

## CHAPTER 13 CULTURAL HERITAGE

### ABBREVIATIONS AND DEFINITIONS

Abbreviation	Definition
<b>AAP</b>	Area of Archaeological Potential
<b>ACA</b>	Architectural Conservation Area
<b>ABP</b>	An Bord Pleanála
<b>AMS</b>	Archaeological Management Solutions
<b>BTM</b>	Boliden Tara Mines DAC
<b>CH</b>	Cultural Heritage
<b>CHD</b>	Cultural Heritage Dataset
<b>DAHG</b>	Department of Arts, Heritage and the Gaeltacht
<b>DAHGI</b>	Department of Arts, Heritage, Gaeltacht and the Islands
<b>DAU</b>	Development Applications Unit
<b>DCHG</b>	Department of Culture, Heritage and the Gaeltacht
<b>DHLGH</b>	Department of Housing, Heritage and Local Government
<b>DIER</b>	Database of Irish Excavation Reports
<b>EIA</b>	Environmental Impact Assessment
<b>EIAR</b>	Environmental Impact Assessment Report
<b>EIS</b>	Environmental Impact Statement
<b>EPA</b>	Environmental Protection Agency
<b>GIS</b>	Geographical Information System
<b>GISTM</b>	Global Industry Standard on Tailings Management
<b>HEV</b>	Historic Environment Viewer
<b>LVIA</b>	Landscape and Visual Impact Assessment
<b>MCC</b>	Meath County Council
<b>NIAH</b>	National Inventory of Architectural Heritage
<b>NIS</b>	Natura Impact Statement
<b>NMI</b>	National Museum of Ireland
<b>NMS</b>	National Monuments Service
<b>OPR</b>	Office of the Planning Regulator
<b>OS</b>	Ordnance Survey
<b>PO</b>	Preservation Order
<b>RHM</b>	Register of Historic Monuments

<b>RMP</b>	Record of Monuments and Places
<b>RPS</b>	Record of Protected Structures
<b>SMR</b>	Sites and Monuments Record
<b>TII</b>	Transport Infrastructure Ireland
<b>TSF</b>	Tailings Storage Facility
<b>ZoN</b>	Zone of Notification

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## CHAPTER 13 CULTURAL HERITAGE

### 13.1 INTRODUCTION

This chapter of the Environmental Impact Assessment Report (EIAR) considers the potential impact, in relation to cultural heritage, of the proposed buttressing works to be undertaken on sections of the dam walls of the Randalstown Tailings Facility, County Meath (Figure 13.1). The Environmental Impact Assessment (EIA) was carried out by Archaeological Management Solutions (AMS) for Boliden Tara Mines DAC (BTM). Impacts from the proposed scheme on cultural heritage during the Construction and Operational Phase are identified, described and assessed for any likely direct and indirect significant effects.

Under Annex IV (4) of amended EIA Directive 2014/52/EU, ‘cultural heritage’ is an environmental factor to be addressed in an EIAR. Cultural heritage comprises archaeology, architectural heritage, folklore and history (EPA 2022, 32). Archaeology is the study of past societies through surviving structures, artefacts and environmental data, and is concerned with known archaeological sites and monuments, areas of archaeological potential and underwater archaeology. Architectural heritage comprises structures, buildings — traditional and designed — and groups of buildings including streetscapes and urban vistas, which are of architectural, historical, archaeological, artistic, engineering, scientific, social or technical interest, together with their setting, attendant grounds, fixtures, fittings and contents. Architectural heritage and archaeology together form ‘built heritage’ or ‘tangible heritage’. Folklore and history are aspects of ‘intangible heritage’, which also includes language, musical traditions, traditional crafts and skills, townland names, poetry and so on. These forms of cultural heritage are ‘non-moveable, non-material and largely non-environmental — although by their associations with certain sites and places, add to the character of an area’ (EPA 2015).

For the purposes of the assessment, cultural heritage assets were categorised broadly as follows:

- Archaeological Heritage — World Heritage Properties; national monuments; archaeological sites and monuments listed on the Record of Monuments and Places (RMP), Register of Historic Monuments (RHM) and/or the Sites and Monuments Record (SMR); archaeological objects recorded in the National Museum of Ireland (NMI) Topographical Files and Finds Database; areas where undesignated archaeological sites, material and deposits potentially occur, including Areas of Archaeological Potential (AAP).

- Architectural Heritage — designated Protected Structures (listed on the Record of Protected Structures; RPS) and Architectural Conservation Areas (ACA); buildings and historic gardens listed on the National Inventory of Architectural Heritage (NIAH); previously unrecorded (undesigned) structures of architectural heritage interest.
- Intangible Cultural Heritage — local folklore traditions documented in the Irish Folklore Commission Schools' Collection; skills, crafts and traditions listed in the National Inventory of Intangible Cultural Heritage; sites, areas or features of potential cultural heritage value.

In this assessment, tangible cultural heritage assets are captured under the relevant sections on archaeology and built heritage, while intangible cultural heritage associations (i.e. historical and folklore associations) are referred to, where known, in the archaeological and historical background with further information presented in the appendices.

The following Appendices are included, to be referenced with this report:

- Appendix 13A: Cultural Heritage Dataset
- Appendix 13B: Archaeological Heritage Inventory
- Appendix 13C: Inventory of Historic Gardens/Demesnes
- Appendix 13D: Inventory of Previous Archaeological Investigations
- Appendix 13E: Inventory of Archaeological Objects from the NMI Topographical Files
- Appendix 13F: Extracts from the Irish Folklore Commission Schools' Collection
- Appendix 13G: Walkover Survey Photographic Record
- Appendix 13H: Designated Cultural Heritage within a 2km Radius
- Appendix 13I: Sites Of Significance within a 20km Radius
- Appendix 13J: Projects Scoped In for Assessment of Cumulative Impacts

This chapter should be read in conjunction with Chapter 9 (Landscape and Visual) and its appendices, which present related impacts arising from the proposed scheme and proposed mitigation measures to avoid or reduce the predicted impacts.

The assessment is based on identifying and describing the likely significant effects arising from the proposed scheme as described in Chapter 3 (Description of the Development) of the EIAR.

### 13.1.1 Company Background

Breana McCulloch is an EIA Consultant with AMS. She holds a BA (with distinction) in Anthropology from the University of Alberta and an MES in Archaeology from Lakehead University in Canada and is a member of the Institute of Archaeologists of Ireland. Breana has over fourteen years of experience in the fields of archaeology and cultural heritage for both the private sector and government agencies. She has worked in the EIA sector for three years and has undertaken walkover surveys and cultural heritage assessments for various developments and infrastructure projects.

### 13.1.2 Consultation

As per the DRAFT Transport Infrastructure Ireland (TII) Cultural Heritage Guidance and Standards (TII 2023), the interaction between the cultural heritage specialist and Landscape and Visual Impact specialist is important, “as setting assessments and visual impact assessments require the input of a Landscape specialist, while visual amenity may contribute to the cultural heritage value of a site...” (*ibid.*, 9). AMS has consulted with the Landscape and Visual Impact Assessment (LVIA) specialists (Macroworks), through the client, to discuss the potential for visual impacts on sites of cultural heritage significance in the wider environment (see Section 13.10.1 Landscape and Visual Impact Analysis (LVIA)).

A consultation request has been made to the Development Applications Unit (DAU) of the National Monuments Service (NMS), and this process is ongoing.

### 13.1.3 Aim of Report

This EIAR chapter describes the potential impacts on cultural heritage receptors as a result of the proposed development.

The purpose of the chapter is to ensure the project complies with legal requirements regarding the protection of cultural heritage, including the National Monuments Acts 1930 to 2014, the Planning and Development Act 2000 (as amended), as well as the amended Environmental Impact Assessment (EIA) Directive 2014/52/EU. The report will assist in the development of measures to avoid, prevent and reduce adverse effects on cultural heritage, as well as measures to remedy or offset (i.e. compensate for) adverse effects that cannot be avoided.

### 13.2 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

Boliden Tara Mines DAC is proposing the following engineering works at the Randalstown Tailings Storage Facility:

- The construction of a reinforcement buttress to the extant embankment walls of the Tailings Storage Facility (TSF) (see Chapter 1; Figure 13.2).

BTM has recently become a member of the International Council for Mining and Metals 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. In order to increase the Factor of Safety of the extant embankment walls of the tailings facility, a rockfill and earthen buttress will be constructed against the extant embankment walls of the TSF (Plate 13.1).



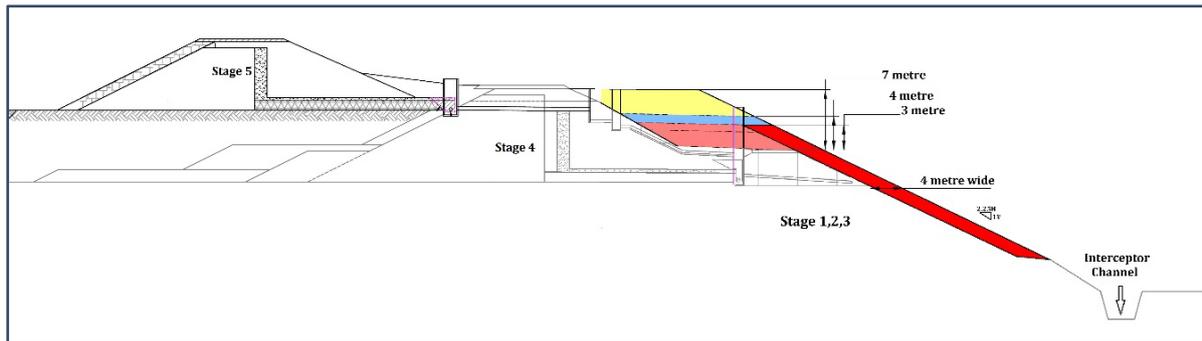
**Plate 13.1: Existing embankments side profile (provided by the client)**

Stages 1 to 5 of the extant embankment is constructed using glacial till that allows water to percolate through and be collected into an internal drainage system. This water will then flow towards the outer perimeter collection channel where it is then recycled into the storage dam. Excess water is discharged into the River Boyne (under licence).

The proposed buttress is to be constructed along the Stage 1, 2 and 3 starter embankments and will fortify the existing Stage 4 and 5 dam embankment walls to increase overall stability. The proposed works involve the placement of glacial till on the crest of the Stage 1, 2 and 3

embankments, supported by a widening of the side slope of these same stages (Plates 13.1 and 13.2).

