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Transport Infrastructure Ireland

TII Publications



Guidelines for Cultural Heritage Impact Assessment of TII National Road and Greenway Projects

PE-ARC-02009

February 2024

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TII Publications



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Executive Summary

This TII publication provides detailed guidance on Cultural Heritage Impact Assessment (CHIA) of national road and greenway projects funded or carried out under the direction of TII. It sets out the regulatory and policy context of CHIA and provides guidance on the scope of, and methodology and processes to be used in, the assessment of impacts on Cultural Heritage, as well as the mitigation of adverse effects. It also provides guidance on the content and format of key outputs to ensure consistency of approach and adherence to high levels of quality.

These guidelines, and the forthcoming Standards Document, **PE-ARC-02010**, are intended for use by suitably qualified Cultural Heritage Professionals (as defined in **Appendix 1**) throughout the planning, design, and environmental evaluation of national roads and greenways. They shall be referred to when carrying out CHIA for new construction and improvements subject to a planning consent. These guidelines and standards shall also be used by Project Managers, TII-assigned Project Archaeologists, Local Authority assigned Resident Archaeologists, Environmental Coordinators, Consulting Engineers, Technical Advisors, Designers, Approving Authorities, Archaeological Consultants, Built Heritage Professionals, and other specialists interacting with CHIA.

In accordance with TII's role of ensuring compliance with environmental requirements, the overall objective of these guidelines and the standards are to ensure that TII Projects:

- minimise the impact on Cultural Heritage, and
- enhance the opportunities for Cultural Heritage, where possible (e.g. through improved access, amenity, and knowledge sharing).

These guidelines align with:

- the amended Environmental Impact Assessment Directive 2011/92/EU, as amended by Directive 2014/52/EU and related guidelines and advice notes (EPA 2003, 2022),
- the Code of Practice for Archaeology agreed between TII and the Minister (TII & DAHRRGA 2017), and
- TII's Project Management Guidelines (PMG) (TII 2023a (**PE-PMG-02041**)), Project Appraisal Guidelines (PAG) (TII 2016a (**PE-PAG-02031**); 2017 (**PE-PAG-02037**); 2021a (**PE-PAG-02035**); 2023b (**PE-PAG-02036**)) and Project Manager's Manuals (PMM) (TII 2022 (**PE-PMG-02047**); 2023c (**PE-PMG-02042**); 2023d (**PE-PMG-02043**)).

A four-step process is required for all iterations of CHIA during TII PMG Phases 1–3. This process applies to all national roads and greenways requiring EIA and those subject to other forms of planning consent. The level of detail for each round of CHIA will be proportionate to the nature and scale of the Project, the PMG Phase, and the receiving Cultural Heritage environment.

For each iteration of CHIA throughout the PMG phases, Cultural Heritage Professionals shall produce and submit various outputs including, depending on the Phase, Assessment Method Statements, Cultural Heritage Datasets (CHDs), reports and Project Archives, and have input to Project Appraisal Deliverables such as Multi-Criteria Analysis (MCA). The standards, **PE-ARC-02010** (to be published later in 2024), describe the minimum requirements for CHIA, including examples of the outputs that Cultural Heritage Professionals are expected to deliver, while recognising the importance of their professional judgement (see **Appendix 1**). All CHIA outputs will be subject to the approval of the Project Archaeologist in conjunction with the Project Manager.

Abbreviations and Acronyms

ACA	Architectural Conservation Area
ASI	Archaeological Survey of Ireland
CAD	Computer Aided Design
CEMP	Construction Environmental Management Plan
CHIA	Cultural Heritage Impact Assessment
CHD	Cultural Heritage Dataset
CHMP	Cultural Heritage Mitigation Plan
DAHG	Department of Arts, Heritage and the Gaeltacht
DAHGI	Department of Arts, Heritage, Gaeltacht and the Islands
DAHRRGA	Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs
DHLGH	Department of Housing, Local Government and Heritage
DHPLG	Department of Housing, Planning and Local Government
DRCD	Department of Rural and Community Development
DRI	Digital Repository of Ireland
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
ER	Environmental Report
GDPR	General Data Protection Regulation
GIS	Geographical Information System
HEV	Historic Environment Viewer
HLC	Historic Landscape Characterisation
ICOMOS	International Council on Monuments and Sites
ITM	Irish Transverse Mercator
LCA	Landscape Character Assessment
Lidar	Light Detection and Ranging
LVIA	Landscape and Visual Impact Assessment
MCA	Multi-Criteria Analysis
NFQ	National Framework of Qualifications
NIAH	National Inventory of Architectural Heritage
NMI	National Museum of Ireland
NMS	National Monuments Service
NRA	National Roads Authority
NTA	National Transport Authority
OPR	Office of the Planning Regulator

PAG	Project Appraisal Guidelines
PMG	Project Management Guidelines
PMM	Project Manager's Manual
RMP	Record of Monuments and Places
RPS	Record of Protected Structures
SMR	Sites and Monuments Record
TII	Transport Infrastructure Ireland
UNESCO	United Nations Educational, Scientific and Cultural Organization
WIID	Wreck Inventory of Ireland Database

1. Introduction

1.1 Background to these Guidelines

Transport Infrastructure Ireland's (TII) primary function is to provide an integrated approach to the development and operation of the national roads, greenways and light rail infrastructure. Its aim is to provide high-quality transport infrastructure and services, delivering a better quality of life and supporting economic growth throughout Ireland. In this role, TII produces and manages a wide range of standards and technical documentation related to its areas of responsibility. These and other publications are available through the TII Publications system: www.tiipublications.ie.

TII Publications are split into 'Technical' documentation and 'Standards'. All documentation for implementation on TII Projects is collectively referred to as 'TII Publications (Standards)', and all other documentation within the system is collectively referred to as 'TII Publications (Technical)'.

This TII technical publication provides detailed guidance on Cultural Heritage Impact Assessment (CHIA) of Projects funded or carried out under the direction of TII. It sets out the regulatory and policy context of CHIA and provides guidance on the scope of, and methodology and processes to be used in, the assessment of impacts on Cultural Heritage, as well as the mitigation of adverse effects. It also provides guidance on the content and format of key outputs to ensure consistency of approach and adherence to high levels of quality. The forthcoming Standards Document, **PE-ARC-02010**, describes the minimum requirements for CHIA, including the outputs of the work.

These guidance and standards are intended for use by suitably qualified Cultural Heritage Professionals (as defined in **Appendix 1**) with appropriate skills and expertise in Archaeological Heritage, Built Heritage, Portable Heritage and/or Intangible Cultural Heritage. They are also intended as a reference for others involved in the planning, design, and evaluation of TII Projects. This includes Project Managers, TII-assigned Project Archaeologists, Local Authority assigned Resident Archaeologists, Environmental Coordinators, Consulting Engineers, Technical Advisors, Designers, Approving Authorities, Archaeological Consultants, Built Heritage Professionals, and other specialists interacting with CHIA.

These guidelines shall be used when carrying out CHIA throughout the planning, design, and environmental evaluation of national road and greenway projects, including new construction and improvements subject to a planning consent. They are applicable to Projects which are funded through TII and/or when TII is the Approving Authority, unless otherwise instructed by TII.

The National Transport Authority (NTA) is generally the Approving Authority for public transport Projects. Where TII is the Sponsoring Agency, then agreement shall be reached at Project outset with the relevant Approving Authority as to the applicability of these guidelines and standards.

These guidelines and standards replace the previous NRA *Guidelines for the Assessment of Archaeological Heritage Impacts of National Road Schemes* (NRA 2005a) and *Guidelines for the Assessment of Architectural Heritage Impacts of National Road Schemes* (NRA 2005b).

The development of these guidelines and standards was based on a literature review, professional experience, and extensive consultation (both internally within TII and with external stakeholders and the public), considering current national and international best practice. These updated guidelines and standards align with:

- the EIA Directive 2011/92/EU, as amended by Directive 2014/52/EU and related guidelines and advice notes (EPA 2003, 2022),

- the Code of Practice for Archaeology agreed between TII and the Minister (TII & DAHRRGA 2017), and
- TII's Project Management Guidelines (PMG) (TII 2023a (**PE-PMG-02041**)), Project Appraisal Guidelines (PAG) (TII 2016a (**PE-PAG-02031**); 2017 (**PE-PAG-02037**); 2021a (**PE-PAG-02035**); 2023b (**PE-PAG-02036**)) and Project Manager's Manuals (PMM) (TII 2022 (**PE-PMG-02047**); 2023c (**PE-PMG-02042**); 2023d (**PE-PMG-02043**)).

Regarding the TII PMG, PAG and PMMs, these publications are subject to regular updates and amendments and Cultural Heritage Professionals conducting CHIA must ensure that they refer to and be consistent with the latest version of these documents (see www.tiipublications.ie).

The level of detail for each round of CHIA will be proportionate to the nature and scale of the project, the PMG Phase, and the receiving Cultural Heritage environment.

These guidelines and standards are also designed to align with the current regulatory and policy framework within which CHIA is carried out, as summarised in **Appendix 3**. While every effort has been made to ensure references to legislation and regulation are correct and up to date, legislation is subject to change and may require legal advice to interpret; there is an onus on the reader to ensure that they are aware of current legislation. Where reference to a statute is made, it is to be read as a reference to the statute as amended from time to time.

Cultural Heritage Professionals preparing CHIAs shall adhere to these guidelines and standards and implement their own auditable quality procedures. Professional judgement will be a key requirement in the preparation of all CHIA outputs. The CHIA outputs will be subject to the approval of the Project Archaeologist in conjunction with the Project Manager.



Plate 1.1 - Cultural Heritage walkover survey for a TII national road project (Photo: TII)

1.2 Objectives of CHIA

INFORMATION BOX 1: What is Cultural Heritage Impact Assessment (CHIA)?

CHIA is a process for identifying and assessing effects on Cultural Heritage and, where necessary, developing measures to mitigate the adverse effects and/or enhance potential positive effects. The purpose of CHIA is to understand the consequences of change to Cultural Heritage Receptors so that informed decisions can be made about their sustainable management.

