11 Landscape and Visual

11.1 Introduction

This Landscape and Visual Impact Assessment (LVIA) was prepared by Geraldine Hayes of Hayes Ryan, Landscape Architects. The assessment is based on a desktop study and field survey assessments of the site and receiving environment. These assessments were conducted on 15th October 2024 and again on the 10th November 2024. Weather conditions in October were dull, but during the November visit, visibility was surprisingly good for the time of year. Despite recent storms, deciduous trees retained a significant amount of foliage in October and displayed typical late autumn colours by November.

The viewpoints selected were photographed on October 25th, 2024, for verified view photomontage. This report is to be read in conjunction with the accompanying verified view photomontage prepared by 3Dimensional.

Although interlinked, the landscape impact and the visual impacts are assessed separately and with their own sets of criteria. The Landscape and Visual Impact Assessment (LVIA), concerns itself with landscape, landscape values, aesthetic and visual amenity and landscape as a resource which provides society with cultural, economic, and environmental benefits. Landscape has come to be defined according to the European Landscape Convention as 'an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors'.

The assessment is informed by EPA draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports[1], 2022 and the methodology prescribed in the Guidelines for Landscape and Visual Impact Assessment, 3rd edition, 2013 (GLVIA) published by the UK Landscape Institute and the Institute for Environmental Management and Assessment.

The EPA sample guidelines analyse landscape from the visual and amenity perspective. Visual effects examine context, character of the view, significance and sensitivity with amenity regarding, public access, public amenities, recreation, and tourism. Landscape is studied under the headings; Landscape Appearance and Character, Landscape Context, Views, and Prospects (in the landscape character area and related areas), and Historical Landscapes.

GLVIA guidelines examine landscape and visual effects in a necessarily interconnected manner. However, they are studied as separate study components.

11.1.1 Landscape

The effects on landscape are studied with Landscape Character Assessment (LCA) as the guiding principle. This is concerned with the identification of and assessment of the importance of landscape characteristics, landscape quality and the condition of the landscape. According to the Guidelines for Landscape Visual Impact Assessment (GLVIA)[2], 'Landscape' results from the interplay between the physical, natural, and cultural components of our surroundings. Different combinations and spatial distribution of these elements create variations in landscape

[1] https://www.epa.ie/publications/monitoring--assessment/assessment/EIAR_Guidelines_2022_Web.pdf
[2] Landscape Institute and the Institute of Environmental Management and Assessment, 2013 Guidelines for Landscape and Visual Impact Assessment 3rd Edition (GLVIA)

character. ‘Landscape Character Assessment’ is how landscape is described. It is the means by which we understand the effects of development on the landscape as a resource.

The impact of the development itself is studied as the impact of the proposals and development on the landscape, whilst ‘effect’ describes the changes brought about by these impacts e.g., a change to landscape character.

11.1.2 Visual

The visual assessment aims to assess the extent of visibility of a development, define the sensitivity of receptors and set out the likely perception of viewers and visually sensitive receptors. This is largely to do with views and visual amenity. ‘Visual’ addresses the effects on specific viewpoints of the Proposed Development as it is experienced by general viewers and those inhabiting the local area. The effect on the views and general visual amenity is assessed. In short, visual assessment is concerned with changes that arise in the composition of available views, the response of people to these changes and the overall effects on the area’s visual amenity.

11.2 Methodology

11.2.1 Baseline Information[3]

The baseline descriptions are required to consider the context of the landscape and views in terms of the proposed location, magnitude and spatial extent of landscape affected as well as current trends in that landscape/view.

Landscape Character Assessment and the character of the relevant views are described and checked against the local condition. The distinguishing characteristics of the landscape/view are examined.

The significance of the landscape or the view is assessed against current designations, significance of the landscape/view locally nationally or internationally. The quality of the landscape or the view is examined as are any legislative protections. The landscape/view is examined for its rarity, its ability to renew itself, uniqueness, and scenic qualities. The landscape/view is considered for its quality, value, designation, and any legislative protections connected to the landscape. The rarity/unique status and condition of the landscape is noted as is its ability to renew itself. Sensitivity relates to the sensitivity of the landscape or view to change.

Landscape assessment of potential landscape effects, involves assessing and classifying the sensitivity of the landscape as a resource and then describing and classifying the magnitude of landscape change which would result from the development. The combination of sensitivity and magnitude of change gives a classification for the significance of the landscape effects. The 'impact' of the development is the action which results in landscape and visual changes. 'Effect' refers to the changes brought about by such an impact. The effect may result in the alteration of the landscape character of the area. 'Effect' is defined as the change or changes resulting from those actions, e.g., a change in landscape character, or changes to the composition, character and quality of views in the receiving environment. This report focusses on these effects. The study considers the area from which the development will be seen and the landscape it is set in. As per the GLVIA the emphasis is on a "reasonable approach which is proportional to the scale and nature of the Proposed Development."[4]

11.2.2 Thresholds of Magnitude of Change

A set of viewpoints were studied for the visual section of the report and a general landscape photographic study was conducted to examine and confirm the landscape character, its form and pattern around the Proposed Development.

The area around the site of the Proposed Development was examined and from this field study a specific set of viewpoints were selected for the visual aspect of the study. Professional judgement as recommended by the GLVIA and establishing a proportionate examination of the area relative to the size of the project has allowed for a thorough visual study.

Various tools, techniques and criteria are used to judge landscape capacity and sensitivity. Thresholds of magnitude of change are established by using such tools. In addition to

[3] EPA Table 3.3 Typical Standards of Descriptions of Baseline Data for use in an EIAR
[4] Landscape Institute and Institute of Environmental Management and Assessment, 2013 Guidelines for Landscape and Visual Impact Assessment p 98

examining local Landscape Character Assessments (LCA), the field study was conducted to establish the magnitude of change to the landscape and views.

Assessment of “significance of landscape effects” requires a review of landscape character assessments at local level, establishing sensitivity against which any predicted change can then be measured. This involves a desk study review of published landscape characterisation studies and assessment of sensitivities for the case in hand.

Field observations are used to confirm decisions to assess landscape character and confirm landscape character against the desk top study. It is also used to assess the appropriateness of the landscape character type for this landscape.

Subjective information on less tangible characteristics is also recorded to inform the impressions or perceptions of the landscape and landscape value.

Ordnance Survey and other published information such as historical maps are also useful in examining the landscape, landscape history and its capacity for change.

The character, quality, scale, and value of the landscape is assessed according to the criteria below.

11.2.3 Landscape Quality

Landscape quality is primarily a matter of how clearly the distinctive character of a landscape is expressed in an area, and of the state of repair or condition of landscape elements and the integrity and intactness of the landscape. There are three categories of quality ranging from high to medium to low.

High – landscapes strong in character or distinctive character, in good condition and very few or no incongruous features. Excellent example of a landscape type.

Medium – moderate strength of character and retain many key characteristics. Such a landscape will typically have suffered some decline and is marked by the occasional incongruous feature.

Low – landscapes with weak strengths of character, fragmented and/or featuring significant atypical, incongruous, or discordant features.

11.2.4 Value

The value of a landscape reflects its value to society and in estimating this, the report sets out to establish levels of importance of the potentially affected landscape, aspects of the landscapes that are valued, to whom and for what reason. It refers to the relative value we attach to different landscapes and is the basis for designating or recognising certain highly valued landscapes. The reasons a landscape is valued are many and varied. It can include a landscapes’ scenic quality, its tranquillity, or its wilderness attributes. It may be highly valued at a national or local level due to conservation reasons or cultural associations.

Landscape value is categorised from high to medium to low.

‘**High**’ value landscapes covered by a national designation for landscape value and display a high number of locally valued features present or are very highly valued as a landscape for

other reasons.

'**Medium**' value landscapes are landscapes not covered by designation for landscape value. These landscapes may have a moderate number of locally valued features present, or they are moderately valued as a landscape for other reasons.

'**Low**' value landscapes are those not covered by a local or national designation for landscape with very few locally valued features present and not locally valued as a landscape for any other reason. A landscape with a low value may be degraded, display numerous incongruous features and have no obvious local association.

Landscape can also be seen to be valued at community level or for intangible reasons can be perceived to be valuable to a particular community. It may be valued for the elements that remain of a finely articulated landscape, with all its associations and connections over time.

11.2.5 Landscape Sensitivity

Landscape sensitivity refers to the degree to which a landscape can accommodate change without adverse effects on the landscape or its character. It has regard for the value placed on the landscape at all levels, how it is used, the patterns of the landscape, its sense of enclosure or openness and all of its visual receptors.

The nature and scale of development also reflects on sensitivity. Five categories are used to classify sensitivity.

Sensitivity Descriptions

Very High Areas; Where the landscape exhibits very strong, positive character with valued elements, features and characteristics that combine to give an experience of unity, richness and harmony. The landscape character is such that its capacity to accommodate change in the form of development is very low. Because of their very high sensitivity these landscapes are subject to protection by designation either nationally or internationally. The priority for such landscapes is the protection of their existing characters from change.

High Areas; Where the landscape exhibits strong, positive character with valued elements, features and characteristics. The landscape character has a limited or low capacity to accommodate change in the form of development. Such landscapes are recognised in landscape policy or designations as being of national, regional or county value. The principal objective for the area is the conservation of existing landscape character.

Medium Areas; Where the landscape has certain valued elements, features or characteristics but where the character is mixed or not particularly strong, or has evidence of alteration, degradation or erosion of elements and characteristics. The landscape character is such that there is some capacity for change in the form of development. These areas may be recognised in landscape policy at local or county level and the principal management objective may be to consolidate landscape character or facilitate appropriate, necessary change.

Low Areas; Where the landscape has few valued elements, features or characteristics and the character is weak. The character is such that it has capacity for change; where development would make no significant change or would make a positive change. Such landscapes are generally unrecognised in policy and the principal management objective may be to facilitate change through development, repair, restoration or enhancement.

Negligible Areas: Where the landscape exhibits negative character, with no valued elements, features, or characteristics. The landscape character is such that its capacity to accommodate change is high; where development would make no significant change or would make a positive change. Such landscapes include derelict industrial lands or extraction sites, as well as sites or areas that are designated for a particular type of development. The principal management objective for the area is to facilitate change in the landscape through development, repair, or restoration.

Sensitivity of the landscape and susceptibility to change are interlinked. This is the ability of the landscape receptor (overall landscape character, landscape quality, condition of the landscape area etc.) to accommodate the Proposed Development without undue consequences for the baseline situation and /or the achievement of landscape policies and strategies. [5]

Existing assessments are very useful and largely deal with intrinsic or inherent sensitivity. This occurs without reference to a particular type of development. According to the GLVIA, "These cannot reliably inform assessment of the susceptibility to change since they are carried out without reference to any particular type of development and so do not relate to the specific development proposed."[6] Therefore susceptibility must be related to the project.

Relevant to this project, the site of the Proposed Development is sited in a **low** sensitivity landscape.

11.2.6 Geographical Extent

Having regard to the geographical extent of landscape effects, it is important to iterate the effects which may have an influence on differing scales at landscape level.

The effect at (a) site level will refer to the effect within the site itself and at (b) the level of the immediate setting of the site and (c) at the scale of the landscape type or character area. Some effects may have a geographical extent (d) ranging over several landscape character areas.

11.2.7 Loss/No Loss of Landscape Elements

In addition to effects which result in the loss of landscape elements, it is possible to have effects which cause no loss of landscape elements and no removal of existing components but there is an introduction of new elements e.g. buildings which alter the skyline or arise over the tree line. In such a case, scale can be seen to alter the landscape character and quality of visual amenity.

11.2.8 Magnitude of Landscape Change

Magnitude of change is a factor of the scale, extent and degree of change imposed on the landscape by a development, with reference to its key elements, features and characteristics ('landscape receptors'). Five categories are used to classify magnitude of change.

[5] GLVIA 3RD Ed., Landscape Institute and Institute of Environmental Management and Assessment 2013 p 89.
[6] GLVIA 3RD Ed., Landscape Institute and Institute of Environmental Management and Assessment 2013 p 89

Description of the Categories of Landscape Change Magnitude

Very High: Change that is large in extent, resulting in the loss of or major alteration to key elements, features or characteristics of the landscape and/or introduction of large elements considered totally uncharacteristic in the context. Such development results in fundamental change to the character of the landscape with a loss of landscape quality and perceived value.

High Change: Change that is moderate to large in extent, resulting in major alteration to key elements, features or characteristics of the landscape and/or introduction of large elements considered uncharacteristic in the context. Such development results in change to the character of the landscape.

Medium Change: Change that is moderate in extent, resulting in partial loss or alteration to key elements, features or characteristics of the landscape, and/or introduction of elements that may be prominent but not necessarily substantially uncharacteristic in the context. Such development results in change to the character of the landscape but not necessarily reduction in landscape quality and perceived value.

Low Change: Change that is moderate or limited in scale, resulting in minor alteration to key elements, features or characteristics of the landscape, and/or introduction of elements that are not uncharacteristic in the context. Such development results in minor change to the character of the landscape and no reduction in landscape quality and perceived value.

Negligible Change: Change that is limited in scale, resulting in no alteration to key elements features or characteristics of the landscape, and/or introduction of elements that are characteristic of the context. Such development results in no change to the landscape character, its quality or perceived value.

11.2.9 Probability of Effects

Likely or probable effects can be described as those which are planned to take place and those which can be reasonably foreseen to be inevitable consequences of the normal construction and operation of the project.

Thus, the probability of the effects is defined as likely and unlikely.

Likely Effects; The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.

Unlikely Effects; The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.

11.2.10 Significance of Effects

To classify the significance of effects, the magnitude of change is measured against the sensitivity of the landscape using the guide in **Table 11.1** below. The matrix is only a guide. The assessor also uses professional judgement informed by their expertise and experience to arrive at a classification of significance that is reasonable and justifiable.

Table 11.1: Guide to Classification of Significance of Landscape and Visual Effects

		Sensitivity : Landscape/View				
		Very High	High	Medium	Low	Negligible
Magnitude of Change : Landscape/View	Very High	Profound	Profound to Very Significant	Very Significant to Significant	Moderate	Slight
	High	Profound to Very Significant	Very Significant	Significant	Moderate to Slight	Slight to Not Significant
	Medium	Very Significant to Significant	Significant	Moderate	Slight	Not Significant
	Low	Moderate	Moderate to Slight	Slight	Not Significant	Imperceptible
	Negligible	Slight	Slight to Not Significant	Not Significant	Imperceptible	Imperceptible

According to EPA guidelines the description of the likely significant effects on both the landscape and visual receptors should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the project.'

11.2.11 Duration of Effects

The duration of effect is categorised in this report according to the EPA guidelines[7].

- Momentary Effects: Effects lasting from seconds to minutes.
- Brief Effects: Effects lasting less than a day.
- Temporary Effects: Effects lasting less than a year.
- Short-term Effects: Effects lasting one to seven years.
- Medium-term Effects: Effects lasting seven to fifteen years.
- Long-term Effects: Effects lasting fifteen to sixty years.
- Permanent Effects: Effects lasting over sixty years.
- Reversible Effects: Effects that can be undone, for example through remediation or restoration.
- Frequency of Effects: Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually).

11.2.12 Environmental Protection Agency Guidelines

The EPA Guidelines on the Information to be Contained in Environmental Impact Assessment Reports, May 2022, describes the significance classifications as follows:

Imperceptible: An effect capable of measurement but without significant consequences.

[7] Environmental Protection Agency, 2022 Guidelines on the Information to be contained in Environmental Impact Assessment Reports

Not significant: An effect which causes noticeable changes in the character of the environment but without significant consequences.

Slight: An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.

Moderate: An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.

Significant: An effect which, by its character, magnitude, duration, or intensity alters a sensitive aspect of the environment.

Very Significant: An effect which, by its character, magnitude, duration, or intensity significantly alters most of a sensitive aspect of the environment.

Profound: An effect which obliterates sensitive characteristics.

11.2.13 Methodology for Visual Effects Assessment

Assessment of visual effects involves identifying a number of key/representative viewpoints in the site's receiving environment, and for each one of these classifying the viewpoint sensitivity and the magnitude of change which would result in the view. These factors are combined to arrive at a classification of significance of the effects on each viewpoint.

11.2.13.1 Susceptibility of the Visual Receptor to Change

This depends on the occupation or activity of the people experiencing the view, and the extent to which their attention is focussed on the views or visual amenity they experience at that location. Visual receptors most susceptible to change include residents at home, people engaged in outdoor recreation focused on the landscape (e.g. trail users), and visitors to heritage or other attractions and places of community congregation where the setting contributes to the experience. Visual receptors less sensitive to change include travellers on road, rail and other transport routes (unless on recognised scenic routes), people engaged in outdoor recreation or sports where the surrounding landscape does not influence the experience, and people in their place of work or shopping where the setting does not influence their experience.

11.2.13.2 Value attached to the view

This depends largely on the subjective opinion of the visual receptor but also on factors such as policy and designations (e.g. scenic routes, protected views), or the view or setting being associated with a heritage asset, visitor attraction or having some other cultural status (e.g. by appearing in arts). Five categories are used to classify a viewpoint's sensitivity.

11.2.13.3 Categories of Viewpoint Sensitivity

Very High: (views towards or from a landscape feature or area) that are recognised in policy or otherwise designated as being of national value. The composition, character and quality of the view are such that its capacity for change is very low. The principal management objective for the view is its protection from change.

High: Viewpoints that are recognised in policy or otherwise designated as being of value, or viewpoints that are highly valued by people that experience them regularly (such as views from

houses or tourist-based views focused on the landscape). The composition, character and quality of the view may be such that its capacity for accommodating change may or may not be low. The principal management objective for the view is its protection from change that reduces visual amenity.

Medium: Views that may not have features or characteristics that are of particular value, but have no major detracting elements, and which thus provide some visual amenity. These views may have capacity for appropriate change and the principal management objective is to facilitate change to the composition that does not detract from visual amenity, or which enhances it. Such views can be judged to have some scenic quality, which demonstrates some sense of naturalness, tranquillity, or some rare element in the view.

Low: Views that have no valued feature or characteristic, and where the composition and character are such that there is capacity for change. This category also includes views experienced by people involved in activities with no particular focus on the landscape (e.g. shopping or they are on heavily trafficked routes). The view may make for an attractive backdrop but is not an important element for these activities. For such views the principal management objective is to facilitate change that does not detract from visual amenity or enhances it.

Negligible: Views that have no valued feature or characteristic, or in which the composition may be unsightly (e.g. in derelict landscapes). For such views the principal management objective is to facilitate change that repairs, restores or enhances visual amenity. Such viewpoints reflect users whose activity has no focus on the landscape or where the view has no relevance to their activity. Such a view may be of poor quality.