The proposed buttress will be c.12m wide at the base, while the crest of Stages 1, 2 and 3 will increase in height from 3–7m (see Chapter 3, Description of the Development). The current embankments are c.15–20m in height and neither this overall height nor the footprint will be altered by the proposed works.



**Plate 13.2: Cross section of facility embankment with proposed buttress (provided by the client)**

### 13.2.1 Construction Phase

The construction works will occur in two phases, which may run concurrently. Works will commence at the eastern end of the site and proceed westward (Plate 13.3):

- Phase 1: will proceed horizontally along Stage 4 of the tailings dam. Works will vary from 3–7m in height and will be undertaken in 500m increments, and;
- Phase 2: will proceed horizontally at ground level against the embankment wall of Stages 1, 2 and 3. This will extend to 4m in width and will also be undertaken in 500m increments (see Plate 13.2).

Prior to works, any topsoil, shrubs, etc. will be removed from the side slopes. Following removal of topsoil, the footprint of the proposed works will be graded and compacted.

The proposed Phase 1 buttress overlies the crest of Stages 1, 2 and 3. The access road, located at the crest of this embankment, includes a layer of rockfill material as capping and surface dressing. It is proposed that this material be salvaged where possible and where the quality of the material permits.

For the Phase 2 buttress, it will be necessary to remove the topsoil from the entirety of the starter dam (Stages 1, 2 and 3) perimeter slope as well as the footprint of the buttress at the

toe. The footprint will require trimming, grading and compaction prior to the placement of the compacted fill. The final excavated surfaces shall be trimmed and rolled to provide a clean, even and firm foundation to permit the movement of construction vehicles without causing rutting or other deleterious effects.

A specified number of passes of a suitable vibratory roller will be required for the underlying soils. Soft spots and areas of unsuitable materials identified shall be excavated and replaced with suitable material placed and compacted and/or shall be improved *in-situ* via compaction or the installation of appropriate geosynthetics as approved by the engineer.

Construction works will be undertaken at 10m as a minimum distance from any water course.



**Plate 13.3: Buttress layout plan (provided by the client)**

### 13.2.2 Operational Phase

The proposed buttress itself is not considered to have an operational phase as, once constructed, seeded and vegetated, it is intended that it will not be altered, amended or interacted with as part of the operations of the TSF, instead it will act as a permanent earthen structure.

Elements of the proposed development that will have an operational phase include the continued use of the TSF to store tailings, the continued use of the perimeter interceptor channel and the required use of the internal road network.

### 13.3 ASSESSMENT METHODOLOGY

The EIA process for Cultural Heritage was divided into five main components:

- Identification and appraisal of known and potential cultural heritage receptors within the receiving environment through baseline studies of statutory and non-statutory heritage lists, archives, publications and other sources;
- Walkover field survey of cultural heritage receptors to supplement the desktop research;
- Identification and description of impacts/effects on cultural heritage from the proposed scheme;
- Quantitative and qualitative assessment of the significance of effects on cultural heritage receptors from the proposed scheme;
- Consideration of appropriate mitigation to minimise effects arising from the proposed scheme; and,
- Description of cumulative and residual effects to cultural heritage from the proposed scheme.

#### 13.3.1 Relevant Guidelines, Policy and Legislation

The methodology for the appraisal of the proposed scheme with regards to cultural heritage was based on the DRAFT TII Cultural Heritage Guidance and Standards (TII 2023),<sup>1</sup> which sets out the expected requirements in relation to cultural heritage for EIARs, and the Environmental Protection Agency's (EPA) Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA 2022).<sup>2</sup> The collation of baseline cultural heritage data and the evaluation of impacts to archaeological and architectural heritage has also had regard to the following legislation, policy and guidance documents.

##### 13.3.1.1 Legislation

- Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023,<sup>3</sup>

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<sup>1</sup> Available at: <https://www.ams-consultancy.com/tii-guidance-and-standards-project/>.

<sup>2</sup> Available at: [https://www.epa.ie/publications/monitoring--assessment/assessment/EIAR\\_Guidelines\\_2022\\_Web.pdf](https://www.epa.ie/publications/monitoring--assessment/assessment/EIAR_Guidelines_2022_Web.pdf).

<sup>3</sup> Section 7 of the Act (which provides for the repeal of the *National Monuments Acts 1930 to 2014* and related legislation) has not entered into force. Accordingly, the *National Monuments Acts 1930 to 2014* and other legislation which section 7 of the Act will, when it comes into force, repeal, remain fully in force.

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- National Monuments Acts 1930 to 2014;
  - Heritage Act 1995 (as amended);
  - National Cultural Institutions Act 1997;
  - European Convention for the Protection of the Archaeological Heritage (Valetta Convention, 1997);
  - European Convention for the Protection of the Architectural Heritage (Granada Convention, 1997);
  - European Landscape Convention (Florence Convention, 2000);
  - Planning and Development Act 2000 (as amended)<sup>4</sup>;
  - UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (Paris Convention, 2003); and,
  - Directive 2011/92/EU of the European Parliament and of the Council on the assessment of the effects of certain public and private projects on the environment, as amended by Directive 2014/52/EU of the European Parliament and the Council (hereafter the EIA Directive).

#### **13.3.1.2 Policy and Planning Documents**

- *Framework and Principles for the Protection of the Archaeological Heritage* (Department of Arts, Heritage, Gaeltacht and the Islands [DAHGI] 1999);<sup>5</sup>
- *Built & Archaeological Heritage: Climate Change Sectoral Adaption Plan* (Department of Culture, Heritage and the Gaeltacht [DCHG] 2019);<sup>6</sup>
- *Archaeology in the Planning Process* (Department of Housing, Heritage and Local Government [DHLGH] & Office of the Planning Regulator [OPR] 2021);<sup>7</sup>

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<sup>4</sup> A bill is currently undergoing due process which will (likely) replace the Planning & Development Act 2000.

<sup>5</sup> Available at: <https://www.archaeology.ie/sites/default/files/media/publications/framework-and-principles-for-protection-of-archaeological-heritage.pdf>.

<sup>6</sup> Available at: <https://www.gov.ie/pdf/?file=https://assets.gov.ie/246863/2660361a-6b77-4b58-b040-aea8fd960606.pdf#page=null>.

<sup>7</sup> Available at: <https://www.archaeology.ie/sites/default/files/media/publications/archaeology-planning-process-pl13.pdf>.

- *A Living Tradition: A Strategy to Enhance the Understanding, Minding and Handing On of our Built Vernacular Heritage* (DHLGH 2021);<sup>8</sup>
- *Places for People: National Policy on Architecture* (DHLGH 2022a);<sup>9</sup>
- *Heritage Ireland 2030: A Framework for Heritage* (DHLGH 2022b);<sup>10</sup>
- *Meath County Council (MCC) Development Plan 2021–2027*.<sup>11</sup>

### 13.3.1.3 Guidelines

- *Guidelines on the information to be contained in Environmental Impact Statements* (EPA 2002);
- *Advice Notes on Current Practice (in the preparation of Environmental Impact Statements)* (EPA 2003);<sup>12</sup>
- *Architectural Heritage Protection: Guidelines for Planning Authorities* (Department of Arts, Heritage and the Gaeltacht [DAHG] 2011);<sup>13</sup>
- *National Inventory of Architectural Heritage Handbook* (DHLGH 2023).<sup>14</sup>

### 13.3.1.4 Legislative Mechanisms of Protection

#### Archaeological Heritage

The National Monuments Acts 1930 to 2014 are the primary legislation aimed at protecting and preserving archaeological heritage in the Republic of Ireland. At present, archaeological sites and monuments are protected under the National Monuments Acts 1930 to 2014 in one of four ways:

1. Being recorded in the RMP;

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<sup>8</sup> Available at: <https://www.buildingsofireland.ie/app/uploads/2021/12/A-Living-Tradition.pdf>.

<sup>9</sup> Available at: <https://www.gov.ie/en/publication/f9879-places-for-people-national-policy-on-architecture/>.

<sup>10</sup> Available at: <https://www.louthcoco.ie/en/services/heritage/publications/heritage-ireland-2030.pdf>.

<sup>11</sup> Available at: <https://consult.meath.ie/en/consultation/meath-adopted-county-development-plan>.

<sup>12</sup> Available at: <https://www.epa.ie/publications/monitoring--assessment/assessment/advice-notes-on-current-practice-in-the-preparation-of-environmental-impact-stat.php>.

<sup>13</sup> Available at: <https://www.buildingsofireland.ie/app/uploads/2019/10/Architectural-Heritage-Protection-Guidelines-for-Planning-Authorities-2011.pdf>.

<sup>14</sup> Available at: <https://www.buildingsofireland.ie/app/uploads/2023/04/NIAH-Handbook-Edition-April-2023.pdf>.

2. Being registered in the RHM;
3. Being a national monument in the ownership or guardianship of the Minister for Housing, Local Government and Heritage or a Local Authority; or
4. Being a national monument subject to a Preservation Order or Temporary Preservation Order.

The National Monuments Acts can also protect elements of architectural heritage or offer dual/parallel protection.

### **Architectural Heritage**

Under the terms of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999, the term 'architectural heritage' means: '*all*

- a) structures and buildings together with their settings and attendant grounds, fixtures and fittings;
- b) groups of such structures and buildings; and
- c) sites which are of architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest'.

The principal sources for the identification of designated architectural heritage sites were the RPS,<sup>15</sup> as published within the MCC Development Plan 2021–2027.<sup>16</sup> The NIAH Building Survey and Survey of Historic Gardens and Designed Landscapes,<sup>17</sup> the RMP, SMR and historical maps were also consulted.

In addition, other buildings and structures of potential built heritage interest identified through desktop research and field survey were also included in the assessment, as such undesignated receptors may have local or wider heritage significance.

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<sup>15</sup> Available at: <https://consult.meath.ie/en/consultation/meath-adopted-county-development-plan/chapter/a06-record-protected-structures>.

<sup>16</sup> Available at: <https://consult.meath.ie/en/consultation/meath-adopted-county-development-plan>.

<sup>17</sup> Available at: <https://www.buildingsofireland.ie/buildings-search/>.

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## 13.3.2 Overview of Data Sources, Collection Methods and Surveys

### 13.3.2.1 Cultural Heritage Data Sources

The principal sources utilised to create the cultural heritage baseline are outlined below. Reference numbers (e.g. CH01, CH02, etc.), were assigned to each identified cultural heritage receptor, as recommended in the DRAFT TII guidelines (TII 2023); see Figure 13.6.

#### World Heritage Properties and Tentative World Heritage List

There are no UNESCO World Heritage Properties, or properties included on the Tentative List (an inventory of properties that each State intends to consider for nomination to the UNESCO World Heritage List), within the primary study area (500m). However, a wider study area of 20km has been included to assess any relevant cultural heritage assets that could incur a visual impact.

