

## CHAPTER 4 LANDSCAPE AND VISUAL IMPACT ASSESSMENT

### 4.1 INTRODUCTION

#### 4.1.1 Backgrounds and Objectives

Macro Works Limited was commissioned by Boliden Tara Mines DAC (BTM) to undertake the Landscape and Visual Impact Assessment (LVIA) Chapter of Environmental Impact Assessment Report for proposed buttressing works to be undertaken on a selection of the dam walls of the Randallstown Tailings Facility. These works are proposed to be undertaken with a view to increasing the Factor of Safety associated with the embankment dam walls.

This Landscape and Visual Assessment (LVIA) has been prepared in respect of a planning application in the townlands of Randalstown, Silloge and Simonstown in County Meath. The LVIA report describes the landscape context of the proposed development and assesses the likely landscape and visual impacts of the proposed development on the receiving environment. Although closely linked, landscape and visual impacts are assessed separately.

**Landscape Impact Assessment (LIA)** relates to assessing effects of a development on the landscape as a resource in its own right and is concerned with how the proposal will affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character.

**Visual Impact Assessment (VIA)** relates to assessing effects of a development on specific views and on the general visual amenity experienced by people. This deals with how the surroundings of individuals or groups of people may be specifically affected by changes in the content and character of views as a result of the change or loss of existing elements of the landscape and/or introduction of new elements. Visual impacts may occur from; Visual Obstruction (blocking of a view, be it full, partial or intermittent) or; Visual Intrusion (interruption of a view without blocking).

#### 4.1.2 Statement of Authority

This LVIA was prepared by Macro Works Ltd. Relevant experience includes landscape and visual assessments for a range of industrial, commercial and infrastructural developments. Experience includes landscape and visual assessments for a range of industrial, commercial and infrastructural developments including over 150 no. solar farm developments and the

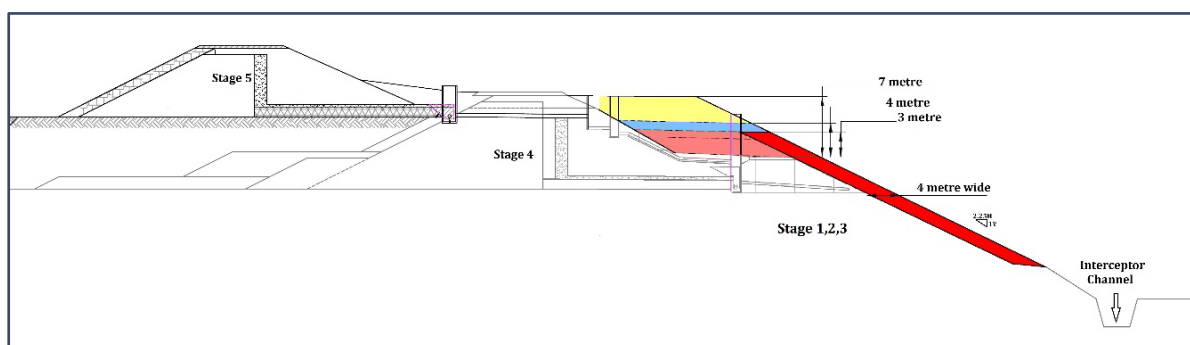
assessment over 150 no. wind energy developments, including both extractive and infill projects.

## 4.2 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

### 4.2.1 Description of the Proposed Development

Boliden Tara Mines DAC (BTM) is proposing engineering works at the Randalstown Tailings Storage Facility (TSF) which involves the construction of a reinforcement buttress to the extant embankment walls of the TSF. The proposed development is to add additional material to approximately 3858.8 linear metres of the existing extant embankment walls around the southern, south-western, south-eastern and eastern perimeter of the Randalstown TSF site (as indicated on planning drawings presented in Appendix 3.A) which is located approximately 2.8km northwest of the centre of Navan, County Meath.

BTM has recently become a member of the International Council for Mining and Metals (ICMM) and is in the process of adopting the Global Industry Standard on Tailings Management (GISTM). A key objective of GISTM is to address the risk of tailings embankment failure through conservative design criteria, independent of trigger mechanisms, in order to minimise potential impacts. The proposed development will increase the factor of safety (FoS) of the extant embankment walls of the tailings facility. The proposed buttress, to be constructed on the downstream slope of and at the crest of the Stage 1, 2 and 3 Starter Embankments will provide additional support to the Stage 4 dam embankment wall in order to increase the overall stability of the upstream raises i.e Stages 4 and 5. The construction of the buttress will involve the placement of rock material on the crest of Stages 1,2 and 3 supported in by a widening of the side slope using glacial till (Figure 4.1 refers).



**Figure 4.1** Cross section of facility embankment with proposed buttress

### 4.2.2 Study Area

From similar studies it is anticipated that the proposed development is likely to be difficult to discern beyond approximately 2km and is not likely to give rise to significant landscape or visual impacts beyond approximately 1km. In the interests of a comprehensive appraisal, a 2km radius study area was selected in this instance.

## 4.3 ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

### 4.3.1 Assessment Methodology

Production of this Landscape and Visual Impact Assessment involved;

- A desktop study to establish an appropriate study area, relevant landscape and visual designations in the Meath County Development Plan ( 2021 – 2027) as well as other sensitive visual receptors. This stage culminates in the selection of a set of potential viewpoints from which to study the effects of the proposed development;
- Fieldwork to establish the landscape character of the receiving environment and to confirm and refine the set of viewpoints to be used for the visual assessment stage;
- Assessment of the significance of the landscape impact of the proposed development as a function of landscape sensitivity weighed against the magnitude of the landscape impact; and
- Assessment of the significance of the visual impact of the proposed development as a function of visual receptor sensitivity weighed against the magnitude of the visual impact. This aspect of the assessment is supported by photomontages prepared in respect of the selected viewpoints. Photomontages are presented in Appendix 4.A
- Incorporation of mitigation measures to reduce potential impacts and estimation of residual impacts once mitigation has become established.

This LVIA uses methodology as prescribed in the following guidance documents:

- Environmental Protection Agency (EPA) publication 'Guidelines on the Information to be contained in Environmental Impact Statements (updated in 2022) and the accompanying Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (updated 2015); and
- Landscape Institute and the Institute of Environmental Management and Assessment publication entitled Guidelines for Landscape and Visual Impact Assessment (2013).

**Note:** Due to the nature of the proposed development, it was deemed that the assessment did not need to include construction phase effects. Therefore, this assessment relates to operational phase effects only.

### 4.3.2 Landscape Impact Assessment Criteria

When assessing the potential impacts on the landscape resulting from a proposed development, the following criteria are considered:

- Landscape character, value and sensitivity;
- Magnitude of likely impacts; and
- Significance of landscape effects

The sensitivity of the landscape to change is the degree to which a particular landscape receptor (Landscape Character Area (LCA) or feature) can accommodate changes or new elements without unacceptable detrimental effects to its essential characteristics. Landscape value and sensitivity are classified using the following criteria set out in **Table 4.1**.

**Table 4.1 Landscape Value and Sensitivity**

Sensitivity	Description
<b>Very High</b>	Areas where the landscape character exhibits a very low capacity for change in the form of development. Examples of which are high value landscapes, protected at an international or national level (World Heritage Site/National Park), where the principal management objectives are likely to be protection of the existing character.
<b>High</b>	Areas where the landscape character exhibits a low capacity for change in the form of development. Examples of which are high value landscapes, protected at a national or regional level (Area of Outstanding Natural Beauty), where the principal management objectives are likely to be considered conservation of the existing character.
<b>Medium</b>	Areas where the landscape character exhibits some capacity and scope for development. Examples of which are landscapes, which have a designation of protection at a county level or at non-designated local level where there is evidence of local value and use.
<b>Low</b>	Areas where the landscape character exhibits a higher capacity for change from development. Typically this would include lower value, non-designated landscapes that may also have some elements or features of recognisable quality, where landscape management objectives include, enhancement, repair and restoration.

<b>Sensitivity</b>	<b>Description</b>
<b>Negligible</b>	Areas of landscape character that include derelict, mining, industrial land or are part of the urban fringe where there would be a reasonable capacity to embrace change or the capacity to include the development proposals. Management objectives in such areas could be focused on change, creation of landscape improvements and/or restoration to realise a higher landscape value.

The magnitude of a predicted landscape impact is a product of the scale, extent or degree of change that is likely to be experienced as a result of the proposed development. The magnitude takes into account whether there is a direct physical impact resulting from the loss of landscape components and/or a change that extends beyond the application site boundary that may have an effect on the landscape character of the area. **Table 4.2** refers.