11.2.14 Magnitude of Change to the View

Classification of the magnitude of change takes into account the size or scale of the intrusion of development into the view (relative to the other elements and features in the composition, i.e. its relative visual dominance), the degree to which it contrasts or integrates with the other elements and the general character of the view, and the way in which the change will be experienced (e.g. in full view, partial or peripheral view, or in glimpses). It also takes into account the geographical extent of the change, as well as the duration and reversibility of the visual effects. Five categories are used to classify magnitude of change to a view:

Categories of Visual Change - Magnitude of Change Description

Very High: Full or extensive intrusion of the development in the view, or partial intrusion that obstructs valued features or characteristics, or introduction of elements that are completely out of character in the context, to the extent that the development becomes dominant in the composition and defines the character of the view and the visual amenity.

High: Extensive intrusion of the development in the view, or partial intrusion that obstructs valued features, or introduction of elements that may be considered uncharacteristic in the context, to the extent that the development becomes co-dominant with other elements in the composition and affects the character of the view and the visual amenity.

Medium: Partial intrusion of the development in the view, or introduction of elements that may be prominent but not necessarily uncharacteristic in the context, resulting in change to the composition but not necessarily the character of the view or the visual amenity

Low: Minor intrusion of the development into the view or introduction of elements that are uncharacteristic in the context, resulting in minor alteration to the composition and character of the view but no change in visual amenity.

Negligible: Barely discernible intrusion of the development into the view, or introduction of elements that are characteristic in the context, resulting in slight change to the composition of the view and no change in visual amenity.

11.2.15 Significance of Visual Effects

As for landscape effects, to classify the significance of visual effects, the magnitude of change to the view is measured against the sensitivity of the viewpoint, using the guide in Table 11.1 above.

11.2.16 Mitigation Measures

Mitigation Measures for both landscape and visual effects are categorised as;

- **Mitigation by Avoidance**
- **Mitigation by Prevention** e.g. Prevention measures are put in place to prevent the effects of accidental events from giving rise to significant adverse effects.
- **Mitigation by Reduction**; seeks to limit the exposure of the receptor.
- **Reducing the Effect**; This strategy is used for effects which occur over an extensive and undefined area of land view or landscape. The mitigation is often achieved by installing screening between the likely receptors and the source of the effects.
- **Offsetting**; This is a strategy used for dealing with significant adverse effects which cannot be avoided, prevented or reduced. It includes measures to compensate for adverse effects. e.g. planting of new vegetation elsewhere to replace unavoidable loss of similar vegetation.

11.3 Baseline Conditions

11.3.1 Ordnance Survey Ireland Historical Maps

The following historical maps from Tailte Éireann; (the OSI historical six inch black and white and coloured (first editions) and twenty five inch black and white maps) (**Figure 11.1- 11.4**) were studied to identify the evolution of the landscape in and around the proposed site and to examine it in the context of the landscape and landscape character area as we find it today.

The OS historical six inch black and white and coloured (first editions) indicate a field pattern connected back through tree lined fields to a wider designed landscape. To the North and Northeast of the site of the Proposed Development, woodlands and trees are connected in variously generous plantations linking Lamberton House, Glenart Castle and Woods and Ballyraine Estate via Ballyduff North to planting at the site of the Proposed Development.

Today the central field boundaries and its trees have gone but there are excellent examples of mature oak in the remaining field boundaries. The eastern field boundary also serves today as it did then as the townland boundary between Moneylane and Ballyroouane. The field pattern was organised in relatively large sizes with a north south field orientation set at an almost ninety-degree angle to fields running west east. The remnants of the north south field pattern are visible in the field from above though the field boundaries themselves have long since disappeared. The fields have been enlarged but not as dramatically as has been the case in other parts of the country.

The spatial arrangement generated by field boundaries is not as finely articulated today as it appeared on the historical maps, but it is still related to the same road infrastructure with many of the original boundaries remaining intact. The northern boundary of the proposed site is today well represented in oak plantings. The oak although mature have the capacity to continue into senescence for greater than 100 years if protected. There are considerably fewer trees today on the western boundary than were originally represented in the historical maps.

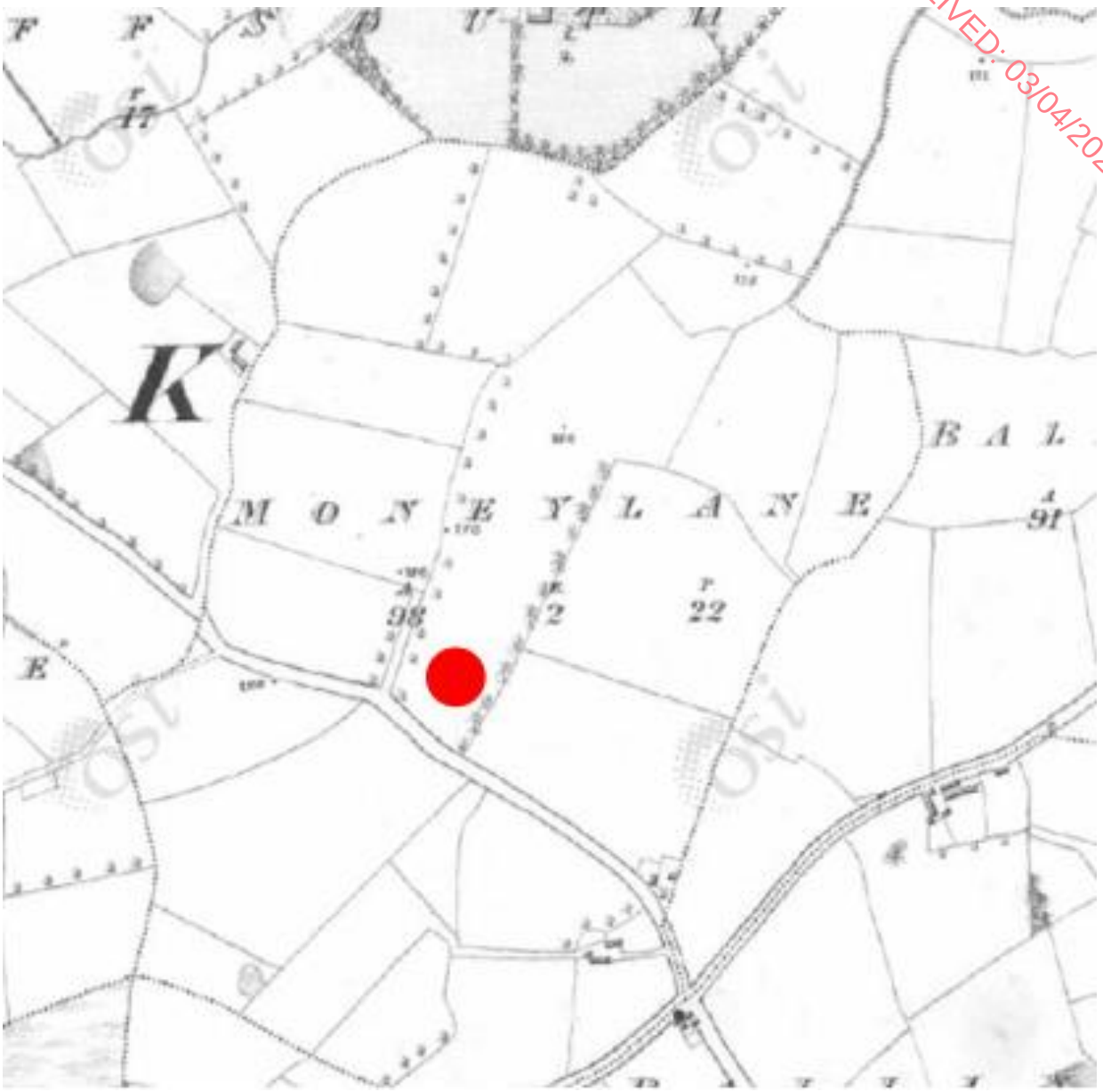


Figure 11.1: OSI Historic Map 6 inch first edition black and white

Figure 11.2: OSI Historic Map 6 inch colour first edition (1837-1842)

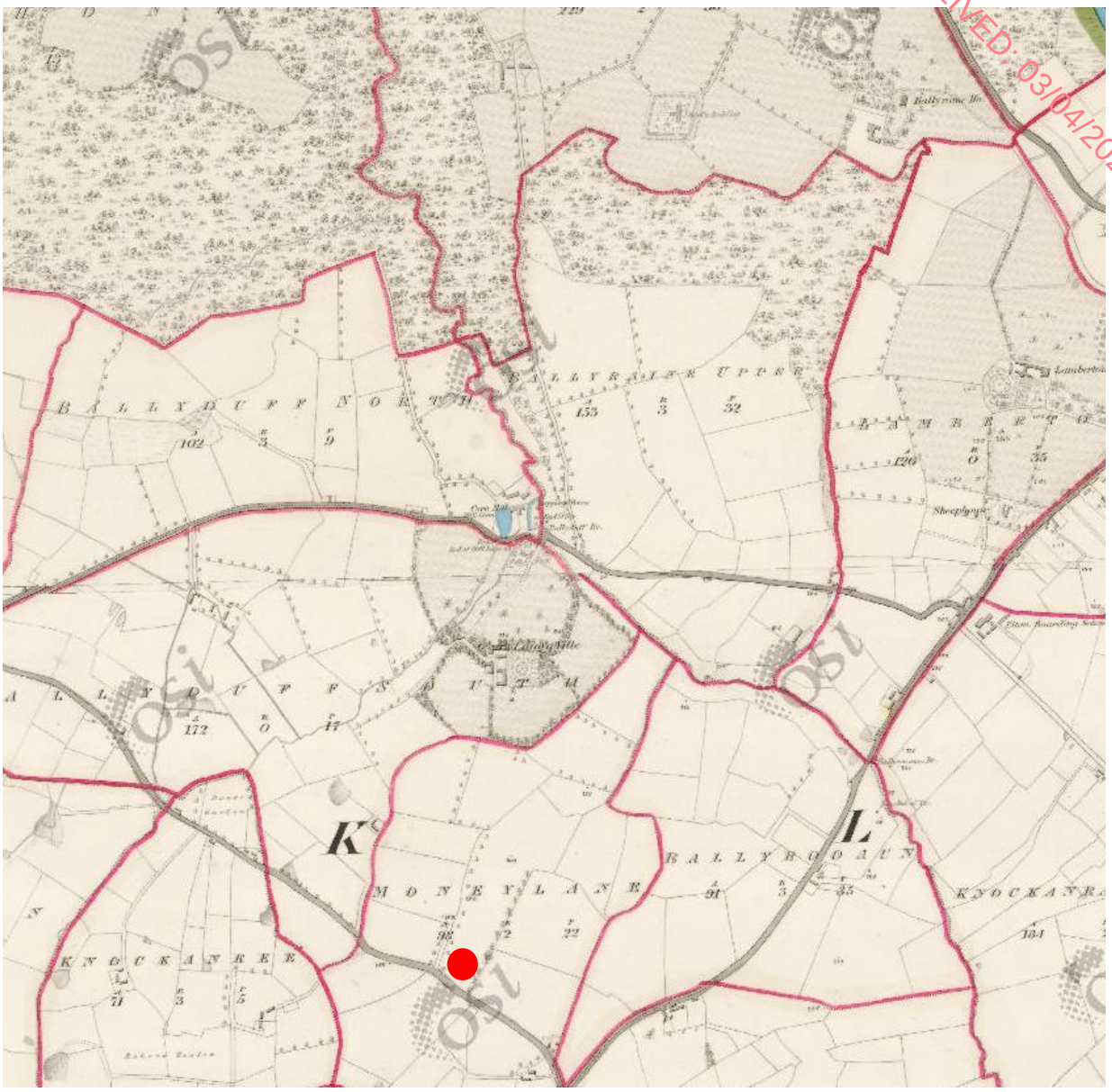


Figure 11.3: OSI Historic Map 6 inch first edition coloured

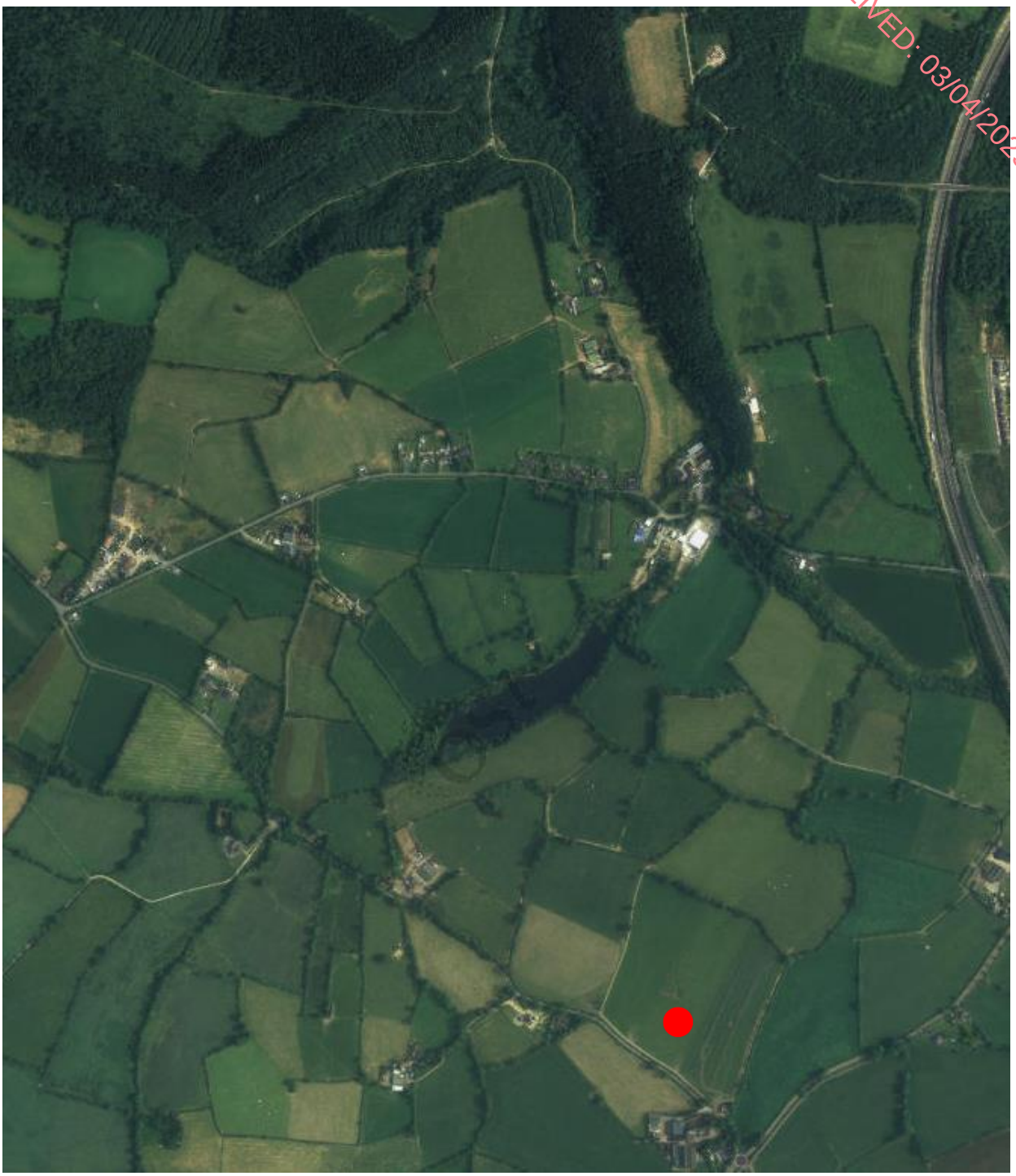


Figure 11.4: OSI Aerial 2013

11.3.2 Landscape Associations

Associations of the landscape with arts / literary / historical / mythical figures or architecture etc. were examined.[8] Moneylane, An Muine Leathan, The Broad Shrubbery (Thicket), has been consistently mentioned in historical records from 1571 (Calendar of Ormond Deeds) – 1839

[8] https://www.logainm.ie/ga/12856

(Index to the Book of Lands). There are no obvious associations available from local information connecting the area to literary, historical or artistic figures. The eastern field boundary opposite the proposed site coincides with the townland boundary with Ballyrocaun. This would indicate an historic hedgerow boundary running along this segment.

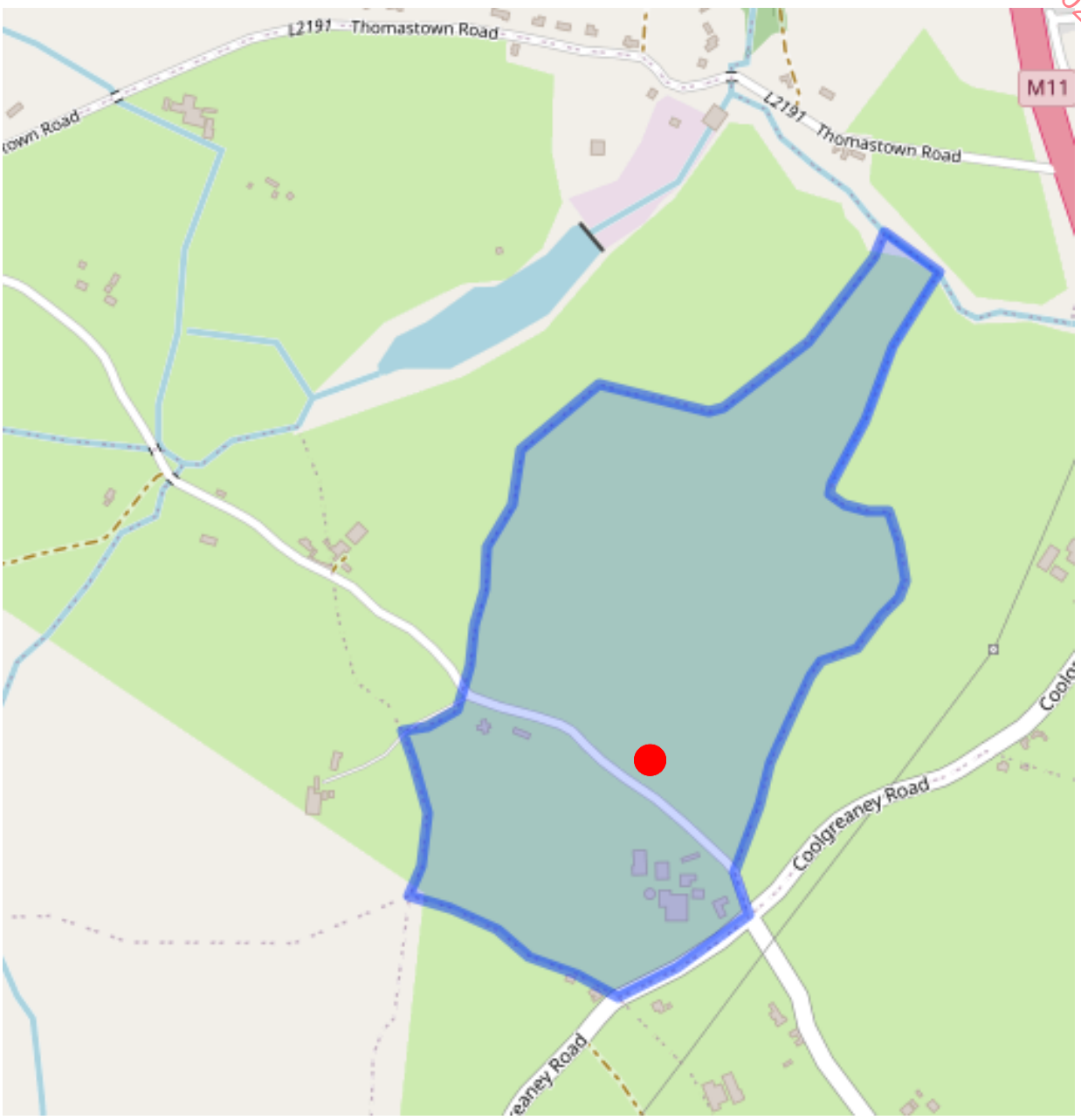


Figure11.5: Moneylane Townland Boundary

This is confirmed once the townland boundary is overlain onto the historical maps.