The *Brú na Bóinne* - Archaeological ensemble of the Bend of the Boyne is located c.12.4km to the east of the proposed scheme (Figure 13.4).<sup>18</sup> This complex includes three main prehistoric sites: Knowth, Dowth and Newgrange and is *'...Europe's largest and most important concentration of prehistoric megalithic art. The monuments there had social, economic, religious and funerary functions. Surrounded by about forty satellite passage graves, they constitute a funerary landscape recognised as having great ritual significance, subsequently attracting later monuments of the Iron Age, early Christian and medieval periods.'*<sup>19</sup>

The Royal Sites of Ireland are included (since 2010) on the Tentative List for World Heritage Site status and were proposed again in 2021 as part of a serial nomination for same. The Hill of Tara is the closest of the Royal Sites to the proposed scheme.

#### National Monuments Lists

A national monument, as defined in Section 2 of the National Monuments Act 1930, means a monument *'...the preservation of which is a matter of national importance by reason of the*

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<sup>18</sup> See also the UNESCO World Heritage Site and Brú na Bóinne Management Plan, available at: <https://consult.meath.ie/en/consultation/meath-adopted-county-development-plan/chapter/a08-unesco-world-heritage-site-and-br%C3%BA-na-b%C3%B3inne-management-plan>.

<sup>19</sup> Available at: <https://whc.unesco.org/en/list/659>.

*historical, architectural, traditional, artistic or archaeological interest attaching thereto.*<sup>1</sup> The current List of national monuments in State care (Ownership and Guardianship) for County Meath is published in the MCC Development Plan 2021–2027.<sup>20</sup> There are no national monuments in State care listed within the proposed scheme. However, there are eight sites or archaeological complexes within the wider 20km study area, with a total of fourteen national monuments numbers, that were scoped in for analysis (Figure 13.4; Appendix 13I). These include round towers, hillforts and significant archaeological complexes such as the *Brú na Bóinne* World Heritage Site and the Hill of Tara.

### **List of Monuments Subject to Preservation Orders**

Section 8(1) of the National Monuments Act 1930 provides for the Minister to place a Preservation Order (PO) on a monument which the Minister considers to be a national monument under threat. The current list of Preservation Orders detailing all monuments that have had a Preservation Order or a Temporary Preservation Order placed on them was published by the NMS in June 2019.<sup>21</sup> There are no national monuments subject to Preservation Orders within the proposed scheme. However, there are three sites or archaeological complexes within the wider 20km study area, with a total of four POs, that were scoped in for analysis (Figure 13.4; Appendix 13I).

### **Record of Monuments and Places**

The RMP is the statutory list of protected places and monuments established under Section 12(1) of the National Monuments (Amendment) Act 1994. The RMP for County Meath was published in 1996, in paper form with accompanying location maps which have been scanned and published online.<sup>22</sup> During the current assessment, the scanned lists and accompanying location maps were used to check whether a monument or place is subject to legal protection under the National Monuments Acts through its inclusion on the RMP. There are eight Recorded Monuments within the 500m study area for the proposed scheme (see Figure 13.3; Appendix 13A)

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<sup>20</sup> Available at: [https://consult.meath.ie/en/system/files/materials/7447/National%20Monuments\\_0.pdf](https://consult.meath.ie/en/system/files/materials/7447/National%20Monuments_0.pdf).

<sup>21</sup> Available at: <https://www.archaeology.ie/sites/default/files/media/publications/po19v1-all-counties.pdf>.

<sup>22</sup> Available at: <https://www.archaeology.ie/publications-forms-legislation/record-of-monuments-and-places>.

### **Register of Historic Monuments**

The Register of Historic Monuments (RHM) was established under Section 5 of the National Monuments (Amendment) Act 1987. It requires the Minister responsible to establish and maintain an RHM that includes historic monuments known at the commencement of the Act, in addition to archaeological areas entered in the Register subsequent to the Act.<sup>23</sup> Archaeological sites and areas included on the RHM are subject to legal protection. No Registered Monuments are located within the proposed scheme; however, there are three sites or archaeological complexes within the wider 20km study area, with a total of 22 RHMs, that were scoped in for analysis (Figure 13.4; Appendix 13I). This includes nearby Liscartan Castle (ME025-009001; RHM 1854).

### **Sites and Monuments Record**

The NMS of the DHLGH maintains a publicly accessible database known as the Sites and Monuments Record (SMR), available through the Historic Environment Viewer (HEV).<sup>24</sup> This contains current information on known archaeological sites and monuments. The SMR sites dataset includes a 'Zone of Notification' (ZoN) for sites and monuments. The zones do not define the exact extent of the monuments, but rather are intended to identify them for the purposes of notification under Section 12(3) of the National Monuments Acts 1930 to 2004. A total of 37 RMP/SMR records are located within the 500m study area (Figure 13.3; Appendix 13B and Appendix 13I).

### **Record of Protected Structures**

Under the Planning and Development Act 2000 (as amended), Local Authorities are required to maintain an RPS as part of their Development Plan. These are structures recognised by the Local Authority as having special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. The legal protections afforded to Protected Structures are set out in Part IV of the Planning and Development Act 2000, as amended.

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<sup>23</sup> Discrepancies were noted between the Local Authority MCC Development Plan and the national RHM. Subsequent consultation with NMS confirmed the national RHM to be accurate.

<sup>24</sup> Available at: <https://maps.archaeology.ie/HistoricEnvironment/>.

The RPS provides positive recognition of a structure's importance and protection from adverse impacts. A Protected Structure, unless otherwise stated in the RPS, includes the interior of the structure, the land lying within its curtilage, any other structures and their interiors lying within that curtilage, plus all of the fixtures and features that form part of the interior or exterior of any of these structures. The National Monuments Acts 1930 to 2014 can also protect elements of the architectural heritage or offer dual/parallel protection. Five Protected Structures located within the wider 20km study area were included for analysis (of which three are also listed on the NIAH; Figure 13.4; Appendix 13I).

### **National Inventory of Architectural Heritage**

The NIAH is a nationwide survey of post-1700 architectural heritage including buildings, structures and historic landscapes and gardens, carried out under the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. The NIAH comprises a Building Survey and a Survey of Historic Gardens and Designed Landscapes. These surveys are used to advise Local Authorities in relation to structures of interest within their functional areas. The purpose of the surveys is to highlight a representative sample of the architectural heritage of each county and to raise awareness of the wealth of architectural heritage in Ireland. Not all buildings and structures listed on the NIAH are legally protected through inclusion on the RPS.

There are no designated architectural heritage sites (RPS or NIAH) within the proposed scheme. However, three historic gardens/demesnes as listed on the NIAH Survey of Historic Gardens and Designed Landscapes are located within the 500m study area (Figure 13.3; Appendix 13C).

### **Database of Irish Excavation Reports**

The Database of Irish Excavation Reports (DIER), also commonly known as the 'Excavations Bulletin' (summary accounts of archaeological excavations in Ireland), is maintained by Wordwell publishers with the support of the DHLGH and is accessible online.<sup>25</sup> Seventeen

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<sup>25</sup> Available at: <https://excavations.ie/>.

previous archaeological investigations are recorded from the study area, and summaries are provided in Appendix 13D (Figure 13.5).

### **Historical Maps and Satellite Imagery**

Undesignated potential cultural heritage receptors were identified through analysis of aerial photography, satellite imagery and historical mapping. The cartographic sources included the first-edition six-inch Ordnance Survey (OS) map for County Meath (surveyed in 1835 and published in 1837), and the first-edition 25-inch OS map (surveyed in 1909/10 and published in 1911) which were reviewed online through the HEV (Figure 13.7 and Figure 13.8).<sup>26</sup>

Satellite and aerial imagery were also reviewed throughout the assessment, including Google Earth via Google Earth Pro; Bing Satellite and Google Satellite via QGIS (version 3.28) XYZ Tiles.

### **National Museum of Ireland Topographical Files and Finds Database**

The NMI Topographical Files and Finds Database, available in the Antiquities Division, Kildare Street, Dublin 2, were accessed by appointment by AMS on the 12 January 2024. All of the townlands from the primary study area (500m) were checked against the NMI Topographical Files and Finds Database; the results are presented in Appendix 13E.

### **Irish Folklore Commission Schools' Collection**

The Irish Folklore Commission Schools' Collection, which is a rich source of local information, is gradually being made accessible online as part of the Dúchas Project,<sup>27</sup> a collaboration between University College Dublin, Dublin City University and the (then) Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media to digitise the National Folklore Collection. The Schools' Collection was searched for entries pertaining to the folklore, traditions and oral histories of the study area (Appendix 13F).

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<sup>26</sup> Available at: <https://maps.archaeology.ie/HistoricEnvironment/>.

<sup>27</sup> Available at: <https://www.duchas.ie/en>.

## Placenames Database of Ireland

Placenames can provide clues to a townland's archaeological and/or historical associations (e.g. Ballinena = *Baile an Aonaigh* – The Town of the Fair/Assembly; Ballingowan = *Baile an Ghabhann* – The Town of the Smith), archaeology (e.g. Dungeeha = *Dún Gaoithe* – Fort of the Wind; Doocatteen = *Dumhach Chaitín* = The Mound of Caitín) and geography (e.g. Moveedy = *Maigh Mhíde* – The Plain of Míde).

A search of the Placenames Database of Ireland<sup>28</sup> was undertaken for the nine townlands that occur within the primary study area; these are all listed in Table 13.4.

### 13.3.3 Desktop Survey

#### 13.3.3.1 Compilation of Base Maps

The cultural heritage assets identified during assessment were digitally mapped using open-source Geographical Information System (GIS) software QGIS (version 3.28) and cross-checked with current cultural heritage datasets (as discussed above). The historical mapping and satellite imagery were explored to identify undesignated structures and features of potential cultural heritage interest, some of which were then included for verification during the walkover survey. KMZ files for the proposed scheme were imported and examined to assess the potential impact on the identified heritage assets.

#### 13.3.3.2 Cultural Heritage Dataset

An inventory of cultural heritage receptors was compiled, drawing on data from the baseline studies and walkover survey. The Cultural Heritage Dataset (CHD) includes a brief description and appraisal of each cultural heritage receptor, as well as their legal status and suggested importance (Appendix 13A). The relative importance of each cultural heritage receptor asset was rated in terms of Very High, High, Medium, Low, Very Low/Negligible or Unknown, in accordance with the TII and EPA guidelines (TII 2022, 72–73). Relative importance derives from a number of factors including current designation (i.e. RMP, RHM, SMR, RPS, NIAH, or none), preservation/condition and archaeological, architectural, historical, artistic, cultural,

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<sup>28</sup> Available at: <https://www.logainm.ie/en/>.

scientific, social or technical interest (see Section 13.3.5 Overview of the Assessment Methodology, below for more detail).