**Table 4.2 Magnitude of Landscape Impacts**

<b>Magnitude of Impact</b>	<b>Description</b>
<b>Very High</b>	Change that would be large in extent and scale with the loss of critically important landscape elements and features, that may also involve the introduction of new uncharacteristic elements or features that contribute to an overall change of the landscape in terms of character, value and quality.
<b>High</b>	Change that would be more limited in extent and scale with the loss of important landscape elements and features, that may also involve the introduction of new uncharacteristic elements or features that contribute to an overall change of the landscape in terms of character, value and quality.
<b>Medium</b>	Changes that are modest in extent and scale involving the loss of landscape characteristics or elements that may also involve the introduction of new uncharacteristic elements or features that would lead to changes in landscape character, and quality.
<b>Low</b>	Changes affecting small areas of landscape character and quality, together with the loss of some less characteristic landscape elements or the addition of new features or elements.
<b>Negligible</b>	Changes affecting small or very restricted areas of landscape character. This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing landscape or are hardly perceivable.

The significance of a landscape impact is based on a balance between the sensitivity of the landscape receptor and the magnitude of the impact. The significance of landscape impacts is arrived at using the following matrix set out in **Table 4.3**.

**Table 4.3 Impact significance matrix**

Scale/Magnitude	Sensitivity of Receptor				
	Very High	High	Medium	Low	Negligible
Very High	Profound	Profound-substantial	Substantial	Moderate	Slight
High	Profound-substantial	Substantial	Substantial-moderate	Moderate-slight	Slight-imperceptible
Medium	Substantial	Substantial-moderate	Moderate	Slight	Imperceptible
Low	Moderate	Moderate-slight	Slight	Slight-imperceptible	Imperceptible
Negligible	Slight	Slight-imperceptible	Imperceptible	Imperceptible	Imperceptible

**Note:** Judgements deemed 'substantial' and above are considered to be 'significant impacts' in EIA terms.

#### 4.3.3 Visual Impact Assessment Criteria

As with the landscape impact, the visual impact of the proposed development will be assessed as a function of sensitivity versus magnitude. In this instance the sensitivity of the visual receptor, weighed against the magnitude of the visual effect.

#### 4.3.4 Sensitivity of Visual Receptors

Unlike landscape sensitivity, the sensitivity of visual receptors has an anthropocentric basis. It considers factors such as the perceived quality and values associated with the view, the landscape context of the viewer, the likely activity they are engaged in and whether this heightens their awareness of the surrounding landscape. A list of the factors considered in estimating the level of sensitivity for a particular visual receptor is outlined below and used in **Table 4.6** below to establish visual receptor sensitivity at each VRP:

1. **Susceptibility of Receptors** - In accordance with the Institute of Environmental Management and Assessment (“IEMA”) Guidelines for Landscape and Visual Assessment (3rd edition 2013) visual receptors most susceptible to changes in views and visual amenity are;

- *“Residents at home;*
- *People, whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focussed on the landscape and on particular views;*
- *Visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience;*
- *Communities where views contribute to the landscape setting enjoyed by residents in the area; and*
- *Travellers on road rail or other transport routes where such travel involves recognised scenic routes and awareness of views is likely to be heightened”.*

Visual receptors that are less susceptible to changes in views and visual amenity include;

- *“People engaged in outdoor sport or recreation, which does not involve or depend upon appreciation of views of the landscape; and*
- *People at their place of work whose attention may be focussed on their work or activity, not their surroundings and where the setting is not important to the quality of working life”.*

1. **Recognised scenic value of the view** (County Development Plan designations, guidebooks, touring maps, postcards etc). These represent a consensus in terms of which scenic views and routes within an area are strongly valued by the population because in the case of County Developments Plans, for example, a public consultation process is required;

2. **Views from within highly sensitive landscape areas.** Again, highly sensitive landscape designations are usually part of a county’s Landscape Character Assessment, which is then incorporated within the County Development Plan and is therefore subject to the public consultation process. Viewers within such areas are likely to be highly attuned to the landscape around them;

3. **Primary views from dwellings.** A proposed development might be seen from anywhere within a particular residential property with varying degrees of sensitivity. Therefore, this category is reserved for those instances in which the design of dwellings or housing estates, has been influenced by the desire to take in a particular view. This might involve the use of a slope or the specific orientation of a house and/or its internal social rooms and exterior spaces;
4. **Intensity of use, popularity.** This relates to the number of viewers likely to experience a view on a regular basis and whether this is significant at county or regional scale;
5. **Connection with the landscape.** This considers whether or not receptors are likely to be highly attuned to views of the landscape i.e. commuters hurriedly driving on busy national route versus hill walkers directly engaged with the landscape enjoying changing sequential views over it;
6. **Provision of elevated panoramic views.** This relates to the extent of the view on offer and the tendency for receptors to become more attuned to the surrounding landscape at locations that afford broad vistas;
7. **Sense of remoteness and/or tranquillity.** Receptors taking in a remote and tranquil scene, which is likely to be fairly static, are likely to be more receptive to changes in the view than those taking in the view of a busy street scene, for example;
8. **Degree of perceived naturalness.** Where a view is valued for the sense of naturalness of the surrounding landscape it is likely to be highly sensitive to visual intrusion by distinctly manmade features;
9. **Presence of striking or noteworthy features.** A view might be strongly valued because it contains a distinctive and memorable landscape feature such as a promontory headland, lough or castle;
10. **Historical, cultural and / or spiritual significance.** Such attributes may be evident or sensed by receptors at certain viewing locations, which may attract visitors for the purposes of contemplation or reflection heightening the sense of their surroundings;
11. **Rarity or uniqueness of the view.** This might include the noteworthy representativeness of a certain landscape type and considers whether the receptor could take in similar views anywhere in the broader region or the country;
12. **Integrity of the landscape character.** This looks at the condition and intactness of the landscape in view and whether the landscape pattern is a regular one of few



strongly related components or an irregular one containing a variety of disparate components;

13. **Sense of place.** This considers whether there is special sense of wholeness and harmony at the viewing location; and
14. **Sense of awe.** This considers whether the view inspires an overwhelming sense of scale or the power of nature.

Those locations which are deemed to satisfy many of the above criteria are likely to be of higher sensitivity. (No relative importance is inferred by the order of listing in the **Table 4.5.**) Overall sensitivity may be a result of a number of these factors or, alternatively, a strong association with one or two in particular.

#### **4.3.5 Visual Impact Magnitude**

The magnitude of visual effects is determined on the basis of two factors; the visual presence (relative visual dominance) of the proposal and its effect on visual amenity. The magnitude of visual impacts is classified in **Table 4.4.**

#### **4.3.6 Visual Impact Significance**

As stated above, the significance of visual impacts is a function of visual receptor sensitivity and visual impact magnitude. This relationship is expressed in the same significance matrix and applies the same EPA definitions of significance as used earlier in respect of landscape impacts (**Table 4.4** refers).

**Table 4.4 Magnitude of Visual Impact**

<b>Criteria</b>	<b>Description</b>
<b>Very High</b>	The proposal intrudes into a large proportion or critical part of the available vista and is without question the most noticeable element. A high degree of visual clutter or disharmony is also generated, strongly reducing the visual amenity of the scene.
<b>High</b>	The proposal intrudes into a significant proportion or important part of the available vista and is one of the most noticeable elements. A considerable degree of visual clutter or disharmony is also likely to be generated, appreciably reducing the visual amenity of the scene.
<b>Medium</b>	The proposal represents a moderate intrusion into the available vista, is a readily noticeable element and/or it may generate a degree of visual clutter or disharmony, thereby reducing the visual amenity of the scene. Alternatively, it may represent a balance of higher and lower order estimates in relation to visual presence and visual amenity.
<b>Low</b>	The proposal intrudes to a minor extent into the available vista and may not be noticed by a casual observer and/or the proposal would not have a marked effect on the visual amenity of the scene.
<b>Negligible</b>	The proposal would be barely discernible within the available vista and/or it would not detract from, and may even enhance, the visual amenity of the scene.

#### 4.3.7 Quality and Timescale of Effects

In addition to assessing the significance of landscape effects and visual effects, EPA Guidance for EIAs requires that the quality of the effects is also determined. This could be negative/adverse, neutral, or positive/beneficial. In the case of new energy / infrastructure developments within rural and semi-rural settings, the landscape and visual change brought about by an increased scale and intensity of built form is seldom considered to be positive / beneficial.

Landscape and Visual effects are also categorised according to their duration:

- Temporary – Lasting for one year or less;
- Short Term – Lasting one to seven years;
- Medium Term – Lasting seven to fifteen years;
- Long Term – Lasting fifteen years to sixty years; and
- Permanent – Lasting over sixty years.