CHIA involves:

- identification of Cultural Heritage Receptors,
- identification of potential impacts to those Receptors,
- assessment of the significance of effects resulting from these impacts, and
- formulation of mitigation measures for adverse effects and enhancement measures, where possible.

CHIA is a process that extends across PMG Phases 1–4 and requires the application of various assessment methodologies. CHIA results in the production of different types of outputs at different stages of the process and analysis, including Cultural Heritage Datasets (CHDs), reports, mapping, spatial data (e.g. GIS/CAD vector files), as well as input to other assessment processes such as Multi-Criteria Analysis (MCA).

At all PMG Phases/Stages, CHIA should be undertaken by competent and suitably qualified Cultural Heritage Professionals with sufficient expertise, working under the supervision of a TII-assigned Project Archaeologist or Local Authority assigned Resident Archaeologist, as applicable.

In accordance with TII's role to provide sustainable transport infrastructure and services, delivering a better quality of life, supporting economic growth, and respecting the environment, the overall objective of these guidelines and standards is to ensure that TII Projects are carried out in such a way as to:

- minimise the impact on Cultural Heritage, and
- enhance the opportunities for Cultural Heritage, where possible (e.g. through improved access, amenity, and knowledge sharing).

Road infrastructure has been part of the Irish landscape for millennia, connecting people and places. However, new and upgraded roads can have a considerable impact on Cultural Heritage, both positive and negative. CHIA is a key tool for understanding, assessing, and, where necessary, mitigating these effects (refer to **INFORMATION BOX 1** above).

In brief, CHIA involves:

- a study of the existing Cultural Heritage environment, and
- an assessment of the significance of effects on Cultural Heritage Receptors resulting from changes brought about by a proposed Project.

The objectives of this work are to:

- avoid or minimise the negative effects of the Project on Cultural Heritage Receptors, wherever possible,
- accommodate the Project, including associated infrastructure, sensitively within and in keeping with the Cultural Heritage environment through which it passes,
- contribute, where possible, to the quality of the public realm by maintaining or replicating traditional landscape elements and enhancing the visual amenity of important Cultural Heritage Receptors,

- make informed decisions about the sustainable management of the Cultural Heritage environment,
- develop mitigation measures to avoid, prevent and reduce adverse effects on Cultural Heritage Receptors, wherever possible, at all stages of a Project lifecycle, and
- benefit all of society and the values they hold in relation to Cultural Heritage.

In addition to Cultural Heritage, a range of other environmental factors are assessed as part of the planning and development of TII Projects, all of which inform the emerging design. Environmental effects and mitigation measures also need to be considered in tandem with other aspects, including engineering constraints and costs. Each Project will have unique features and constraints may vary—in some cases, the best option from a Cultural Heritage perspective may not be the preferred option overall when other effects and considerations are evaluated. These guidelines describe the holistic and iterative approach that needs to be undertaken and emphasise that the controls and mitigations proposed for Cultural Heritage need to be proportionate and achievable and have regard to these other factors and considerations.

1.3 Purpose of these Guidelines

These guidelines provide a source of reference for the methods and procedures that are required by the forthcoming standards, **PE-ARC-02010**, which set out the specific CHIA requirements in relation to TII Projects (refer to **Section 4.2**). The intent is to deliver rigour, transparency, and consistency in the approach to the assessment and mitigation of likely effects on Cultural Heritage. Thus, the documents work as a pair.

The guidelines provide:

- the regulatory and policy context of CHIA,
- the methodology for the analysis and assessment of likely impacts on Cultural Heritage, both in general terms and on a Phase-specific basis,
- direction on the production of specified documents and related outputs, and
- a glossary of terms, abbreviations and acronyms, supporting information sources and other relevant guidelines.

The standards describe the minimum requirements for CHIA, including examples of the outputs that Cultural Heritage Professionals are expected to deliver, while recognising the importance of their professional judgement.

A more complete list of objectives for these guidelines is given in **INFORMATION BOX 2** below.

INFORMATION BOX 2: Objectives of these guidelines

In terms of TII Projects, these guidelines:

set out definitions as to what constitutes Cultural Heritage in the context of TII Projects, including its integral components of Archaeological Heritage, Built Heritage, Portable Heritage, and Intangible Cultural Heritage (see glossary in **Appendix 2**),

- outline procedures to determine whether a proposed Project should be subject to a CHIA and, where CHIA is required, outline procedures to determine its scope,
- outline the application of CHIA during the planning, assessment, and design stages for proposed TII Projects and associated infrastructure,
- provide guidance on the methodology for the assessment of impacts on Cultural Heritage to ensure consistent and appropriate description and evaluation of the baseline (receiving) environment relevant to TII Projects,
- promote mitigation measures that are proportionate to the complexity, scale, and likely significance of effects on Cultural Heritage,
- provide consistency to the consideration of CHIA during the planning, selection, design, assessment, and delivery phases of a TII Project as set out in TII's PMG, PMMs and PAG,
- promote a consistent approach to the design of appropriate mitigation measures for likely adverse effects on Cultural Heritage from TII Projects, and
- assist Projects to achieve sustainable assessment, design, and construction outcomes and enhance the Cultural Heritage environment and experience of the user, where possible.

1.4 Code of Practice for Archaeology

The *Code of Practice for Archaeology agreed between the Minister for Arts, Heritage, Regional, Rural and Gaeltacht Affairs and Transport Infrastructure Ireland* (TII & DAHRRGA 2017) provides a single framework for managing archaeology across all TII Projects. It is a sustainable framework that balances the need for high-quality transport infrastructure with ensuring the protection of the archaeological resource through appropriate impact assessment and mitigations. The Code is key to the successful management of archaeology between the Department responsible for the protection of the Archaeological Heritage (currently the Department of Housing, Local Government and Heritage (DHLGH)) and TII.

The Code requires that consideration of archaeology is built into each TII Project lifecycle from the outset and that 'every effort is made to avoid and/or minimise impacts on archaeology' whilst also 'having regard to best practice in the Project design, safety implications, costs, environmental constraints and other impacts.' The Code sets out specific commitments by both parties to ensure this can be achieved, central to which is the TII commitment to assign Project Archaeologists to oversee the archaeological elements of each TII Project from initial planning to completion.

The Code sets out the Project Archaeologist's key responsibilities in the planning and design phases in relation to minimising impacts, mitigation and archaeological best practice/standards, and their wider role in managing all archaeological aspects of TII Projects (refer to **Section 1.7** of these guidelines for further information of the role of the TII-assigned Project Archaeologist).

1.5 TII's Project Management Guidelines

TII's PMGs provide a framework for a phased approach to the development and delivery of national road and greenway projects. They are applicable to Projects which are funded through TII and/or when TII is the Approving Authority, unless otherwise instructed by TII (TII 2023a (**PE-PMG-02041**)).

The following Project phases are set out in the PMG (refer to **Table 1.1** below).

Table 1.1 - TII Project Phases (after TII 2023a, fig. 2)

Planning and Design	Phase 0	Scope and Strategic Assessment
	Phase 1	Concept and Feasibility
	Phase 2	Options Selection
	Phase 3	Design and Environmental Evaluation
	Phase 4	Statutory Processes
Construct / Implement	Phase 5	Enabling and Procurement
	Phase 6	Construction and Implementation
	Phase 7	Close out and Review

The activities during each phase of Project planning differ, and hence the Cultural Heritage input to the various PMG phases differs (refer to **Section 6**). CHIA is a process that extends across PMG Phases 1–4, and input into each of these phases constitutes a discrete element of data collection and analysis which provides a foundation for subsequent phases of activity to assist in the final design and implementation of the Project. Within each Phase, the Cultural Heritage input seeks to help the Project Team avoid, prevent, and reduce adverse effects on Cultural Heritage, wherever possible, using the four-step CHIA process set out in **Section 5** of these guidelines.

Cultural Heritage shall receive detailed consideration throughout the PMG phases, and in some cases it may constitute one of the more important factors to be addressed in the design of the Project. As already noted in **Section 1.2**, Cultural Heritage must be seen in conjunction with engineering constraints, costs, and potential impacts on other environmental factors, namely:

- Population and Human Health,
- Biodiversity,
- Land, Soil, Water, Air, and Climate,
- Material Assets, and
- Landscape.

1.6 Requirements of Cultural Heritage Professionals

EIA Directive 2011/92/EU, as amended by Directive 2014/52/EU, stipulates that an Environmental Impact Assessment Report (EIAR) must be prepared by ‘competent experts’ (Article 5(3)(a) of the EIA Directive (European Union, 2011–2014), as transposed into Irish law under Section 5(2)(a) of the European Union (Roads Act 1993) (Environmental Impact Assessment) (Amendment) Regulations 2019).

Whether a TII Project is subject to EIA or not, the CHIA shall be undertaken by suitably qualified and competent Cultural Heritage Professionals who have sufficient expertise and experience in those aspects of the Cultural Heritage they are assessing, namely Archaeological Heritage, Built Heritage, Portable Heritage and/or Intangible Cultural Heritage (e.g. folklore and history including oral traditions, early medieval and medieval literature). This shall apply regardless of whether the CHIA is undertaken as part of an EIA or as part of an alternative assessment and approvals process (refer to **Section 3**).

The specific competencies and qualifications of Cultural Heritage Professionals for the purposes of CHIA of TII Projects are outlined in **Appendix 1**.

1.7 The Role of the Project Manager and Project Archaeologist

A Project Manager will be assigned by the Sponsoring Agency to ensure that the Project is delivered on time, to budget, and to the required standards and specifications. Under the terms of the Code of Practice for Archaeology, TII will also assign a Project Archaeologist to, among other things:

- oversee the archaeological elements of each TII Project from inception to completion,
- ensure that any preparatory archaeological work undertaken (including desktop and field studies) is in keeping with guidelines and best practice, and
- be the main point of contact with the Department for the Project on behalf of the Project Team.

The Project Archaeologist is responsible for, among other things:

- advising the Project Team on matters relating to archaeology (and other forms of Cultural Heritage),
- working closely with the Project Manager to ensure that Cultural Heritage Impact Assessment, and all ensuing mitigations and enhancements, are carried out in accordance with guidelines, legal requirements and best practice, and
- providing regular updates to TII's Head of Archaeology and Heritage.