#### **13.3.4 Walkover Survey**

A comprehensive walkover survey was carried out by AMS on 4 December 2023 to supplement the desktop research. The entirety of the proposed scheme was surveyed as were features of interest within the study area. The survey assisted in:

- Confirming the nature, location, condition and extent of cultural heritage receptors that have the potential to be impacted by the proposed scheme;
- Noting additional unidentified archaeological sites and monuments and architectural heritage assets as defined under the National Monuments Acts 1930 to 2014 and Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999;
- Evaluating the magnitude of impact and significance of effect of the proposed scheme; and
- Providing a photographic record and field notes of individual undesignated features of potential archaeological and architectural heritage interest.

Appendix 13G comprises the photographic record and associated field notes from the walkover survey.

#### **13.3.5 Overview of the Assessment Methodology**

##### **13.3.5.1 Assessment Criteria**

The EIA considers the potential for significant environmental impacts to affect the baseline cultural heritage environment as a direct and/or indirect result of the proposed scheme. The baseline conditions are defined as the existing state of the environment and how it may develop in the future in the absence of the proposed scheme.

The potential impact of the proposed scheme on cultural heritage was carried out with reference to the published EPA guidelines (EPA 2022) and the DRAFT TII Guidelines (TII 2023). The assessment included both quantitative assessment and qualitative judgement.

The importance rating for each cultural heritage receptor was based on evidence from the baseline studies, fieldwork, specialist surveys and consultation, using professional judgement,

and with reference to the factors set out in Table 13.1 (TII 2023, Table 5–6). Additional guiding factors that were considered included the status, i.e. designation and level of statutory protection, of the cultural heritage receptor, the condition/preservation, special interest, group value, rarity, visibility in the landscape, fragility/vulnerability, amenity value and local significance (*ibid.*, 62; DAHG 2011, 24–30).

**Table 13.1: Criteria for assessing the importance of cultural heritage receptors**

Importance/ Significance	Criteria Considered
<b>Very High</b>	<p>World Heritage Properties and properties listed on the World Heritage Tentative List;</p> <p>Built heritage receptors rated as being of international importance by the NIAH, including associated historic gardens and designed landscapes;</p> <p>Historic landscapes of international value (designated or undesignated). Such landscapes are extremely well-preserved with exceptional coherence, time-depth, or other critical factors;</p> <p>Places or features of international intangible heritage value; and</p> <p>Other designated or undesignated receptors of demonstrable cultural heritage importance.</p>
<b>High</b>	<p>National monuments;</p> <p>Undesignated sites and monuments that might reasonably be considered a national monument by the Minister because of their historical, architectural, traditional, artistic, or archaeological interest;</p> <p>Recorded Monuments (or sites and monuments scheduled for inclusion on the RMP) of high quality and importance;</p> <p>Sites and monuments subject to a Preservation Order or Temporary Preservation Order;</p> <p>Protected Structures;</p> <p>Undesignated receptors of comparable quality and importance as Recorded Monuments and Protected Structures;</p> <p>ACAs containing important buildings/groupings of buildings that contribute either individually or collectively to the streetscape and the character and appearance of the ACA;</p> <p>Built heritage receptors rated as being of National importance by the NIAH, including associated buildings and designed landscapes;</p> <p>Historic landscapes (designated or undesignated) of outstanding interest and of demonstrable national value. These will be well-preserved historic landscapes exhibiting considerable coherence, time-depth or other critical factors;</p> <p>Places or features of national intangible heritage value; and</p> <p>Other designated or undesignated receptors of national cultural heritage importance.</p>
<b>Medium</b>	<p>Recorded Monuments (or sites and monuments scheduled for inclusion on the RMP) of good quality/preservation;</p> <p>Built heritage receptors rated as being of Regional importance by the NIAH including associated historic gardens and designed landscapes;</p>

Importance/ Significance	Criteria Considered
	Historic townscapes or built-up areas with important historic integrity in their buildings or built settings (e.g. including street furniture and other structures); Historic landscapes of regional value (designated or undesignated); Places or features of regional intangible heritage value; and Other designated or undesignated receptors of regional cultural heritage importance.
<b>Low</b>	Receptors compromised by poor preservation and/or poor survival of contextual associations; Built heritage receptors rated as being of Local importance by the NIAH including associated historic gardens and designed landscapes; Undesignated historic buildings of modest quality in their fabric or historical associations; Historic townscapes or built-up areas of limited historical integrity in their buildings, or built settings (e.g. including street furniture and other structures); Historic landscapes whose value is limited by poor preservation and/or poor survival of contextual associations; Places or features of local intangible heritage value; and Other designated or undesignated receptors of local importance.
<b>Very Low/ Negligible</b>	Receptors/landscapes with very little or no surviving cultural heritage interest; and Buildings of no architectural, historical, archaeological, artistic, cultural, scientific, social, traditional or technical interest; buildings of an intrusive character.
<b>Unknown</b>	The importance of the receptor has not yet been ascertained (e.g. a possible archaeological feature identified through LiDAR analysis or geophysical survey that may or may not be archaeological, or an area of archaeological potential). In such cases, the significance of effect will be 'Indeterminable'.

Likely effects from the proposed scheme on the cultural heritage environment were categorised as direct, indirect, positive and/or negative adverse in accordance with the forthcoming TII guidelines (TII 2023, 62):

- **Direct Effect** — an effect that is directly attributable to the proposed scheme;
- **Indirect Effect** — an effect that results indirectly from the proposed scheme because of the direct effects, which may be away from the proposed scheme;
- **Positive Effect** — a change that enhances or improves the quality of the cultural heritage environment. Includes increased physical separation resulting in traffic relief, reduced visual and noise intrusion, and enhancement of setting or amenity; and
- **Negative/Adverse Effect** — a change that reduced the quality of the cultural heritage environment. Includes total or partial loss of a site, monument, structure or its attendant grounds, visual intrusion, severance, degradation of setting and/or amenity.

The predicted magnitude (level) of impact was rated as Very High, High, Medium, Low or Very Low/Negligible (TII 2023, Table 5–6), as detailed in Table 13.2. The predicted magnitude of impact was evaluated by considering the type and quality of impact/effect, extent and context, probability, duration and frequency of impact/effect.

**Table 13.2: Magnitude of Impact/Effect on Cultural Heritage**

Magnitude of Impact	Typical Descriptors of Impact/Effect
<b>Very High</b>	Major alteration to, or complete loss of a key cultural heritage receptor. Effects likely to be experienced at a very large scale, considered permanent and irreversible.
<b>High</b>	Notable or long-term change to key cultural heritage characteristics or receptors.
<b>Medium</b>	Moderate or long-term change over a restricted area, or a moderate change in key cultural heritage characteristics or receptors.
<b>Low</b>	Minor short or medium-term change over a restricted area, or a minor change in key cultural heritage characteristics or receptors.
<b>Very Low/ Negligible</b>	Imperceptible change in cultural heritage characteristics or receptors.

The predicted significance of effect was evaluated by comparing the predicted magnitude of impact/effect with the suggested importance of the cultural heritage receptor using the schedule and definitions of significance adapted from the EPA and DRAFT TII Guidelines (EPA 2022, 50–51; TII 2023, 66). Significance of effect for cultural heritage are classified and summarised in Table 13.3.

**Table 13.3: Significance of Effects on Cultural Heritage**

Significance of Effect	Typical Descriptors of Effect
<b>Profound</b>	An effect which obliterates important characteristics. These effects are generally, though not exclusively associated with receptors of High or Very High importance that are likely to suffer a very high negative impact.
<b>Very Significant</b>	An effect which, by its character, magnitude, duration or intensity, significantly alters most of an important aspect of the cultural heritage environment.
<b>Significant</b>	An effect which, by its character, magnitude, duration or intensity alters an important aspect of the cultural heritage environment. These effects are generally, though not exclusively, associated with cultural heritage receptors of Medium to Very High importance that are likely to suffer damaging impact and loss of integrity.
<b>Moderate</b>	An effect that alters the character of the cultural heritage environment in a manner that is consistent with existing and emerging baseline trends.
<b>Slight</b>	An effect which causes noticeable changes in the character of the cultural heritage environment without affecting its importance.

Significance of Effect	Typical Descriptors of Effect
<b>Not Significant</b>	An effect which causes noticeable changes in the character of the cultural heritage environment but without significant consequences. However, the cumulative effects of such impacts may lead to an overall adverse effect.
<b>Imperceptible</b>	An effect capable of measurement but without significant consequences. Such effects can be positive or negative.

An assessment of cumulative effects was also considered as part of the EIA. The EPA guidelines describe cumulative effects as “The addition of many minor or insignificant effects of other projects, to create larger, more significant effects” (2022, 52). The assessment baseline included the proposed scheme and proposed developments with planning permission in the vicinity that are likely to give rise to significant cumulative effects on cultural heritage (TII 2023, 67; see Section 13.6 CUMULATIVE Impacts).

The interaction of effects between cultural heritage and other environmental factors was considered throughout the environmental evaluation of the proposed scheme (see Section 13.10 Interactions Arising).

### 13.3.6 Methodology for Setting the Study Area

The description of the cultural heritage baseline is based on a 500m buffer around the proposed scheme footprint, which is referred to as the study area (see Figure 13.2). This study area is considered a suitable distance to enable the description of baseline conditions and allow the assessment of effects to cultural heritage receptors. Where setting/visual effects were anticipated for cultural heritage, the study area was extended to a 20km radius to include these receptors (Figure 13.4; see Appendices 13H and 13I).

### 13.3.7 Approach to Defining Mitigation

A key objective of the EIA was to develop mitigation measures to avoid, prevent and reduce adverse effects on cultural heritage. Where avoidance was not possible, measures were devised to remedy/offset adverse effects to the cultural environment through compensation and enhancement measures.

### **13.3.8 Limitations and Assumptions**

The following general limitations apply to the cultural heritage assessment presented in this chapter:

- The assessment is based on the information available at the time of writing. There is potential for additional information to become available at a later date that may alter the assessment presented here; and,
- The findings conveyed in the assessment are based on information obtained from a variety of sources including regulatory data, baseline studies and field surveys, as detailed in the chapter and which are understood to be reliable. Nevertheless, the authenticity and reliability of the information cannot be guaranteed.