## 4.4 RECEIVING ENVIRONMENT

### 4.4.1 Planning Policy Context

#### Meath County Development Plan 2021-2027

A landscape character assessment was carried out in 2007 and has been included within Appendix A.05 Landscape Character Assessment<sup>1</sup> of the current Meath County Development Plan 2021-2027<sup>2</sup>, in which the county is divided into four main landscape character types. These are then sub-divided into a further 20 geographically distinct Landscape Character Areas (LCAs). The proposed development is located within a 'Lowland Area' Landscape Character Type (**Figure 4.** refers). However, in terms of more-localised scale LCAs, the site is situated within LCA 3 - 'North Navan Lowlands'. LCA 3 - 'North Navan Lowlands', is identified as having; 'Moderate' Landscape Value; 'Moderate / Medium' Landscape Sensitivity (**Figure 4.3** and **Figure 4.4** refer), and; 'Regional' Landscape Importance. This LCA is described as:

*'A large area of agricultural land to the north of Navan contained in the east and west by the Rivers Blackwater and Boyne respectively and to the north by a more complex hilly landscape along the north Meath border (LCA 1). Overall this landscape character area is in a degraded condition. It comprises of a mixture of pasture and arable fields that have been enlarged by loss or removal of traditional boundaries, now often consist of post and wire or timber fences and drainage ditches along road corridors. The landscape around the fringes of Navan is flat - an extension of the river plains to the east and west. It has a mix of land uses including ribbon housing development, retail units, a large quarry and a racecourse which are not well integrated into the landscape and which have caused the loss of traditional field boundaries, trees and vernacular field and road boundaries.'*

Map 4 of the Landscape Character Assessment (**Figure 4.5** refers) indicates potential capacity for various development types. LCA 3, in which the site is located, has been identified as having a 'low' capacity for 'one off housing' and a 'medium', 'medium-high' or 'high' capacity for all types of development. This classification provides the sense of a reasonable robustness

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<sup>1</sup> <https://consult.meath.ie/en/consultation/meath-adopted-county-development-plan/chapter/a05-landscape-character-assessment>

<sup>2</sup> <https://consult.meath.ie/en/consultation/meath-adopted-county-development-plan>

for this LCA to accommodate various forms of development including alterations to existing industrial and extractive facilities.

Eleven recommendations have also been outlined in the Meath Landscape Character Assessment regarding LCA 3 - 'North Navan Lowlands', but none relates to the type of development in question.

Four general objectives are provided in relation to landscape in 'Section 8.17 Landscape'<sup>3</sup> of the Meath County Development Plan 2021-2027, but none are directly relevant to the proposed development:

- *HER OBJ 48 - To support the aims and objectives of the European Landscape Convention by implementing the relevant objectives and actions of the National Landscape Strategy 2015-2025 and any revisions thereof.*
- *HER OBJ 49 - To ensure that the management of development will have regard to the value of the landscape, its character, importance, sensitivity and capacity to absorb change as outlined in Appendix 5 Meath Landscape Character Assessment and its recommendations.*
- *HER OBJ 50 - To require landscape and visual impact assessments prepared by suitably qualified professionals be submitted with planning applications for development which may have significant impact on landscape character areas of medium or high sensitivity.*
- *HER OBJ 51 - To review and update (if required), in the context of a regional approach to landscape assessment, the County Landscape Character Assessment following publication of statutory guidelines for Planning Authorities on local Landscape Character Assessments, as outlined in the National Landscape Strategy 2015-2025.*

Furthermore, there are two policies relating to landscape, one of which relates to the management of existing hedgerows which is of particular relevance to this proposed development as it has been designed to avoid impacting on existing hedgerows;

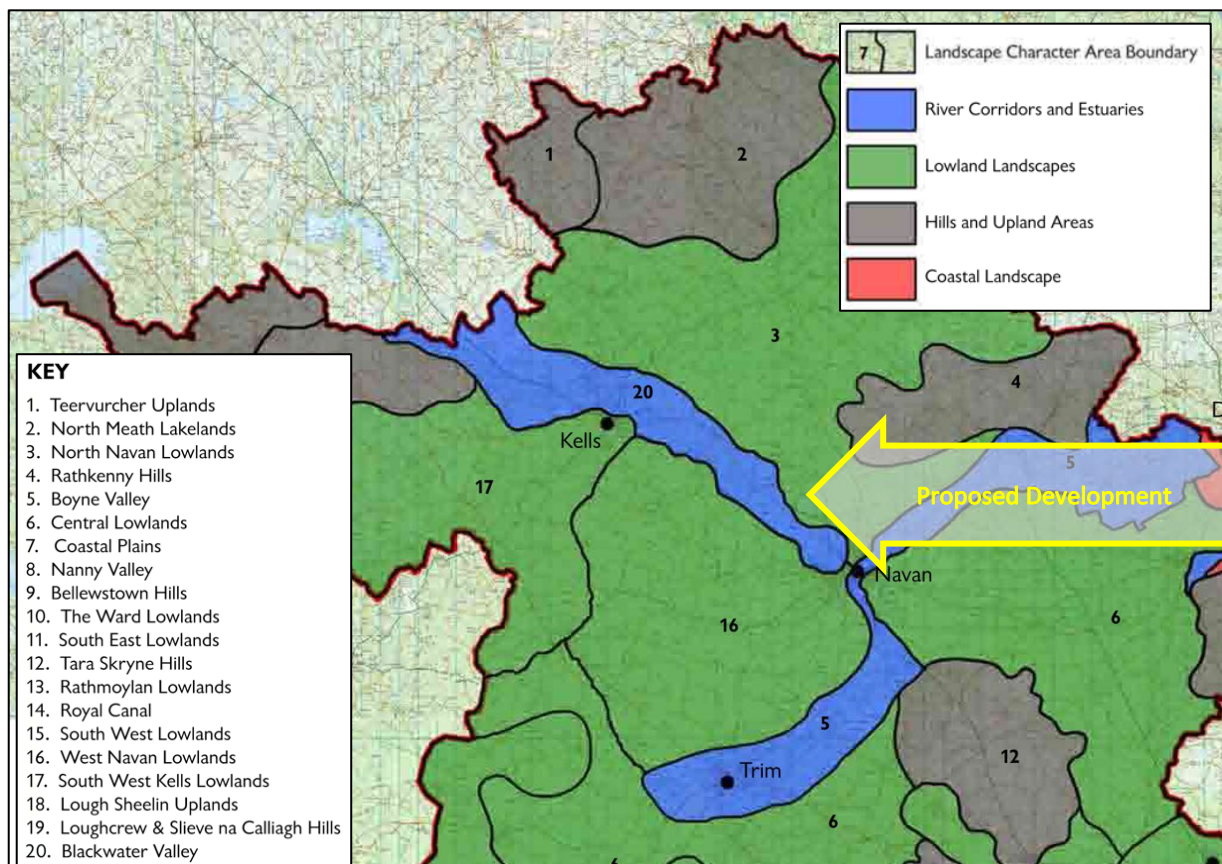
- *HER POL 52 - To protect and enhance the quality, character, and distinctiveness of the landscapes of the County in accordance with national policy and guidelines*

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<sup>3</sup><https://consult.meath.ie/en/consultation/meath-adopted-county-development-plan/chapter/08-cultural-and-natural-heritage-strategy>

and the recommendations of the Meath Landscape Character Assessment (2007) in Appendix 5, to ensure that new development meets high standards of siting and design.

- HER POL 53 - To discourage proposals necessitating the removal of extensive amount of trees, hedgerows and historic walls or other distinctive boundary treatments.



**Figure 4.2: Excerpt from Meath Landscape Character Assessment, map 4.1 showing approximate location of proposed development in relation to designated landscape character types and landscape character areas.**