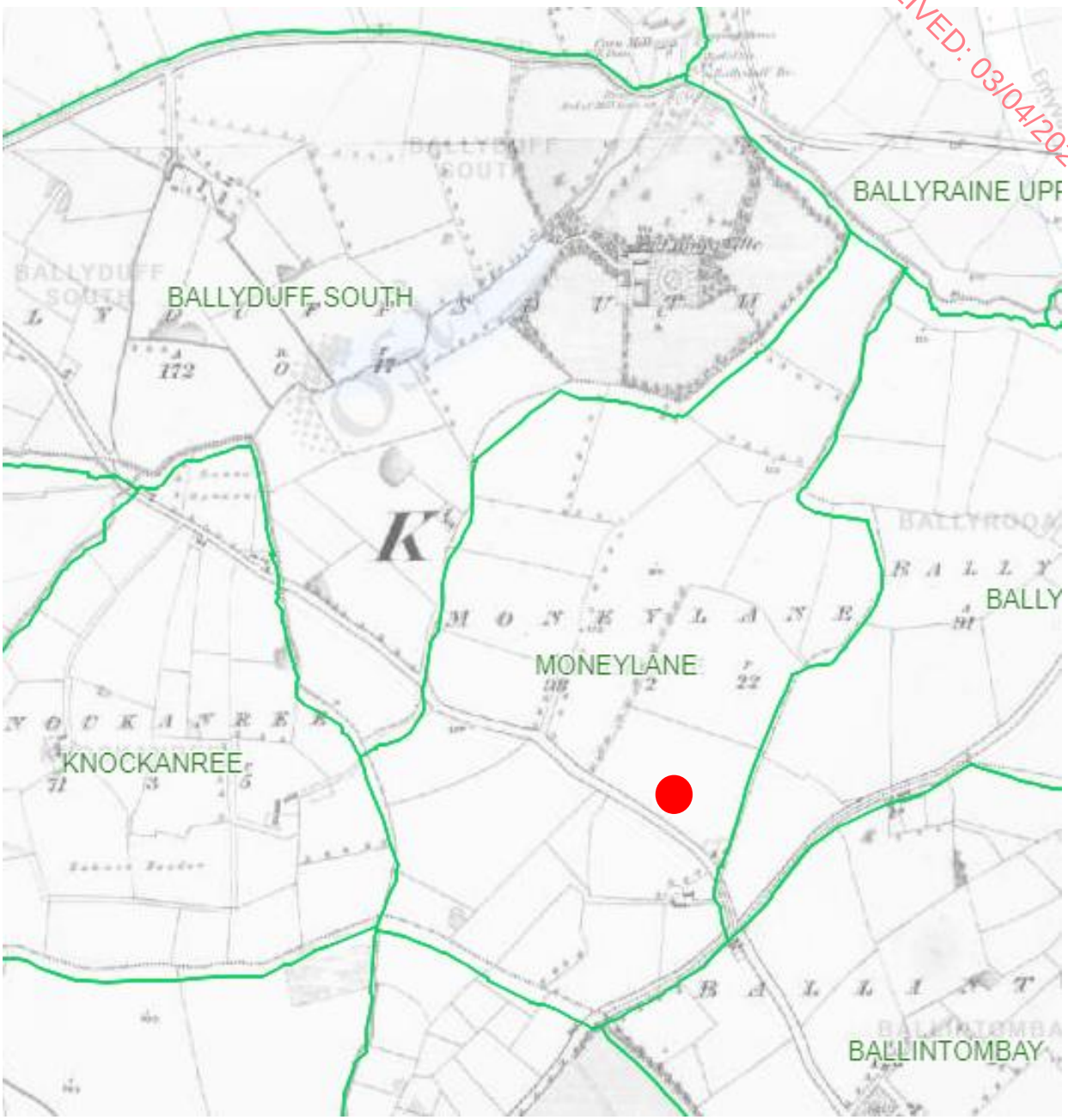
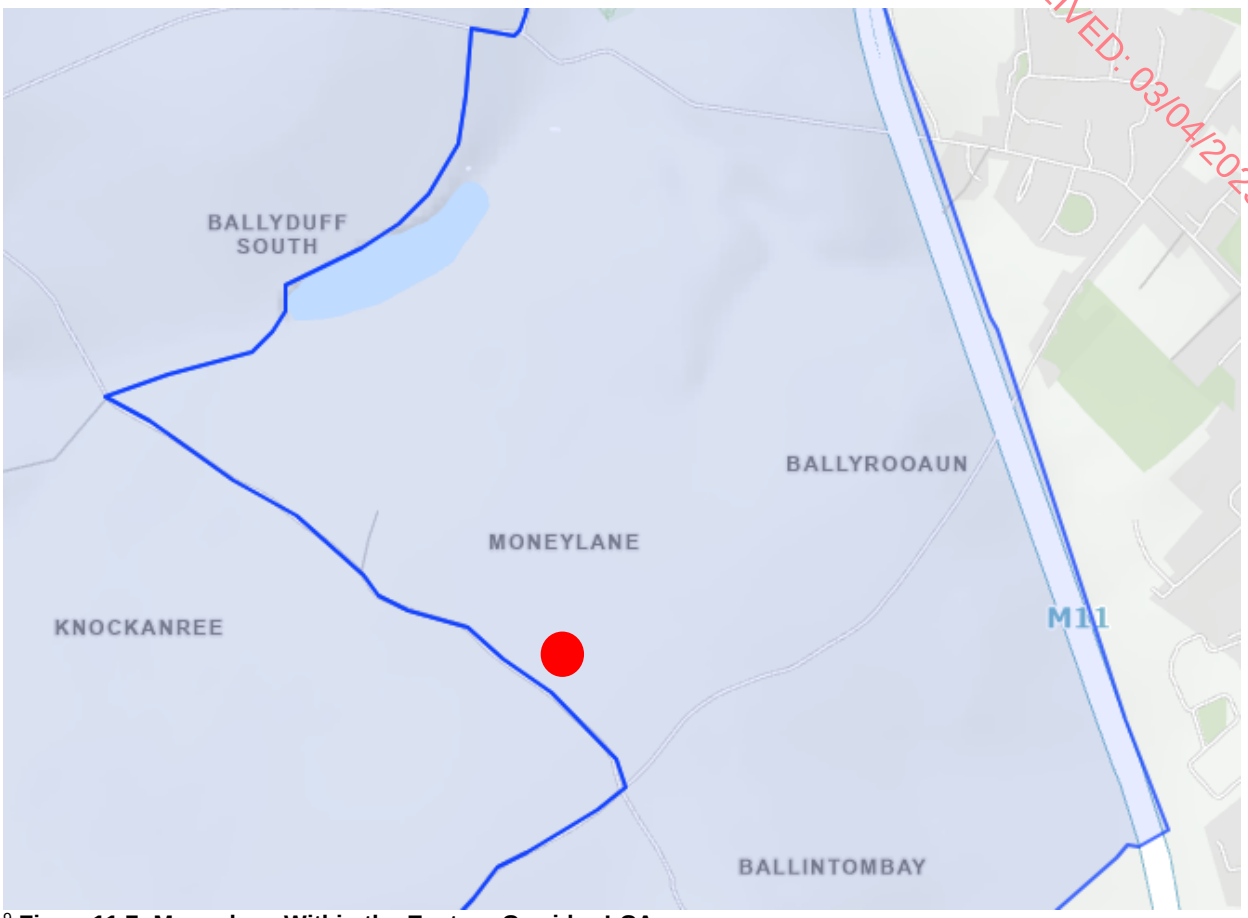


Figure11.6: Moneylane Townland Boundary Overlain onto Historic Map (six inch)

11.3.3 Wicklow County Development Plan LCA

The WCDP 2022-2028 categorises the landscape into a hierarchy of six landscape categories and within those, fifteen Landscape Character Areas in the County. This landscape character assessment was subsumed from the 2016 assessment into the current County Development Plan.



[9] **Figure11.7: Moneylane Within the Eastern Corridor LCA**

[9] Landscape Category WCDP https://data.gov.ie/dataset/landscape-category-cdp-2022-2028

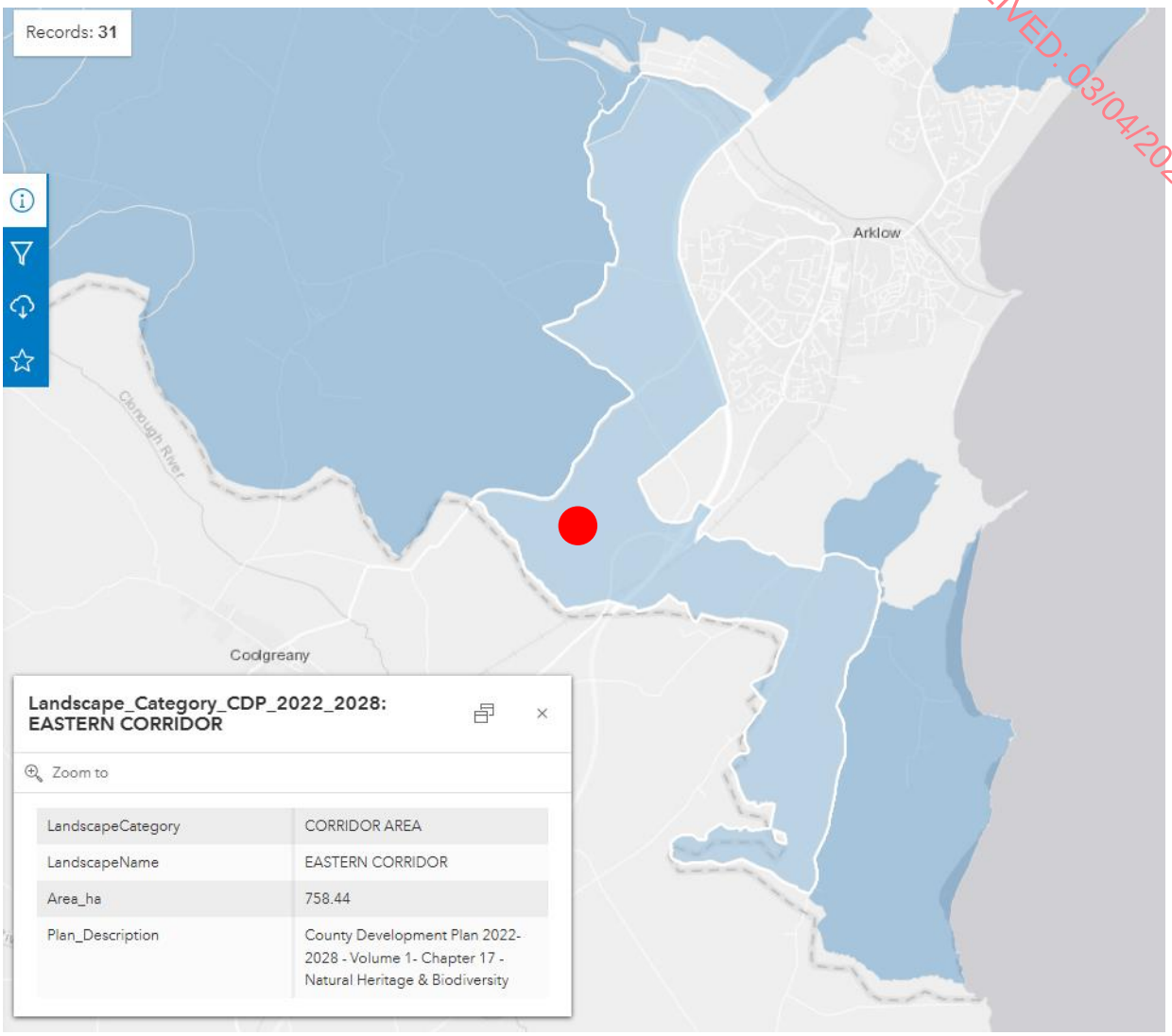


Figure11.8: Moneylane Within the Eastern Corridor LCA

[10] https://hub.arcgis.com/datasets/wicklow::landscape-category-cdp-2022-2028

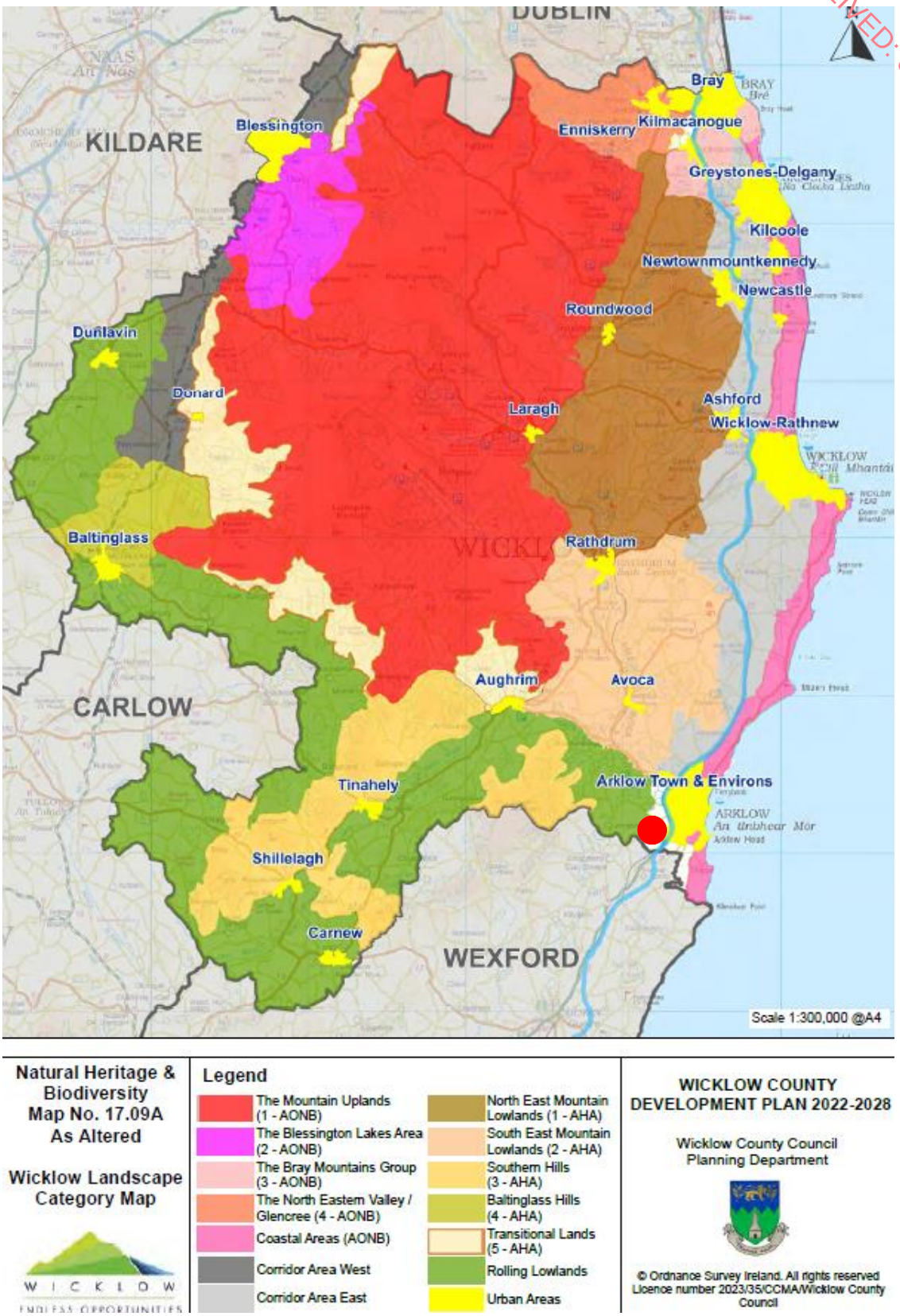


Figure 11.9: Wicklow County Development Plan 2022-2028 Landscape Character Assessment

[11] County Wicklow Landscape Character Assessment for WCDP 2022-2028

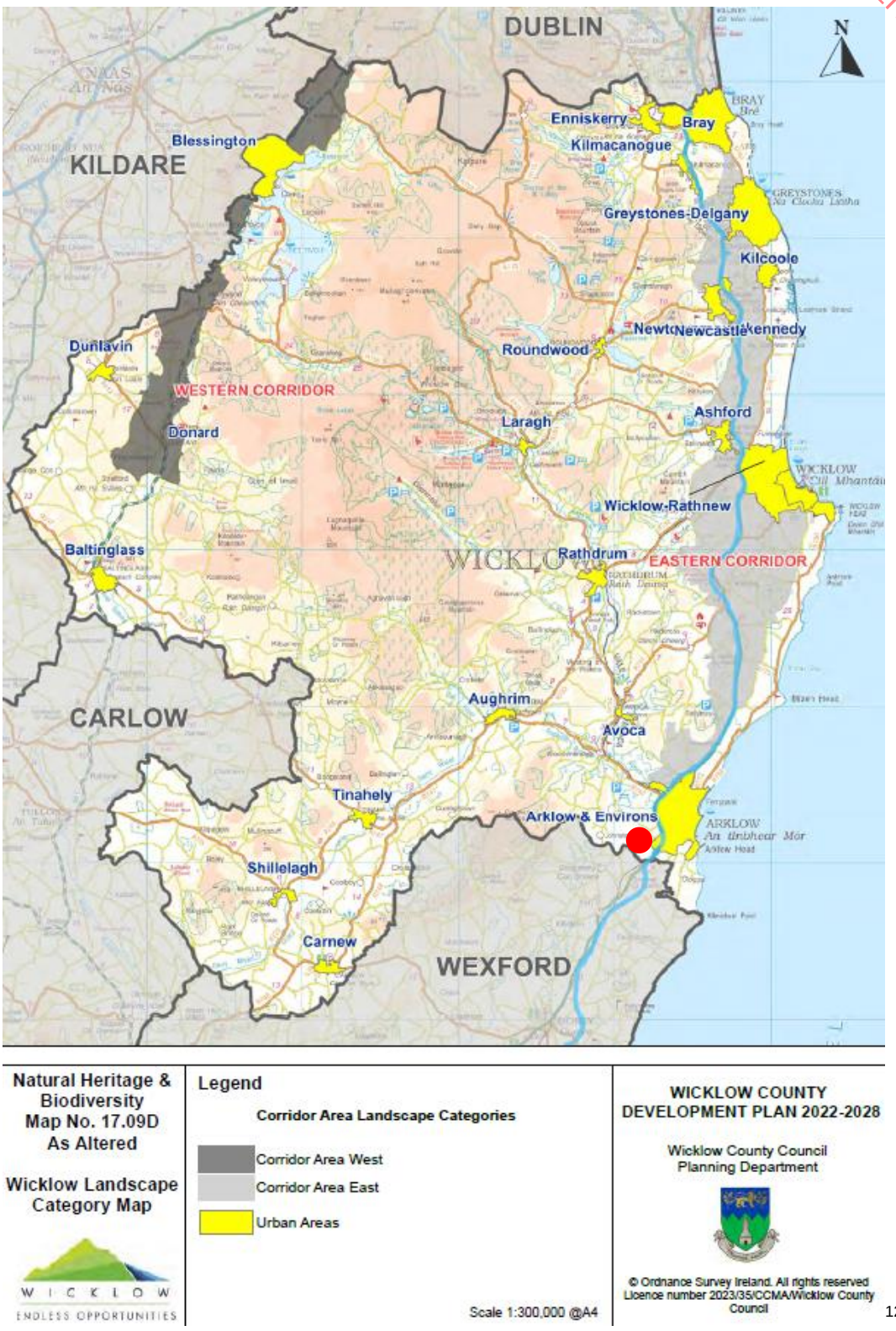


Figure11.10: Wicklow County Development Plan 2022-2028 Landscape Character Assessment Eastern Corridor