Assignment of the Project Archaeologist will take place during PMG Phase 0 for greenway projects and at Phase 1 for national roads projects. Project Archaeologists are integral members of TII Project Teams which have responsibility for the planning, design, construction and operation of road, greenway, and light rail schemes. They have a pivotal role to play within these teams in ensuring that due consideration is given to archaeology and other aspects of Cultural Heritage from the earliest opportunity. The Project Archaeologist shall fulfil, in conjunction with the Project Manager, the obligations for the delivery of the Project in accordance with the Code of Practice for Archaeology and shall also have regard to these guidelines and forthcoming standards.

The Project Manager, in conjunction with the Project Archaeologist, will determine various survey and test excavation requirements for the Project, and the Roads Authority shall apply for authorisations for such works (e.g. Ministerial Directions/Ministerial Consent), where required.

The Project Archaeologist is responsible for consultation with the relevant agencies and for reviewing and approving Assessment Method Statements, Archaeological Method Statements, Cultural Heritage Datasets (CHDs) and reports prepared by Cultural Heritage Professionals. The Project Manager, in conjunction with the Project Archaeologist, will also ensure that any commitments made in the environmental evaluation documentation, or via authorisations, regarding the protection of the Cultural Heritage are adhered to during the Main Construction Contract (refer to **Section 6.7**).

The Project Archaeologist will manage and supervise, as necessary, the Cultural Heritage services required during the Main Construction Contract. In the event of archaeological sites/features being uncovered during the Main Construction Contract, the Project Archaeologist will determine, in conjunction with the Project Manager and in consultation with the statutory consultees (e.g. the Minister via the NMS), the preferred means of preservation (i.e. preservation by record or preservation *in situ*) (see Section 6.8.3 for more information).

The PMMs (TII 2022 (**PE-PMG-02047**); 2023c (**PE-PMG-02042**); 2023d (**PE-PMG-02043**)) provide further detail on the relationship between the Project Manager and the Project Archaeologist.

1.8 Procurement of Cultural Heritage Services

Cultural Heritage services will be procured as appropriate in accordance with the Project Procurement Strategy using the conditions of engagement and associated schedules as published on the Capital Works Management Framework website (<https://constructionprocurement.gov.ie>). Procurement of Cultural Heritage services during Phases 5 and 6 will depend on the Project's procurement process:

- For 'Employer Designed' Projects (normally smaller scale Projects), the detailed design will be done at Phase 5.
- For 'Contractor Designed' or 'Design and Build' (D&B) Projects (normally larger scale Projects), the Contractor (with an Archaeological Consultant, where required) will develop the Cultural Heritage mitigation strategy in accordance with the EIAR requirements and consent conditions at Phase 6.

The tender documentation to facilitate construction of the approved Project shall be prepared by the Technical Advisor in consultation with the Project Archaeologist (where a Technical Advisor has not been appointed this documentation may be developed by the design team). The specifications will allow for the appointment of an Archaeological Consultant to oversee the archaeological requirements of the Project and undertake the Cultural Heritage aspects of the enabling works. The Archaeological Consultant may or may not be the same Cultural Heritage Professional who carried out the CHIA.

For further information on procurement, refer to the PMMs (TII 2022 (**PE-PMG-02047**); 2023c (**PE-PMG-02042**); 2023d (**PE-PMG-02043**)) and the forthcoming standards, **PE-ARC-02010**.

1.9 TII as an Environmental Condition Enforcement Authority

The European Union (Roads Act 1993) (Environmental Impact Assessment) (Amendment) Regulations 2019 creates a regulatory regime which makes TII an 'environmental condition enforcement authority' in respect of national roads proposed by Road Authorities requiring an EIA. This regime is summarised in section 5.1.6.2 of *Environmental Planning of National Road and Greenway Projects* (TII 2023e (**RE-ENV-07008**)).

1.10 TII's Sustainability Principles

These guidelines and the standards support the delivery of the sustainability principles outlined in TII's *Sustainability Implementation Plan* (TII 2021b), in particular:

- **Sustainability Principle 3** – ‘Collaborate for a holistic approach’ – which seeks to develop smart and sustainable assets and services through innovating and improving the planning, design, construction, operation, and maintenance of the transport network, increasing collaboration and systems thinking to seek mutual gains and mitigate negative externalities (including impacts on Cultural Heritage), and
- **Sustainability Principle 6** – ‘Create total value for society’ – which seeks to maintain and enhance the balanced delivery of economic, environmental, and social value through robust planning, rigorous appraisal and decisions that prioritise sustainability.

1.11 Overlaps and Interactions with Other Environmental Factors

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).

The physical and visual appearance and character of the landscape as it is experienced today is covered under the Landscape factor and assessed through Landscape Character Assessment (LCA) and Landscape and Visual Impact Assessment (LVIA) (refer to TII 2020a (**PE-ENV-01101**) and TII 2020b (**PE-ENV-01102**)). The interaction between Cultural Heritage and Landscape is particularly relevant 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 or place (e.g. a local landmark) in terms of how it is experienced/appreciated.

Social and community issues, which are considered under Population and Human Health, may also overlap with Cultural Heritage in terms of how Cultural Heritage Receptors are perceived, valued and used by the local community (e.g. as recreational amenities and contributors to a community’s sense of place and cultural or historical identity). Engagement with Cultural Heritage is linked to our sense of wellbeing, so it is important to highlight where adverse effects on Cultural Heritage Receptors could also have adverse effects on Human Health (e.g. through loss of an archaeological monument with amenity or other social value). Conversely, providing opportunities for users to engage with Cultural Heritage contributes to wellbeing, social cohesion, and community identity.

Another area of potential overlap is Biodiversity as certain Cultural Heritage Receptors (e.g. graveyards, derelict buildings) can also be important ecological receptors as habitats for wildlife; certain species of flora and fauna may have cultural associations; and certain trees (e.g. a lone blackthorn) may have local Cultural Heritage importance.

For more information on the interaction of effects and related assessment processes, refer to **Sections 4.3**. See also **Figure 1.1** below.

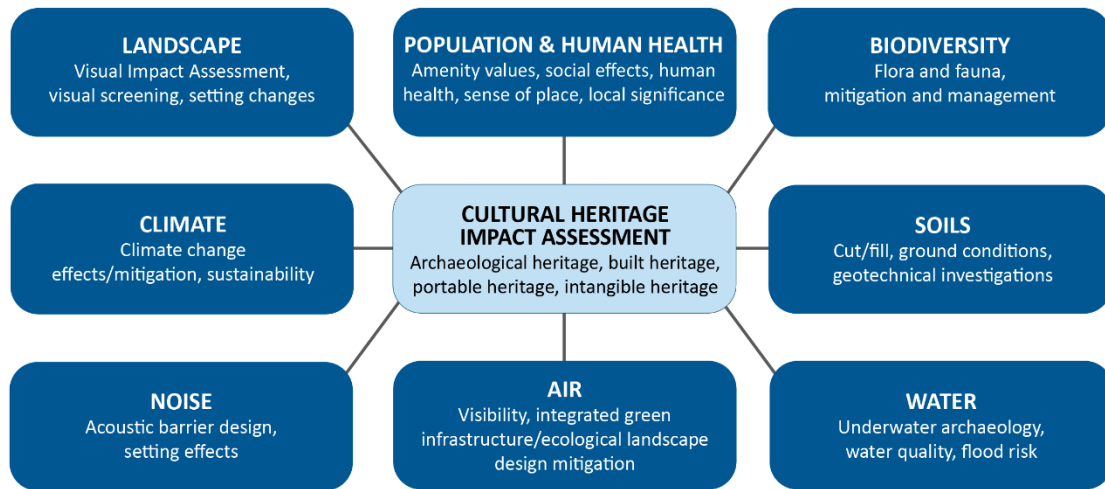


Figure 1.1 - Cultural Heritage interactions and overlap with other environmental factors

1.12 Key Definitions

The Roads Act 1993 (Environmental Impact Assessment) (Amendment) Regulations 2019, in line with Article 3(1) of the amended EIA Directive, identifies Cultural Heritage as one of the environmental factors to be included in an EIA for road schemes. The definitions outlined in the glossary (**Appendix 2**) include the various elements of the Cultural Heritage considered relevant for inclusion in CHIA for TII Projects, namely Archaeological Heritage, Built Heritage (including but not limited to Architectural Heritage and Industrial Heritage), Portable Heritage, and other Tangible and Intangible Cultural Heritage. These definitions are informed by the Cultural Heritage regulatory and policy framework (summarised in **Appendix 3**), current practice, and the consultations carried out during the preparation of these guidelines and standards.

*For examples of the types of Cultural Heritage Receptors commonly encountered on TII Projects, see **Table 5.3**, **Table 5.4** and **Table 5.5** in **Section 5.3.3**.*

2. The Value and Importance of Cultural Heritage

Public acceptance of TII Projects and other major developments is frequently influenced by the extent and significance of their effects on Cultural Heritage. In this section, we briefly outline the value and importance of Cultural Heritage for society while recognising that a balance needs to be found between a range of issues (refer to **Section 1.2** above).

Cultural Heritage is a broad term that includes Archaeological Heritage, Built Heritage, Portable Heritage, Intangible Heritage, and other resources inherited from the past by contemporary society. It consists of the tangible and intangible traces of the interactions between people and places, people and nature and people and objects through time. The distinctive heritage and collective memory of each locality or community are unique and a key foundation for identity, social cohesion, and sustainable development. How these Cultural Heritage aspects—which are defined below and in the glossary (**Appendix 2**)—relate to CHIA in practice is shown in **Figure 4.2**.



Plate 2.1 - Archaeological monuments are a prominent part of our rich Cultural Heritage (Photo: TII)

2.1 Cultural Heritage

Cultural Heritage is a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge, and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time (Faro Convention 2005).

The value of Cultural Heritage for society is recognised in international treaties, the EIA Directive and national legislation and policies (see **Appendix 3**). For example, the ICOMOS *Burra Charter* (Australia ICOMOS 2013) states that:

'places of cultural significance enrich people's lives, often providing a deep and inspirational sense of connection to community and landscape, to the past and to lived experiences. They are historical records, that are important expressions of ... identity and experience. Places of cultural significance reflect the diversity of our communities, telling us about who we are and the past that has formed us and the ... landscape. They are irreplaceable and precious.'