### **13.3.9 Difficulties Encountered in Compiling Information**

In general, no significant difficulties were encountered in undertaking the assessment.

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## 13.4 RECEIVING ENVIRONMENT<sup>29</sup>

### 13.4.1 Site Description

The proposed scheme is located in central Meath in a fertile low-lying rural area less than 2km northwest of the town of Navan (Figure 13.1). The underlying bedrock of the area consists of limestones and shale, mudstones, siltstones, and greywackes.<sup>30</sup>

The Blackwater River is situated to the southwest, with the proposed scheme located along the eastern shore of its tributary, the Yellow River in the townlands of Randalstown, Simonstown and Silloge (Figure 13.2). These three townlands converge at the eastern end of the scheme which also denotes the borders between the civil parishes of Donaghpatrick, Donaghmore and Kilberry and the baronies of Kells Upper, Navan Lower and Morgallian (see Figure 13.1).

Given the long history of habitation within the county, it is not surprising that many of the townlands within the wider study area contain placename components relating to settlement (Table 13.4). The Irish form of Simonstown, (*Baile Shíomoin*) and Randalstown (*Baile Raghnaill*) contain the element *baile* meaning town or homestead, but in these instances, in combination with a name (Simon's town or Randal's town).<sup>31</sup> Both townlands are referenced in numerous historical documents, beginning with a reference to tithes recorded in the *Extents of Irish Monastic Possessions* in 1540 (White 1943, 31). Silloge is referenced in a Patent Roll from 1408 (and referred to as *Shilcok*) as recorded in *A Calender of Irish Chancery Letters*.<sup>32</sup>

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<sup>29</sup> With contributions from Dr Fergal Donoghue (BA; MA; PhD), who is an AMS Historical and Archaeological Researcher.

<sup>30</sup> Source: The Geological Survey Ireland's MapViewer at: <https://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=a30af518e87a4c0ab2fbde2aac3c228>.

<sup>31</sup> Source: <https://www.logainm.ie/en/38549>.

<sup>32</sup> Source: <https://www.logainm.ie/en/38663>.

**Table 13.4: Townlands within the study area<sup>33</sup>**

Townland	Gaelic Name	Suggested Meaning	Civil Parish	Barony
<b>Boolies</b>	<i>Buailidh</i>	Dairie places, booleys, mountain dairies	Donaghpatrick	Kells Upper
<b>Gibstown</b>	<i>Baile Ghib</i>	Gilbert's town	Donaghpatrick	Kells Upper
<b>Milestown</b>	<i>Baile Mhilis</i>	Milis' town	Donaghpatrick	Kells Upper
<b>Mullaghard</b>	<i>Mullach ard</i>	High summit	Donaghpatrick	Kells Upper
<b>Randalstown</b>	<i>Baile Raghnaill</i>	Randal's town	Donaghpatrick	Kells Upper
<b>Silloge</b>	<i>Saileog</i>	A willow	Kilberry	Morgallion
<b>Simonstown</b>	<i>Baile Shíomoin</i>	Simon's town	Donaghmore	Navan Lower
<b>Tatestown</b>	N/A	Tate's town (Tate is a family name)	Donaghpatrick	Kells Upper
<b>Windtown</b>	<i>Baile na Gaoithe</i>	Town of the wind	Donaghmore	Navan Lower

Orientated roughly north–south, the historic Navan to Kingscourt Railway is located immediately east of the scheme, through Simonstown and Silloge townlands. The railway was constructed in 1872 and the associated Gibstown Station is located c.191m from the northeast corner of the scheme (Figure 13.3). This railway is now part of the Boyne Valley to Lakelands County Greenway.

### 13.4.2 Archaeological Background

County Meath is rich in archaeological remains and contains a number of iconic and highly significant upstanding sites, including *Brú na Bóinne*, a UNESCO World Heritage Site. Two major navigable rivers run through central Meath — the Boyne and the Blackwater — both of which are currently designated as Special Areas of Conservation and Special Protection Areas.

Navan, the county town and largest settlement in the county lies less than 2km south-southeast of the proposed scheme. The town, which is situated on the confluence of the Boyne and Blackwater rivers, is of Anglo-Norman origins; however, given its location, it was likely significant as a fording point from an earlier period. It was formally founded as a town during the twelfth century and was walled sometime after the fourteenth century (Thomas 2006, 170–

<sup>33</sup> Suggested translations based on the Placenames Database of Ireland (<https://www.logainm.ie/en/>).

73). The town continued to grow and develop and is now the focal point of local government administration in the county.

Many sites are located in proximity to watercourses, and the Blackwater likely played an important role not only for subsistence but for the transportation of goods and people between many of these prehistoric sites.

#### **13.4.2.1 Prehistoric Period (c.8000–AD 400)**

Settlement and habitation in Meath dates from the Mesolithic period onwards. Excavations in advance of the M3 uncovered Mesolithic evidence including hearths, post-holes, chipped flint and a butt-trimmed mudstone flake (Walsh 2021, 9). In Clowanstown, an M3 excavation revealed a fishing/mooring platform and four conical fish-traps (*ibid.*).

Evidence for life during the Mesolithic has also been revealed from the rich, multicomponent site of Moynagh Lough c.13km north-northwest of the scheme. A series of platforms were built in the lake in the Late Mesolithic from which three phases of occupation were identified. Recorded features include 56 postholes, with some indicating a possible windbreak, while finds include animal bone and over 2000 pieces of chert and flint including axe-heads and spearheads (Potterton 2022).

The Neolithic period in Ireland is perhaps best known for its large ritual and funerary monuments and many of these megalithic constructions can be found in County Meath. As noted above, Meath is home to one of Ireland's two World Heritage Properties, the monument complex of *Brú na Bóinne*. This complex comprises three main prehistoric sites (Newgrange, Knowth and Dowth), which are situated on the north bank of the Boyne River. It is one of Europe's largest and most important concentrations of prehistoric megalithic art, and the monuments there had social, economic, religious and funerary functions.<sup>34</sup> There are a total of 247 recorded monuments within the World Heritage site and its buffer zone; 154 in the core area and 93 in the buffer zone, as laid out in the *Brú na Bóinne* Management Plan.<sup>35</sup>

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<sup>34</sup> Available at: <https://whc.unesco.org/en/list/659/> [Accessed: 29 November 2023].

<sup>35</sup> Available at: <https://consult.meath.ie/en/consultation/meath-adopted-county-development-plan/chapter/a08-unesco-world-heritage-site-and-br%C3%BA-na-b%C3%B3inne-management-plan> [Accessed: 29 November 2023].

Another significant ancient royal site in Meath is the complex at the Hill of Tara which contains monuments dating from the Neolithic to the early medieval period. The passage tomb known as the Mound of the Hostages (*Duma na nGiall*) was later reused for burials during the Bronze Age (Walsh 2021, 10). Visible to the west of the Hill of Tara, a number of passage tombs are recorded within the archaeological landscape of Loughcrew, along with standing stones and rock art. Loughcrew (*Slieve na Cailleach*) consists of over 30 chambered cairns and many contain interior stone carvings.

Evidence for Neolithic settlement has also been uncovered in Meath, including the remains of at least eight Early Neolithic houses with associated finds and features revealed during excavations in advance of the northern section of the M3, including prehistoric timber structures (Walsh 2021, 11). In fact, they concluded that the frequency of Neolithic features in Grange and Phoenixtown, specifically — just west of the proposed scheme — suggest that an Early Neolithic settlement may be nearby (*ibid.*, 67).

The ancient royal ceremonial complex at Teltown lies to the west-northwest of the scheme and may have prehistoric origins. This complex comprises a landscape of earthworks and early church sites with the large royal enclosure known as *Ráith Airthir* at its centre (ME017-033). It was here that an assembly (*Óenach Tailtiu*) was held each year at the festival of Lughnasa (Walsh 2021, 2 and 16), which involved games, marriages and sports that amounted to a form of “Olympic Games” (HEV) and which were briefly revived in modern times during the Gaelic Revival.

The earliest known evidence for the use of metal occurs during the transitional period between the Neolithic and the Bronze Age, along with the introduction of new pottery styles and types of funerary monuments (e.g. wedge tombs). Evidence for Chalcolithic settlement has been recorded at Newgrange and Knowth, and excavations in advance of the M3 recovered Beaker pottery. At a site in Phoenixtown c.5km from the scheme, a complete barbed-and-tanged flint arrowhead was found that is typical of this period (Walsh 2021, 18).

The Bronze Age also features strongly in the archaeological record of Meath, evidenced by 494 recorded sites likely dating to this period (including 317 ring-ditches and 177 barrow monuments of varying type).<sup>36</sup> Barrows have been recorded at the Hill of Tara and Loughcrew.

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<sup>36</sup> Available at: <https://maps.archaeology.ie/HistoricEnvironment/> [Accessed: 29 November 2023].

Round houses and burnt mounds (*fulachtaí fia*) are typical of this period, and cremation became more predominant.

Numerous Bronze Age features and finds were recovered in advance of the M3 including a barrow, two round-houses and multiple pits and post-holes dated to the Middle and Late Bronze Age in Grange townland, and a bipartite vase from a site in Phoenixtown (Walsh 2021, 20). These townlands are located just west of the proposed scheme. A range of Bronze Age settlement features and finds were recovered from these excavations (*ibid.*, 106–39).

Hillfort construction typically dates from the Late Bronze Age and Iron Age, through into the early medieval period, and was used for social and ceremonial gatherings. The Hill of Lloyd, for example, may represent an ancient royal fort and assembly place (Walsh 2021, 16). A number of hillforts have been included for analysis to ensure potential visual impacts are addressed.

The Iron Age is also represented in Meath. The complex at the Hill of Tara was important throughout this period; for example, the large hilltop enclosure *Ráith na Rí* dates to this period. The passage tomb at Knowth saw reuse as an Iron Age cemetery (McGarry 2012, 707–12), and the hillforts of the Hill of Lloyd and Faughan Hill may have been important ceremonial centres during this time (Walsh 2021, 22). Excavations in advance of the M3 Road Project also revealed archaeological sites from this period (*ibid.*, 21–22).

The quadrivallate earthwork of *Tlachtga* on the Hill of Ward is generally associated with the late Iron Age, built by the high king *Túathal Techmar* following the creation of the kingdom of Mide in the early decades of the first millennium AD. It is noteworthy that many of the recorded monuments noted here have intervisibility; Loughcrew, the Hill of Tara and Hill of Lloyd are all visible from the Hill of Ward (Davis 2013).