[12] Landscape Character Corridor Area WCDP https://data.gov.ie/dataset/landscape-category-cdp-2022-2028

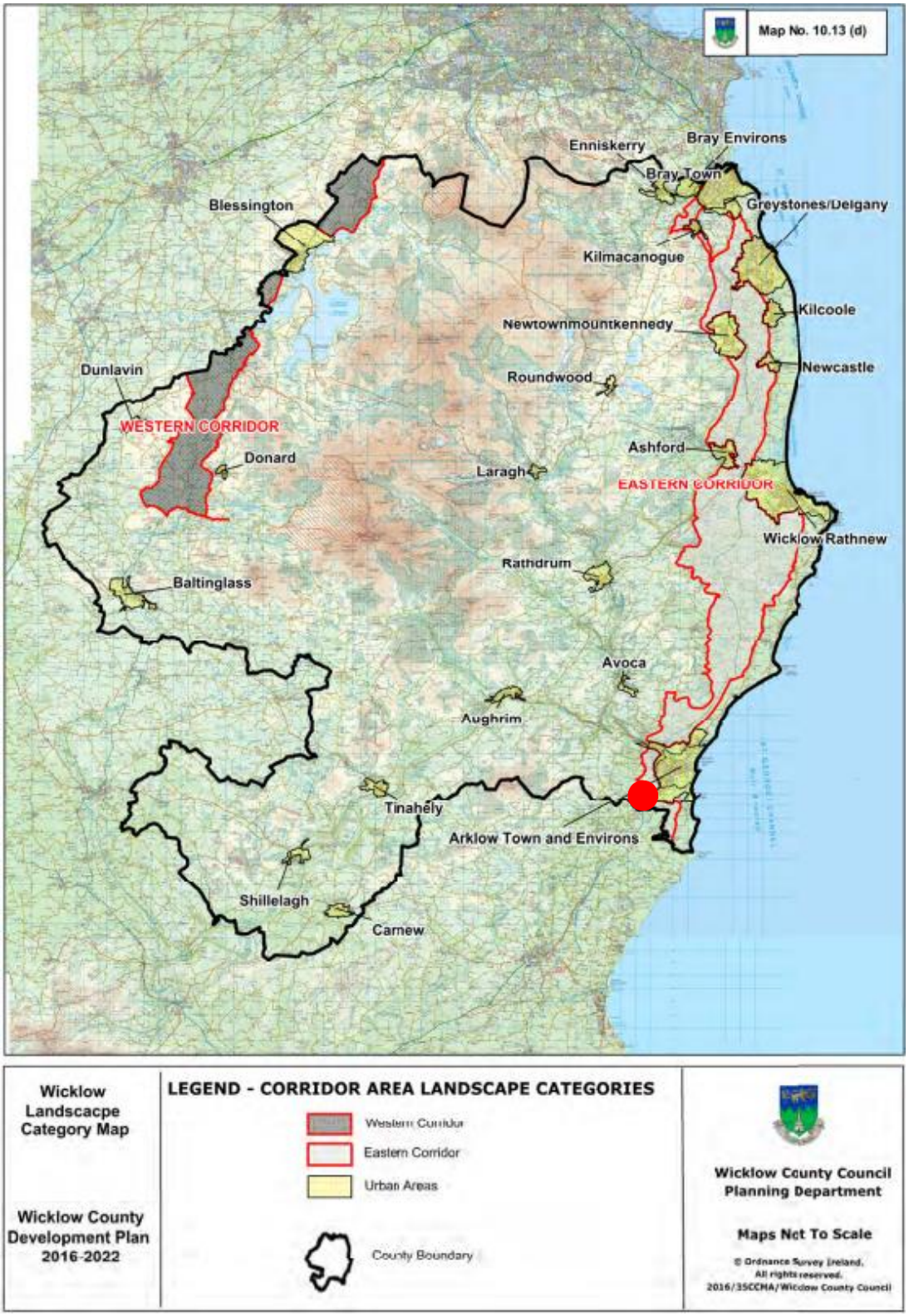


Figure11.10a: Wicklow County Development Plan 2016-2022 (subsumed into the 2022-2028 WCDP) Landscape Character Assessment Eastern Corridor

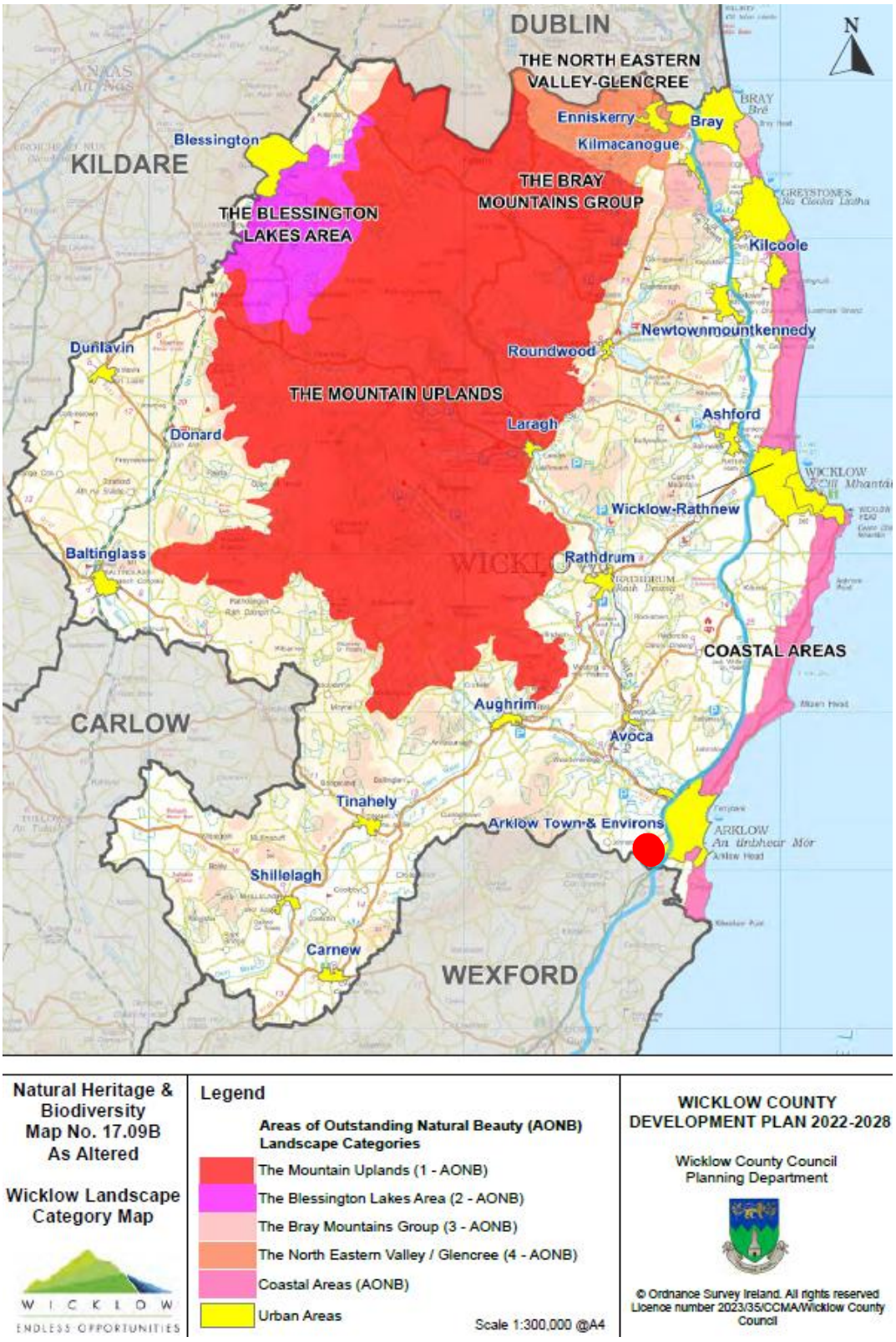


Figure 11.11: Wicklow Landscape Character Areas of Outstanding Natural Beauty. None are affected by the Proposed Development.

Eastern Corridor Area

The Eastern Corridor LCA is described as follows in the WCDP 2022-2028;
"4(a) - The N11 This area covers the main access corridor area along the east of the County. The boundary of the eastern access corridor generally follows what is considered to be the areas upon which the greatest influence is exerted by this primary access route. This route, for the most part, runs through the more low lying and accessible tracts of land, dissects the Glen of the Downs wood in the north of the County and provides expansive coastal views north of Wicklow Town. This landscape area acts as the main connection between the major towns along the east coast of the County"

The definition of landscape quality as outlined in the methodology above refers to medium quality landscapes as those that retain many key characteristics and are marked by the occasional incongruous feature. In the context of the site of the Proposed Development, at a local landscape scale, the landscape is not without value. In this respect the landscape quality is closer to a **low to medium** sensitivity than a low sensitivity rating as indicated in the WCDP.

The sensitivity ratings to be considered for the landscape are those outlined in the general methodology above and those provided in the WCDP 2022-2028.

Range	Landscape Sensitivity	Range
1	Low Sensitivity	0-25
2	Low to Medium Sensitivity	25-30
3	Medium Sensitivity	30-35
4	Medium to High Sensitivity	35-40
5	High Sensitivity	40+

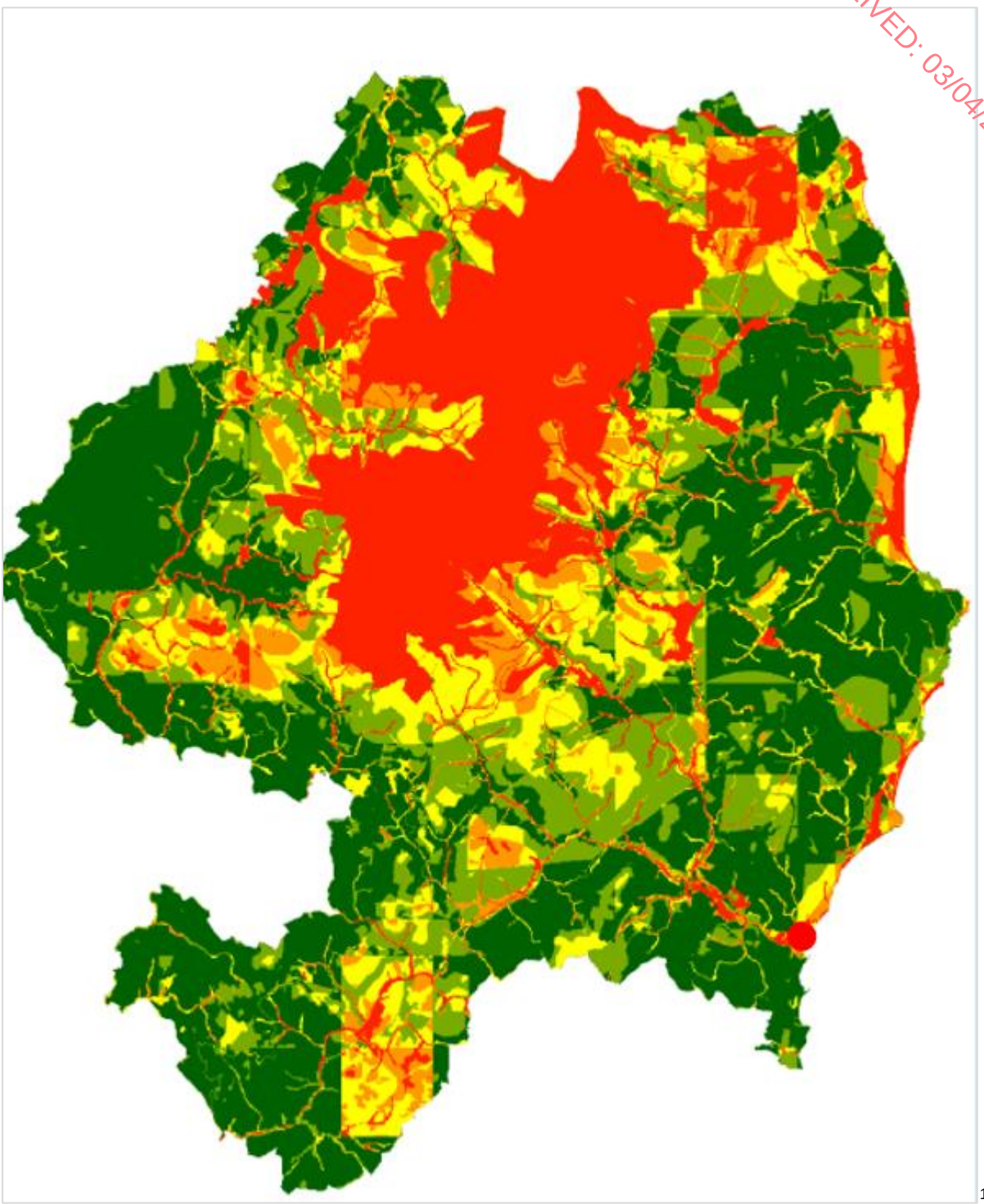
 [13]

Figure 11.12: Landscape Sensitivity Map for County Wicklow

[13] Landscape Sensitivity Designations WCDP 2016-2022 subsumed into WCDP 2022-2028

11.3.4 Landscape Character Type

The findings of the field survey (**Appendix 2**) concur with this description. Near the site of the Proposed Development some elements of landscape remain clearly influenced from eighteenth century demesne style landscapes and the era of improving landlords. The mature oak and beech in the defined drain and bank hedgerow system are a feature of this time.

11.3.5 Landscape Character Assessment Policy Objectives and WCDP Policy Objectives

The landscape character assessment included in the current Wicklow County Development Plan 2022-2028 outlines that the;

"Corridor area landscape category relates to lands adjoining, surrounding or considered to be influenced by the man made features of the N11 and N81. These lands generally fall between the 80m and 150m contour line following the path of the more low lying and easily developable lands for such road infrastructure. Development proposals within the western and north eastern corridor landscape area should not unduly impinge on any views or prospects in these areas."

The view from the M11 is tested in this report in the visual section of this report.
As has been iterated above specific to the Eastern Corridor the LCA is described as;

"The N11 This area covers the main access corridor area along the east of the County. The boundary of the eastern access corridor generally follows what is considered to be the areas upon which the greatest influence is exerted by this primary access route. This route, for the most part, runs through the more low lying and accessible tracts of land, dissects the Glen of the Downs wood in the north of the County and provides expansive coastal views north of Wicklow Town. This landscape area acts as the main connection between the majors towns along the east coast of the County." For this LCA, the landscape policy objective 3.14 Corridor Area KDC as included in Appendix 4 Map 10.13(d) of WCDP applies;

"Landscape Policy Objective3.14 Corridor Area KDC (see Appendix 4 Map 10.13(d)) 1. To protect views and prospects from the corridor area towards the surrounding landscape areas from development that would either obstruct the views / prospect from the identified vantage point or form an obtrusive or incongruous feature in that view / prospect. Due regard will be paid in assessing development applications to the span and scope of the view / prospect and the location of the development within that view / prospect. 2. Development proposals within this area should aim to locate within existing clusters of structures / tree stands and avoid locating new development in open fields."

None of the protected views and prospects will be affected by the Proposed Development.

The current Wicklow County Development Plan 2022-2028 also outlines the considerations and objectives below.

11.3.6 General Landscape Policies and Objectives WCDP

The County Development Plan Objectives relating to landscape for County Wicklow is further recognised in Chapter 17 Natural Heritage and Biodiversity. Namely "The landscape of the County is a national asset. County Wicklow is richly endowed with a variety of landscape 'types' formed naturally over time and through the interactions of humans with the natural environment producing a variety of characteristic landscapes and landscape features. The

increasing development pressure of recent years has caused changes in the natural landscape, which are unprecedented in scale and nature, and has led to the Government setting out guidelines for landscape appraisal. This assessment of the landscape is to ensure that "*the environment and heritage generally are maintained in a sustainable manner, while at the same time enabling a proactive approach to development*". This is the LCA as discussed above.

11.3.7 Landscape Character Area

The Eastern Corridor Area as relevant to the site of the Proposed Development has no archaeological influences on the landscape at the site of the Proposed Development.

The hedgerow segments in the existing landscape pattern around the area features mature deciduous trees. The field boundary of the enlarged field system will not be disturbed by the proposals. There will be no loss of landscape elements apart from the removal of a segment of hedgerow- road boundary to facilitate the site entrance. The Proposed Development will lie within the pattern of field boundaries and the townland boundary to the east of the site will not be affected.

Tranquillity in this landscape character area is moderate to low due to its proximity to the town of Arklow and the road infrastructure. The local roads are busy. Woodland and forestry blocks to the north of the site shield the area from the influence of the motorway.

There are large agrucultural units and modern single housing developments in the landscape character area.

There is no great sense of remoteness at the site of the Proposed Development, although a good sense of the rural Irish landscape is prevalent.