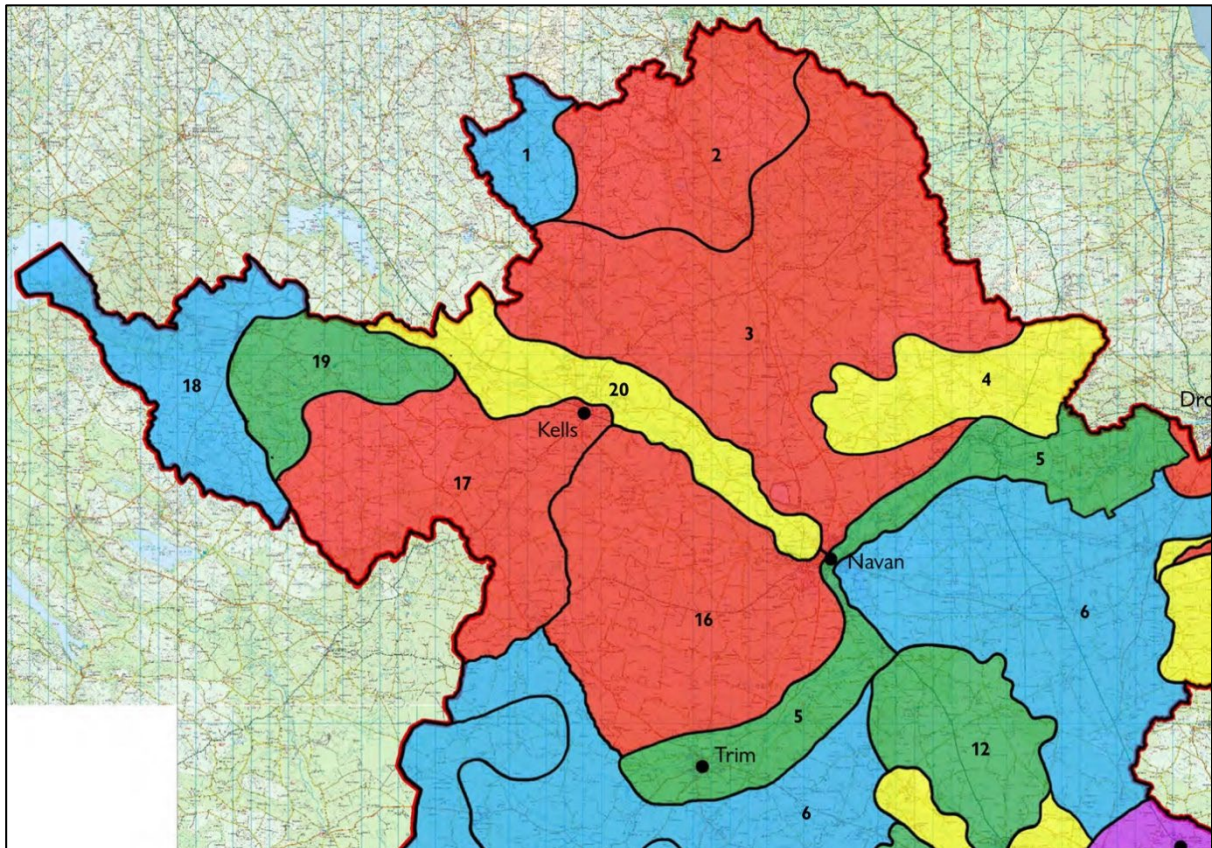
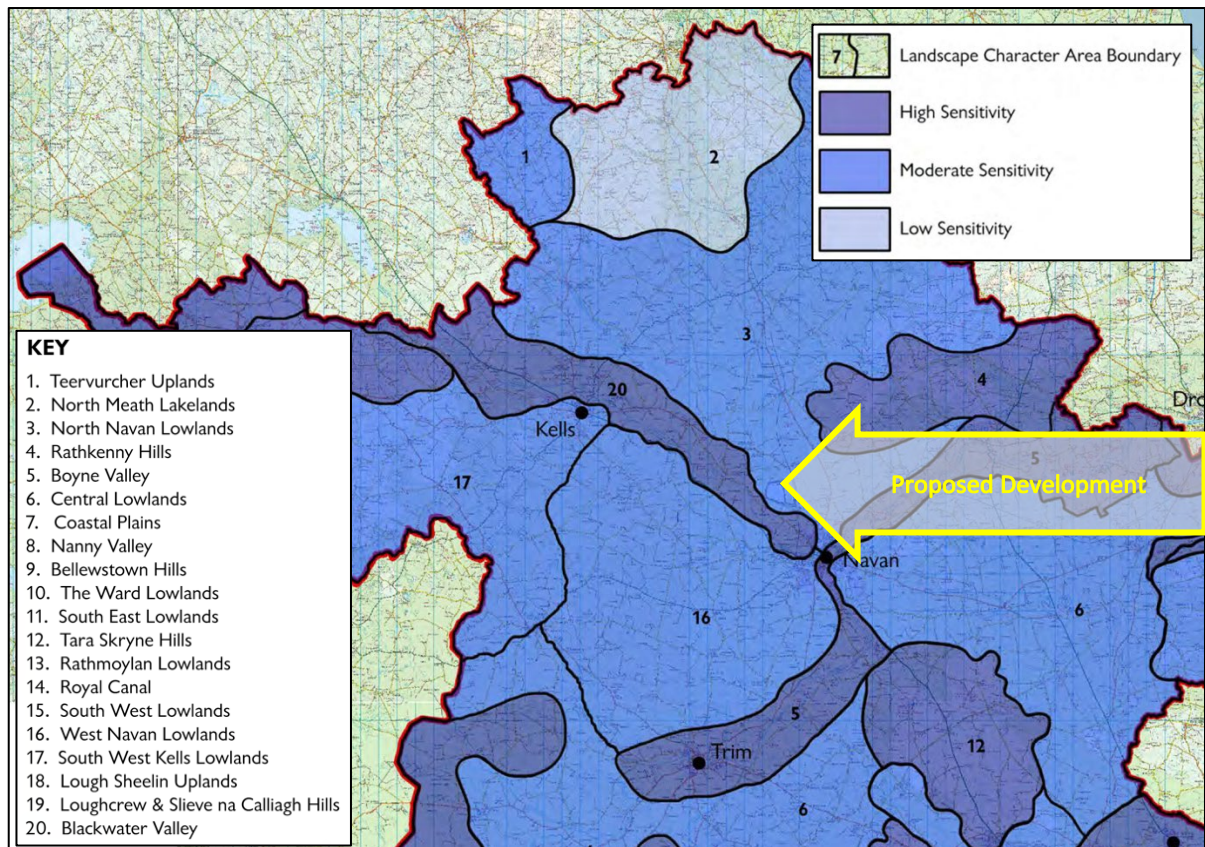
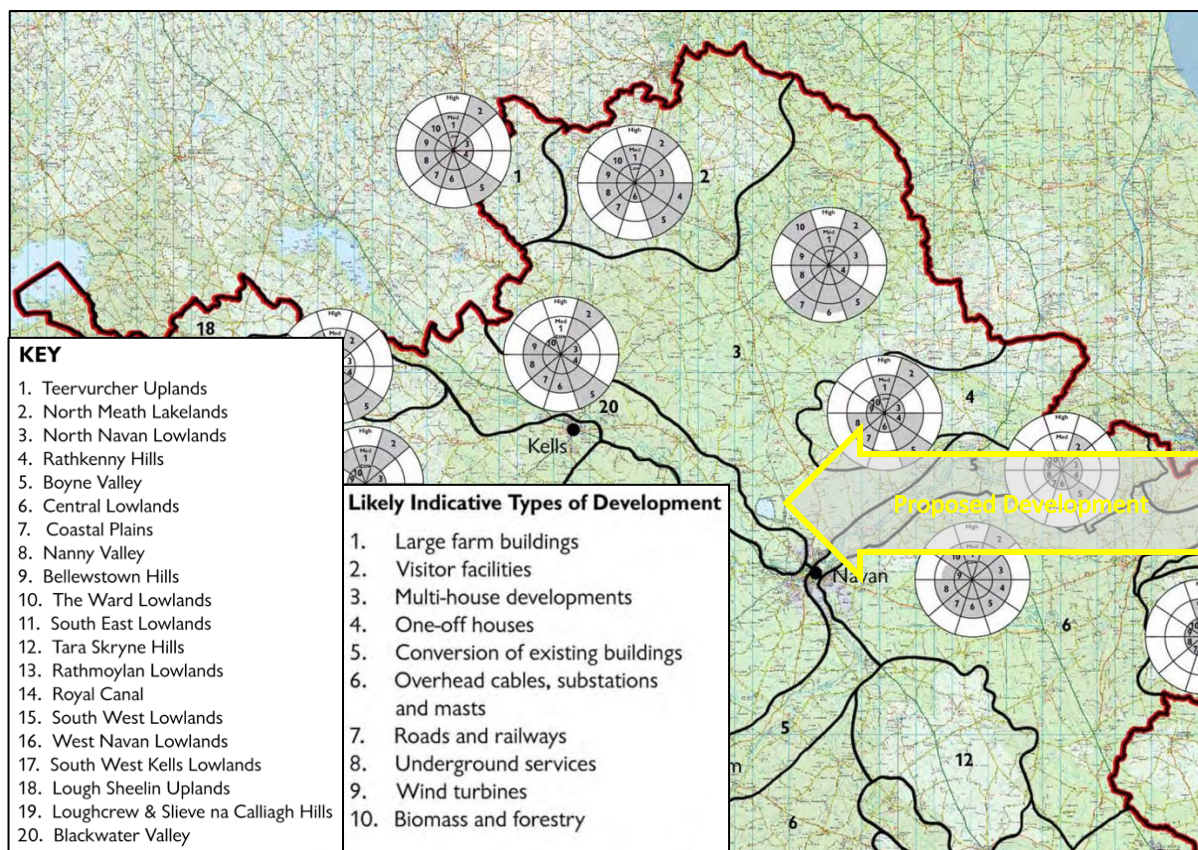


Figure 4.3: Excerpt from Meath Landscape Character Assessment, map 4.2 showing approximate location of proposed development in relation to landscape character areas and associated Value ratings.



**Figure 4.4: Excerpt from Meath Landscape Character Assessment, map 4.3 showing approximate location of site in relation to areas of sensitivity.**



**Figure 4.5: Excerpt from Meath Landscape Character Assessment, map 4.4 showing the potential capacity for development within certain landscape character areas.**

#### 4.4.2 Views & Prospects

Views of recognised scenic value are primarily indicated within the current and draft Development Plans in the context of scenic views/routes designations, but they might also be indicated on touring maps, guide books, road side rest stops or on post cards that represent the area.