Interestingly, Roman artefacts are recorded from Late Iron Age contexts in proximity to the scheme, including a bronze ladle from Boheermeen Bog and a spiral armlet from Phoenixtown (Walsh 2021, 22).

#### **13.4.2.2 Medieval Period (AD 400–1650)**

The early medieval period in Meath is well represented by various site types, including 712 recorded ringforts. These represent the enclosed farmsteads of relatively prosperous farmers, the majority of which were constructed over a 300-year period from the start of the seventh until the end of the ninth century AD (Stout 1997, 24). They are often found in association with

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other features such as souterrains and field systems. Ecclesiastical sites and churches also appear in the landscape during this period, such as the early ecclesiastical site known as *Domhnach Mór Maigh Echnach*, located in Donaghmore townland 2.8km to the southeast of the proposed scheme, where a medieval round tower and church are also located.<sup>37</sup> Another significant early ecclesiastical site in the area is Donaghpatrick (ME017-034) situated 2.4km to the west of the scheme; the site for this religious foundation is believed to have been donated to St Patrick by Conall, a brother of the High King Laoghaire (HEV). The sites at Knowth and Tara also saw further adaptation and reuse during this period (Walsh 2021, 22–23). The medieval period saw further settlement developments within the county with the foundation of towns at Navan, Kells and Trim. New building types were introduced, as evidenced by the presence of 63 recorded mottes and 51 tower houses, two of which are located south-southwest of the scheme along the Blackwater River (ME025-009001 and ME025-011).

#### **13.4.2.3 Territorial Boundaries**

Parish, baronial and county boundaries are typically of the greatest antiquity owing to their frequent use of topographical features followed by older Gaelic boundaries. Civil parishes largely date to the twelfth century, being coterminous with existing Gaelic political and territorial units (Nugent 2007, 119; Ní Ghabhláin 1996). Similarly, baronies, although being institutions introduced by colonial administrations from the high medieval to the early modern period, have their origins in older Gaelic territorial units (Nugent 2007, 63; Ó Muraíle 1984).

Townlands constitute the smallest territorial unit in Ireland, with approximately 62,000 being delineated on the first-edition OS maps (Duffy 2004, 24). While first surveyed in their modern incarnation in the mid-nineteenth century, townlands have a long pedigree stretching back to the pre-Norman period (McErlean 1983). As territorial units, they ultimately derive from the Gaelic system of landholding, serving to allocate land and usage rights and to impose taxation. The existing framework of townlands was utilised during both high medieval and early modern colonial periods, serving as an expedient framework for controlling confiscated land. Many

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<sup>37</sup> National Monument No. 106 (RMP ME025-015001- and ME025-015002-).

Irish townlands were mapped for the first time in the Down Survey undertaken by William Petty in the 1650s in preparation for the Cromwellian land settlement.

### **13.4.3 Historical Background and Folklore**

As demonstrated above, there is a wealth of archaeological evidence in County Meath and the immediate vicinity of the scheme is no exception. Excavations in Randalstown and Simonstown, undertaken due to continuing development from Tara Mines, has revealed human activity from the Neolithic through to the nineteenth century (Figure 13.5; Appendix 13D).

The scheme is located within the Randalstown House historic demesne (Figure 13.3, Figure 13.7, Figure 13.8 and Figure 13.9), the lands of which became the charge of the Everard family in the fifteenth century when John Everard married the heiress of Olive Rendill of Rendillstown (HEV). A castle (ME025-069) likely occupied this site first and was listed among Richard Everard's possessions in 1574–75 and noted in the Down Survey (1656–8) where it was stated that John Everard held 447 acres and a castle at Randalstown (HEV); however, the Civil Survey (1655–7) recorded 290 acres (Simington 1940, 295). At the end of the seventeenth century, Mathias Everard recovered the land after the property had been lost during the Cromwellian wars, at which time the castle may have been demolished. Randalstown House itself was built c.1710 by Mathias Everard and stood until its demolition in the 1970s prior to the construction of the Tara Mines tailings facility (MCC Ref. No. NA160408, 2016).

Situated at the southwest corner of the scheme lies St Anne's Church (ME025-002001). The chapel, built into a mound, contains a vaulted crypt (ME025-002003) and is associated with Randalstown House (Figure 13.5). A silver chalice was created in 1637 to commemorate Patrick Everard, "for the use of St. Anne's of Randalstown", and now sits in the NMI (Tara Mines, 1973). The chapel may have been destroyed when the Everard family lost their land during the Cromwellian wars, though the lands were later returned to them. This information

comes from local lore<sup>38</sup> though it may be supported by a layer of seventeenth century objects that was recorded overlying the collapsed wall of the church (Tara Mines 1973).

St Anne's Well (ME025-045) is located approximately 75m southwest of the church and is placed at the site of a former spring (Figure 13.5). Stone steps lead down to the well and during investigations in the 1970s, rags were noted on a nearby blackthorn bush. Water from this well was said to be used for toothaches and sore eyes (Tara Mines 1973), while local lore mentions cures for "wildfire, ringworm and thrush" can be found if red flannel is hung on the overhanging bush.<sup>39</sup> Roman finds recovered during excavations at the church (see Appendix 13D), in association with the holy well suggests that pre-Christian activity occurred here. Votive deposition at springs may be influenced by Romano-British tradition and aligns with the ritual deposition of items around or within water sources in Ireland (Discovery Programme Report, 2014).

Randalstown is also notable for its use in plans to promote commercial tobacco growing. From 1898 to 1938, the industry was focused on the Everard estate which provided up to 100 jobs at its peak.<sup>40</sup> During this period, Sir Nugent T. Everard lived on the estate; he was known for his role as High Sheriff and Lord Lieutenant for Meath and was a long-serving member of the county council and a senator for the newly formed state for seven years.<sup>41</sup> Everard's tobacco growing is immortalized in James Joyce's *Ulysses*<sup>42</sup> as well as field names around the county as recorded by the Meath Field Names Project.<sup>43</sup>

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<sup>38</sup> The Schools' Collection, Vol. 0699, p.169. Available at: <https://www.duchas.ie/en/cbes/5008958/4970759> [Accessed: December 2023].

<sup>39</sup> The Schools' Collection, Vol. 0699, p.169. Available at: <https://www.duchas.ie/en/cbes/5008958/4970759> [Accessed: December 2023].

<sup>40</sup> Available at: <https://www.askaboutireland.ie/reading-room/environment-geography/flora-fauna/the-tobacco-growing-indus/> [Accessed: November 2023].

<sup>41</sup> Available at: [https://www.askaboutireland.ie/reading-room/environment-geography/flora-fauna/the-tobacco-growing-indus/sir-nugent-t.-everard-\(18/](https://www.askaboutireland.ie/reading-room/environment-geography/flora-fauna/the-tobacco-growing-indus/sir-nugent-t.-everard-(18/) [Accessed: November 2023].

<sup>42</sup> Available at: <https://meathhistoryhub.ie/nugent-everard/> [Accessed: 1 December 2023].

<sup>43</sup> Available at: <https://meathfieldnames.com/> [Accessed: 1 December 2023].

### **13.4.3.1 The Meath Field Names Project**

The Meath Field Names Group is run by volunteers, whose aim is to record and publish the field names of County Meath with information about their history, features, name origin and folklore. The interactive map, which the group have created, includes a note for Randalstown Church (ME025-002001), which states that there was a souterrain linking Simonstown to the chapel.<sup>44</sup> This project also indicates that the field immediately east of CH48 (lime kiln as noted on the historical OS mapping) is known as Limekiln Field.

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<sup>44</sup> Available at: <https://meathfieldnames.com/> [Accessed: 1 December 2023].

### 13.5 IDENTIFICATION OF LIKELY SIGNIFICANT IMPACTS

A quantitative and qualitative evaluation was carried out to assess the potential impact of the proposed scheme on the identified cultural heritage assets, in line with the DRAFT TII guidelines for the assessment of impacts on the cultural heritage environment (TII 2023) and the EPA guidelines (EPA 2022). The results of these assessments are outlined in Appendix 13A. The potential impacts were considered in terms of type, quality and magnitude of impact and the predicted significance of effect. See Figure 13.6 for the cultural heritage receptors located within the study area.

The proposed scheme will not expand the current footprint and the overall height of the embankment will not be increased. Given the nature of the proposed works, **no predicted impacts with a significance of effect above 'Moderate'** have been identified.

#### 13.5.1 Construction Phase Impacts

Potential impacts resulting from the construction of the proposed scheme have been identified for nine cultural heritage receptors; these are summarised in Table 13.5. Please note, that while the Significance of Effect for CH19 (Recorded Monument ME025-001) and CH20 (ME025-001001) is Imperceptible, they are included here as the proposed works traverse the ZoN for these receptors (Figure 13.5 and Figure 13.6). Works are also proposed within the ZoNs for CH21–CH24 (ME025-002, ME025-002001, ME025-002002 and ME025-002003), and **therefore, Section 12(3) notification is required.**

Recorded Monument CH19 (ME025-001; souterrain) and the associated early medieval house (ME025-001001) were discovered during topsoil stripping (Licence No. E000309). The souterrain, c.13.4m in length contained one surviving lintel, while discrete features contained cat and bird bones and an occupational layer contained a bone pin and bones from various livestock animals. Postholes located at the entrance to the souterrain suggested a rectangular house. These features were fully excavated in 1985 prior to mining development, hence, the site locations are considered of **very low** importance. Therefore, the magnitude of impact is **negligible** leading to an **imperceptible** significance of effect. However, as stated above, the ZoN remains and therefore, Section 12(3) notification is required prior to the proposed works.