11.3.8 Landscape Value

There is no strong landscape value attributed to the area around Moneylane in the WCDP, but this does not mean it has no attributable landscape value. The high ditches and the existing oak trees with some mature Scots Pine attest to this landscape sitting on the fringe of a valuable set of interconnected demesne landscapes almost connected to each other by a network of woodlands and trees. The maturity of the trees with their understory holly is a link both aesthetically and genetically to a much richer landscape tapestry. It is also not very common to have a concentration of mature examples of oak and holly together in hedgerows around the country. Visually it suggests a sense of the primeval woodland. Whilst the sensitivity for the LCA has been assessed as low, the value for this landscape when assessed at a local level is **low to medium.**

11.3.9 Geological Heritage

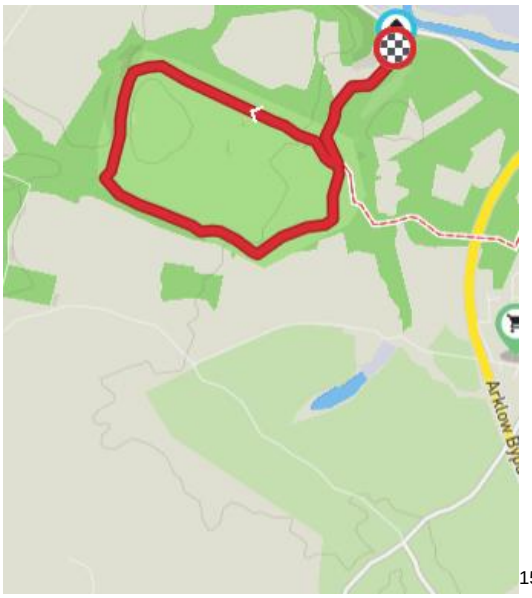
There are no sites of geological importance relating to the site of the Proposed Development.

11.3.10 Recreation and Tourism

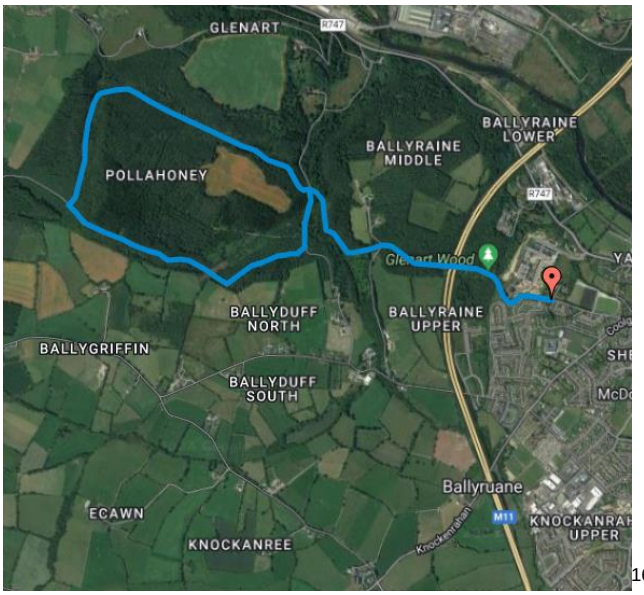
The hiking trails around Glenart Wood to the north of the site are the closest recreational and tourist use to the site of the Proposed Development.

[14]

Figure 11.13 All Trails; Glenart Woods, north of the Proposed Development



[15]



[16]

Figure 11.14 Hiker apps and websites recommend different starting points to the loop.

Coillte (**Figure 11.15**) indicates the trail head located at the most northerly point.

[14] All Trails Open Map Data
[15] https://hiiker.app/trails/ireland/county-wicklow/glenart-wood-walk/map
[16] https://visitwicklow.ie/listing/glenart-walk/

[17]

Figure 11.15 Starting points to the loop recommended by Coillte with the site of the Proposed Development located south of the trail.

[17] https://www.coillte.ie/site/glenart-wood/

The possibility of a loss in visual amenity is examined in detail under the visual section of this report examining visual receptors in Ballyduff, north of the Proposed Development.

11.3.11 Natural Heritage

Natural heritage is examined in this report as it can contribute to landscape value.

None of the listed Natura sites (National Parks and Wildlife Service designations) are within the site of the Proposed Development. All the designated areas are at some distance from the Proposed Development and due to distance, intervisibility is also not a concern for these proposals.

There are no (SPA,SAC,NHA or pNHA) within the boundaries or close to the Proposed Development.[18]

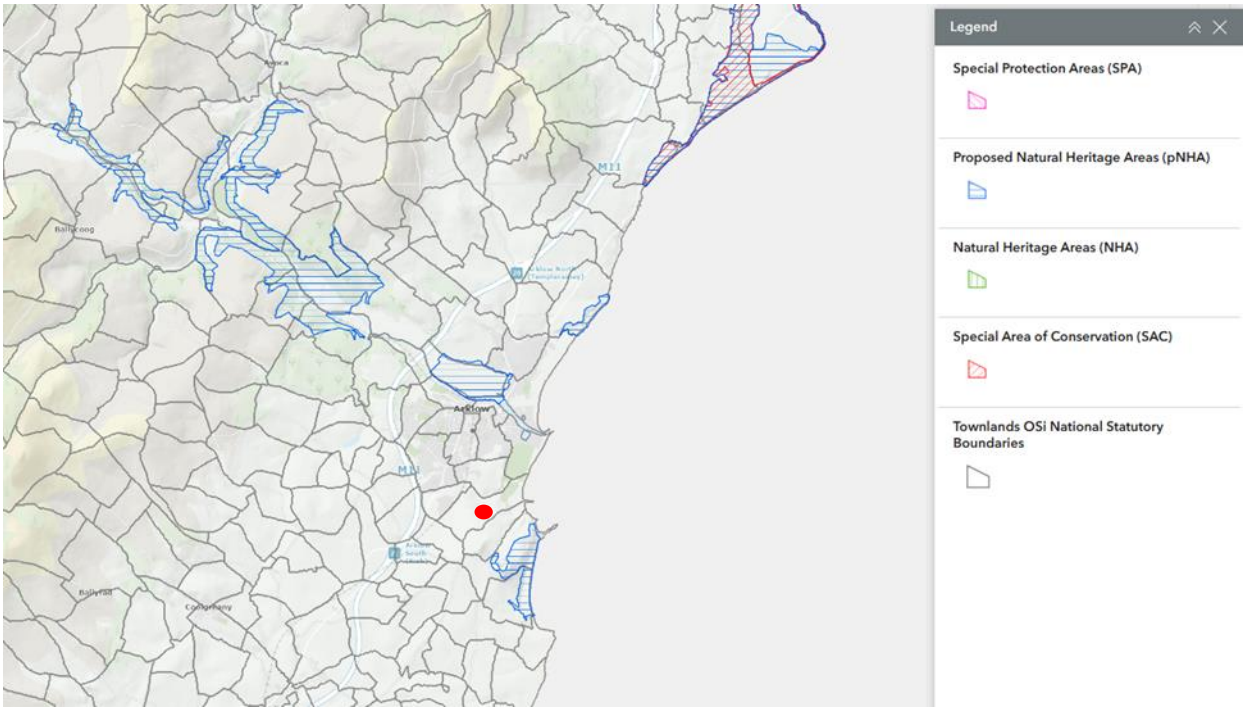


Figure 11.16: Natura Designations

11.3.12 Tree Protection Orders

There are no tree protection orders pertaining to the site of the Proposed Development. The closest order is east of Arklow and will in no way be affected by the Proposed Development.

[18] NPWS Tailte Éireann Mapping Service https://experience.arcgis.com/experience/edf

[19]**Figure 11.17:** Tree Protection Orders Unaffected

Monuments and Protected Structures

The National Inventory of Architecture and the local Record of Protected structures are also considered as part of this report. The interaction of archaeology and landscape is also considered in this report as an element of landscape. There are no recorded monuments or protected structures in the townland or near the site of the Proposed Development.

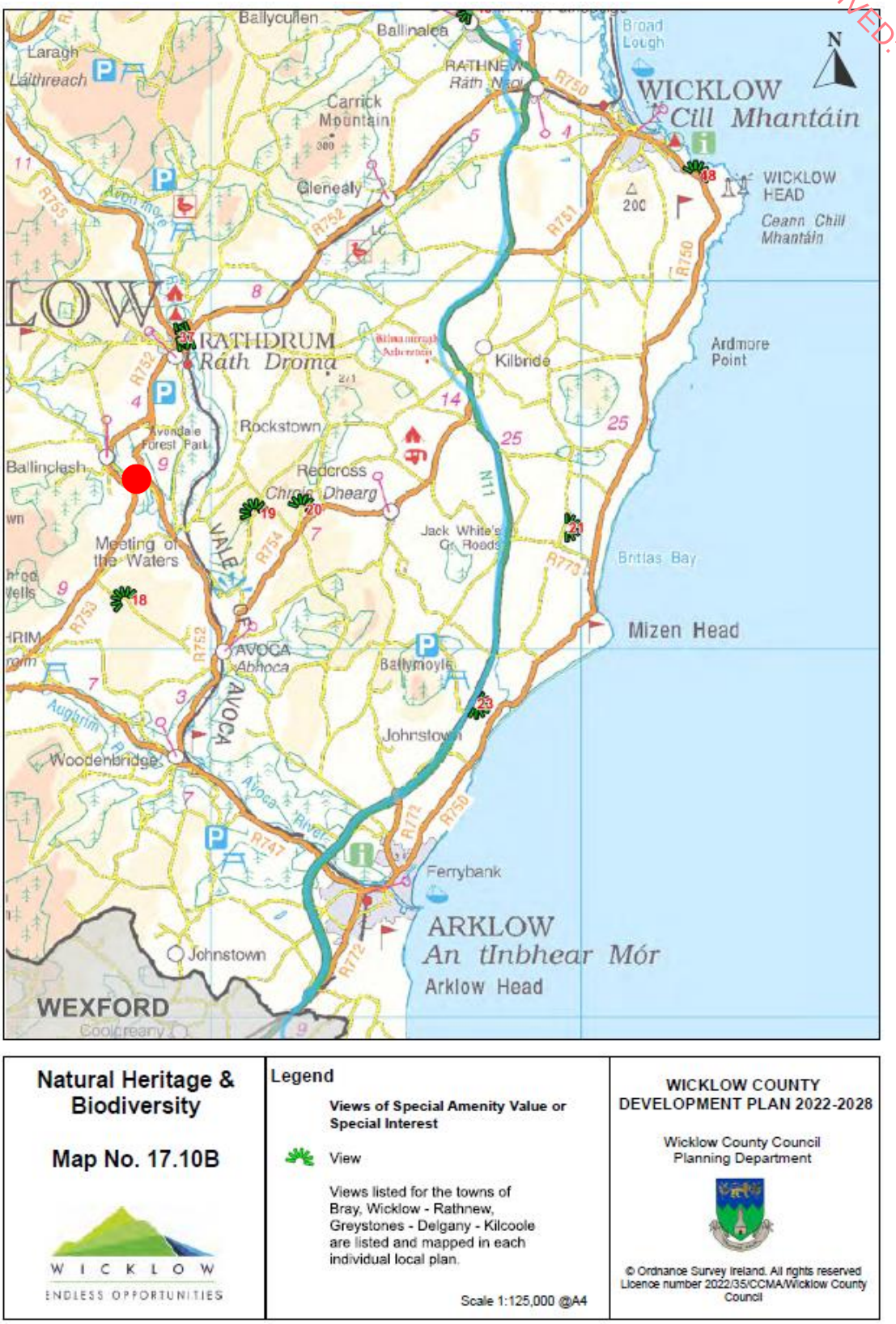
[19] Excerpt from Map No. 17.05J Tree Protection Order Wicklow County Development Plan 2022-2028

[20]**Figure 11.18:** Record of Protected Structures, NIAH, National Monuments – no records pertinent.

11.3.13 Designated Amenity Views and Prospects in County Wicklow

The scenic viewpoints as listed in the WCDP were examined in relation to the Proposed Development. There are no listed views in the proximity of or focused on the Proposed Development.

[20] https://heritagedata.maps.arcgis.com/apps/webappviewer



Natural Heritage & Biodiversity

Map No. 17.10B

WICKLOW
ENDLESS OPPORTUNITIES

Legend

Views of Special Amenity Value or Special Interest

View

Views listed for the towns of Bray, Wicklow - Rathnew, Greystones - Delgany - Kilcoole are listed and mapped in each individual local plan.

Scale 1:125,000 @A4

WICKLOW COUNTY DEVELOPMENT PLAN 2022-2028

Wicklow County Council
Planning Department

Figure 11.19 Listed Scenic Prospects WCDP 2022-2027

[21]**Figure 11.20** Listed Scenic Prospects WCDP 2022-2027

The prospects listed in the WCDP 2022-2028, will not be affected by the Proposed Development. The closest prospects to the Proposed Development are;

- Prospect 57, the L2197 at Coolgarrow Prospect of Goldmine River valley
- Prospect 58 R747 from Woodenbridge to Coates Bridge, Aughrim
- Prospect extending from Woodenbridge with tree lined valley and good river focus
- Prospect 61 R752 from Avoca to Woodenbridge Prospect southwards and eastwards towards
- Avoca Valley and deciduous forests
- Prospect 62 R747 Vale of Avoca east of Woodenbridge Prospect of both sets of Vale of Avoca including Avoca River Valley

[21] Chapter 5 Scenic Routes and Prospects WCDP 2022-2028

11.3.14 Objectives WCDP 2022-2028

Landscape, Views & Prospects

CPO 17.35 *All development proposals shall have regard to the County landscape classification hierarchy in particular the key landscape features and characteristics identified in the Wicklow Landscape Assessment (set in Volume 3 of the 2016 County Development Plan) and the 'Key Development Considerations' set out for each landscape area set out in Section 5 of the Wicklow Landscape Assessment Wicklow County Development Plan 2022-2028.*

The Key Development Considerations for the eastern corridor are examined in the landscape impact assessment of this report.

CPO 17.36 *Any application for permission in the AONB which may have the potential to significantly adversely impact the landscape area shall be accompanied by a Landscape / Visual Impact Assessment, which shall include, inter alia, an evaluation of visibility and prominence of the Proposed Development in its immediate environs and in the wider landscape, a series of photos or photomontages of the site / development from clearly identified vantage points, an evaluation of impacts on any listed views / prospects and an assessment of vegetation / land cover type in the area (with particular regard to commercial forestry plantations which may be felled thus altering character / visibility). The Assessment shall demonstrate that landscape impacts have been anticipated and avoided to a level consistent with the sensitivity of the landscape and the nature of the designation.*

The Proposed Development does not fall into the AONB category, however this report constitutes the LVIA requirement and is accompanied by a landscape masterplan and a full set of verified photomontages.The provision of tree planting and screening in the planting specification will ensure the Proposed Development will not rely on external trees and local commercial plantations alone for screening. The trees will eventually become an asset in the local landscape adding to visual amenity to a greater extent with each passing year.

CPO 17.37 *To resist development that would significantly or unnecessarily alter the natural landscape and topography, including land infilling / reclamation projects or projects involving significant landscape remodelling, unless it can be demonstrated that the development would enhance the landscape and / or not give rise to adverse impacts.*

Topographical adjustment and earthworks pertinent to this project are aimed at reducing visual impact and increasing the potential of tree and hedgerow planting to screen the Proposed Development.

CPO 17.38 *To protect listed views and prospects from development that would either obstruct the view / prospect from the identified vantage point or form an obtrusive or incongruous feature in that view / prospect. Due regard will be paid in assessing development applications to the span and scope of the view / prospect and the location of the development within that view / prospect.*

There are no designated views or prospects affected by the Proposed Development.

11.3.15 Cycling, Walking and Driving Routes

There are no other looped trails, long distance walking (The Wicklow Way, St Kevins Way etc.) cycling or touring routes affected by the Proposed Development.

11.3.16 Green Infrastructure

The following WCDP Objectives relating to green infrastructure and landscape were examined in this report;

CPO 17.16 *Require pollinator friendly landscape management and planting within new developments and on Council owned land.*

There are generous planting measures accompanying the application for the Proposed Development. The inclusion of oak, holly, whitethorn, blackthorn, rowan and wild cherry[22] in the planting mix increases the pollinating capacity of the plantings and also allows for increased connectivity to other trees and hedgerow habitats locally. It is recommended that the landscape management regime at the operational stage will include hedgerow maintenance and cutting dates that are conscious of the need to allow flowering plants to stay in flower for as long as possible.

CPO 17.17 *Work with statutory authorities to prevent and control the spread of invasive plant and animal species and require, where appropriate Invasive Species Management Plans to be prepared as part of the development management process where necessary.*

This is recommended as an avoidance measure in the mitigation recommendations. There were no obvious signs of invasive species present during site visits in October and November 2024.

The following WCDP Objectives relating to woodlands, trees and hedgerows were examined in this report;

Woodlands, Trees and Hedgerows

CPO 17.18 *To promote the preservation of trees, groups of trees or woodlands in particular native tree species, and those trees associated with demesne planting, in the interest of the long-term sustainability of a stable ecosystem amenity or the environment generally, as set out in Schedule 17.05 and Maps 17.05 and 17.05A - H of this plan.*

The closest tree protection orders to the site of the Proposed Development are at too great a distance to be in any way affected by the proposals.

CPO 17.19 *To consider the making of Tree Preservation Orders (TPOs) to protect trees and woodlands of high amenity value.*

This is outside the scope of these proposals.

CPO 17.20 *Development that requires the felling of mature trees of environmental and/or amenity value, even though they may not have a TPO in place, will be discouraged.*

[22] https://www.treecouncil.ie/.pdf (Trees for Pollinators)

There will be no felling of mature trees required for these proposals to go ahead.

CPO 17.21 *To strongly discourage the felling of mature trees to facilitate development and encourage tree surgery rather than felling if such is essential to enable development to proceed.*

Tree surgery is recommended in the mitigation measures under the avoidance category as a landscape management method during the construction and operational phase of the project.

CPO 17.22 *To require and ensure the preservation and enhancement of native and semi-natural woodlands, groups of trees and individual trees, as part of the development management process, and require the planting of native broad-leaved species, and species of local provenance in all new developments.*

The landscape masterplan that accompanies this report along with measures ensuring the avoidance of damage to hedgerows address this objective. The planting mix is native and naturalised for the most part and the with native hedgerow material recommended as being sourced locally of local provenance. This is not expected to present any problem to the developers as there is a ready source of plant material of local provenance available from nurseries around Co. Wicklow.

CPO 17.23 *To require the retention, wherever possible, of hedgerows and other distinctive boundary treatment in the County. Where removal of a hedgerow, stone wall or other distinctive boundary treatment is unavoidable, provision of the same type of boundary will be required of similar length and set back within the site in advance of the commencement of construction works on the site (unless otherwise agreed by the Planning Authority).*

The landscape proposals for this Proposed Development (as submitted in the accompanying landscape masterplan) recommend increased planting of new hedgerows and replacement of new hedgerow back from the proposed sight lines where a new entrance punctures the site entrance. The original Moneylane townland boundary will not be affected by the Proposed Development.

In addition, WCC "*Require all development to submit a green infrastructure statement outlining how the proposal contributes to green and blue infrastructure both within its environs as well as within the wider settlement or rural area. Larger developments (multiple residential developments including Part 8 applications, retail, industrial, mineral extraction, etc.) will be expected to prepare a Landscape/ Green (and Blue) Infrastructure Plan including a Landscape Design Rationale. This Plan should identify environmental assets and include proposals which protect, manage, and develop green infrastructure resources in a sustainable manner*."