Cultural Heritage is a resource that contributes to cultural diversity and sense of place and is increasingly recognised as a vital aspect of life. Engagement with Cultural Heritage is linked to human rights and democracy and with the wellbeing of individuals, communities, and society at large. There is recognition that places and objects are not, in themselves, what is important about Cultural Heritage—they are important because of the meanings and uses that people attach to them and the values they represent (Council of Europe 2005). TII's *Sustainability Implementation Plan* supports these concepts, specifically regarding Sustainability Principle 6—'Create total value for society' (TII 2021b).

2.2 Archaeological Heritage

Archaeology is the study of human societies through their material remains and artefactual assemblages. The 1992 *European Convention on the Protection of the Archaeological Heritage* ('Valletta Convention'), which was ratified by Ireland in 1997, aims to 'protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study' (see **Appendix 3**).

The study of archaeology increases our understanding and knowledge of the structure and culture of societies that may not be recorded by any other means. Each monument possesses a unique and, as such, invaluable record of the individual site, as well as providing evidence for its context in a wider cultural framework. Collectively, archaeological sites and monuments contribute to charting cultural evolution and change over time, providing insight into the communications, trade, and growth of human societies.

National legislation is in place for the protection of archaeological sites, monuments, and objects (refer to **Appendix 3**). National policy on the protection of the Archaeological Heritage during development is set out in *Framework and Principles for the Protection of the Archaeological Heritage* (DAHGI 1999a) (see also <https://www.archaeology.ie/monument-protection>). This includes the recognition that the Archaeological Heritage is a finite, non-renewable resource (see **Appendix 3**). The importance of the Archaeological Heritage is also outlined in *Archaeology in the Planning Process* (DHLGH/OPR 2021), which notes that:

'Our archaeological heritage not only enriches our landscapes, townscapes and seascapes but is essential to understanding our past. Only a portion of the material remains left by our predecessors has survived, so it is vital that we manage what is left wisely. Since prehistoric people had no written record to leave behind, we are entirely dependent on the monuments and artefacts they did leave. But it is important to understand that archaeology addresses all periods, and the material remains of all past societies contribute to developing our understanding of such societies. Archaeology attempts to achieve the best possible level of knowledge and understanding of past societies by assembling all available evidence and analysing it.' (DHLGH/OPR 2021, p.3).

2.3 Built Heritage

The term Built Heritage encompasses a diverse range of buildings and structures (residential, military, ecclesiastical, maritime, industrial, etc.).

The importance of the Architectural Heritage (which is considered in these guidelines as part of the Built Heritage) is outlined in *Architectural Heritage Protection: Guidelines for Planning Authorities* (DAHG 2011), which notes that:

‘Our architectural heritage is a unique resource, an irreplaceable expression of the richness and diversity of our past. Structures and places can, over time, acquire character and special interest through their intrinsic quality, continued existence and familiarity. The built heritage consists not only of great artistic achievements, but also of the everyday works of craftsmen. In a changing world, these structures have a cultural significance which we may recognise for the first time only when individual structures are lost or threatened. As we enjoy this inheritance, we should ensure it is conserved in order to pass it on to our successors.’ (DAHG 2011, p.13).

Protecting Built/Architectural Heritage is a vital function of planning authorities. Each Local Authority development plan must include policy objectives to protect structures or parts of structures of special interest and to preserve the character of buildings in the Record of Protected Structures (RPS), Architectural Conservation Areas (ACAs) and areas of special planning control within the planning authority’s functional area (DAHG 2011, p.21). For more information, refer to *Architectural Heritage Protection: Guidelines for Planning Authorities* (DAHG 2011) and *A Guide to Architectural Heritage* (DHLGH/OPR 2022).

The 1985 *Convention for the Protection of the Architectural Heritage of Europe* (‘Granada Convention’) was ratified by Ireland in 1997 (see **Appendix 3**).

2.4 Portable Heritage

Portable Heritage means any Tangible Cultural Heritage that can be moved from one place to another. This includes excavated material and surface finds (artefacts) observed in the field during walkover surveys. Such moveable objects are important for developing our understanding of past societies and may be considered Archaeological Objects under legislation. Objects may come within the terms of this definition regardless of their age, and include human remains and ecofacts (ancient animal and plant remains and other deposits of palaeo-environmental/geoarchaeological importance).

All Archaeological Objects found in the State which have no known owner at the time of finding (i.e. where neither the original owner nor their present legal heirs are known) are State property. Anyone who finds an Archaeological Object must report it to the National Museum of Ireland (NMI) or other relevant authority within a prescribed period. This notification requirement is not necessary when such objects are discovered during licensable activities such as archaeological excavations. Failure to expertly record the context from which an object has been removed results in an irreplaceable loss of knowledge of the past (see **Appendix 3**, and the NMI’s *Standards for the Care and Treatment of Archaeological Objects from Excavations* (NMI 2022) for more information).

2.5 Intangible Cultural Heritage

The importance of the Intangible Cultural Heritage is recognised in the 2003 UNESCO *Convention for the Safeguarding of the Intangible Cultural Heritage* (Paris Convention) as ‘a mainspring of cultural diversity and a guarantee of sustainable development’ (UNESCO 2003). Refer to **Appendix 3** for more information.

Ireland’s obligations under the Paris Convention, which was ratified by the State in 2015, include establishing a National Inventory for Intangible Cultural Heritage (<https://nationalinventoryich.tcagsm.gov.ie/>) to protect, promote and celebrate Irish living Cultural Heritage practices, customs, crafts, and traditions. At the time of writing, the Inventory includes entries under the following categories:

- oral traditions and expressions, including language (e.g. Cant/Gammon, a traditional language spoken by Irish Travellers),
- social practices, rituals, and festive events (including Irish Traditional Music, Hurling, and patterns at Holy Wells),
- traditional craftsmanship (including Snap Net Fishing, Traveller Tin-smithing, Dry Stone Construction),
- performing arts, and
- knowledge and practices concerning nature and the universe (including Winterage in the Burren, Floating Heritage and Traditional Sheep Farming).

The National Inventory of Intangible Cultural Heritage is updated on an ongoing basis with the goals of acknowledging, safeguarding, and promoting Ireland's living heritage through official State recognition (<https://www.gov.ie/en/publication/8ef0e-intangible-cultural-heritage/>). To date, Ireland has successfully inscribed three elements of Irish Intangible Cultural Heritage in the UNESCO Representative List of the Intangible Cultural Heritage of Humanity, namely Irish Harping (inscribed in 2019), Hurling (2018) and Uilleann Piping (2017).

Intangible aspects (associative values) of Built Heritage receptors are included in the categories of special interest for Protected Structures as set out in the Planning and Development Act 2000 (as amended), and in the evaluative criteria applied under best practice for assessing the importance of archaeological sites (e.g. historical and social interest, amenity value). It is, therefore, critical that intangible values or associations are considered when assessing the importance of archaeological and Built Heritage receptors. For more information on assessing importance, refer to **Section 5.5.1**.

2.6 Setting

When carrying out CHIA, the immediate and wider setting of Cultural Heritage Receptors needs to be considered. Setting is described in Article 1.12 of the Burra Charter (2013) as 'the immediate and extended environment of a place that is part of or contributes to its cultural significance and distinctive character'. The accompanying explanatory note states:

'Setting may include: structures, spaces, land, water and sky; the visual setting including views to and from the place, and along a cultural route; and other sensory aspects of the setting such as smells and sounds. Setting may also include historical and contemporary relationships, such as use and activities, social and spiritual practices, and relationships with other places, both tangible and intangible.'

In the context of setting, the *Xi'an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas* (ICOMOS 2005) is a valuable resource for practitioners. Its principles stress the need to:

- adequately address the rapid or incremental transformation of cities, landscapes and heritage routes which result from changes in lifestyles, agriculture, development, tourism or large-scale disasters of natural or human origin; and
- recognise, protect and adequately sustain the meaningful presence of heritage structures, sites and areas in their settings as a way to reduce the threats posed by these transformation processes.

When carrying out CHIA, it should be noted that in certain cases the immediate and wider setting of a Cultural Heritage Receptor may be subject to statutory protection along with the principal receptor (e.g. in the case of Protected Structures, the curtilage would also be protected).

As noted above in **Section 1.11**, setting assessments and visual impact assessments require the input of a Landscape Professional as they shall be assessed through LCA and LVIA (see also **Section 4.3.1**).



Plate 2.2 - The wider setting of a Cultural Heritage Receptor (Photo: TII)

3. CHIA as Part of the Approval Process

3.1 Introduction

In this chapter, we outline the different types of approval processes that are required for TII Projects and how CHIA fits into these depending on whether the Project is subject to EIA or another approval process. The chapter also provides a summary of procedures followed by TII and Roads Authorities in the planning, design and implementation of road schemes as specified in the Roads Acts 1993 to 2023, the Planning and Development Act 2000 (as amended) and the PMG (TII 2023a).

Cultural Heritage Professionals should be aware of, refer to and take account of relevant legislation and guidance as appropriate in undertaking all steps of CHIA. **Appendix 3** provides an overview of the regulatory and policy framework within which CHIA is carried out (see also **Figure 3.1** and **Figure 3.2** below). While every effort has been made in preparing these guidelines and standards to ensure references to legislation and regulation are correct and up to date, legislation is subject to change and may require legal advice to interpret; there is an onus on the reader to ensure that they are aware of current legislation. For a comprehensive list of other relevant guidance documents and standards, refer to **Appendix 4**.

Approval is required in accordance with the nature and scale of the Project (refer to **Sections 3.2, 3.3** and **4.1** below). CHIA will generally be carried out as part of the preparation of an EIAR or Environmental Assessment (e.g. Part 8 or Section 177AE) report. It may be presented as a chapter or as a standalone study depending on requirements. For Projects not of a type or scale to require EIA but which are subject to Appropriate Assessment under Section 177AE of the Planning and Development Act 2000 (as amended), CHIA shall be carried out where there is a possibility of adverse effects on Cultural Heritage at any scale (see **Section 4.3.3** below). CHIA is also used to inform the outline 'appraisal' of development proposals, design adjustments and consent applications. Where a CHIA is carried out for Projects not requiring EIA, it should still follow the broad approach and structure outlined in these guidelines.

