate to long-term / permanent negative impacts to landscape character. It is therefore essential that a holistic view is taken with proposals of this nature, not only assessing the

potential impact during the construction phases extractive operations, but critically how it will also appear when fully complete and the landscape proposals are fully implemented and matured.

Table 5.6 - Landscape Sensitivity Summary (within visual envelope)

Consideration Factor	Comment	Significance
Landscape designation	At its nearest point the application site is approximately 4km south of the Cooley Peninsula Area of High Scenic Quality; c. 6.5km from the Area of Outstanding Natural Beauty (AONB); 6km from the nearest designated 'Scenic Route' and 8km from the nearest designated 'View & Prospect' (Refer to Figures 5.1 & 5.3 in Appendix D).	Whilst these designated landscapes are highly important in relation to the Landscape and Visual assessment, distance between them and the site significantly diminishes potential for impact on the qualities of the designation.
Landscape scale	There are extensive areas of low lying topography associated with Dundalk Bay resulting in an expansive feel to this landscape. However, the presence of mature hedgerows and woodland blocks, combined with undulating landforms create a more intimate scale locally.	Generally, within an expansive landscape development, typologies can be highly visible and intrusive, however in this context the proposed development would be relatively well integrated. The existing structural planting and undulating topography serves to increase the landscapes capacity.
Landscape quality	The surrounding landscape is considered of moderate quality. Proximity to Dundalk & Blackrock have resulted in a somewhat peri-urban feel. IDA lands (Finnabair Industrial Estate) to the north, ESB lines, suburban housing both north and east, and Dundalk golf course are all considered to be urban influences.	The landscape, although overall of reasonable quality, cannot be considered to be pristine or unable to accommodate development.
Landscape value	The site is currently of reasonable agricultural and amenity value.	The site is composed of two large, well-drained, undulating fields and whilst soils are relatively thin in places, they offer reasonable productivity. In amenity terms the site presents open views to a number of adjoining properties.
Landscape distinctiveness & rarity	The site is composed of two large open undulating arable fields.	This landscape is not considered rare.
Public ownership and popularity	The site and much of the surrounding area is under private ownership.	The site and the immediate surrounding area contain few public recreation resources.
Landscape capacity	The site is located in a low-lying undulating landscape with mature hedgerows and clusters of woodland which increase the potential capacity to accommodate the proposal.	The screening potential of the topography and existing vegetation, particularly in the areas of lower ground where most of the human traffic is concentrated, raises the capacity

	of the area to accommodate development.

5.4.1.2. Lighting

Consideration of potential impacts arising from lighting both during the construction phase and following implementation (i.e. lighting associated with the ongoing development) forms an important aspect of the landscape and visual assessment.

5.4.1.3. Lighting Construction Phase

The principal lighting impacts which are often associated with construction sites and would be relevant at this location are as follows:

- Temporary floodlighting particularly during the winter months;
- Temporary security lighting;
- Lighting at height associated with construction of structures;
- Lighting in the contractors compound and car parking areas;
- Light spill and glare towards surrounding residential receptor areas predominantly along Bóthar Maol;
- Light spill eastwards over Dundalk Bay and the Cooley Peninsula; and
- Glare from illuminated advertisements.

When considered against Table 5.6 above, assessment criteria outlined in Table 5.1 to Table 5.5, and combined with consideration of baseline descriptions, it has been concluded that the sensitivity of the broad regional landscape associated with this development fits within the Medium-Low class.

(Definition below extracted from Table 5.1 Landscape Sensitivity Criteria);

> ***Medium-Low*** *- Landscape characteristics or features which are reasonably tolerant of change without detriment to their present character; No landscape designation present;*
>
> *Of medium to low local value, or an example of a common or un-stimulating landscape or set of features and conditions.*

With reference to Table 5.3 Landscape Magnitude Criteria it is considered that the proposals would fall within the 'High magnitude' category during the construction phase; however, potential impacts diminish to 'Medium' post construction as defined below:-

(Definitions below extracted from Table 5.3 Landscape Magnitude Criteria);

> ***High*** *- Extensive, noticeable change, affecting many key characteristics and the experience of the landscape; and introduction of many incongruous elements.*
>
> ***Medium*** *- Noticeable change to a significant proportion of the landscape, affecting some key characteristics and the experience of the landscape; and introduction of some uncharacteristic elements.*