A landscape masterplan and landscape design statement accompany this submission.

The increased planting proposed will ensure that there is a greater potential at the site to absorb carbon and maximise the potential as the plant material matures, to increase habitat connectivity and local landscape ecological gain. The proposed increase in the number of hedgerow trees will increase the potential for habitat development and connection within the hedgerow network. The wider landscape ecology is well considered and there will be a gain in connectivity and biodiversity in the overall landscape.

11.3.17 Potential Capacity

Landscape capacity is regarded as the ability of a landscape to visually absorb change and accommodate diverse types of development. Topography ensures there is good capacity for the area to ensure enclosure will absorb the Potential Development. Though the topography is falling back from the site of the Proposed Development, it is unelevated from the south and will not be visible over a wide area. The soil is a rich clay and with organic amelioration and localised drainage can easily support excellent tree growth as is evident in the trees surrounding the site of the Proposed Development. The generous stands of hedgerows and hedgerow trees in the area means there is good capacity to screen development and allow it to be absorbed into the wider landscape. Commercial forestry to the north and Glenart Woods absorb development on a wider landscape scale, but this development will not depend on the commercial forestry for visual absorption into the future.

Figure 11.21: OSI Contours around Moneylane

11.4 Characteristics of the Proposed Development

The applicants propose to develop an Anaerobic Digestion Facility. The site will be located in the townland of Moneylane, Arklow Co. Wicklow.

The development will consist of the following:

- Construction of 3 no. digesters (c. 15.5m in height), 2 no. digestate storage structures (c. 15.5m and c. 12m in height), a liquid feed tank (c. 4m in height) and 4 no. pump houses (with a GFA of 27 sq.m, 28 sq.m, 28 sq.m, and 14 sq.m, and each with a height of c. 2.6m), located in the northern section of the site.
- 4 no. pasteurisation tanks (each c. 6m in height), a post pasteurisation cooling tank (c. 4m in height) and a pre fertiliser manufacturing tank (c. 4m in height), located to the southeast of the digesters, in the centre of the site.
- A part single-storey and part two-storey reception hall (with a gross floor area (GFA) of c. 2,113 sq.m and an overall height of c. 16.5m) to accommodate a laboratory, panel room, tool store, workshop, and storage areas, with a liquid feed intake adjacent to the reception hall, located to the centre of the site.
- A single-storey solid digestate storage and a nutrient recovery building (with a GFA of c. 880 sq.m and an overall height of c. 12.4m) located to the east of the reception hall, in the central portion of the site.
- Odour abatement plant (with an overall height of c. 6m) and equipment and a digestate offtake area will be provided to the east of the solid digestate storage and nutrient recovery building.
- Construction of an ESB substation (with a GFA of c. 24 sq.m and a height of c. 3.4m), a fuel storage tank (c. 1.6m in height), a CNG compression unit (with a GFA of c. 20 sq.m and a height of c. 4.1m), 2 no. CO2 tanks (c. 10.7m in height), a CO2 loading pump (c. 2.6m in height), CO2 auxiliaries (c. 2.6m in height), CO2 liqueufactor (with an overall height of c. 8.2m), a CO2 compressor (with an overall height of c. 5.9m and a GFA of c. 15 sq.m) and a CO2 pre-treatment skid (c. 3.5m in height), located in the eastern portion of the site.
- Construction of an emergency biogas flare (c. 11.3m in height), a biogas treatment skid (with an overall height of c. 4.1m), a biogas compression system (with a maximum height of c. 5.8m in height), a biogas upgrading module (with a maximum height of c. 4.6m and a GFA of c. 28 sq.m), a combined heat and power unit and panel room (with a height of c. 5.8m) and a H2S washing tower (with an overall height of c. 7.8m), located within the eastern section of the site.
- Construction of a grid offtake skid, a biomethane boiler (c. 5.6m in height to flue stack), a grid injection unit (with a GFA of c. 22 sq.m and a height of c. 2.8m), and 2 no. propane tanks (c. 1.3m in height), located to the southeast of the CO2 structures, within the eastern section of the site.
- Construction of a two-storey office and administration building (with an overall height of c. 8.6m and a GFA of c. 271.5 sq.m), located within the southeast section of the site, adjacent to the main site entrance.
- Associated works including parking (8 no. standard, 3 no. EV, and 1 no. accessible parking spaces; and bike storage), access arrangements (including new access point to the site from the adjacent road to the south), a weighbridge, provision of solar panels (roofed mounted solar array), wastewater treatment

equipment, attenuation pond in the northern portion of the site, boundary treatments, lighting, services, lightning protection masts, drainage, landscaping, and all associated and ancillary works.

11.4.1 Site Location

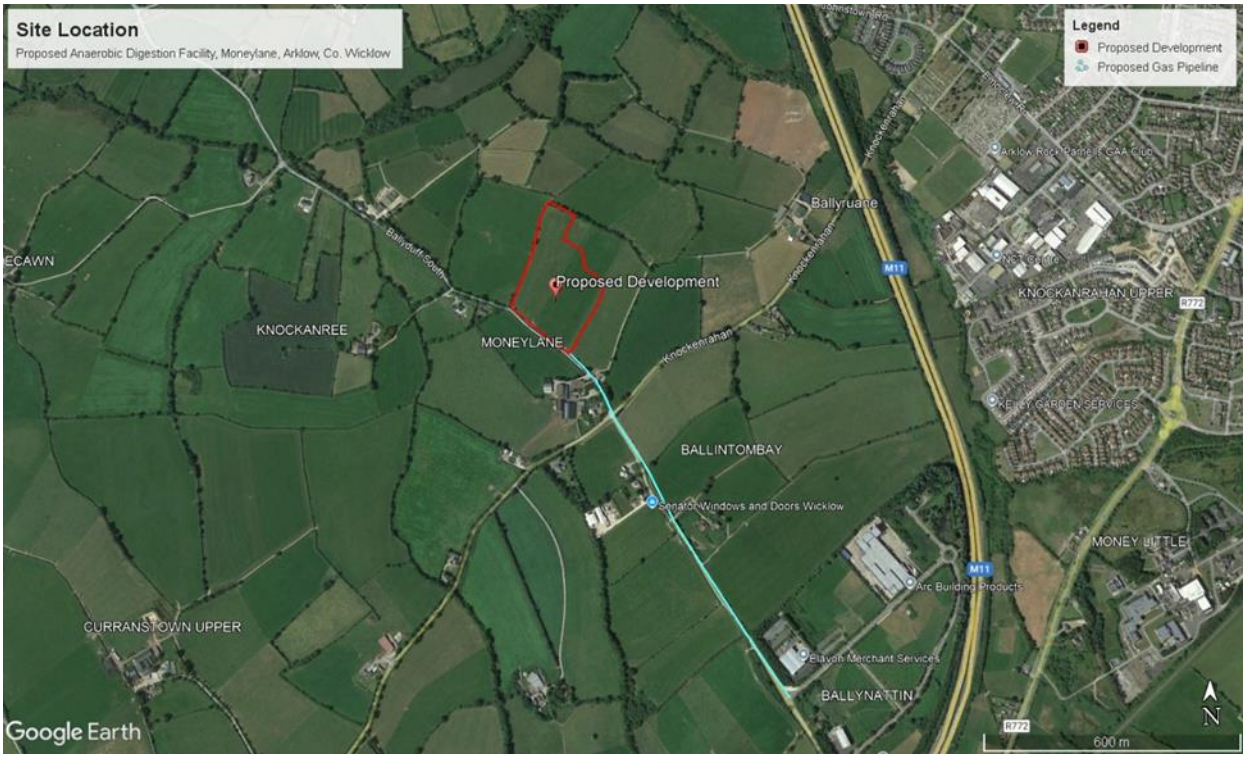


Figure 11.22: Site Location in the townland of Moneylane

The site is located in the townland of Moneylane, west of Arklow, Co. Wicklow. The site of the Proposed Development is currently in agricultural use. It is pastoral grassland in a relatively large field derived from an older field system. There is a north east to south east orientation on the grazing strips.

11.4.2 Landscape Character and Sensitivity

Landscape character as discussed above is a significant aspect of the landscape receptors susceptibility to change. The effect on landscape character and its ability to accommodate the Proposed Development, maintain the baseline and achieve landscape planning policies is considered. The elements which contribute to positive landscape character at or near the site of the Proposed Development are the shape and orientation of the field system, the hedgerows and the particular presentation of hedgerow trees in this area. There are several mature oak trees with their understory of holly quite intact in the hedgerow network. There are also Scots Pine and beech visible locally in the hedgerow. The bank and drain system of hedgerow construction is peculiar in this instance due to the prominence of the hedgerow bank which is particularly pronounced when associated with damper ground or level changes. Stone is apparent in some though not all the bank construction. In general, the field mosaics are comprised of large rectangular fields bounded in hedgerows and deciduous trees. Fencing posts and wire are also used as field dividers.

The proximity of the site to the town of Arklow with large industrial units and warehouses in the landscape character area, results in elements which contribute less positively to landscape character. The large industrial structures visible in the local IDA Business Park at nearby Ballynattin, like the ARC Building Products structure add incongruity at the landscape character level.

The sensitivity of the Eastern Corridor LCA lies within a '**low'** sensitivity landscape**.** However, locally, there are many valuable landscape elements near the site of the Proposed Development. Considering the nature of the Proposed Development, the intrinsic and inherent values attributed to the landscape character area and assessing the landscape at and near the site of the Proposed Development the rating '**low to medium'** is more appropriate for landscape sensitivity.

11.5 Predicted Impacts

11.5.1 Landscape - Construction Phase

The changes to the landscape will occur during the construction stage. The proposal will require an entrance creating an opening in the existing hedgerow line and facilitate sight lines, however there will be no other loss of landscape elements that would alter the landscape character at a local level. There will be a new scale introduced into the landscape. The landscape exhibits a reasonable capacity for change when accompanied with tree planting. Woodland and trees are an addition to the existing landscape which even in modest quantities add to the overall landscape pattern of woodland, forestry, trees and a mosaic of fields.

The soils are fine loamy over calcareous derived from marine muds and although better suited as pastureland demonstrate excellent tree growing properties when treated correctly. The proposed topographical adjustment will work with the existing topography in the area. Any soil disturbance or overload is to be utilised onsite as far as practicable. The proposals are accompanied by a landscape masterplan indicating how the development is to be integrated into the surrounding landscape and how hedgerow removal is compensated for. This will achieve in protecting the existing landscape character and reinforce it somewhat. The soils will support the tall vegetation selected in the landscape masterplan which will screen the development in time.

11.5.1.1 Magnitude of Change

During the construction phase there will be activity at the site of the Proposed Development. Machinery travelling to and from the site, site compounds and storage facilities as well as lighting and other construction aids will have an impact on the landscape in the short term.

During the construction process hedgerows will need to be cut back and there will be some removal of hedgerow to allow for the site entrance and sight lines. The overall field pattern will remain intact. The proposed planting of new hedgerows, trees and screening will add some new elements to the landscape pattern which will benefit it positively over time.

This development will be in place for more than 15 years which constitutes a long-term change (15 and 60 years as per the EPA guidelines). Landscape character will be affected by the change in land use resulting from construction on the site of the Proposed Development. The change experienced to the landscape will be due to the introduction and scale of the components of the proposed facility. The geographical extent will be confined to the fields and

road network surrounding the development.

The scale of change will be due to the digestion tanks and their contrast in form to other agricultural buildings and its difference from the agricultural character of surrounding fields. The size of the Proposed Development will not dominate the landscape more than other industrial units in nearby Ballynattin.

However, the scale and form of the Proposed Development will have a noticeable influence on the landscape within and near the site and incongruity will result directly following construction.

Because this landscape character area, the Eastern Corridor is linear, there will be no effect on the greater landscape character area or landscape unit type and the magnitude of change will not affect the landscape in its geographical extent. The general quality of existing trees and woodlands will help integrate the Proposed Development into the landscape. The proposals include screen planting and tree and hedgerow planting using native and naturalised trees and hedgerow materials. The reversibility of the development is not considered for the construction phase.

The overall magnitude of change will be **'medium.'** This is in line with the description of medium landscape change which is moderate in extent with the introduction of elements that may be prominent but "not necessarily substantially uncharacteristic in the context. Such development results in change to the character of the landscape but not necessarily reduction in landscape quality and perceived value."

11.5.1.2 Significance of Effects

Setting a **medium** magnitude of change against **low to medium** landscape sensitivity gives a significance of effects that is categorised as **'Moderate'** for medium sensitivity and **'Slight'** for low sensitivity according to the matrix in **Table 11.1**, above. Professional judgement recognising both the strong valuable rural character of the landscape close to an agri-industrial landscape rate the significance as **'moderate to slight'.**

As per EPA guidelines slight and moderate effects are defined as;

Slight: An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.

Moderate: An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.

The likely **slight to medium** effect will be adverse and medium term until the development is absorbed by maturing trees.

11.5.2 Landscape - Operational Phase

There will be no change to the landscape form or structures placed therein from the construction phase as the facility becomes operational. There is expected increase in traffic at the facility. As part of the landscape proposals, it is recommended that there will be a significant mixed screen planting wrapped around the proposed facility. This will largely include native and naturalised trees and plant material.

This will screen the scale and form of the structures and add additional deciduous trees and

Scots Pine to the overall landscape which blends with the landscape character area. Trees will add another favourable element to the landscape in the long run.

During the operational phase of the development, maturing trees present an opportunity to make a positive contribution to the overall landscape. The landscape sensitivity is not likely to change from the construction phase, but the magnitude of change will be lower as the landscape proposals start to establish and grow. In the medium term, the positive landscape impact of the trees and understory development will reduce the magnitude of change experienced at landscape level from medium to low.

Landscape Sensitivity: **Medium to Low**

Magnitude of Change: **Low**

Setting a **medium to low** landscape sensitivity against a **low** magnitude of change gives a **'slight'** rating for medium landscape sensitivity and a **'not significant'** rating for significance of effects at the operational phase of the proposed facility. Given the scale of the development, a significance of effects rating of '**slight'** is appropriate.

Significance of effects: **Slight**

The likely effect will be adverse and long term, but the tree planting and general landscape proposals will be positive and the benefits to the landscape will be permanent with many of the species listed in the planting schedule capable of living for more than 100 years.

11.5.3 Visual Assessment

In conducting the visual assessment for the Proposed Development, issues relating to views and viewpoints were considered including the amount of time over which a view would be experienced, the angle of the view and whether views would be full, partial, or glimpsed. The distance from the Proposed Development was considered and the extent of the area over which the proposed works would be visible. Initially a zone of theoretical visibility (**Appendix 2**) influenced the areas being considered for intervisibility. A ZTV is computer generated and presents the worst-case scenario and examines intervisibility without the effect of natural land cover, forests, woodlands, trees, buildings and vegetation. The area was visited and the most likely visual receptors identified. Again, as for the landscape effect, the duration of the visual impact was considered. The duration of the visual effects is considered as appropriate. As per EPA guidelines, duration of effects is categorised as follows.

Short-term Effects: Effects lasting one to seven years

Medium-term Effects: Effects lasting seven to fifteen years

Long-term Effects: Effects lasting fifteen to sixty years

Permanent Effects: Effects lasting over sixty years

As described in **Table 11.1** above, the magnitude of change is judged according to a set of criteria with results ranging from very high to negligible. Judgements are made based on the size of the proposed works and the geographical extent of the viewpoints. Consideration is also given to duration of effects as outlined above. In choosing the viewpoints to be assessed the scale at which the Proposed Development will have influence was considered and this is

considered within the magnitude of change as assessed. The sensitivity of each view is adjudged taking into consideration other factors apart from value and recognised designations. These include the susceptibility of the viewers, panoramas, frequency of visits, features and rarity of the view and the intact nature of the landscape being viewed. Sensory experiences of place, tranquillity, history, nature and awe also factor into viewpoint sensitivity.

A comprehensive assessment was made of potential viewpoints. These were then distilled down to a set of viewpoints which are the subject of the verified photomontage study. The accompanying verified view photomontage is to be read in conjunction with this report. In making these assessments, topography, site location, hedgerows systems, woodlands, and residences were considered as well as designated sensitivities and landscape as a resource for visual amenity, recreation, culture, and tourism.

11.5.4 Visual Impact – Construction Phase

The selected viewpoints were assessed, and this is summarised as outlined in **Table 11.2** below. The sensitivity at each viewpoint is set against the magnitude of change to arrive at a significance of effects as outlined in **Table 11.1** above. Again, the sensitivity of each viewpoint is set against the magnitude of change to that view to arrive at a significance of effects at each viewpoint. The matrix is not over relied on and where appropriate, professional judgement and experience is exercised.

11.5.4.1 Initial Field Study

The area around Moneylane was visited on 15th October 2024 and again on 10th November for assessment and viewpoint appraisal. The area was visited on 25th October 2024 for photography for verified photomontage production. The visual impact assessment is to be read with the 3Dimensional, verified photomontage booklet which accompanies this report. The site location and its hinterland were examined. Taking topography and vegetative cover into consideration, an inventory of viewpoints was selected. Upon establishing the location of likely viewpoint receptors each was visited and an assessment with respect to viewpoint sensitivity and the likely magnitude of change to this view due to the Proposed Development was made. The verified photomontages of these views examine the extent of any visual impact or loss of visual amenity at these viewpoints.

On the occasion of these initial field studies, conditions were shrouded somewhat on 15th October but clearer on 10th November and relatively good for the time of year. Trees were still in full leaf in October and had a typical autumnal presentation in November.

These views, VP 1-8, are assessed in detail at the construction stage and at the operational phase. The accompanying verified photomontage booklet prepared by 3Dimensional, gives a clear indication of the magnitude of change at each of these viewpoints. All viewpoints were taken from publicly accessible areas. Many have been accorded '**high**' receptor sensitivity which as iterated in the methodology above; is defined for viewpoints "that are recognised in policy or otherwise designated as being of value, or viewpoints that are highly valued by people that experience them regularly (such as views from houses or tourist-based views focused on the landscape). The composition, character and quality of the view may be such that its capacity for accommodating change may or may not be low. The principal management objective for the view is its protection from change that reduces visual amenity."

At the construction phase, the placing of the structures into the topography helps partially

absorb them into the landscape. The objectives of the landscape plan to protect the landscape and views from change that reduces visual amenity cannot be realised fully at the construction phase. The full effect of the tree planting will be more apparent during the operational phase when the plant material starts to establish and mature.