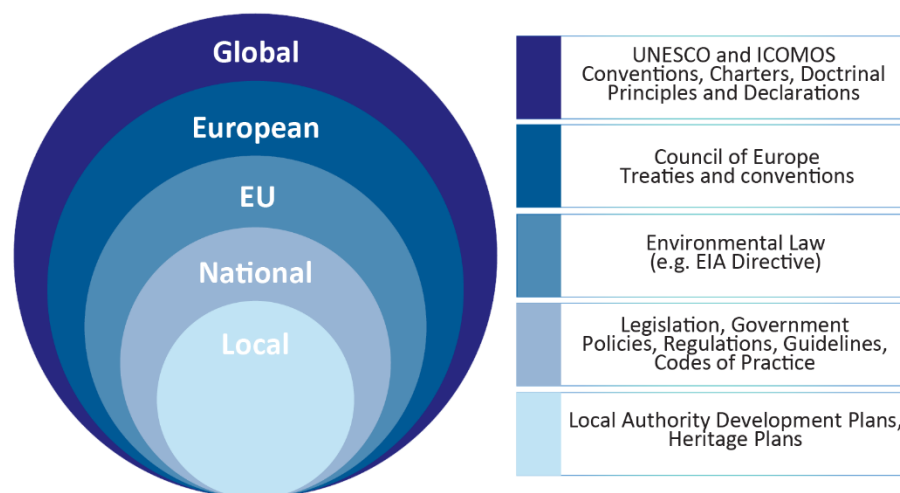


Figure 3.1 - Legislative and policy contexts

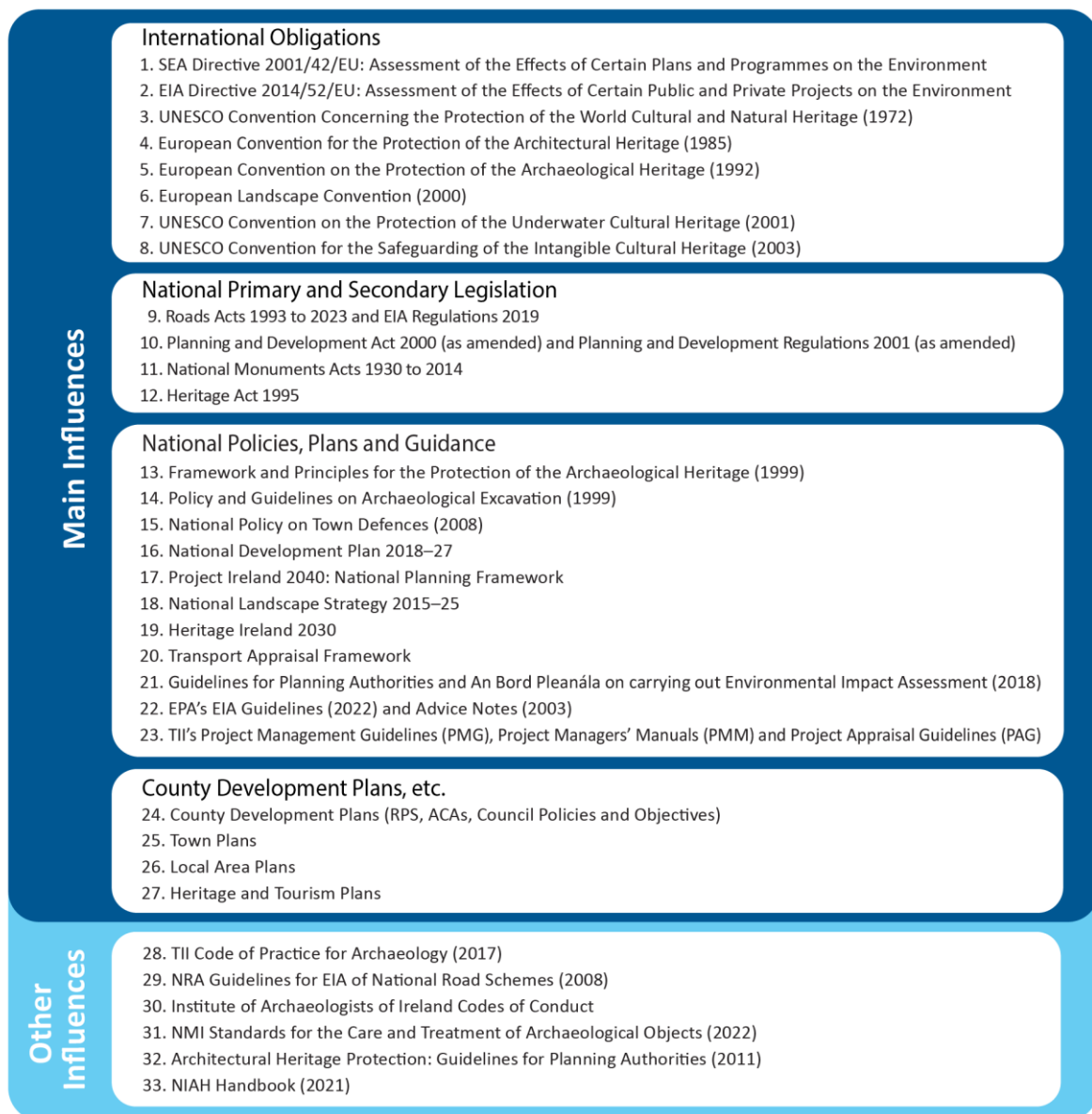


Figure 3.2 - Legislation, statutory guidance, and other influences on CHIA for TII Projects

3.2 Environmental Impact Assessment (EIA)

3.2.1 EIA Directive

Environmental Impact Assessment (EIA) is the process of examining the anticipated environmental effects of a proposed project on the receiving environment, including effects on Cultural Heritage. EIA contributes to the environmental basis of the decision-making process, helping to ensure that consent decisions are made in knowledge of the environmental consequences of the project (EPA 2022). As a process, EIA consists of:

- preparation by the developer of an Environmental Impact Assessment Report (EIAR) which describes the effects, if any, which the proposed project, if carried out, would have on the environment,

- carrying out consultations,
- examination by the Competent Authority of the EIAR, supplementary information and information received through consultations,
- reasoned conclusion by the Competent Authority on the likely significant effects of the proposed project, and
- integration of the reasoned conclusion into the consent decision.

Requirements for EIA derive from the European Communities Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment. Amendments to this initial directive from 1997, 2003 and 2009 were subsequently codified by EIA Directive 2011/92/EU which in turn has been amended by EIA Directive 2014/52/EU. The EIA Directive:

- ensures that consent for certain projects can only be granted after an assessment of the likely significant environmental effects has been carried out, and
- promotes public participation in environmental decision-making.

In respect of proposed road development, EIA is regulated by the Roads Act 1993, as amended, which in respect of such projects, transposes Directive 2011/92/EU as amended by Directive 2014/52/EU. For further information please refer to *Environmental Planning of National Road and Greenway Projects* (TII 2023e (**RE-ENV-07008**)).

As outlined below in **Appendix 3**, new road development in Ireland is regulated under the Roads Acts 1993 to 2023 and associated EIA regulations which require the preparation of an EIAR for certain types of road schemes. Under the EIA Directive, Cultural Heritage is identified as one of the environmental factors for which the 'environmental impact assessment shall identify, describe, and assess in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of a Project' (Article 3(1) EIA Directive 2011 as amended by the 2014 Directive).

The EIA Directive references the various Council of Europe definitions for Cultural Heritage and its components, and highlights the link with landscape, noting that:

'For the protection and promotion of cultural heritage comprising urban historical sites and landscapes, which are an integral part of the cultural diversity that the Union is committed to respecting and promoting in accordance with Article 167(4) TFEU, the definitions and principles developed in relevant Council of Europe Conventions, in particular the European Convention for the Protection of the Archaeological Heritage of 6 May 1969 [London Convention], the Convention for the Protection of the Architectural Heritage of Europe of 3 October 1985 [Granada Convention], the European Landscape Convention of 20 October 2000 [Florence Convention], the Framework Convention on the Value of Cultural Heritage for Society of 27 October 2005 [Faro Convention] can be useful. In order to better preserve historical and cultural heritage and the landscape, it is important to address the visual impact of Projects, namely the change in the appearance or view of the built or natural landscape and urban areas, in environmental impact assessments.' (Recital 16 of Preamble).

For more information on the conventions and legislation referred to above, see **Appendix 3**. For more information on EIA, refer to the EPA guidelines and advice notes (EPA 2022, 2003), the NRA's *Environmental Impact Assessment of National Road Schemes – A Practical Guide* (NRA 2008) and *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment* (DHPLG 2018).

3.2.2 Screening and Scoping

Under Section 51 of the Roads Act 1993, a proposed road development (i.e. subject to EIA) shall not be carried out unless An Bord Pleanála has approved it or approved it with modifications. In applying for approval, the Roads Authority is required to submit an EIAR in respect of the proposed development. Determination as to whether an EIA is required or not is made through a process known as ‘screening’. The screening procedure should ensure that an EIA is only required for projects likely to have significant effects on the environment (Recital 27 of Directive 2014/52/EU).

In screening for EIA, consideration should be given to the following:

- Some TII Projects, such as motorways, automatically or mandatorily require EIA (supra-threshold screening), and
- all other Projects require assessment on a case-by-case basis to determine if an EIA is required (sub-threshold screening).

EIA is a mandatory requirement in respect of certain TII Projects as illustrated below in **Figure 3.3**. Where EIA is not a mandatory requirement, screening will determine if the Project is or is not likely to have significant effects on the environment, including Cultural Heritage. Where likely significant effects are identified, the Project is subject to a sub-threshold development EIA.