Table 5.7 - Assessment of landscape impacts (Post Construction)

		Sensitivity				
		High	**High - Medium**	**Medium**	**Medium - Low**	**Low**
Magnitude	**Very High**	Major	←→	Major	←→	Mod-major
	High	Major	←→	Mod-major	←→	Moderate
	Medium	Mod-major	←→	**Moderate**	←→	Minor

Low	Moderate	←→	Minor	←→	Negligible
Very Low	Minor	←→	Negligible	←→	Negligible

Therefore, with **Medium-Low** landscape sensitivity combined with **Medium** magnitude of change it is considered that the proposed development would generate a **Moderate** landscape impact post construction.

5.4.1.4. Summary of Visual Impacts

Visual impacts have been illustrated by assessment from specific viewpoints. Figures 5.5 to 5.12 (Appendix D) illustrate key identified visual receptors, with potential visual impacts assessed from these positions. Refer to these figures for detail. Table 5.8 below provides a summary of visual impacts from each of the selected viewpoints.

These viewpoints are representative of views of the proposed development. Therefore, it is important to emphasise that as viewers move away from these receptors, the magnitude of change and potential visual impacts will generally diminish.

Potential impacts / impacts experienced will typically be greater during the construction phase of the development. However, it should be noted that both during the construction phase and following completion of the development it is predicted that none of the representative visual receptors will experience impacts/ impacts which fall within the 'Significant' category.

Table 5.8 - Summary of Visual impacts (Construction Phase)

Viewpoint No.	Receptor Type	Visual Sensitivity	Magnitude of Change	Effect /Impact
Viewpoint 1a & 1b	Intervisibility images	N/A	N/A	N/A
Viewpoint 2	Public Road - Sequential	Medium- Low	High	Moderate
Viewpoint 3	Residential (Direct Views) Public Road - Sequential	High-Medium	Medium	Moderate
Viewpoint 4	Residential (Oblique Views) Private Road - Sequential	Medium	Low	Minor
Viewpoint 5	Public Road - Sequential	Medium-Low	Medium	Moderate
Viewpoint 6	Public Road - Sequential	Medium	Low	Minor
Viewpoint 7	Public Road - Sequential	High-Medium	Low	Minor
Viewpoint 8	Public Road - Sequential	Medium-Low	Low	Minor
Viewpoint 9	Public Road - Sequential	High-Medium	Low	Minor

Table 5.9 - Summary of Visual impacts (Post Construction)

Viewpoint No.	Receptor Type	Visual Sensitivity	Magnitude of Change	Effect /Impact
Viewpoint 1a & 1b	Intervisibility images	N/A	N/A	N/A
Viewpoint 2	Public Road - Sequential	Medium- Low	Medium	Minor
Viewpoint 3	Residential (Direct Views) Public Road - Sequential	High-Medium	Medium	Moderate

Viewpoint 4	Residential (Oblique Views) Private Road - Sequential	Medium	Very Low	Negligible
Viewpoint 5	Public Road - Sequential	Medium-Low	Medium	Moderate
Viewpoint 6	Public Road - Sequential	Medium	Low	Minor
Viewpoint 7	Public Road - Sequential	High-Medium	Very Low	Negligible
Viewpoint 8	Public Road - Sequential	Medium-Low	Very Low	Negligible
Viewpoint 9	Public Road - Sequential	High-Medium	Very Low	Negligible

5.5. Proposed Mitigation Measures

The purpose of mitigation is to avoid, reduce and where possible remedy or offset, any significant negative (adverse) impacts on the environment arising from the proposed development. If good environmental planning and design principles are applied, together with a flexible approach to design, a high degree of mitigation can be built into the scheme from the outset, which can thereby reduce the extent or scale of adverse impacts.

Mitigation measures may be considered under two categories:

1. Primary measures that intrinsically comprise part of the development design through an iterative process; and,
2. Secondary measures designed to specifically address the remaining (residual) negative (adverse) effects of the final development proposals ('Guidelines for Landscape and Visual Impact Assessment', 2013).

5.5.1. Mitigating Landscape and Visual Impacts

The current development plan for the subject site includes a significant area of open space (3.7ha) which would effectively form a central spine in an east-west direction. This open space broadly separates the development site into three main parts, with residential areas along the northern and the southern boundaries, and open space dominating the central portion.