Designated scenic Views and Prospects within County Meath are listed in Appendix 10, in Volume 2 and on Map 8.6 of the Meath County Development Plan. Within the study area there is one designated scenic viewpoint (no.33) (Figure 4.6 refers). It is located c.1.8km to the east of the application site at Proudstown Cross Roads on the R162 regional road and is described in the Meath CDP as: *‘Extensive eastward view to distant location across settled landscape. Dense urbanisation on right hand side of view. More open but still undeveloped left hand side.’* As this view is orientated to the east, in the opposite direction of the proposed development, it will not have any potential to be significantly impacted.



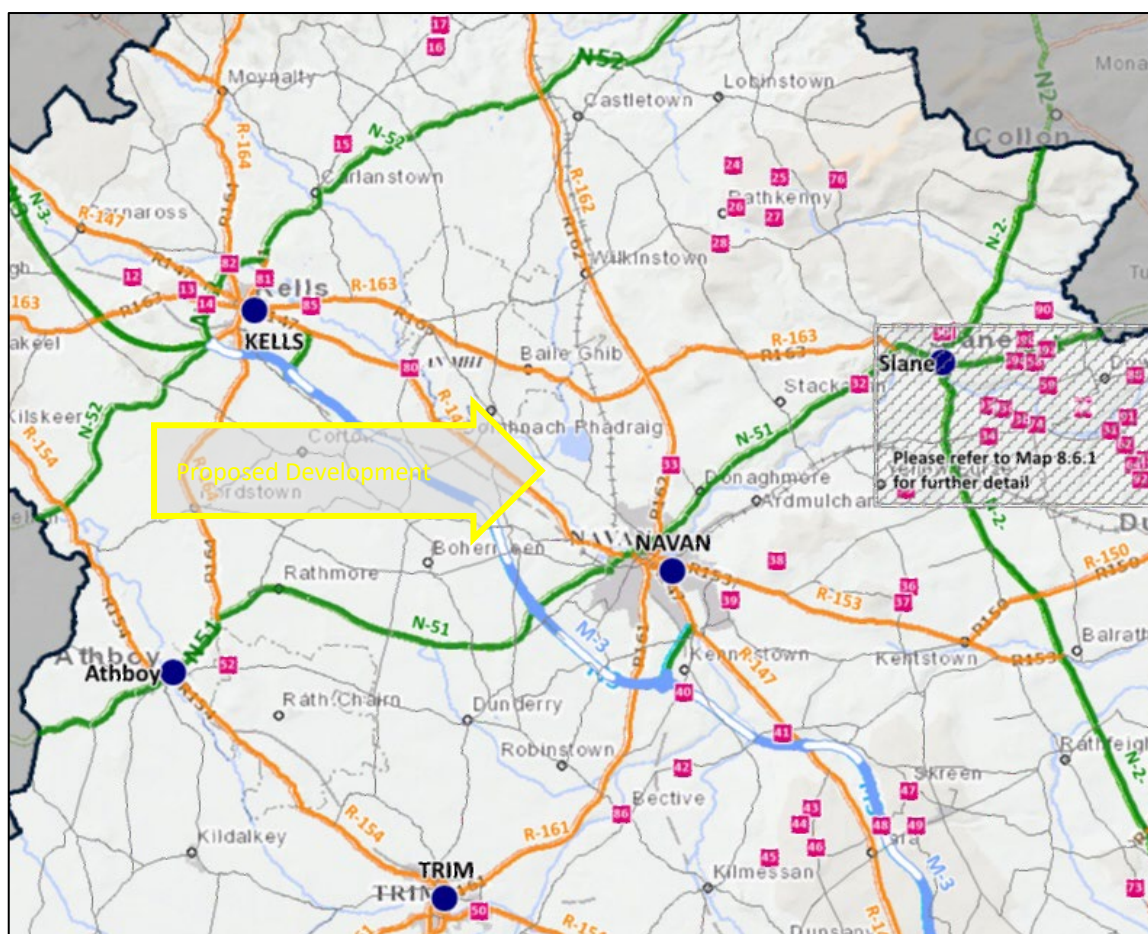


Figure 4.6: Excerpt from Meath Landscape Character Assessment, map 8.6 showing Views and Prospects.

#### 4.4.3 Landscape Context & Site Description

The landscape baseline represents the existing landscape context and is the scenario against which any changes to the landscape brought about by the proposed development will be assessed.

A description of the landscape context of the proposed development and wider study area is provided below under the headings of landform and drainage, vegetation and land use, centres of population and houses, transport routes and public amenities and facilities and the site context. Although this description forms part of the landscape baseline, many of the landscape elements identified also relate to visual receptors i.e. places and transport routes from which viewers can potentially see the proposed development. The visual resource will be described in greater detail in **Section 4.6**.

#### 4.4.4 Landform and Drainage

The study area is composed of gently undulating lands between 40m and 90m OD. The proposed works would occur on the existing embankment walls of the Tara Mines Tailings Storage Facility. The tailings rise c. 20 - 28m above the surrounding terrain and are flanked to the east and west by small watercourses (Simonstown Stream and Yellow River). These watercourses flow in a southerly direction before merging with the Kells Blackwater river, the main watercourse within the study area.

#### 4.4.5 Vegetation and Land Use

The predominant land use in the vicinity is that of farmland consisting of small to medium-sized agricultural fields (**Figure 4.7** refers). Field boundaries in the surrounding area tend to comprise of mounded ditches lined with mature trees. Mature tree-lined hedgerows also occur throughout the study area. However, land use is not homogenous as there is the Tara Mines Tailings Storage Facility in the centre of the study area, Proudstown Park Race Course and the urban area of Navan to the east and south, respectively.



**Figure 4.7: Aerial view of the study area (blue line) showing the Tara Mines Tailings Storage Facility (red line (Google Earth Pro)).**

#### **4.4.6 Centres of Population and Houses**

There is a reasonably dispersed rural population within the central study area, inhabiting crossroad settlements and linear clusters of dwellings along the road network. The main settlement is Navan, the north-western outskirts of which are contained within the south-eastern extents of the study area.

#### **4.4.7 Transport Routes**

The R163, R147 and R162 regional roads pass the application site to the north, south and east, respectively. A network of local roads also criss-cross through the study area. The proposed works will be set back from the road network.

#### **4.4.8 Public Amenities and Facilities**

Recreational opportunities are limited to walking and cycling on the public road network and water based activities along the River Blackwater. The Boyne Valley to Lakelands Greenway (BVL) runs approximately 100m to the East of the TSF on the old Kingscourt railway line, is part of a 30km walking and cycling amenity from Navan to Kingscourt.

#### **4.4.9 Conservation Interests**

The Kells Blackwater river forms part of the 'River Boyne And River Blackwater Special Area of Conservation (SAC) and Special Protection Area (SPA).'

#### **4.4.10 Identification of Viewshed Reference Points as a Basis for Assessment**

Viewshed Reference Points (VRP's) are the locations used to study the visual impacts of a proposal in detail. It is not warranted to include each and every location that provides a view of a development as this would result in an unwieldy report and make it extremely difficult to draw out the key impacts arising from the proposed development. Instead, the selected viewpoints are intended to reflect a range of different receptor types, distances and angles. The visual impact of a proposed development is assessed by Macro Works using up to six categories of receptor type as listed below:

- Key Views (from features of national or international importance);
- Designated Scenic Routes and Views;
- Local Community views;
- Centres of Population;

- Major Routes; and
- Amenity and heritage features.

VRP's might be relevant to more than one category, and this makes them even more valid for inclusion in the assessment. The receptors intended to be represented by a particular VRP are listed at the beginning of each viewpoint appraisal.

The Viewshed Reference Points selected in this instance are set out in the **Table 4.5** and **Figure 4.** below.