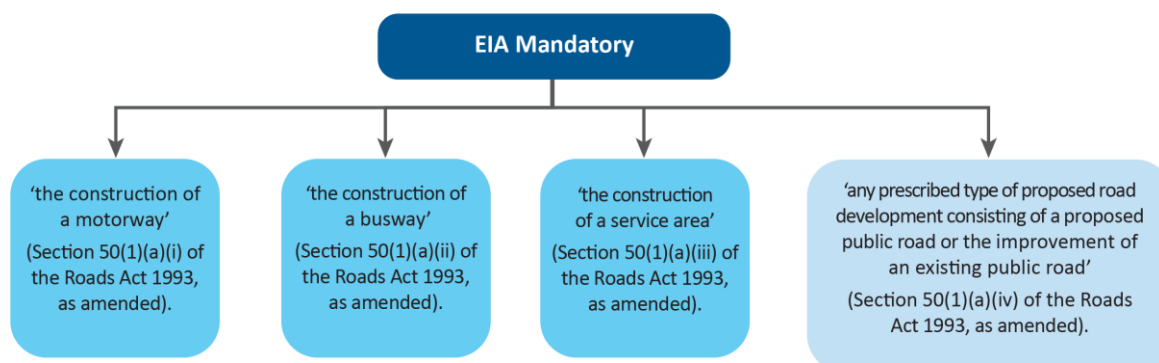


Figure 3.3 - Examples of TII Projects automatically requiring EIA

Where EIA is required, ‘Scoping’ is a process of deciding what information should be contained in the EIAR and what methods should be used to gather and assess that information. Scoping is defined in the European Commission guidance as ‘The process of identifying the content and extent of the information to be submitted to the Competent Authority under the EIA process’. The Environmental Protection Agency (EPA) advises that scoping is best carried out by personnel having appropriate expertise and relevant prior experience (EPA 2022, p.23).

It is important to note that the scoping process does not end with the scoping report. All parties—Roads Authority, Design Team, and specialists—should be aware of the potential for the scope to be altered during the preparation of the EIAR. This can arise either because of design reviews or because new environmental sensitivities come to light during the preparation of specialist studies or through consultation (NRA 2008, p.35).

Further information on EIA screening and scoping is given in the EPA guidelines (2022) and relevant European Commission guidelines (refer to **Appendix 4**).

3.2.3 Environmental Impact Assessment Reports

Where an EIAR is required, it shall be prepared by 'competent experts' (refer to **Appendix 1**) and shall include, in the case of a Road Project, the following information in accordance with Section 50(2)(b) of the Roads Acts 1993:

- i. a description of the proposed road development comprising information on the site, design, size and other relevant features,
- ii. a description of the likely significant effects of the proposed road development on the environment (including Cultural Heritage),
- iii. a description of any features of the proposed road development and of any measures envisaged to avoid, prevent, or reduce and, if possible, offset likely significant adverse effects on the environment (i.e. mitigation measures, see **Sections 5.6** and **6.7**),
- iv. a description of the reasonable alternatives examined and an indication of the main reasons for the option chosen, taking into account the effects of the proposed road development on the environment,
- v. a non-technical summary of the information referred to above, and
- vi. any additional, relevant information as set out in Annex IV of the EIA Directive (e.g. a description of the factors likely to be significantly affected by the Project including Cultural Heritage; a description of the likely significant direct and indirect effects resulting from the construction and operation of the Project; cumulation of effects with other existing and/or approved Projects).

3.3 Other Approval Processes

Projects that do not require an EIA and approval under Section 51 of the Roads Act 1993 (as amended) may require approval under Section 177AE of the Planning and Development Act 2000 (as amended) (certain Local Authority developments subject to Appropriate Assessment) or may be subject to the procedure established under Section 179 (Local Authority own development) of the Planning and Development Act 2000 (as amended) and Part 8 of the Planning and Development Regulations 2001 (as amended) (known as the 'Part 8' procedure) which sets out requirements in respect of specified development by, on behalf of, or in partnership with Local Authorities. Part 8 Development includes:

- construction of a new road or the widening or realignment of an existing road of 100m or more in length in an urban area or 1km or more in length in any other area,
- construction of a bridge or tunnel, and
- certain development, other than that specified elsewhere in Regulation 80(1), the estimated cost of which exceeds €126,000.

CHIA may be required as part of this approvals process and the findings presented in an Environmental Report (ER) to be submitted with the Part 8 application.

Section 179 does not apply to, among other things,

- maintenance or repair works, other than works which would materially affect the character of a Protected Structure or proposed Protected Structure or any element of the structure which contributes to its special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest,

- development the manager (chief executive) of a Local Authority considers necessary to deal urgently with an emergency situation calling for immediate action,
- works, other than works involving road widening, to enhance public bus services or improve facilities for cyclists, and
- development in respect of which an EIAR or an Appropriate Assessment is required.

See **Section 6.6** below for further information on the above approvals processes and how these relates to CHIA.

4. Application of the Guidelines to TII Projects

4.1 Introduction

These guidelines apply to different types of TII Projects (national roads and greenways) that require CHIA. The various TII Project phases, and the CHIA required for each, are outlined in **Section 6**.

In addition to national roads and greenways, TII Projects may include:

- safety improvement schemes,
- minor national road realignment schemes,
- pavement renewal schemes, and
- active travel schemes.

The type of Cultural Heritage assessment required may vary depending on the type of TII Project. For example, an urban road project requires a different focus to a realignment in a rural area. The different approval processes, as outlined above in **Section 3**, may also influence the level of assessment that may be required.

These guidelines and forthcoming standards shall be used in the planning, design, and construction of all TII Projects that:

- require approval under Section 51 of the Roads Act 1993 (as amended) (proposed road development subject to EIA),
- require approval under Section 177AE of the Planning and Development Act 2000 (as amended) (certain Local Authority development subject to Appropriate Assessment),
- are subject to the procedure established under Section 179 of the Planning and Development Act 2000 (as amended) and Part 8 of the Planning and Development Regulations 2001 (as amended) (the 'Part 8' procedure) (refer to **Section 6.6** for more information on statutory processes), or
- is a 'sub-threshold' development (i.e. below the threshold for automatically requiring an EIA) that has been deemed to require an EIA following screening.

The application of these guidelines and standards shall be commensurate with the nature and scale of the Project, the assessment and approvals processes required, and the receiving Cultural Heritage environment. These matters shall be agreed between the Project Manager, Project Archaeologist, and the Cultural Heritage Professional, and set out in the Assessment Method Statement (see **INFORMATION BOX 4**) for each Project phase per TII's PMG (TII 2023a).

4.2 Application of the Guidelines to TII Project Thresholds and Phases

TII's Project Appraisal Guidelines (PAG) provide specific guidance on the appraisal of certain aspects of national road and greenway projects. TII Road Projects are classified in the PMG and PAG as either Major or Minor Projects depending on their value or scope.

These guidelines and forthcoming standards will apply to all TII national road and greenway projects >€5m.

The full extent of these documents do not generally apply to TII Projects <€5m, however, unless EIA is required (because a Project has been screened in for this) and/or adverse effects on Cultural Heritage are likely to occur (for example, a pavement scheme in the core of a medieval town).

The complexity of Minor Projects can vary considerably. The upgrading of a section of a national road may not require the same level of CHIA as a town bypass or a new urban bus network. Therefore, the level of assessment should be proportionate to the nature and scale of the Project and to the sensitivity of the baseline Cultural Heritage environment. The determination of whether CHIA should be undertaken, and to what level of detail, shall be made by the Project Manager in consultation with the Project Archaeologist.

As stated above, TII’s PMG provide a framework for a phased approach to the management of the development and delivery of national road and greenway projects. These phases address scope and strategic assessment (Phase 0), concept and feasibility (Phase 1), options selection (Phase 2), design and environmental evaluation (Phase 3), statutory processes (Phase 4), enabling and procurement (Phase 5), construction and implementation (Phase 6) and close-out and review (Phase 7) (refer to **Figure 4.1** below).

CHIA is a process that extends through PMG Phases 1–4 (planning and design). Its objective is to reduce the likely impact on Cultural Heritage and avail of opportunities to enhance Cultural Heritage, where possible (e.g. through improved access, amenity, and knowledge sharing). The process is described in detail in **Section 5**, and on a phase-by-phase basis in **Section 6**.

Detail of the project management processes and deliverables for each phase can be found within the PMG (TII 2023a) and the relevant PMM (TII 2022 (**PE-PMG-02047**); 2023c (**PE-PMG-02042**); 2023d (**PE-PMG-02043**)).

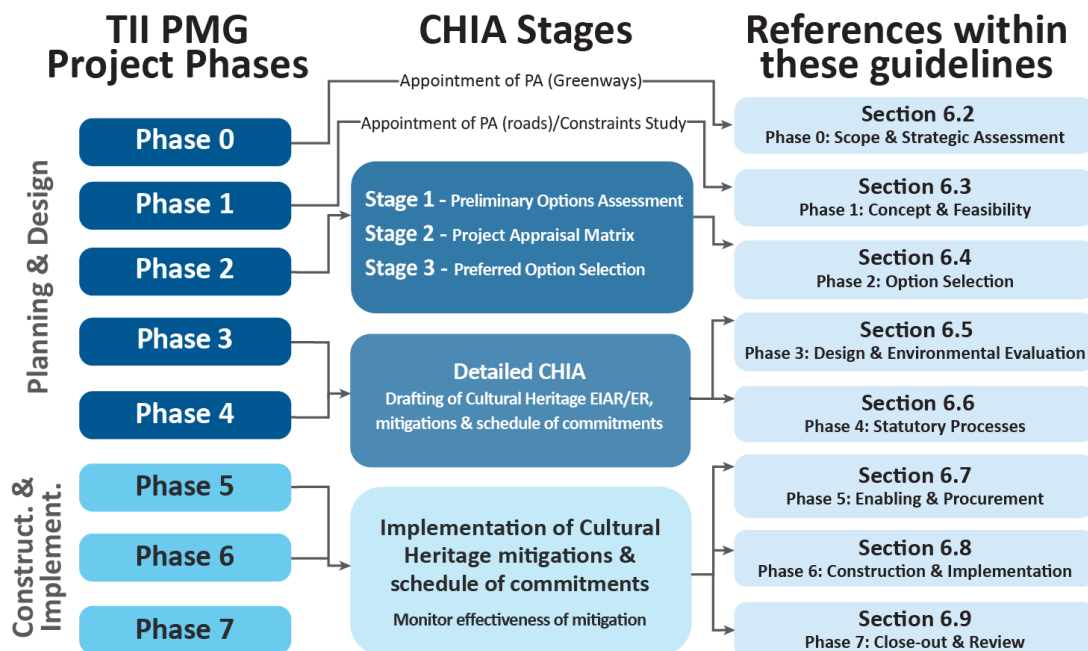


Figure 4.1 - PMG Phases and main CHIA Inputs/Outputs

4.3 Related Assessment Processes

These guidelines are focused on the assessment of likely effects of TII Projects on the Cultural Heritage aspects of the landscape (receiving environment). Landscape is also a consideration under other environmental factors, and assessments under these factors are generally addressed by other competent experts. For example,

- the appearance and physical character of the landscape as it is experienced today is covered under the 'Landscape' factor as assessed through LCA and LVIA,
- the natural landscape, with particular attention on species and habitats, is assessed under 'Biodiversity',
- the geological landscape is considered under 'Land, Soil, Water, Air and Climate', and
- the human landscape (community and social effects, etc.) is considered under 'Population and Human Health'.