In landscape and visual terms this offers very positive outcomes for the development site by avoiding uniform, uninterrupted spread of built development across the entire application area.

This large open space also offers potential to accommodate significant vertical landscape elements such as woodland, hedgerows, earthworks and individual parkland trees which greatly enhance the potential to screen and integrate built elements of the development.

5.5.1.1. Development Phases

There are 11no. development phases proposed for this site (refer to Chapter 2 – Project Description), which would be implemented over a five year period.

This development offers an opportunity for mitigation through the establishment of advanced boundary and structure planting (i.e. planting at the earliest opportunity).

For example, along the Bóthar Maol boundary to the north, the preliminary phasing suggests 4no. phases (Phase 7, 9, 10 and 11). Therefore, based on the above assumptions, development in this part of the site could commence towards the end of the construction phase, in which case any advanced structure / screening planting would be established.

5.5.1.2. Residential Amenity Mitigation

Figures 5.13 to 5.17 (Appendix D) have been prepared to consider outline residential amenity for existing properties surrounding the subject site, (particularly along Bóthar Maol). As these figures illustrate the majority of properties adjacent and near to the subject site are bound by robust hedgerows, fences and walls. However, a small number have open uninterrupted views into the development site. In these locations additional advanced landscape treatment would be introduced to create visual screening and preserve privacy.

Existing planting would be retained along these boundaries and all major proposed planting would be comprised predominantly of native indigenous plant species to facilitate the absorption of the proposed development within the host landscape. Grass seeding and tree planting should occur at the earliest possible stage within the construction program.

5.5.1.3. Lighting Mitigation Construction Phase

The key opportunities to mitigate lighting impacts by implementing best practice during construction will include:

- Specified working hours, uses of lighting, location of temporary floodlights and construction compound to be agreed with the Local Authority;
- Lighting to be switched off when not required specifically for construction activities or required for security or health and safety;
- The programme of works will take into account the location of sensitive receptors, particularly to the North (Bóthar Maol) and east of the site (Dundalk Bay/ Cooley Peninsula)
- Glare caused by poorly directed security and flood lighting will be minimised by positioning lights to <70 degrees and directing into the centre of the site, in a generally west and southward direction.
- Light spill will be minimised by avoiding poorly sighted lights on the boundary of the development;
- Sky glow will be minimised by use of modern flood lights with appropriate shields to avoid light spilling upwards; and,
- Should any illuminated advertising be installed to advertise the development during construction, the signage should be carefully illuminated in order to minimise glare and follow best practice guidelines.

5.5.1.4. Lighting Mitigation Post Construction (Operational)

The future detailed lighting will be designed in accordance with relevant best practice standards and current technology, to satisfy all statutory and planning requirements. Additionally, the proposals for the development include a comprehensive landscaping strategy which will further reduce potential impacts of any lighting installed by providing screening. It is important to note that the proposed land uses (predominantly residential) are typically lit with a lighting specification unlikely to trigger nuisance complaints. In addition to this, the open space areas will not be floodlit. The impacts of the external lighting will be minimised by the installation of lighting to the minimum specification required to provide a safe night-time environment for residents and others using onsite facilities e.g. creche. Therefore, lighting will be designed to comply with the minimum luminance levels given within the appropriate guidance.

Sky glow is limited in the areas surrounding the site, however, it is visible directly to the north and to the east in the direction of Dundalk Bay and Cooley Peninsula; therefore, it is recommended that luminaries typical of a rural town or village location are installed. This would require luminaires that permit up to 2.5% sky glow upward lighting ratio; however, it would be prudent to choose a high specification where possible. Such a specification would have a better performance than the majority of existing light fittings in residential areas surrounding the site.

All lamps used for external lighting should be high pressure sodium lamps of the same colour and temperature. The whiter light emitted by high pressure sodium lamps provide superior colour rendering to the more orange low-pressure sodium lamps, and additionally reduce impacts on the night time scene (due to their poor performance, low pressure sodium lights have now been phased out for new developments or lighting upgrades). Additionally, care should be taken to minimise glare from any luminaires installed, by ensuring the correct luminaire is selected and installed correctly.