11.5.4.2 Visual Impact - Construction Phase

Table 11.2: Predicted Visual Impacts on Selected Viewpoints Assessed – Construction Phase

Viewpoint No.	**Location**	**Sensitivity**	**Magnitude of Change**	**Significance of Effects**	**Nature of effects**
VP1	Cooladangan	High	Medium	Significant	Adverse
VP2	Moneylane	High	High	Very Significant	Adverse
VP3	Moneylane	High	Medium	Significant	Adverse
VP4	Ballyduff South	High	Low	Moderate to Slight	Adverse
VP5	Ballyduff North	High	Low	Moderate to Slight	Adverse
VP6	Ballyduff North	High	Low	Moderate to Slight	Adverse
VP7	Mill Meadows	High	Low	Slight	Adverse
VP8	Knockanrahan Upr	High	Negligible	Not Significant	Neutral

View Point 1

This viewpoint represents pedestrians, road users and local residences. The landscape being viewed from this viewpoint is towards the Proposed Development over fields and a farmstead. Pedestrians, motorists, and cyclists have a low viewer sensitivity at this viewpoint as their experience is brief and glimpsed. However, residential receptors are accorded a '**high**' viewer sensitivity. The Proposed Development will be visible during construction. Therefore, the magnitude of change attributed to this view is '**medium**'. Setting a '**high**' viewpoint sensitivity against a '**medium'** magnitude of change to the viewpoint, results in a significance of effects that is rated as '**significant'** as outlined in Table 11.2 above. The nature of the effects will be adverse. The beneficial impact of tree planting and screening is not taken into consideration at the construction phase.

View Point 2

This viewpoint represents road users and local residences. Local residential receptors are

accorded a '**high**' viewpoint sensitivity whilst road users who experience the view in a fleeting way are a low sensitivity receptor group.

The Proposed Development will be visible from this viewpoint at the construction stage. Construction traffic, plant and machinery will be visible during construction. There will be no loss of elements in this view, but the form shape and scale of the proposals will be apparent at the construction stage. The magnitude of change at this viewpoint will be **'high'**. Setting a **'high'** magnitude of change against **'high'** viewpoint sensitivity as set out in Table 11.2 above, gives a significance of effects that is rated as '**Very Significant'.** At the construction phase, the potential benefit of planting and screening is not considered.

View Point 3

This viewpoint represents road users and local residences. Local residential receptors are accorded a '**high**' viewpoint sensitivity.

The Proposed Development will be partially visible during the construction stage at this viewpoint. Construction traffic, plant and machinery will be somewhat visible during construction. The expected magnitude of change at this viewpoint is **'medium'**. Setting a **'medium'** magnitude of change against **'high'** viewpoint sensitivity as set out in Table 11.2 above, gives a significance of effects that is rated as '**Significant'.** The impact of the landscape proposals is not considered for the construction stage as growth will not be effective until the Proposed Development is at the operational phase. This effect will be **short to medium term** and will reduce year on year as trees fill out and eventually screen the Proposed Development.

View Point 4

This viewpoint represents residential receptors and local road users. The presence of local residential receptors means this view has been accorded a '**high**' viewpoint sensitivity. Road users, pedestrians, cyclists, and motorists have a **low** viewer sensitivity as this view will only be experienced in a fleeting manner. The magnitude of change to this view will be '**low'** at the construction stage. Setting a '**high**' viewpoint sensitivity against a '**low'** magnitude of change to the viewpoint, results in a significance of effects that is rated as **'moderate to slight'** as outlined in Table 11.2 above. The duration of the effects will be medium term and the nature of the effects will be adverse.

View Point 5

This viewpoint represents residential receptors and road users. The view has been accorded a '**high'** viewer sensitivity because of the presence of residential receptors. Road users are accorded a low receptor sensitivity.

The magnitude of change to this view will be '**low'** during construction. Setting a '**high**' viewpoint sensitivity against a '**low'** magnitude of change to the viewpoint, results in a significance of effects that is rated as '**moderate to slight'** as outlined in Table 11.2 above. The impact will be **short to medium term** and will reverse during the operational phase once the proposed planting softens the digesters against the skyline.

View Point 6

This viewpoint represents pedestrians, road users and local residences. It is also the closest viewpoint to Glenart which is valued as an outdoor trail. The landscape being viewed from this

viewpoint is intact and displays to beneficial effect, the role tall hedgerows and deciduous trees make in defining the landscape character of the area. The view focuses on hill tops enclosing the valley in the middle of the view. Pedestrians, motorists, and cyclists have a low viewer sensitivity at this viewpoint as their experience is brief and glimpsed. However, residential receptors are accorded a '**high**' viewer sensitivity. The Proposed Development will be partially visible during construction with the digesters visible at the end of construction. Although the digesters break the skyline the tall hedgerow trees will absorb the Proposed Development effectively. Therefore, the magnitude of change attributed to this view is '**low**'. Setting a '**high**' viewpoint sensitivity against a '**low'** magnitude of change to the viewpoint, results in a significance of effects that is rated as '**moderate to slight'** as outlined in Table 11.2 above. The effect is adverse and medium term.

View Point 7

This viewpoint is taken from open space in a residential area. It represents local residences and those using the open space for play and recreation. With residential receptors and those depending on outdoor space for recreational use in mind, this viewpoint has a **high** viewpoint sensitivity. This view is through space in the built environment across the M11 and electrical infrastructure in the area. The view has some incongruous elements and is taken from an already developed area. It also benefits from screen planting along the motorway. The magnitude of change at this viewpoint is **low**. The Proposed Development will be visible later in the construction process. Setting a '**high**' viewpoint sensitivity against a '**low'** magnitude of change to the viewpoint, results in a significance of effects that is rated as 'moderate to slight' as outlined in Table 11.2 above. Given the incongruency presented by electrical infrastructure in the view **slight** is more appropriate for the significance of effects in this viewpoint.

View Point 8

This viewpoint represents pedestrians, people participating in play and recreation and the local residents of the nearby housing estate. The landscape being viewed from this viewpoint benefits from the maturing screen planting along the M11. The view across the road infrastructure is relatively secluded. Pedestrians, motorists, and cyclists have a low viewer sensitivity at this viewpoint as their experience is brief and glimpsed but recreational users of the tennis courts and the open space used for play have a higher receptor sensitivity. Residential receptors also have a '**high**' viewer sensitivity. The Proposed Development will not be seen during construction. Therefore, the magnitude of change attributed to this view is '**negligible**'. Setting a '**high**' viewpoint sensitivity against a '**negligible'** magnitude of change to the viewpoint, results in a significance of effects that is rated as 'slight to not significant' as outlined in Table 11.2 above. Given there, will be no intervisibility from viewpoint eight '**not significant**' is the appropriate rating. The nature of the effects will be neutral.

11.5.5 Visual Impact – Operational Phase

The operational phase of the project will not have any additional large impacts on visual receptors. There will be no change to structures in the views from the construction phase. There will be more vehicular movement into and out of the facility. There are specific considerations at each viewpoint which are addressed here below.

As part of the landscape and mitigation measures long term changes to the landscape are taken into consideration over the life of the project. The ability of the landscape proposals to not only mitigate but improve the quality of the views in line with landscape character over time is factored in at the operational stage of the Proposed Development. The landscape measures

are important during the operational phase of the project when tree growth will start to contribute to protecting visual amenity. The species, plant specifications optimum growth rates and establishment time is considered. The development and growth of plant material in the short to medium term is considered for the screening effect of tree and hedgerow growth.

The selected viewpoints were assessed as for the construction phase above, and this is summarised as outlined in **Table 11.3** below. The sensitivity at each viewpoint is set against the magnitude of change to arrive at a significance of effects as outlined in Table 11.1 above. The matrix is not over relied on, and professional judgement and experience is employed to rate the viewpoints.

The operational phase of the project gives an opportunity to the developer to future proof the visual amenity afforded by trees and hedgerows.

The operational period will coincide with the establishment of the screen trees which will buffer the key areas around the structures. It is estimated that there will be effective screening established in the medium term with the ameliorating effect of the landscape proposals increasing each year. Many of the selected species will live for more than 100 years having a permanent positive impact on the views.

All the plant material as well as the trees specified are to be sourced and propagated locally. This material is to be disease free and well maintained, irrigated appropriately and allowed to establish optimally to achieve the best possible growth outcomes. Correct earthworks and contouring in conjunction with local drainage design will optimise tree growth and hedgerow establishment.

Table 11.3: Predicted Visual Impacts on Selected Viewpoints Assessed – Operational Phase

Viewpoint No.	**Location**	**Sensitivity**	**Magnitude of Change**	**Significance of Effects**	**Nature of effects**
VP1	Cooladangan	High	Low	Moderate	Adverse
VP2	Moneylane	High	Low	Moderate	Adverse
VP3	Moneylane	High	Low	Moderate to Slight	Adverse
VP4	Ballyduff South	High	Low	Moderate to Slight	Adverse
VP5	Ballyduff North	High	Low	Moderate to Slight	Adverse
VP6	Ballyduff North	High	Low	Moderate to Slight	Neutral
VP7	Mill Meadows	High	Low	Slight	Adverse

For the purpose of this assessment the beneficial effect of tree screening as specified in the landscape plans is considered in the short to medium term. Likely growth and screening to year

ten post construction forms the basis of the assessment during the operational phase. The ability of tree screening and tree development to continue to provide visual amenity in the medium to long term is noted for all the viewpoints.

View Point 1

This viewpoint represents pedestrians, road users and local residences. The landscape, being viewed from this viewpoint is towards the Proposed Development over fields and a farmstead. Pedestrians, motorists, and cyclists have a low viewer sensitivity at this viewpoint as their experience is brief and glimpsed. However, residential receptors are accorded a '**high**' viewer sensitivity. The Proposed Development will be visible during construction though some construction activity will have low visibility at this viewpoint. There will be no loss of elements in this view but there will be an introduction of items of a new scale and mass. The proposed planting will have good effect in the short to the medium term and will effectively absorb the entire scale of the proposals in the view in the medium to long term. The magnitude of change attributed to this view is '**low**' at the operational stage. Setting a '**high**' viewpoint sensitivity against a '**low'** magnitude of change to the viewpoint, results in a significance of effects that is rated as '**moderate**' as outlined in Table 11.3 above.

View Point 2

This viewpoint represents road users and local residences. Local residential receptors are accorded a '**high**' viewpoint sensitivity however road users, motorists, cyclists and pedestrians do not experience this view for any significant length and are accorded a **low** receptor sensitivity.

There will be no loss of landscape elements in this view. The Proposed Development will appear screened in the short to medium term and increasingly thereafter. The maturing trees and hedgerows will effectively screen the Proposed Development as demonstrated in the verified photomontage for this view in the short to medium term. The magnitude of change at this viewpoint is **'low'**. Setting a **'low'** magnitude of change against **'high'** viewpoint sensitivity as set out in Table 11.3 above, gives a significance of effects that is rated as 'Moderate to Slight'. Considering the scale of the development '**Moderate'** is the more appropriate assessment. With each passing year tree development will eventually reverse the significance of the effects on this view. Eventually in the medium to long term not only will the development be fully screened but it will increase the visual amenity of the view. Trees will remain in this view permanently increasing its visual amenity for a period of greater than 100 years.

View Point 3

This viewpoint represents road users and local residences. Local residential receptors are accorded a '**high**' viewpoint sensitivity. Road users as discussed have a low receptor sensitivity.

There will be no loss of landscape elements in the view. The Proposed Development will be screened in this viewpoint in the short to medium term. It will be significantly screened as compared to the construction stage. The expected magnitude of change at this viewpoint will be **'low'** once the proposed band of trees starts to mature. Setting a **'high'** magnitude of change against a **'low'** viewpoint sensitivity as set out in Table 11.3 above, gives a significance of effects that is rated as **'Moderate to Slight'.** With each passing year tree development will eventually reverse the significance of the effects on this view and a pleasant woodland copse will develop, screening the development completely. Eventually oak and beech trees will

provide visual amenity which will be permanent and will last for a period of greater than 100 years.

View Point 4

This viewpoint represents residential receptors and local road users. Given the presence of local residential receptors, this view has been accorded a '**high**' viewpoint sensitivity. Road users, pedestrians, cyclists, and motorists have a low viewer sensitivity as this view will only be experienced in a fleeting manner. There will be no loss of elements in this view. The landscape as seen in the view will not change but there will be the addition of a new and unfamiliar scale and form on the skyline. Distance will protect the impact of the digesters in the view. In the medium to the long-term trees will take this place on the skyline. The magnitude of change to this view during the operational phase will therefore be '**low'.** Setting a '**high**' viewpoint sensitivity against a '**low'** magnitude of change to the viewpoint, results in a significance of effects that is rated as **'moderate to slight'** as outlined in Table 11.3 above. The Proposed Development is expected to have good screening at the base in the short to medium term. The positive effects of the tree and hedgerow planting will increase each year with much of the tree planting forming a new silhouette on the skyline with the beneficial effect lasting for a period of greater than 100 years.

View Point 5

This viewpoint represents residential receptors and road users. The view has been accorded a '**high'** viewer sensitivity because of the presence of residential receptors. Local topography and the mature stands of trees and hedgerows will absorb the development at the operational phase in this view. A hilly outcrop behind the digesters reduces the visual impact of the proposals against the skyline. The proposed planting will also significantly soften the digesters as viewed against the sky in the short to medium term. In the medium to long term the digesters will be fully absorbed and softened by the maturing trees as proposed.

The distance and planting ensure the magnitude of change to this view will be '**low'.** Setting a '**high**' viewpoint sensitivity against a '**low'** magnitude of change to the viewpoint, results in a significance of effects that is rated as '**moderate to slight'** as outlined in Table 11.3 above.

View Point 6

This viewpoint represents pedestrians, road users and local residences. Pedestrians, motorists and cyclists have a low viewer sensitivity at this viewpoint as their experience is brief and glimpsed. The trail at Glenart wood is considered at this viewpoint also. Recreational and residential receptors are accorded a '**high**' viewer sensitivity. The Proposed Development will be visible at the operational phase in the short to medium term. It is at a distance from residential receptors and is helped by absorption from existing mature trees and hedgerows along the hilltop. The Proposed Development partially breaks the skyline but benefits from the planting specification and the existing trees and hedgerows. Therefore, the magnitude of change attributed to this view is '**low**'. Setting a '**high**' viewpoint sensitivity against a '**low'** magnitude of change to the viewpoint, results in a significance of effects that is rated as '**moderate to slight'** as outlined in Table 11.3 above.

View Point 7

This viewpoint is taken from open space in a residential area. It represents local residences and those using the open space for play and recreation. With residential receptors and those

depending on outdoor space for recreational use in mind, this viewpoint has a **high** viewpoint sensitivity. This view is through space in the built environment across the M11 and electrical infrastructure in the area. The view has some incongruous elements and is taken from an already developed area. It also benefits from screen planting along the motorway. The magnitude of change at this viewpoint is '**low'**. Setting a '**high**' viewpoint sensitivity against a '**low'** magnitude of change to the viewpoint, results in a significance of effects that is rated as 'moderate to slight' as outlined in Table 11.3 above. **Slight** is the more appropriate rating for this viewpoint. The development will eventually be screened from this viewpoint as trees mature and blend in with the hedgerow trees and motorway planting in the medium to long term.

View Point 8

This viewpoint represents pedestrians, people participating in play and recreation and the local residents of the nearby housing estate. The landscape being viewed from this viewpoint benefits from the maturing screen planting along the M11. The view across the road infrastructure is relatively secluded. Pedestrians, motorists, and cyclists have a low viewer sensitivity at this viewpoint as their experience is brief and glimpsed but recreational users of the tennis courts and the open space used for play have a higher receptor sensitivity. Residential receptors also have a '**high**' viewer sensitivity. The Proposed Development will not be visible during the operational phase. Therefore, the magnitude of change attributed to this view is '**negligible**'. Setting a '**high**' viewpoint sensitivity against a '**negligible'** magnitude of change to the viewpoint, results in a significance of effects that is rated as 'slight to not significant' as outlined in Table 11.3 above. Having regard for the verified photomontage for viewpoint eight '**not significant**' is the appropriate rating. The nature of the effects will be neutral.

11.5.6 'Do Nothing' Scenario

There will be no difference to the views or the landscape for a 'Do Nothing' scenario. It is likely the site will remain as pastoral grassland until development pressures are exerted on the area as the town of Arklow grows in the future. It is unlikely senescent trees will be replaced without a requirement due to development.

11.5.7 Cumulative Impact

There are no other known proposals of a similar nature planned for this area. The significance of effects will therefore be no greater on the landscape or visual receptors than as assessed above.

11.6 Mitigation Measures

The following landscape protection and landscape impact mitigation measures should be put in place to avoid, eliminate, or minimise any potential landscape and visual impact associated with the construction of the Proposed Development.

- Any area of site subject to soil disturbance is to be repaired, the soil reworked into the site, recontoured and modelled. Matching sod/seed sown to blend the topography back into the rural landscape.
- All construction materials, fill, gravel, etc to be removed from the site and surrounding fields once the works are complete.
- Earthworks and hedgerow banks to facilitate appropriate drainage for the soil type and this

to be detailed at the design detail stage.

- An irrigation plan to be put in place to allow for establishment of plantings with the irrigation water source to be identified prior to the spring of the first year of planting. A plan to irrigate in hot weather and as required to be put in place especially for the first two years after planting. Recovered process water which has been cooled may be used.

Avoidance Prevention Reduction and Offsetting

Mitigation is discussed below as a measure of avoidance, prevention, reduction and offsetting of impacts and effects. The positioning of the digestion tanks into the topography along with specified screen planting reduces impact of the structures against the skyline. Other measures include;

Disease

- The avoidance of *Fraxinus excelsior*, ash, in any planting will not only protect existing landscape trees from the biologically infectious chalara disease, but it will also protect the local habitats that ash supports for as long as possible, by avoiding this biosecurity risk.

- Any plant materials brought on site to be disease free of local provenance, to at a minimum hold all relevant plant passports and preferably be sourced field grown and inspected at source prior to planting. This is to avoid spreading potential infections to local populations. All trees and shrubs will conform to the specification for nursery stock as set out in British Standard 3936 Parts 1 (1992) and 4 (1984). Advanced Nursery stock trees where used in tree planting shall conform to BS 5236.Standards for plant establishment to conform to at a minimum BS 8545:2014 Trees: from nursery to independence in the landscape.

Topsoil

- Avoid bringing any additional topsoil on site. Use local soil to make localised repairs. Where additional topsoil is required use from a matching source as local as possible to the Proposed Development. Do not mix topsoil and sub soil during construction. Identify storage area where soils are to be stored separately until they are reworked into the contours.

Invasive Species and Biohazards

- Avoid spreading or bringing invasive plant species onsite in soil or plant materials. Soil and plant material hygiene to be observed and plant, boots, tools, and equipment to be clean before being brought on site. All involved at the construction stage to be made aware of this prior to coming on site.

  Invasive Alien Plant Species include;
  - Japanese knotweed *Fallopia japonica*
  - Giant knotweed *Fallopia sachalinensis*
  - Bohemian knotweed *Fallopia x bohemica*
  - Himalayan knotweed *Persicaria wallichii*
  - Old man's beard *Clematis vitalba*
  - Winter heliotrope *Petasites fragrans*
  - Garden Yellow Archangel *Lamiastrum galeobdolon ssp argentatum*

Of these, knotweed is most likely to be problematic if introduced on site.