An obvious relationship exists between the cultural landscape and these other related landscape aspects, not least in terms of potential interactions of effects. It is therefore crucial for Cultural Heritage Professionals to interact with these other specialists when carrying out CHIA (see **Section 5.5.3**). Landscape historians and ecologists may also need to be involved in CHIA (e.g. when assessing the importance of a designed landscape) as well as Irish-language experts (e.g. when a Project may impact a Gaeltacht).

In addition, Cultural Heritage is a consideration in other separate but related assessment processes as outlined below. Such related assessments may be carried out in tandem with CHIA or may have been carried out prior to CHIA of a TII Project. While these guidelines do not specifically address the assessments outlined below, such assessments can inform aspects of the Cultural Heritage baseline and the assessment of impacts on Cultural Heritage. Cultural Heritage Professionals should, therefore, refer and have due regard to the findings of such assessments, where available.

4.3.1 Landscape Character Assessment and Landscape and Visual Impact Assessment

While the immediate and wider setting (i.e. landscape context) of Cultural Heritage Receptors is a consideration under CHIA (refer to **Section 2.6**), landscapes in general come under the Landscape environmental factor in an EIAR which is the remit of suitably qualified Landscape Professionals. These specialists will undertake the Landscape Character Assessment (LCA) and Landscape and Visual Impact Assessment (LVIA) for TII Projects, where required.

LCA seeks to describe, understand, and evaluate the receiving landscape environment. It provides a baseline for LVIA and the context for the development of measures to mitigate adverse landscape and visual effects of a Project. TII has published an Overarching Technical Document (OTD), **PE-ENV-01101** (TII 2020a), which provides guidance on the methodology, scope and processes underlying LVIA for Specified Infrastructure Projects. A separate Standards Document, **PE-ENV-01102** (TII 2020b), sets out the methodology for LVIA and for the use of LCA in the establishment of the landscape baseline for proposed national roads.

LVIA will be carried out for Project Phases 2–4 by a suitably qualified and competent Landscape Professional who has previous experience in this field. As there is considerable overlap and interaction between LVIA and CHIA (e.g. in relation to Cultural Heritage Receptors that may also be visual receptors), close coordination is required between the Cultural Heritage Professional and the Landscape Professional throughout these Phases.

Sites and monuments of architectural, archaeological, or historical interest are among the visual receptors to be considered during landscape and visual surveys and to be reported on in LVIA chapters. Particular attention is to be drawn to views from such sites (TII 2020a). The Cultural Heritage Professional and the Landscape Professional, in consultation with the Project Archaeologist, shall therefore liaise with one another as to which Cultural Heritage Receptors need to be included in the LVIA, and this shall be approved by the Project Manager.

4.3.2 Strategic Environmental Assessment

Strategic Environmental Assessment is a higher tier form of environmental assessment that examines plans and programmes (as opposed to projects) at the decision-making level. The extent to which higher level Cultural Heritage considerations have already been assessed in plans and programmes can inform, and be referred to, under the Cultural Heritage baseline and/or scoping process (DHLGH 2020).

4.3.3 Appropriate Assessment

Appropriate Assessment is an assessment required under Article 6(3) of the Habitats Directive 92/43/EEC of the effects of a plan or project on the Natura 2000 European network of important ecological sites. The assessment focuses on the plan or project's implications for the site and any potential adverse effects on its integrity.

Where a scheme requires a Natura Impact Statement to enable a Competent Authority to carry out an Appropriate Assessment, works to be carried out for Cultural Heritage should be considered (e.g. extensive archaeological test trenching and any potential impact this may have on watercourses). Further information on Appropriate Assessment refer to *Environmental Planning of National Road and Greenway Projects* (TII 2023e (RE-ENV-07008)).

4.3.4 Historic Landscape Characterisation (HLC)

Historic Landscape Characterisation (HLC) is a separate assessment process that 'identifies the contribution of the past to the landscape. All areas have some element of historic character, which needs to be identified. HLC is not concerned exclusively with particular sites or monuments, although these do of course contribute to character, but considers the whole of the area' (Lambrick et al., 2013). Cultural Heritage Professionals should refer and have due regard to the findings of HLC where available for their Study Area.

4.3.5 Heritage (Cultural) Landscape Assessment

Heritage (Cultural) Landscape Assessment is different to HLC, with the analysis of impacts prepared under a different but related methodology and termed Heritage Impact Assessment. The term cultural landscape 'embraces a diversity of manifestations of the interaction between humankind and its natural environment. Cultural landscapes often reflect specific techniques of sustainable land-use, considering the characteristics and limits of the natural environment they are established in, and a specific spiritual relation to nature' (UNESCO 2018).

For further information on cultural landscapes and assessment, refer to the UNESCO World Heritage Convention and ICOMOS websites and *Guidelines on Heritage Impact Assessments for Cultural World Heritage Properties* (ICOMOS 2011a). See also UNESCO's *Operational Guidelines for the Implementation of the World Heritage Convention* which are periodically revised to reflect the decisions of the World Heritage Committee. The latest version was issued in July 2021 (UNESCO 2021).

4.3.6 Archaeological Assessment

Archaeological Assessment is defined in *Framework and Principles* (DAHGI 1999a) as an investigation aimed at any of the following:

- i. gaining a better understanding of a known or suspected archaeological site or monument with particular reference to considering the implications of proposed development for such a site or monument,
- ii. locating previously unidentified archaeological sites or monuments (or possible ones) prior to the commencement of development works with particular reference to considering the implications of proposed development for such sites or monuments,
- iii. considering the potential that proposed development works or longer term effects of a development may have on elements of the archaeological heritage not identified prior to the commencement of development works.

Where it is considered that a proposed development may (due to its location, size, or nature) have archaeological implications, then an Archaeological Assessment should be carried out (DAHGI 1999a, p.25). Such assessment can take a variety of forms from non-invasive inspections (e.g. to determine whether upstanding structures contain fabric of archaeological interest) to the excavation of archaeological test trenches (DHLGH/OPR 2021). The findings of such assessments, whether carried out for a particular TII Project or for another development within the Study Area, would inform the CHIA (see **Figure 5.7** and **Section 5.4.3**).

4.3.7 Architectural Heritage Assessments (Record of Protected Structures)

Architectural Heritage Assessments are carried out by planning authorities when deciding whether a structure is worthy of inclusion in their RPS by identifying the characteristics of special interest which would merit such inclusion.

Part 2 of *Architectural Heritage Protection: Guidelines for Planning Authorities* (DAHG 2011) describes the features that may contribute to the character and special interest of a structure. These categories of special interest are defined in the Planning and Development Act 2000 (as amended) as architectural, historical, archaeological, artistic, cultural, scientific, social, and technical interest. These categories are not mutually exclusive; for example, a structure may be of historical and archaeological as well as architectural interest. These categories should be considered when evaluating the importance of potential Cultural Heritage Receptors in relation to CHIA (refer to **Section 5.5.1** for more detailed guidance for rating the importance of Cultural Heritage Receptors).

4.3.8 Architectural Heritage Impact Assessments

Architectural Heritage Impact Assessments are prepared in accordance with Part IV of the Planning and Development Act 2000 (as amended), and with regard to the assessment criteria set out in *Architectural Heritage Protection: Guidelines for Planning Authorities* (DAHG 2011) and relevant Local Authority policies. The requirement for an Architectural Heritage Impact Assessment will generally come about for one of two reasons:

- as part of a development application to provide sufficient information for the planning authority to make an informed decision on the potential impact on the architectural heritage, or
- where permission has been granted for works to a Protected Structure or a proposed Protected Structure, to record the existing fixtures or features which contribute to its special interest and which would be lost or altered as a result of the works.

The Records of Protected Structures (which form part of Local Authority development plans) and the National Inventory of Architectural Heritage (NIAH) provide baseline data for an Architectural Heritage Impact Assessment, as well as for CHIA. Site visits and research of relevant primary and secondary source material underpin the understanding of such Built Heritage and its special interest.

Appendix B of *Architectural Heritage Protection: Guidelines for Planning Authorities* (DAHG 2011) provides detailed advice in respect of the preparation of Architectural Heritage Impact Assessments. As outlined in **Section 1.6** and **Appendix 1**, such assessments should be undertaken by suitably qualified and experienced Cultural Heritage Professionals.

4.4 Other Guidance

Appendix 4 provides a list of other guidelines and standards that may be of relevance to Cultural Heritage Impact Assessment.