Situated at the southwest corner of the scheme lies St Anne's Church (CH22; ME025-002001). The church with its associated burial vault (CH24; ME025-002003) and graveyard (CH23; ME025-002002) are associated with Randalstown House (Figure 13.5 and Figure 13.6; see

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Section 13.4.3 Historical Background and Folklore). Situated beneath the church are the remains of an enclosure with an estimated diameter of c.90m (CH21; ME025-002). This Recorded Monument contained a bronze Roman fibula, adding — along with the Roman finds from nearby St Anne’s Well (ME025-045) — to the unique history of ‘Roman’ Ireland (see Discovery Programme Report, 2014). As these sites were not fully excavated, there is potential for associated remains to be preserved *in situ* under the existing development and at, or in close proximity to, the proposed works. Therefore, a negative, direct impact could occur as a result of the grading and compacting works of the proposed development (see Section 13.2.1 Construction Phase). Additionally, while impact beyond the current development footprint is unlikely, accidental damage could occur due to the proximity of the proposed works (e.g. direct damage from plant; structural damage due to vibration; direct impact to below-ground remains due to compaction or damage through rutting). Given these considerations, the significance of effect for these receptors is as follows:

- Recorded Monument CH21 (ME025-002; enclosure) is considered of **medium** importance. Due to the potential for a direct, adverse impact during the construction phase, the magnitude of impact is **medium**, with a significance of effect of **moderate**;
- St Anne’s Church (CH22; ME025-002001) is also of **medium** importance, in part due to its historical value in the region through its association with Randalstown House. The magnitude of impact will be **medium** as per the criteria set out in Section 13.3.5 Overview of the Assessment Methodology, leading to a significance of effect of **moderate**;
- The associated graveyard (CH23; ME025-002002) was subject to excavation in 1975–76. At least twenty inhumations were recovered (Licence No. E000149) though it does not appear to have been fully resolved/excavated. Therefore, this site is considered to be of **medium** importance. The magnitude of impact is judged to be **medium** which results in a **moderate** significance of effect;
- The burial vault underneath St Anne’s Church (CH24; ME025-002003) was previously measured at 3m by 2.75m. The walkover survey confirmed the presence of the steps, with masonry arch leading to the crypt. This receptor is of **medium** importance. Due to the potential, negative adverse impact from proposed works, the magnitude of impact is rated as **medium**, resulting in a **moderate** significance of effect in line with the criteria displayed in Table 13.3;

- The Yellow River (CH41) is considered an AAP; as such, archaeological features, remains or artefacts may exist below-ground in close proximity to the proposed works (Figure 13.6). As an AAP, its importance and magnitude of impact is **unknown** and its significance of effect is **indeterminable**. Therefore, additional mitigation is recommended (see Section 13.8 Mitigation Measures);
- While it is unlikely, a potential direct, adverse impact could occur to the townland boundary between Boolies and Randalstown (CH99) due to its proximity to proposed works (Figure 13.2). Townland boundaries can be pre-Norman in date (McErlean 1983) and derive from the Gaelic system of landholding. This receptor is of **low** importance, with the magnitude of impact considered to be **low** leading to a significance of effect of **slight**; and,
- As with CH99, a direct negative impact to CH103 (townland/civil parish/barony boundary) is unlikely. And while much of the boundary has been impacted by previous development, the southern edge of proposed works is in close proximity to the extant boundary (Figure 13.1). Civil parishes largely date to the twelfth century, being coterminous with existing Gaelic political and territorial units (Ní Ghabhláin 1996; Nugent 2007, 119). Similarly, baronies, although being institutions introduced by colonial administrations from the high medieval period to the early modern period, have their origins in older Gaelic territorial units (Ó Muraíle 1984; Nugent 2007, 63). The receptor is therefore of **medium** importance with a magnitude of impact effect considered to be **low** leading to a significance of effect of **slight**.

While no impact is predicted for bridge CH43, caution is warranted during the construction phase if this road is to be used as access for plant/machinery (Figure 13.6). This extant bridge is also depicted in the first-edition six-inch OS map (Figure 13.7); therefore, historic features of this bridge may survive.

**Table 13.5: Summary of Predicted Construction Phase Impacts**

Receptor	Description of Impacts	Importance	Magnitude of Impacts	Significance of Effect
CH19	▪ <b>Proposed works to take place within the ZoN</b> of this Recorded Monument (ME025-001; souterrain)	Very low	Negligible	Imperceptible
CH20	▪ <b>Proposed works to take place within the ZoN</b> of this SMR	Very low	Negligible	Imperceptible

Receptor	Description of Impacts	Importance	Magnitude of Impacts	Significance of Effect
	(ME025-001001; house-early medieval)			
<b>CH21</b>	<ul style="list-style-type: none"> <li>▪ <b>Proposed works to take place within the ZoN</b> of this Recorded Monument (ME025-002; enclosure)</li> <li>▪ Possible direct impact due to construction works (e.g. grading, movement of plant)</li> </ul>	Medium	Medium	Moderate
<b>CH22</b>	<ul style="list-style-type: none"> <li>▪ <b>Proposed works to take place within the ZoN</b> of this SMR (ME025-002001; church)</li> <li>▪ Possible direct impact due to construction works (e.g. movement of plant)</li> <li>▪ Possible direct impact due to vibration</li> </ul>	Medium	Medium	Moderate
<b>CH23</b>	<ul style="list-style-type: none"> <li>▪ <b>Proposed works to take place within the ZoN</b> of this SMR (ME025-002002; graveyard)</li> <li>▪ Possible direct impact due to construction works (e.g. grading, movement of plant)</li> </ul>	Medium	Medium	Moderate
<b>CH24</b>	<ul style="list-style-type: none"> <li>▪ <b>Proposed works to take place within the ZoN</b> of this SMR (ME025-002003; burial vault)</li> <li>▪ Possible direct impact due to construction works (e.g. movement of plant)</li> <li>▪ Possible direct impact due to vibration</li> </ul>	Medium	Medium	Moderate
<b>CH41</b>	<ul style="list-style-type: none"> <li>▪ Potential for direct, negative impact as the possibility exists for archaeological sites, features or artefacts to remain below-ground due to the AAP (watercourse; Yellow River)</li> </ul>	Unknown	Unknown	Indeterminable
<b>CH99</b>	<ul style="list-style-type: none"> <li>▪ Potential direct impact to townland boundary</li> </ul>	Low	Low	Slight
<b>CH103</b>	<ul style="list-style-type: none"> <li>▪ Potential direct impact to townland/civil parish/barony boundary</li> </ul>	Medium	Low	Slight

### 13.5.2 Operational Phase Impacts

As demonstrated during the walkover survey, the height of the existing embankments allows a vast view of the landscape in most directions. Due to the number of important archaeological sites in County Meath and their proximity to the study area, the study area was expanded to

include sites or areas of significance within a 20km radius that were deemed relevant (i.e. scoped in; Figure 13.4).

In order to determine which cultural heritage receptors within a 20km radius were to be scoped-in for analysis, two tables were initially created:

1. A list of all of the designated cultural heritage receptors within a 2km radius (Appendix 13H); and,
2. Any additional sites within a 20km radius that were deemed significant based on their designations (i.e. UNESCO World Heritage Site, national monuments in State care, those listed on the RHM and/or those with POs) and/or site type (e.g. hillforts or round towers that may have intervisibility with the proposed scheme); Appendix 13I.

From these tables, sites were scoped in for analysis on the basis of their perceived relevancy or potential for adverse impacts. The receptors that were scoped in are detailed in Table 13.6.

This was completed in order to appropriately assess effects on setting or potential visual impacts that could occur as a result of the proposed scheme. However, as there will be a negligible change to the baseline environment with no increase in height and no works beyond the current footprint, there are no predicted visual or setting impacts on designated sites within a 20km radius.

Other factors, such as changes in hydrology were also considered for operational phase impacts. As Chapter 3: Description of the Development demonstrates, there will be no change to the hydrology as drainage will continue to be carried out with existing infrastructure. Therefore, receptors such as Recorded Monument CH31 (St Anne's holy well; ME025-045), c.25m from the proposed works, will not be impacted.

**No significant effects during the operational phase are predicted.**

**Table 13.6: Scoped-In Cultural Heritage Receptors within a 20km radius**

Cultural Heritage No.	Site Type and Name	Reference No.	Designations
CH40	Historic garden/demesne: Milestown House	5120	NIAH; Noted in 500m radius CHD also, as eastern extent of demesne on historic OS map is within the 500m buffer

Cultural Heritage No.	Site Type and Name	Reference No.	Designations
CH98	Round tower	ME025-015002	Nat. Mon. 106 (ME025-015001 and -015002; church and round tower)
CH110	Country house; Rathaldron House	90867	RPS
CH111	Castle-tower house; Rathaldron	ME025-011	RMP
CH112	Historic garden / demesne; Liscartan Castle	5109	NIAH
CH113	Tower house and church; Liscartan Castle	90866	RPS
CH114	Church	ME025-008	RMP
CH115	Graveyard	ME025-008001	SMR
CH116	Castle-tower house; Liscartan Castle	ME025-009001	RHM 1854; RMP
CH117	House-16th/17th century	ME025-009002	SMR
CH118	Gatehouse	ME025-010	RMP
CH119	Archaeological complex; Hill of Tara	ME031-033001 to ME031-033050; ME031-033053 to ME031-033080	Nat. Mon. 676; 148 (ritual and burial site; church and graveyard). Also on Tentative List for World Heritage Site status
CH120	Hillfort; Hill of Lloyd	ME016-054	RMP
CH121	Tower house; Hill of Slane	ME019-060010	Nat. Mon. 666, 188 (ME019-060002 to -060015; church and college)
CH122	World Heritage Site; <i>Brú na Bóinne</i> Complex	Various	Various RHM, Nat. Mon and PO designations (see CHD for detail)
CH123	Hillfort; Faughan Hill	ME024-022001	SMR
CH124	Hillfort; Mountfortescue	ME013-012001	Nat. Mon. 651 (ME013-012001; ringditch, tumulus and hillfort); PO 12/1987
CH125	Archaeological complex; Slieve Breagh	Various	PO 11/1956 (ME013-007, and ME013-031 to -066, inclusive); HEV states that it has Nat. Mon. No. 596 (ME013-060), however, this is not listed in the MCC Development Plan 2021-2027
CH126	Round tower; Kells round tower	ME017-044013	Nat. Mon. 158 (ME017-04413 to -044017; round tower and high crosses)

Cultural Heritage No.	Site Type and Name	Reference No.	Designations
CH127	Historic garden / demesne; Ardraccon House	4940	NIAH
CH128	Country house; Ardraccon House	90774; 14402402	RPS; NIAH
CH129	Outbuildings; Ardraccon House	90775; 14402403	RPS; NIAH
CH130	Church; St Ultan's Church	ME025-022; 90863; 14402510	RMP; RPS; NIAH
CH131	Ringfort-rath; Hill of Ward	ME030-001	Nat. Mon. 150 (ME030-001; earthworks)
CH132	Ceremonial enclosure; <i>Rath Airthir</i>	ME017-033	RHM 1828
CH133	Archaeological complex; Moynagh Lough	ME005-088001 to - 088015	RMP

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## 13.6 CUMULATIVE IMPACTS

Cumulative effects are described as 'The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects' (EPA 2022, 52); an assessment of cumulative effects is required by EIA Directive. Projects that are of a relevant context, nature and scale were included for analysis and are listed in Appendix 13J. The same methodology used to determine significance of effect above, was used in the assessment of cumulative effects (see Section 13.3.5 Overview of the Assessment Methodology).