**Table 4.5 Outline Description of Selected Viewshed Reference Points (VRPs)**

<i>VRP No.</i>	<i>Location</i>	<i>Direction of View</i>
<b>VP1</b>	Local road, Gibstown	SE
<b>VP2</b>	R163 regional road, Silloge	SW
<b>VP3</b>	R163 regional road, Kilberry	SW
<b>VP4</b>	Local road, Tatestown	NE
<b>VP5</b>	Local road, Randalstown	N
<b>VP6</b>	Local road, Simonstown	NW
<b>VP7</b>	Proudstown Park, Proudstown	W
<b>VP8</b>	R162 regional road, Proudstown	W
<b>VP9</b>	Cluain Adain, Clonmagaddan	NW

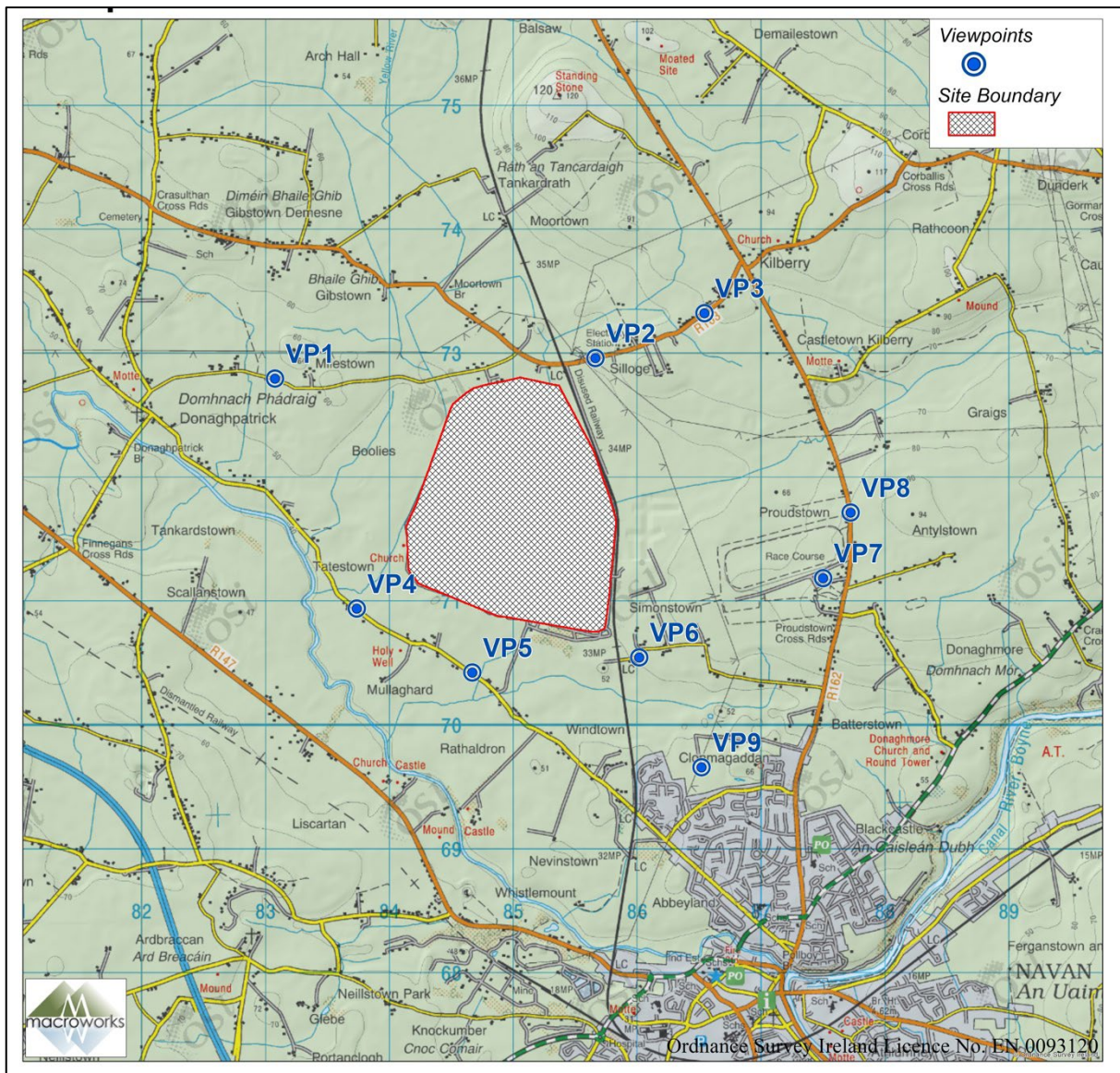


Figure 4.8: Viewpoint location map.

## 4.5 LANDSCAPE IMPACT

### 4.5.1 Landscape Value and Sensitivity

Landscape value and sensitivity are considered in relation to a number of factors highlighted in the Guidelines for Landscape and Visual Impact Assessment 2013, which are set out below and discussed relative to the proposal site and wider study area.

#### 5 *Landscape quality (condition)*

The site and central study area are dominated by the Tara Mines tailings facility, which has a distinctly industrial extractive character and is of a substantial scale. There is a range of agricultural land management practices within the wider study area, some relatively intensive, with few untidy, fallow or unused areas. Generally, field boundaries appear well maintained, but there are instances where post and wire fences have replaced hedgerows. The field patterns have changed dramatically within the study area due to hedgerow removal due to agricultural intensification, the existing Tara Mines Tailings Facility, Kilsaran Quarry and Proudstown Park Race Course.

#### 6 *Scenic quality*

A pleasant countryside aesthetic prevails in some portions of the study area, particularly in the vicinity of the Kells Blackwater river. However, it is generally a rural environment with associated productive, rather than scenic, values. There is very little scenic quality in the central study area in the immediate vicinity of the mine site.

#### 7 *Rarity and Representativeness*

The study area is not a distinctive or rare landscape, particularly in the context of this part of County Meath, a county that contains numerous landscape heritage features that are recognised at an international level. There are no particularly unique or remarkable landscape elements within the study area.

#### 8 *Conservation interests*

National Parks and Wildlife Service have two designations associated with the Kells Blackwater river, but neither has any direct associations with the application site.

#### 9 *Recreation Value*

The Boyne Valley to Lakelands Greenway is a new 30km Greenway from Navan, Co Meath, to Kingscourt, Co Cavan. It passes along the parallel to the eastern boundary of the application site. Otherwise, the landscape of the study area is not particularly synonymous with outdoor recreation other than Proudstown Race Course and the Blackwater River.

### *10 Perceptual aspects*

A minor degree of rural tranquillity occurs in the wider study area, away from the main roads and the Tara Mines facility, where the hedgerow structures create some sense of enclosure. There are some naturalistic qualities relating to the Kells Blackwater river and the broader Blackwater valley.

### *11 Cultural Associations*

There would not appear to be any strong landscape associations to particular people, historical events or mythology within the central study area. That is not to say that none exist, as all places have local landscape associations with certain families or historical incidents, such as the churches, cemeteries, ringforts, crannogs, holy wells and moated sites; however, these would not necessarily be associated with landscape values for the wider population. County Meath, in general, has a high concentration of important heritage sites. St. Annes Well (MW025-045) and St Annes Church (ME025-002001) are located to the southwest corner of the Tailings Facility and contribute the local landscape character in the immediate context of the application site.

### *Landscape Sensitivity Summary*

LCA 3 - 'North Navan Lowlands' has been categorised as having '*moderate value*' in the Meath CDP, which is the second-lowest category on the (5 level) scale, and although this LCA has been judged to be of '*moderate sensitivity*' in the Meath CDP, the site and its immediate surrounds identify more readily as an industrial hinterland rather than as a typical rural typology. The Blackwater valley to the west of the existing Tara Mines Tailings Facility has a more pleasant pastoral quality, but the area to the east, south and southeast are influenced by Proudstown Park Race Course, Kilsaran Quarry and the outskirts of Navan. However, the key consideration the central study area is already strongly influenced by the existing Tara Mines Facility.

On the basis of the factors outlined above, it is considered that this is a complex and productive landscape with typical rural land uses contrasted with equestrian and extractive industries in

the hinterland of Navan. The study area is by no means a rare or distinctive landscape and instead is a typical rural setting with robust and productive landscape values rather than susceptible scenic or naturalistic values. On balance, the landscape sensitivity to the proposed development is deemed to be **Low**.

#### **4.5.2 Magnitude of Landscape Effects**

The impact of the duration, intensity and reversibility of activities will be assessed, but the main landscape effects to be considered relate to long term / permanent changes in landscape character and the physical impact on the landscape through the introduction of above-ground elements and any permanent removal of vegetation.

In terms of physical landscape disturbance, the addition of material to the existing embankment walls of the TSF will have a minimal additional footprint in the context of the wider landscape within the study area. These works are not considered to be more than a minor form of land disturbance, particularly when considered in the context of a receiving industrial landscape that contains an existing tailings facility. The change will be 'negative' and 'permanent' (effects lasting over 60 years, as defined in the EPA's EIA guidelines).

In relation to landscape character, the proposal seeks the introduction of an additional layer of material onto the existing embankment walls. The proposed development would occur at a location where the established landscape character is heavily influenced by the existing Tara Mines Tailings Storage Facility. The proposed development represents a limited increase in the intensity of industrial development in an industrial landscape context and is clearly related to the predominant intensive industrial activity of this area.

This form of buttressing work would not be an unexpected or incongruous feature within an industrial mining landscape such as this. The additional buttressing will not, therefore, appear out of place or unduly intensify the effects of industrial development on the landscape character of the area. Upon completion of works the embankment walls will be seeded and grassed helping it readily integrate with the existing environment.

Based on the factors discussed above, it is considered that the magnitude of landscape impact is **Low-negligible** within those lands contained within approximately 1km of the proposed development. The magnitude of impact is likely to reduce rapidly with increasing distance



thereafter (**Imperceptible**), as the proposed development becomes a proportionally smaller component of the overall landscape fabric.