The following mitigation measures will also apply:

- Where practicable, switch off lights when not required for safety, security or enhancement of the night-time scene (this could be achieved through automatic timer in appropriate locations);
- The lighting design prepared at the detailed design stage should utilise low light pollution flat glass luminaires throughout to ensure adherence with rural environmental standards; and,
- Low level bollard lights could be proposed as a subtle alternative to taller columns along the footpaths and cycle routes, particularly through the central zoned open space.

5.5.1.5. Cumulative Impacts

Cumulative impacts of the proposed development have been considered and divided into two types:

- Cumulative impacts from the proposed development (i.e. interaction of impacts); and
- Cumulative impacts from other developments (in combination with the Proposed Development being assessed).

5.5.1.6. Cumulative Interactive Impacts arising from the Proposed Development

These effects are typically interactive, i.e. arising from the combined action of a number of different environmental topic areas, for example the removal of trees not only have potential to generate landscape and visual impact but can also have an ecological impact.

There are a number of topic areas were interaction impacts can occur along with Landscape and Visual.

Key interactive effects with Landscape and Visual at this site are:

Noise /Air Quality

Potential noise and air quality impacts are generally most prevalent during construction phases. Whilst these would have no visual impacts, they can alter people's perception of the areas character. Measure to minimise noise and air quality impacts will reduce perceived landscape character impacts.

Post construction noise and air quality impacts would diminish and would be limited to typical traffic and day to day usage and human occupation.

Community and Socio-Economics,

During construction the development works will generate employment although this may not all be local, however post construction various community and socio- economic benefits will typically emerge – not only in terms of employment, but also in terms of new open spaces, cycleways and play parks combining to create public amenity and connectivity.

Natural Heritage

The Ecological section of the report provides detail of Natural heritage value associated with the site which is relatively limited. However, a cluster of existing trees to the north east and an existing hedgerow through the site should be protected and retained.

The proposed landscape plan focuses heavily on habitat creation with large areas of wildflower meadow, wetland, woodlands and tree planting. There will therefore be a net gain in ecological terms.

5.5.1.7. Cumulative impacts from Other Planning Applications

As well as interactive as outline above, cumulative impacts may arise from the combined effects of a number of other developments. In combination with the subject development being assessed there can be increased impact on a single receptor.

This can include multiple impacts of the same or similar type from a number of developments upon the same receptor.

Whilst there are a number of development sites in the region, in landscape and visual terms none were considered to combine with the development application to generate significant cumulative impacts.

5.6. Residual Impacts

In addition to the consideration of the layout, the implementation of landscape proposals as illustrated in the submitted landscape planning drawings will greatly assist with the appropriate integration of this development into its setting. It is expected that residual glimpsed and partial views of the development would continue to be achieved from a number of locations surrounding the site.

Whilst the development is of a scale requiring consideration of potential environmental impact under the regulations, the intention is to transform the existing landuse typology to one which continues to

deliver positive placemaking attributes. This would include public access and connectivity through the site and notably a large open space or park. In addition, other public amenities would be created including pedestrian walkways, cycleways, play areas, wetland and woodlands habitats.

Specifically, in terms of residual impacts to designated or protected landscapes, due to the east facing aspect of the site towards Dundalk Bay and the elevated nature of lands within the Cooley Peninsula across the bay, it will not be feasible to screen the development. However due to distance, any landscape and visual impacts generated by the development site on the sensitive landscapes within the Cooley Peninsula would be minor to negligible.

The development proposals would not involve the introduction of new and uncharacteristic features into the local or wider landscape character setting.

Whilst the proposals would result in some disruption to visual amenity (notably during implementation) it is considered that there are opportunities for beneficial amenity and biodiversity outcomes post development at this location.

Landscape sensitivity associated with this site is considered **Medium-Low**. In terms of magnitude of change over the entire life of the proposals (post construction) it has been considered to generate a **Medium** change to the landscape character area. This combined with the sensitivity outlined above would result in **Moderate** landscape impact post construction.

Selected visual receptors are considered representative of typical views of the proposal with receptor visual sensitivity ranging from **Medium-Low** to **High-Medium**.

Visual impacts are set out in Tables 5.8 & 5.9 and within the illustrative figures contained in Appendix D. The impacts range from **Negligible** to **Moderate**

However, as viewers move away from these key receptors visual sensitivity and magnitude of change generally diminishes, resulting in visual impacts over the majority of the Zone of Theoretical Visual Influence (ZTVI) being in the **Minor** to **Negligible** range.