As changes to the baseline environment due to the proposed scheme will be negligible, cumulative impacts are unlikely during the operational phase of the site; however, cumulative impacts may occur during the construction phase of relevant projects. Of note would be temporary negative impacts on the setting of, or visual impacts to, cultural heritage receptors such as St Anne's Church and associated features (CH21–CH24), St Anne's holy well (CH31) and the historic rail line (CH62). No direct, negative cumulative impacts are predicted to the cultural heritage receptors during the construction or operation phases.

### 13.6.1 Boliden Tara Mines DAC

Boliden Tara Mines DAC has two additional ongoing planning applications (Table 13.7). Due to the nature of the proposed works for the water treatment plant (An Bord Pleanála [ABP] 317390) no cumulative effects are predicted. The water treatment plant is smaller in scale and c.2.8km from the proposed works with no predicted intervisibility.

In 2017, ABP granted permission for the tailings pond extension but refused permission for the integrated constructed wetlands (Ref. No. PL17.247707). Construction of the lateral tailings pond extension (referred to as Stage 6) was completed in 2022 at the location of the northern borrow pit (see Plate 13.3).

BTM also intend to lodge an application for a solar farm to generate renewable electricity for use within the BTM Knockumber site, which was advertised in the Meath Chronicle dated Saturday, 3 February 2024. The extent of the proposed development site is 34ha and will consist of a ten-year planning permission with an operational lifetime of 35 years. This planning application will be accompanied by an EIA Screening Report and a Natura Impact Statement (NIS).

**Table 13.7: Boliden Tara Mines DAC Ongoing Planning Applications**

Planning Ref. No.	Competent Authority	Development	Status	Distance
PL17.247707	ABP	The lateral extension to the existing tailings storage facility and construction of an Integrated Constructed Wetlands	Grant permission with revised conditions	0m
317390	ABP	Construction of water treatment plant within mine site complex	Ongoing	2.8km

### 13.6.2 Miscellaneous Planning Applications

The Liscarton to Proudstown Rising Mains project (MCC Ref. No. 2360198) consists of the replacement of existing asbestos cement pipes with c.3,958m of new mains, to be installed within a 1m wide trench at a maximum depth of 2m (Smith 2023). While the proposed works are contained within a narrow route, its proximity to the proposed site (c.500m) lends the possibility for a temporary negative impact on setting of the historic rail line (and current greenway; CH62) during the construction phase of these projects. As this would be temporary, the significance of the cumulative effect is **not significant**.

There are numerous residential development applications within a 5km radius of the proposed site (see Appendix 13J). While there may be some intervisibility between some of these projects and the proposed site (e.g. MCC Ref. No. 22924), any impact on setting to cultural heritage receptors (e.g. CH21–CH24, CH31, CH62, etc.) would be temporary during the construction phase, and consistent with emerging baseline trends. Other residential developments as flagged in the planning application search will likely not impact cultural heritage receptors within the study area whether due to their distance or lack of intervisibility with the proposed scheme; therefore, the significance of the cumulative effect is **imperceptible/not significant**.

### 13.7 DO NOTHING SCENARIO

The 'do-nothing' scenario or 'no Project' alternative describes what would happen should the Project not be implemented (EIA 2017, 55). In other words, it is an outline of what is likely to happen to the environment should the Project not be implemented (EIA 2017, 33).

The do-nothing scenario will not result in any significant changes to the baseline cultural heritage environment. The magnitude of impact would be **negligible** leading to a significance of effect of **imperceptible**.

## 13.8 MITIGATION MEASURES

This section sets out the measures that shall be undertaken to avoid, prevent, reduce, remedy and offset adverse effects on the cultural environment during the Construction and Operational Phases.

**The recommendations are subject to the agreement of the National Monuments Service, the National Museum of Ireland, Meath County Council Heritage Officer and Architectural Conservation Officer, Meath County Council and An Bord Pleanála.**

### 13.8.1 Construction Phase

- Built Heritage Survey shall be carried out for architectural heritage sites and/or features that may be impacted by the proposed scheme:
  - CH22 (St Anne's Church; ME025-002001); and,
  - CH24 (burial vault; ME025-002003).
- Townland Boundary Surveys shall be carried out at the following locations:
  - CH99 (townland boundary); and,
  - CH103 (townland, civil parish and barony boundary)
- Protective fencing/barriers along the southwestern section of the scheme to prevent accidental damage to St Anne's Church and associated features (CH21–CH24)
- Vibration monitoring shall be undertaken of the following receptors during the construction phase:
  - CH22 (St Anne's Church; ME025-002001); and,
  - CH24 (burial vault; ME025-002003).
- Monitoring During Construction shall be carried out in areas of archaeological potential or significance identified during the walkover survey and assessment. These include:
  - The southwestern and western sections of the proposed scheme in order to monitor works in proximity to Recorded Monument CH21 (enclosure; ME025-002), CH22 (St Anne's Church; ME025-002001), CH23 (graveyard; ME025-002002), CH24 (burial vault; ME025-002003), CH41 (Yellow River; AAP-watercourse) and CH99 (townland boundary); and,

- Works in the vicinity of CH103 (townland, civil parish and barony boundary).

The aim of the Built Heritage Surveys is to compile a comprehensive written and illustrated record of built heritage receptors that may be directly impacted. The Built Heritage Surveys shall include, but not be limited to, written descriptions, measured drawings and the compilation of photographic and documentary archives of the interior and exterior of the structure, as necessary.

The aim of the Townland Boundary Survey is to compile a comprehensive written and illustrated record of these historic boundaries.

Archaeological monitoring in part, ensures that proposed mitigations are operating as intended. This allows adjustments of operations to be made to ensure compliance with consent conditions and detection of unexpected mitigation failures.

### **13.8.2 Operational Phase**

It is recommended that the continued development of this site is offset through dissemination of knowledge (e.g. through publication of reports, similar to that published by Tara Mines in 1973). Updated findings from additional surveys such as the built heritage survey recommended for St. Anne's Church (CH22) and burial vault (CH24) would be in the interests of the community.

As noted during the walkover survey, St Anne's Church (CH22) and St Anne's Well (CH31) continue to be visited each year. It would be in the interests of the community to maintain and enhance access to these cultural heritage receptors and improve these amenities (e.g. clearing the brush around the church or signage to share the history of the area), providing a positive effect.

No additional mitigation measures are required for the operational phase of the proposed development.

### 13.9 RESIDUAL IMPACTS

Residual effects are ‘the degree of environmental change that will occur after the proposed mitigation measures have taken effect’ (EPA 2022, 52), or the remaining environmental ‘costs’ of a Project that could not be reasonably avoided (*ibid.*, 62; TII 2023, 68).

Following mitigation measures, the residual magnitude of impact for the cultural heritage receptors described in Section 13.5 is **negligible**, with a significance of effect of **imperceptible**.

## **13.10 INTERACTIONS ARISING**

The EIA Directive requires the assessment of any effects arising from the interactions of different sorts of environmental receptors (e.g. between Cultural Heritage and Landscape, Biodiversity, Population and Human Health; TII 2023, 9).

### **13.10.1 Landscape and Visual Impact Analysis (LVIA)**

The LVIA specialist utilised a 2km study area and determined that the magnitude of impact was low–negligible within a 1km buffer, changing to imperceptible beyond that radius; this led to a significance of effect rating of slight–imperceptible (Macroworks 2022).

Interactions between the cultural heritage and LVIA specialist occurred as part of the assessment process, resulting in discussions on the size of the study area and impacts on cultural heritage receptors. As changes to the baseline environment are negligible, no effects will arise from the interaction between these two environmental factors.

### **13.10.2 Population and Human Health**

Overlap can occur between cultural heritage receptors and social and community factors. Cultural heritage receptors are perceived, valued and used by the local community and can contribute to a community's sense of place and cultural or historical identity (TII 2023, 9).

Recreational amenities such as the adjacent greenway would fall into this category. This greenway runs along the eastern end of the TSF and utilises the historic rail line (CH62). While the TSF and proposed works are visible from the greenway (as noted during the walkover survey and discussed in the LVIA; Macroworks 2022), changes to the baseline environment are negligible. There is likely to be a negative impact to the public during the construction phase (due to visibility and noise factors), however, this will be temporary.

Additionally, members of the public continue to visit St Anne's Church (CH22) and St Anne's holy well (CH31). Recommendations to improve access and increase the amenity of these receptors would provide opportunities for users to engage with the cultural heritage and create a positive effect from the proposed scheme. This engagement contributes to wellbeing, social cohesion, and community identity (TII 2023, 9).

### 13.11 CONCLUSIONS

Boliden Tara Mines DAC is proposing the construction of a rockfill reinforcement buttress to the extant embankment walls of the TSF in order to address the risk of tailings embankment failure through conservative design criteria and minimise potential impacts, in line with its adoption of the Global Industry Standard on Tailings Management.

Cultural heritage receptors within a 500m radius of the proposed works were assessed for potential direct and indirect effects during the construction and operation phases of the development, as were additional cultural heritage receptors within a 20km radius that were deemed relevant to account for potential setting or visual impacts.

Due to the nature of proposed works (i.e. no increase to extant embankment height, no works outside of the current development footprint and no additional drainage works) there are no predicted impacts during the operational phase.

Potential adverse impacts could occur during the construction phase; however, mitigation measures have been recommended that would decrease the significance of these effects to imperceptible or not significant.

A quantitative and qualitative evaluation was carried out to assess the potential impact of the proposed scheme on the identified cultural heritage assets, in line with the DRAFT TII guidelines for the assessment of impacts on the cultural heritage environment (TII 2023) and the EPA guidelines (EPA 2022). The proposed scheme will not expand the current footprint and the overall height of the embankment will not be increased; **therefore, there are no predicted significant effects** as a result of the proposed works. Potential impacts resulting from the construction of the proposed scheme have been identified for nine cultural heritage receptors; these are summarised in Table 13.5.

Works are also proposed within the ZoNs for CH19 (Recorded Monument ME025-001) and CH20 (ME025-001001) and CH21–CH24 (Recorded Monument ME025-002, ME025-002001, ME025-002002 and ME025-002003), and **therefore, Section 12(3) notification is required.**

There are no Significant Effects due to cumulative impacts.

Mitigation measures have been recommended to avoid, prevent, reduce, remedy and offset adverse effects on the cultural environment during the Construction and Operational Phases,

including measures to create a positive effect (e.g. dissemination of research/knowledge and to maintain and enhance access to these cultural heritage receptors).

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## CHAPTER 13 CULTURAL HERITAGE APPENDICES AND FIGURES .....APPENDICES VOLUME I