With reference to the significance matrix (**Table 4.3**) above, the **Low** landscape sensitivity judgement attributed to the study area coupled with a Low-**negligible** magnitude of landscape impact within and immediately around the site is considered to result in a localised significance of no greater than **Slight-imperceptible**.

## **4.6 VISUAL IMPACT ASSESSMENT**

### **4.6.1 Sensitivity of Visual Receptors**

**Table 4.6** uses the criteria set out in Section 4.3 to determine sensitivity at each of the viewpoints selected to represent visual receptors.

**Table 4.6 Analysis of Visual Receptor Sensitivity at Viewshed Reference Points**  
**Scale of value for each criterion**

Strong association	Moderate	Mild association	Negligible

Values associated with the view	VP1	VP2	VP3	VP4	VP5	VP6	VP7	VP8	VP9
Susceptibility of viewers to changes in views									
Recognised scenic value of the view									
Views from within highly sensitive landscape areas									
Primary views from residences									
Intensity of use, popularity (number of viewers)									
Viewer connection with the landscape									
Provision of vast, elevated panoramic views									
Sense of remoteness / tranquillity at the viewing location									
Degree of perceived naturalness									
Presence of striking or noteworthy features									
Sense of historical, cultural and / or spiritual significance									
Rarity or uniqueness of the view									
Integrity of the landscape character within the view									
Sense of place at the viewing location									
Sense of awe									
<b>Overall sensitivity assessment</b>	<b>ML</b>	<b>ML</b>	<b>ML</b>	<b>ML</b>	<b>ML</b>	<b>ML</b>	<b>M</b>	<b>ML</b>	<b>ML</b>

**N** = Negligible; **L** = low sensitivity; **ML** = medium-low sensitivity **M** = medium sensitivity; **HM** = High-medium sensitivity; **H** = high sensitivity; **VH** = very high sensitivity

#### 4.6.2 Magnitude of Visual Effects

The assessment of visual impacts at each of the selected viewpoints is aided by photomontages of the proposed development (presented in Appendix 4.1). Photomontages

are a 'photo-real' depiction of the scheme within the view utilising a rendered three-dimensional model of the development, which has been geo-referenced to allow accurate placement and scale. For each viewpoint, the following images have been produced;

1. Existing view;
2. Outline view (yellow outline showing the extent of the above ground elements of the proposed development overlaid on the photography); and
3. Montage view.

Viewshed Reference Point		Viewing Distance	Direction of View
VP1	Local road, Gibstown	1.48km	SE

**Representative of:**

- Local community views

**Receptor sensitivity**                      **Medium-Low**

**Existing view**                      This is a broad view from a narrow local road. Over a low trimmed hedgerow is a view of gently undulating agricultural fields set against a backcloth of the Tailings Facility.

**Visual impact**                      A portion of the proposed buttress will occur along the western perimeter of the application site will be identifiable on the slopes of the starter embankment slopes of the Tailings Facility. The additional material will not increase the overall height of the facility but will increase the height (at varying levels of 3m, 4m and 7m) at the crest of Stages 1, 2 and 3 and a widening of the side slopes. The new profile and scale of the buttressing works to the embankment walls will be similar to the existing embankment walls and thus will not be notable in the context of the existing facility; therefore, the visual change will not be noticeable. Once complete the embankment walls will be seeded and grassed.

The tone of the new surface of the buttressing will initially be 'fresher' but not dissimilar to what is currently in place. Once the embankment walls are seeded and grassed, it will be indistinguishable from its current appearance). In the context of the existing facility, the proposed buttress will readily integrate into the view without having a negative impact on the visual amenity.

For these reasons, the magnitude of the impact is deemed to be **Negligible.**

**Summary**

Based on the assessment criteria and matrices outlined at **Section 4.3** the significance of residual visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	Significance of Visual Impact
Medium-low	Negligible	Imperceptible, Negative and Permanent

Viewshed Reference Point		Viewing Distance	Direction of View
VP2	R163 regional road, Silloge	0.34km	SW

**Representative of:**

- Major route
- Local community views

**Receptor sensitivity**                      **Medium-Low**

**Existing view**                      This is a channelled view from a field gate on the R163 regional road. The fore-to-middle ground is occupied by large arable fields containing numerous pole sets from several overhead lines. Behind mature trees along a disused railway line in the middle ground, the ridge of the Tara Mines Tailings Storage Facility is visible.

**Visual impact**                      Less than half of the visible portion of the side of the Tailings Facility, in the background of the view, will receive additional material. And a large proportion of the new buttressing will be partially or fully screened by the intervening vegetation along the Boyne Valley to Lakelands Greenway. However, a glimpse will be afforded of the new, profile of the buttressing visible in silhouette against the sky. This visual change will be noticeable, but not by a casual observer.

The proposed buttress will be very similar to the existing embankment in terms of tone and texture, and the scale of the increase of the lateral extent of the side slopes of Stage 1, 2 and 3 will be marginal; thus, there will be no reduction to the visual amenity.

For these reasons, the magnitude of the impact is deemed to be **Negligible**.

**Summary**                              Based on the assessment criteria and matrices outlined at **Section 4.3** the significance of residual visual impact is summarised below.

Visual Sensitivity	Receptor	Visual Impact Magnitude	Significance of Visual Impact
Medium-low		Negligible	<b>Imperceptible, Negative and Permanent</b>

Viewshed Reference Point		Viewing Distance	Direction of View
VP3	R163 regional road, Kilberry	1.26km	SW

**Representative of:**

- Major route
- Local community views

**Receptor sensitivity**      **Medium-Low**

**Existing view**      This view is similar to VP2 in that it is a channelled view from a field access point off the R163 regional road but is slightly further from the application site and is somewhat more elevated. The foreground also comprises of an arable field bounded by mature hedgerows. The mature hedgerow trees in the middle ground break up the view over a low rolling landscape and partially screen the Tailings Facility.

**Visual impact**      The proposed buttress will be identifiable from this location; however, due to its relatively small scale, the intervening distance and the vegetative screening, it is very unlikely to be noticed, and would not be a new or uncharacteristic element within the view. For these reasons, the magnitude of the impact is deemed to be **Negligible**.

**Summary**      Based on the assessment criteria and matrices outlined at **Section 4.3** the significance of residual visual impact is summarised below.

Visual Sensitivity	Receptor	Visual Impact Magnitude	Significance of Visual Impact
Medium-low		Negligible	Imperceptible, Negative and Permanent

Viewshed Reference Point		Viewing Distance	Direction of View
VP4	Local road, Tatestown	0.56km	NE

**Representative of:**

- Local community views

**Receptor sensitivity**                      **Medium-Low**

**Existing view**                      This is a broad view in close proximity to the application site. Over the roadside hedgerow, a row of mature hedgerow trees in the background partially screens the Tailings Facility, which forms a low ridge in the distance and foreshortens the view.

**Visual impact**                      The proposed buttress will occur on the side slopes and crest of the starter embankment walls and will not increase the overall height of the tailings facility. The proposed increase in the volume of embankment fill will be minimal. The tone and texture of the new buttress will be similar to the existing embankments; therefore, it is unlikely to be noticeable by a casual observer. For these reasons, the magnitude of the impact is deemed to be **Negligible**.

**Summary**                              Based on the assessment criteria and matrices outlined at **Section 4.3** the significance of residual visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	Significance of Visual Impact
Medium-low	Negligible	<b>Imperceptible, Negative and Permanent</b>



Viewshed Reference Point		Viewing Distance	Direction of View
VP5	Local road, Randalstown	0.5km	N

**Representative of:**

- Local community views

**Receptor sensitivity**                      **Medium-Low**

**Existing view**                      This is a channelled view towards the southern perimeter of the application site. A large pasture enclosed by hedgerows occupies the fore-to-middle ground. The Tailings Facility foreshortens the view to the north and creates an earthen backcloth to the view.

**Visual impact**                      The proposed buttress involves adding additional material to the existing embankment walls of the Tailings Facility in the background of the view, and this will be visible. From this viewing angle, it will be difficult to discern the new profile of the proposed buttress. The new buttress will have a similar tone and texture to the existing embankment walls and will not materially alter the nature of the view; therefore, there will be no reduction to the visual amenity. For these reasons, the magnitude of the impact is deemed to be **Negligible**.

**Summary**                              Based on the assessment criteria and matrices outlined at **Section 4.3** the significance of residual visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	Significance of Visual Impact
Medium-low	Negligible	Imperceptible, Negative and Permanent

Viewshed Reference Point		Viewing Distance	Direction of View
VP6	Local road, Simonstown Lane	0.3km	NW

**Representative of:**           ▪ Local community views

**Receptor sensitivity**           **Medium-Low**

**Existing view**           This is a relatively enclosed view from a cul-de-sac close to the south-eastern corner of the Tailings Facility. A local road (Simonstown Lane) and a neatly trimmed roadside hedgerow sweep through the foreground of the view. Mature trees adjoining the Boyne Valley to Lakelands Greenway in the middle ground partially screen views of the Tailings Facility.