- *Thaumetopoea processionea*, commonly known as the Oak Processionary Moth (OPM) is not to be brought onsite and reported immediately to the Department of Agriculture, Food and the Marine (DAFM), if identified on or near to the site.
- *Xylella fastidiosa* also presents a threat to new and existing planting and is to be avoided and reported to DAFM if detected on or near the site.
- All hedgerows and hedgerow trees to be protected during the construction process with a root protection zone established, prior to the commencement of construction. No root systems to be trenched severed or cut and there is to be no piling of building materials, soil, plant, containers, or any loading material on the protected root zone during construction. All parties involved in the construction process to be made aware of this avoidance measure. No unnecessary damage is to occur to the existing tree and hedgerow complex during construction or afterwards during operations. At the detailed design stage tunnelling is to be preferred over trenching where pipework interacts with existing hedgerow systems in selected areas. This is to minimise the impact of pipe works on adjacent hedgerow structures.
- Palisade fencing is to be screened with hedging and trees.
- Planting specifications to be overseen by a qualified landscape architect during the construction and operational period as required.

Reinforcing landscape

Any damage to field boundaries received during construction to be repaired in the traditional manner. Low banks for planting trees and hedgerows are to be reinforced where possible. The screening planting and new tree planting will reinforce much of the landscape pattern.

Following correct landscape construction and planting, all plant material is to be properly and satisfactorily, irrigated pruned and given correct amounts of appropriate fertiliser to ensure plant health and vigour.

Landscape Maintenance and Management Plan

- A landscape management plan is to be produced and ready post construction so that all new and existing planting, hedgerows, and trees will be immediately cared for and promptly maintained. This plan along with any necessary method statements to be produced during the operational phase of the planting by a qualified landscape architect.

- Landscape maintenance and management plans ought to remain in place until all plantings are fully established and during the life of the Anaerobic Digestion Facility. The aim of the plan is to continue to ensure landscape character is maintained as well as biodiversity and habitat protection.

- A landscape maintenance and management plan will include a small woodland/hedgerow management plan and will address appropriate hedgerow cutting, timing of operations, protection of hedgerow habitats, address irrigation of newly planted trees or infill plants, accessing water, pruning, weeding, fertilising, trimming, management of dead and diseased wood, and general maintenance. Plant establishment to be provided for appropriately. All amelioration as required for good plant establishment to be tailored to the plants, trees, and hedgerows to satisfy their continued growing needs.

- The mitigation measures as outlined are conducted throughout the life of the operation.

- Periodically the landscape maintenance and management plans to be reviewed to ensure growth, screen establishment and general appearance of the site is fulfilling its original intent. Stake belts are to be loosened as required and stakes cut down and or removed as appropriate.

- Hedgerow maintenance and laying are to occur outside of the nesting season and where hedgerows are weak and require significant work to rejuvenate the hedgerows, this to be completed on each side, on alternate years.

- Flowering hedgerow plants and other pollinators are to be factored into the hedgerow cutting regime with respect to timing of operations.
- Tree surgery is to be used to ensure the longevity of the mature trees on the site boundaries.

Buildings and Structures

The colour of the buildings as selected will blend into the landscape similarly to agricultural buildings. Wall colours are to be lighter than roof colour. A suitable dark green specification is to be applied on all metal cladding. The least reflective colours to be chosen to avoid light reflection and to reduce the apparent size of the buildings in the landscape. Standards as expected for large agricultural buildings to be applied to prevent incongruent colour choices on the buildings and structures.

Failure of Mitigation Measures

The landscape proposals can be regarded as mitigation measures in this context. A good diversity and mix of species sizes and varieties along with the landscape management proposals as outlined above will ensure there is little chance of complete failure of the planting. In the unlikely event that this is the case, the screening potential of trees will be lost and the ability of the landscape to absorb the development will be diminished. The potential visual amenity that maturing trees lend to a landscape will also be lost. The long term and permanent benefit of trees will also be lost if there is a failure of planting as a mitigation measure. Should failure occur, the entire planting proposals will have to be reinstated upon detailed examination as to why they were not successful in the first instance. Competent and qualified horticulturist to be employed to plant, establish and manage the landscape and trees once they are growing effectively.

11.7 Interactions and Cumulative Impact

Other environmental impacts which will interact with landscape and visual impacts in the case of this Proposed Development are biodiversity related and are generally positive and beneficial. Mitigation measures which avoid damage to the landscape and views will also help mitigate biodiversity loss.

11.7.1 Biodiversity and Carbon Absorption

Biodiversity, floral, faunal, and microbial will benefit from tree planting and tree maintenance and the use of native and naturalised species as prescribed in the planting mix. There will also be a pollinator benefit from the hedgerow specifications, increasing the habitats for bees and other pollinating insects. Adding native and naturalised trees to the landscape has a

generalised effect of increasing habitat size and habitat connectivity in the area. It adds to the corridors which connect hedgerows, woodlands, and habitats to each other.

The avoidance of *Fraxinus excelsior*, in the planting plan species mix will not only protect existing landscape trees from the biologically infectious chalara disease, but it will also protect the local habitats that ash supports for as long as possible, by avoiding this biosecurity risk. Avoiding infectious plant diseases in plant selection will also prevent spreading disease to local tree stands.

The emphasis is to be on plant selection of disease resistant, resilient, locally produced and propagated, screening trees of native and naturalised provenance. This will incorporate alternative climax species to ash and will ensure a good addition to the local biodiversity. The requirement to use locally sourced, produced and propagated, native and naturalised plant material will decrease the chances of introducing disease to the system. Climax trees like oak in the planting specification ensures the schedule of planting is maximising its capacity as a carbon absorptive sink. This service will continue permanently i.e. for a period of greater than 60 years. The plantation of native and naturalised trees around the proposed facility will also ensure that as trees age and decline in the landscape and commercial forestry is harvested, in this area, there will be a woodland replacement in place. Maturing oak, Scots Pine, beech and other climax trees will ensure there are species present to replace ash in the ecosystem. These species can absorb carbon in increasing quantities each year until maturity. Maturity is expected to continue for greater than 100 years.

11.7.2 Residual Impacts

Once all mitigation measures have been implemented and there is ongoing care provided to the landscape tree planting and hedgerows over the life of the project, the Proposed Development will not be hidden but it will be effectively screened, and a plantation of trees will be an addition to the landscape. Year on year the development of taller trees will continue to absorb the Proposed Development at Viewpoints 1 and 2. Apart from the impacts as outlined in the assessment above, no further residual impacts are expected.

References

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County Wicklow Landscape Character Assessment for WCDP 2022-2028

Appendix 11.1: Zone of Theoretical Visibility ZTV, Viewpoint Locations, Soil Type Map

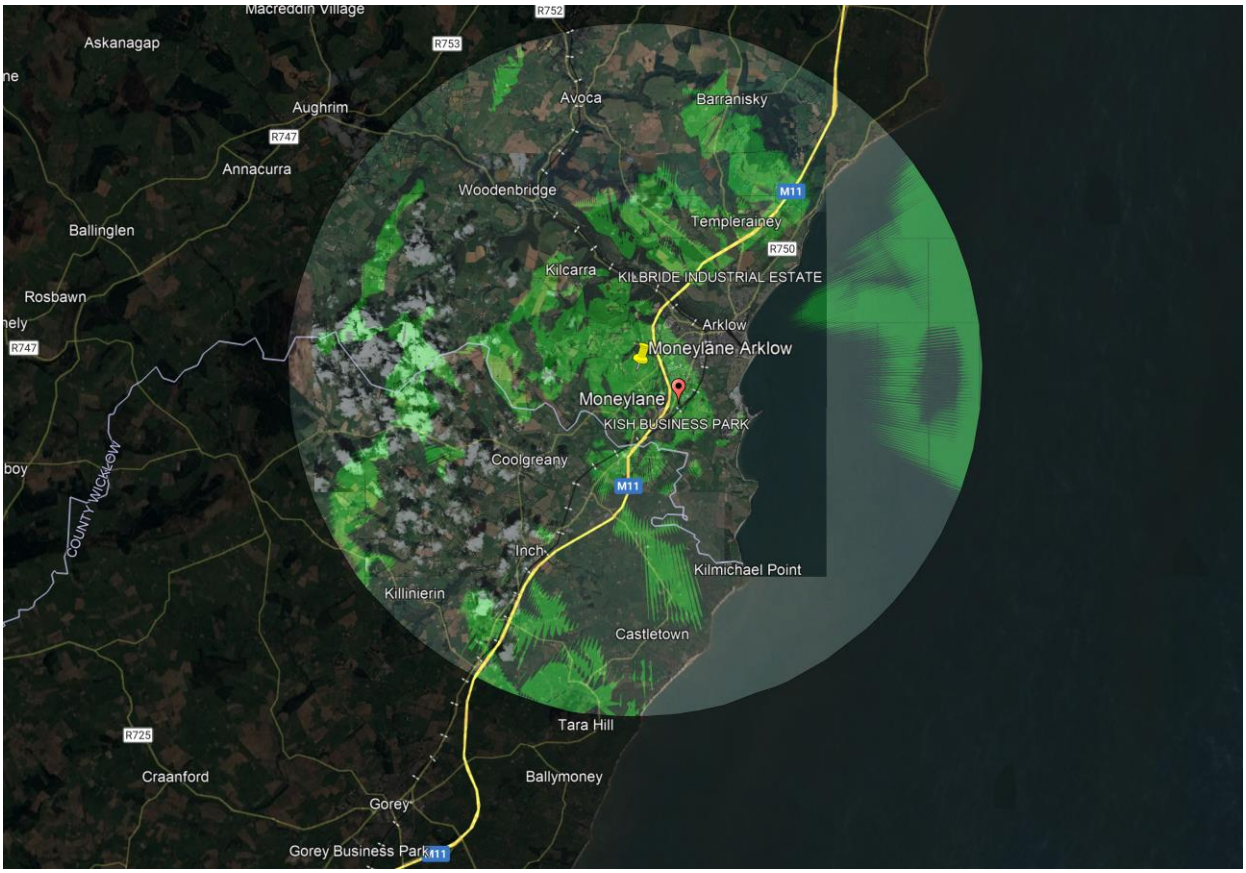


Figure 11.23: Zone of Theoretical Visibility (viewshed analysis).

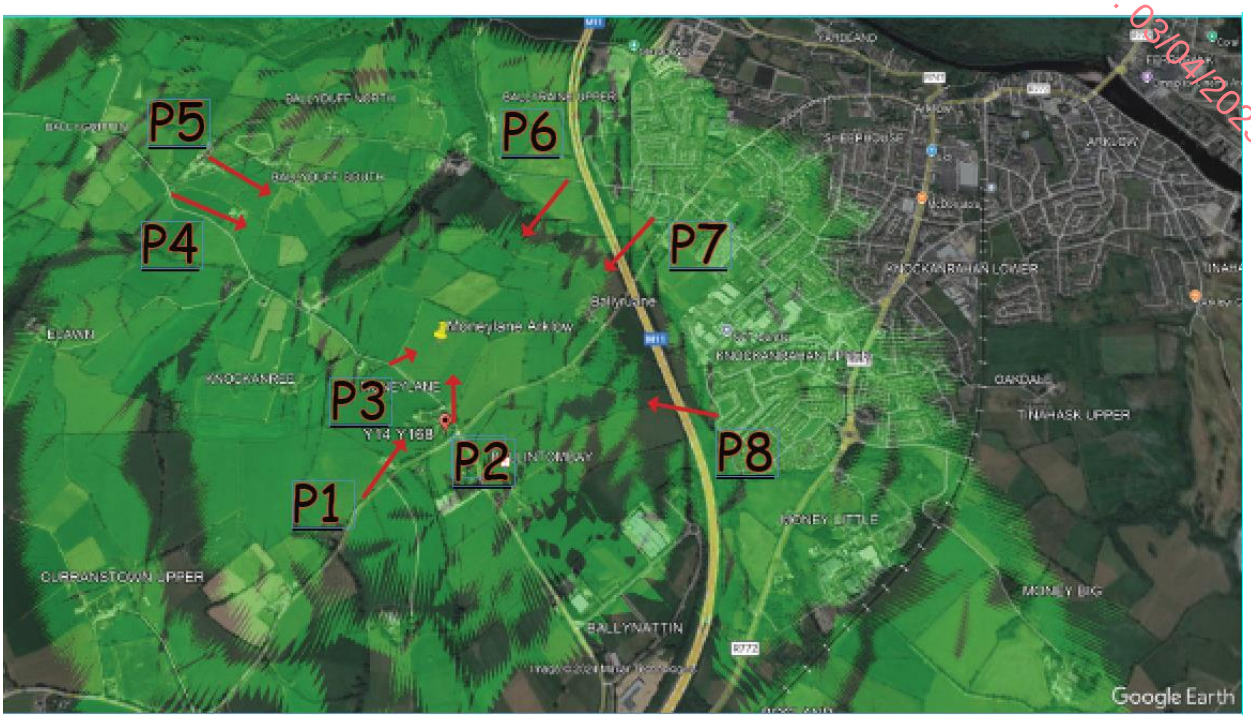


Figure 11.24: Verified photomontage viewpoint locations.

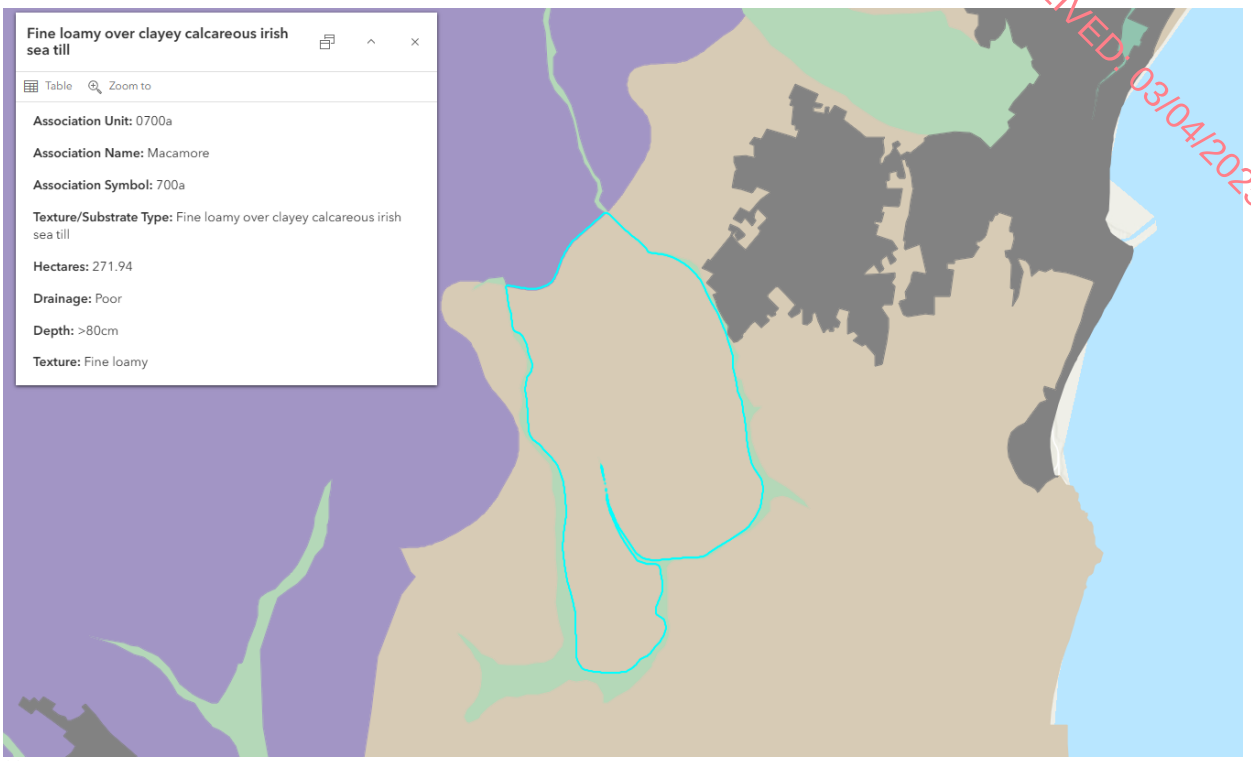


Figure 11.25: Soil Association

[23] https://www.arcgis.com/apps/mapviewer Esri, Environmental Protection Agency & Teagasc SIS National Soils Map Ireland

Appendix 11.2: Field Survey Photoset

Landscape Character at Moneylane, Arklow and the surrounding area.

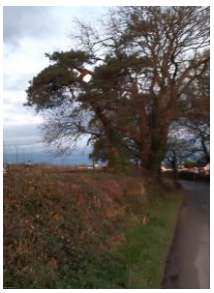
The site of the Proposed Development lies within the townland of Moneylane. It is fertile pastureland suited to grass production for grazing and dairying. The field system defines the landscape pattern and is a particularly excellent example of a relict eighteenth century landscape. The outer edge of historic demesnes is characterised by tall deciduous tree plantations in hedgerows. In this case the presence of oak, beech and Scots pine planted onto high banks, indicates an intentional historical planting plan. Historical mapping correlate this finding of the field survey. At a local level this strongly influences the landscape character of the area. Woodland and forestry surround the field system.



Large fields are enclosed with hedgerows on a bank and drain system. This facilitates good tree growth and establishment in oak beech and Scots pine.




There is a higher percentage of oak represented in the hedgerow tree species found in the field boundaries near the site of the Proposed Development than one encounters in other parts of the country. This adds to the definition of landscape character at a local level.

The absence of hedgerow suggests some original tree lines were the outer reaches of

eighteenth century demesne design. Oak and Scots pine are particularly combined as hedgerow trees in the area. A little further from the site ash predominates as a hedgerow tree.




Field boundaries defined by banked ditches and drains are typically planted with whitethorn as expected but there is also a large amount of holly in the understory of oak trees and gorse associated with Scots pine, as above.




The sides of the banks are mostly open dropping to a lower drain and richly representative of an herbaceous woodland layer of plants including fern. Some segments of bank are faced in local stone and reinforced in this way.

Others are dramatically high and have retained height over time due to the nature of the local soils. The enclosure type defines landscape character which is so generated by the anthropogenic cultural landscape.



The landscape also contains some incongrous elements related to electrical, water and of course the motorway infrastructure. It slightly weakens the landscape character in the area at a local level. However, as an element of the overall landscape character area as assessed in the the Wicklow County Development Plan, the M1, forms the spine of the Eastern Corridor LCA. As a linear space major road infrastructure links a variety of landscapes with differing characteristics at local level.


Local roads are an integral part of the landscape character at a local level. They are busy at this proximity to Arklow which reduces somewhat the level of rural tranquility one would associate with similar landscapes. They are not an incongruent feature of this landscape at a local landscape scale. Large industrial units are visible in the landscape. Woodland and tree plantations help integrate the scale and form of the buildings and reduce their incongruity at landscape character and local level.

The topography rolls and descends towards the coast and to streams and rivers. The topography shields the coastal landscape character areas which neighbour the Eastern Corridor LCA.

There is a rapid descent to the local beaches which are protected by the hilly backdrop. The coastal landscape character areas which are sensitive won't be affected by the Proposed Development.