**Visual impact**           The proposed buttress will be identifiable on the southeast side of the existing tailings facility. Although the overall height of the tailings facility will not increase, given the close proximity of this viewpoint to the tailings facility, it may appear as though it has risen fractionally (buttress will increase height at the crest of Stages 1, 2 and 3 varying from 3m to 7). The texture and tone of the new buttress will be similar to the existing embankment walls. The form of the profile of the new buttressing will be smoother than the existing side slope of the tailings facility. Overall there will be no material difference to the nature of the view or to the visual amenity afforded at this location. For these reasons, the magnitude of the impact is deemed to be **Negligible**.

**Summary**           Based on the assessment criteria and matrices outlined at **Section 4.3** the significance of residual visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	Significance of Visual Impact
Medium-low	Negligible	Imperceptible, Negative and Permanent

Viewshed Reference Point		Viewing Distance	Direction of View
VP7	Proudstown Park, Proudstown	1.64km	W

- Representative of:**
- Amenity feature (Proudstown Park Race Course)
  - Local community views

**Receptor sensitivity**                      **Medium**

**Existing view**                      This is an elevated and broad view from the stands at Proudstown Park Race Course. The race track in the foreground slopes gently away from the viewpoint. The middle ground is occupied with rolling lowlands, with the Tailings Facility presenting as a low, thin sliver. Panoramic views are afforded to distant hills and ridges in the background, including the Tower of Lloyd located on the outskirts of Kells.

**Visual impact**                      The proposed buttress will occur at the side slope and crest of the starter embankment walls and will not increase the overall height of the tailings facility itself. The tone and texture of the new buttress will be similar to the existing embankment walls, and due to the intervening distance, it is unlikely that it will be noticeable by a casual observer. For these reasons, the magnitude of the impact is deemed to be **Negligible**.

**Summary**                              Based on the assessment criteria and matrices outlined at **Section 4.3** the significance of residual visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	Significance of Visual Impact
Medium	Negligible	<b>Imperceptible, Negative and Permanent</b>

Viewshed Reference Point		Viewing Distance	Direction of View
VP8	R162 regional road, Proudstown	1.84km	W

- Representative of:**
- Major route
  - Local community views

**Receptor sensitivity**                      **Medium-Low**

**Existing view**                      This is a glimpse view through a field gate on the busy R162 regional road. The landform of an arable field in the foreground slopes gently away from the viewpoint. The Tailings Facility sits low within the farmed and settled lowlands in the middle ground. Low distant ridges form a backdrop to the view.

**Visual impact**                      The proposed buttress will occur at the side slope and crest of the starter embankment walls and will not increase the overall height of the tailings facility itself. The tone and texture of the new buttress will be similar to the existing, and due to the intervening distance, it is unlikely that it will be noticeable by a casual observer. For these reasons, the magnitude of the impact is deemed to be **Negligible**.

**Summary**                              Based on the assessment criteria and matrices outlined at **Section 4.3** the significance of residual visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	Significance of Visual Impact
Medium-low	Negligible	<b>Imperceptible, Negative and Permanent</b>

Viewshed Reference Point		Viewing Distance	Direction of View
VP9	Cluain Adain, Clonmagaddan	1.32km	NW

**Representative of:**           ▪ Local community views

**Receptor sensitivity**           **Medium-Low**

**Existing view**           This is an enclosed view from within a residential housing development. The adjoining field in the foreground is fenced off with temporary fencing and is becoming overgrown. New buildings at Scoil Naomh Eoin are visible directly to the east, but views to the northeast are heavily screened by a hedgerow in the middle ground. A small gap in the hedgerow reveals a glimpse of two residential dwellings and a portion of the side of the tailings at the Tailings Facility in the background.

**Visual impact**           The new buttressing will occur at the side slope and crest of the starter embankment walls and will not increase the height of the tailings facility itself. The tone and texture of the new buttress will be similar to the existing embankment walls, and due to the intervening distance, it is unlikely that it will be noticeable by a casual observer. For these reasons, the magnitude of the impact is deemed to be **Negligible**.

**Summary**               Based on the assessment criteria and matrices outlined at **Section 4.3** the significance of residual visual impact is summarised below.

Visual Receptor Sensitivity	Visual Impact Magnitude	Significance of Visual Impact
Medium-low	Negligible	<b>Imperceptible, Negative and Permanent</b>

#### **4.7 CUMULATIVE IMPACTS**

The potential for cumulative effects between any other proposed development within the study area is minimal given the predicted landscape and visual effects of the proposed development are very much at the lower end of the significant spectrum. (Landscape effects are deemed to be Negative, Slight-imperceptible and Permanent. Visual effects are deemed to be Imperceptible, Negative and Permanent.) Particular attention was given to planning permission is being sought at the existing mine site complex approximately 2.8km south of proposed development, for the construction of:

- a water treatment plant within (An Bord Pleanála - 317390. Status: Appealed); and
- a solar farm development to generate renewable electricity.

However, due to the intervening distance, variety of intervening land uses and the degree of intervening vegetative screening, no significant cumulative landscape or visual effects are anticipated for these developments, or any other developments within the study area.

#### **4.8 DO NOTHING SCENARIO**

The primary purpose of the proposed development is to increase the Factor of Safety associated with the TSF dam walls. The 'do nothing' scenario would result in BTM not complying with GISTM and ICMM standards. A key objective of GISTM is to address the risk of tailings embankment failure through conservative design criteria, independent of trigger mechanisms, to minimise potential impacts. Therefore the 'do nothing' scenario is not considered a sustainable option.

#### **4.9 MITIGATION MEASURES**

The main mitigation measure employed in this instance is by 'mitigation by avoidance' as it is proposed to depositing the material onto the perimeter of the existing tailings facility located within a relatively well-contained rural area that avails of considerable existing hedgerow screening and has an established industrial landscape character.

#### **4.10 RESIDUAL IMPACTS**

The only landscape and visual related mitigation is design embedded. As no specific mitigation measures were considered necessary in relation to landscape and visual effects, residual impacts will be that same as those assessed herein.

#### **4.11 INTERACTIONS ARISING**

Whilst there is some interaction between the ecological and landscape aspects of the proposed development these are minor and neither is critical to the other. There are no other material interactions with other environmental attributes.

#### **4.12 MONITORING**

As there are no mitigation measures proposed for this evaluation, there will be no landscape monitoring required after the completion of works.

#### **4.13 CONCLUSIONS**

In terms of landscape impacts, it is considered that the proposed development will have a minor physical impact on the landscape and that such effects will be 'permanent'. There will be a minimal impact on the landscape character as a result of the additional buttressing to the existing tailings facility as it will occur within an area that can be generally characterised as industrial. Consequently, the proposed development is not considered to conflict unduly with the prevailing landscape character of its immediate environs. For these reasons, a 'Negative', 'Permanent' and 'Imperceptible' level of landscape impact is predicted for the site and its immediate surroundings.

Visual impacts were specifically assessed at nine viewpoints representing different distances, angles and viewing contexts within the study area. The visual impacts at all viewpoints were deemed to be 'Imperceptible', even at VP7 from Proudstown Race Course, which is considered to have a slightly higher level of sensitivity relative to the other typical rural views.

##### **4.13.1 Overall Significance of Impact**

Based on the landscape and visual impact judgements provided throughout this LVIA, the proposed development at Tara Mines Tailings Storage Facility, County Meath is not considered to give rise to any significant landscape or visual impacts.

#### **4.14 REFERENCES**

Environmental Protection Agency (EPA) (2022) Guidelines on the Information to be contained in Environmental Impact Statements

Landscape Institute and the Institute of Environmental Management and Assessment (eds.) (2013) Guidelines for Landscape and Visual Impact Assessment – Third Edition

Meath County Council (2021). Meath County Development Plan 2021 – 2027. Available from: <https://consult.meath.ie/en/consultation/meath-adopted-county-development-plan> [Accessed: 03 January 2024]

National Parks and Wildlife Service (2021) Map viewer. Available from: <http://webgis.npws.ie/npwsviewer/> [Accessed: 05 September 2023]

The Heritage Council (2021) Map Viewer. Available from <http://www.heritagemaps.ie/> [Accessed: 03 January 2024]

Coillte (2021) Map Viewer. Available from <https://www.coillte.ie/our-forests/recreation-map/> [Accessed: 03 January 2024]

Fáilte Ireland (2021). Available from: <https://www.discoverireland.ie/> [Accessed: 05 September 2023]

Sport Ireland (2021) Sport Ireland Trails. Available from: [www.irishtrails.ie](http://www.irishtrails.ie) [Accessed: 03 January 2024]

The Heritage Council (2021) Map Viewer. Available from <http://www.heritagemaps.ie/> [Accessed: 03 January 2024]

Google Maps (2021) Map view and aerial view. Available from: [www.google.ie/maps](http://www.google.ie/maps) [Accessed: 03 January 2024]