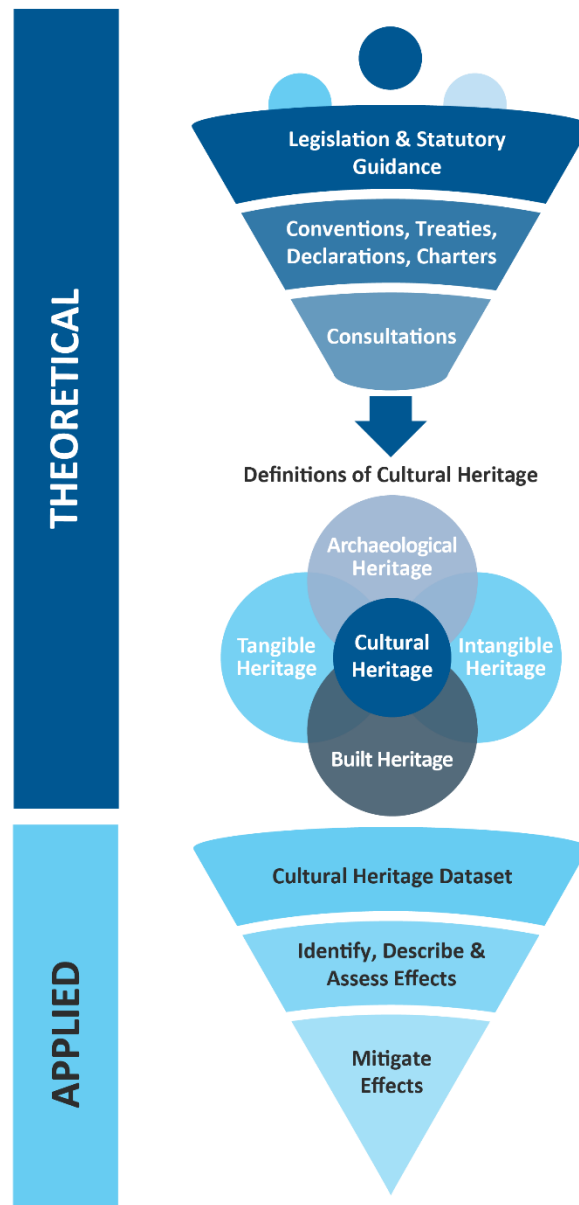


Figure 4.2 - Practical application of the Cultural Heritage definitions for CHIA

5. Cultural Heritage Impact Assessment Process

5.1 Introduction

Figure 4.2 above illustrates the theoretical underpinning of the Cultural Heritage definitions used within these guidelines—which have been derived from, among other things, international conventions and charters, national legislation and the consultations carried out in preparing these guidelines—and how these are to be applied in practice. The processes set out in these guidelines for CHIA for TII Projects is broadly based on the approach and methodology set out in the EPA’s EIA guidelines (EPA 2022) and advice notes (EPA 2003).

Where CHIA is to be undertaken, it will be proportionate to the nature and scale of the Project and its likely direct and indirect effects, and will have regard to relevant legislation and policies, these guidelines and the forthcoming standards. Appropriate consultation shall occur throughout each iteration of the CHIA process (refer to **Section 5.4.4**). The level of consultation to be carried out by the Cultural Heritage Professional shall be set out in the relevant Assessment Method Statement (see **INFORMATION BOX 4** and **Section 5.3.4** for more detail) and agreed in advance with the Project Archaeologist/Project Manager.

A four-step process shall be followed for each iteration of CHIA during TII’s PMG Phase 1 (Concept and Feasibility, which includes a Constraints Study), Phase 2 (Options Selection, which may be broken down into Stages also requiring CHIA) and Phase 3 (Design and Environmental Evaluation). The PMMs (TII 2022 (**PE-PMG-02047**); 2023c (**PE-PMG-02042**); 2023d (**PE-PMG-02043**)) refer to the Constraints, Risks and Opportunities Study for national roads and the Constraints and Opportunities Study for greenways, but hereafter these are referred to as the Constraints Study.

The iterative four-step CHIA process is explained in **INFORMATION BOX 3** and **Table 5.1** below and illustrated in **Figure 5.1**. A summary of the overall process is illustrated in **Figure 5.2**. Further detail on the CHIA process for national roads and greenways is provided here in **Section 5** of these guidelines and in the standards.

INFORMATION BOX 3: The four-step CHIA process

Step 1: Establish Scope	Establish scope and confirm Study Area/Assessment Corridors.
Step 2: Analysis	Compile Cultural Heritage Dataset and analyse data gathered through desktop research, fieldwork and consultation to establish the Cultural Heritage baseline of the receiving environment.
Step 3: Assessment	Identify and describe the likely direct and indirect impacts on Cultural Heritage Receptors and assess the significance of their effects.
Step 4: Mitigation and Enhancement	Set out suitable mitigation/enhancement measures to be considered during options selection and design, including the measures to be implemented during construction and operation of the Project.

Within these four CHIA steps there are certain procedures, tasks and outputs, as outlined below in **Table 5.1** (see also Table 5.2).

It may be necessary to move backwards as well as forwards in these steps (e.g. on occasions when the Study Area is increased or decreased in size, or when further design details emerge that require assessment, such as the location and extent of temporary work areas, construction compounds, quarries, attenuation ponds, access routes, etc.).

Table 5.1 - CHIA Procedures, Tasks and Outputs (non-exhaustive list, not necessarily in sequential order)

Procedures	<ul style="list-style-type: none"> i. Identify Cultural Heritage Receptors ii. Evaluate their importance <p>Assess the significance of effects arising from any anticipated impacts Develop mitigation measures and enhancement opportunities</p>
Tasks	<ul style="list-style-type: none"> i. Desktop research/literature review ii. Map regression analysis iii. GIS analysis to determine proximity of Cultural Heritage Receptors to Project elements iv. Geophysical surveys to assess subsurface potential v. Lidar analysis to identify low-relief features of potential interest (including the use of the TII Automatic Detection of Archaeological Features software) vi. Aerial/satellite imagery analysis to identify cropmarks, etc. vii. Walkover surveys/site inspections (archaeology and built heritage) viii. Targeted test excavations/built heritage surveys/underwater assessments ix. Meetings/workshops/consultations
Outputs	<ul style="list-style-type: none"> i. Assessment Method Statements ii. Cultural Heritage Datasets (CHDs) iii. Mapping/geospatial data for Cultural Heritage Receptors iv. Cultural Heritage Reports/Chapters v. Contributions to Multi-Criteria Analysis (MCA) vi. Cultural Heritage Mitigation Plans (CHMPs) vii. Input to Construction Environmental Management Plans (CEMPs) viii. Input to Schedule of Environmental Commitments for Projects requiring EIA ix. Briefs of Evidence for Projects requiring EIA x. Project Archives (Receptor Survey Forms, photographs, field notes, etc.)

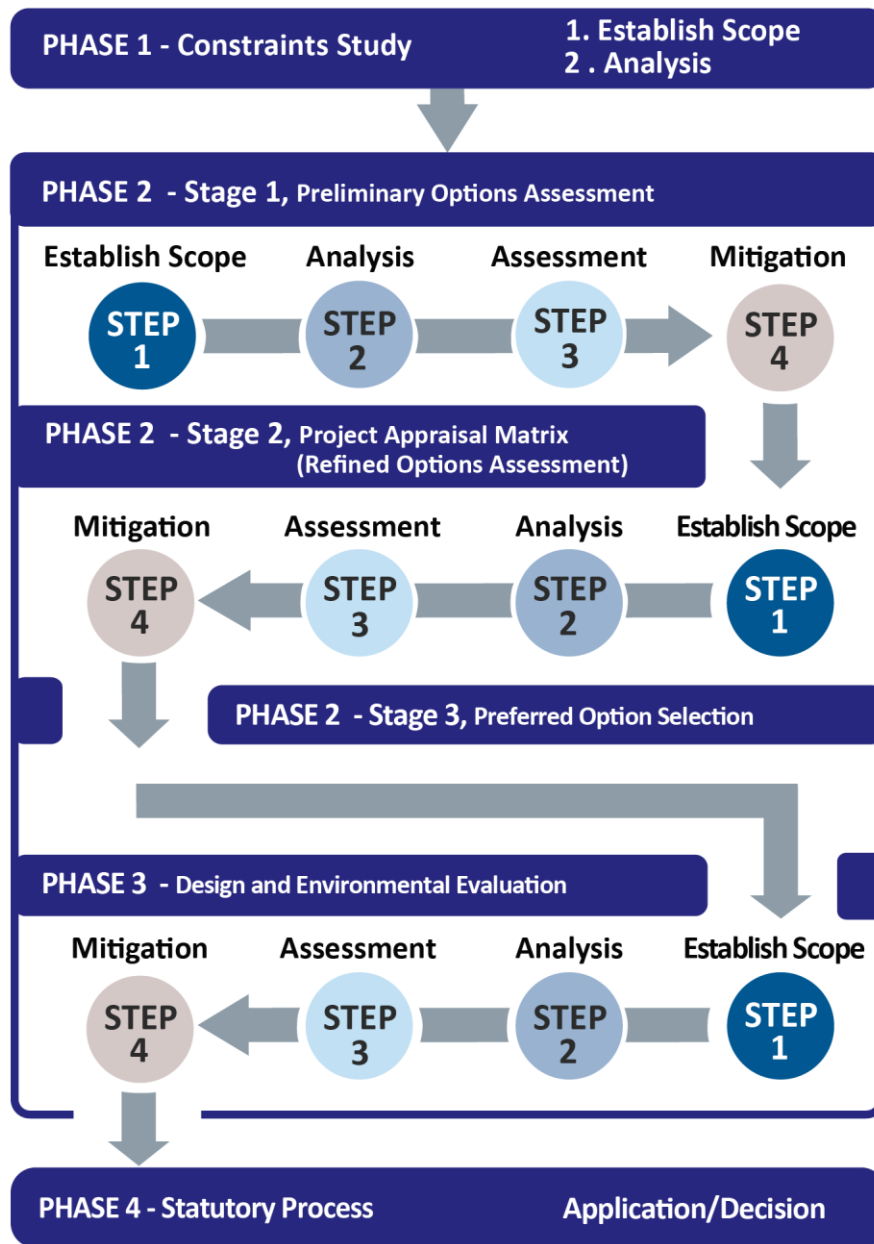


Figure 5.1 - The CHIA process within the PMG Project Phases (no outputs are required from the Cultural Heritage Professional during Phase 2 Stage 3 apart from providing clarifications to the Project Team, as necessary)

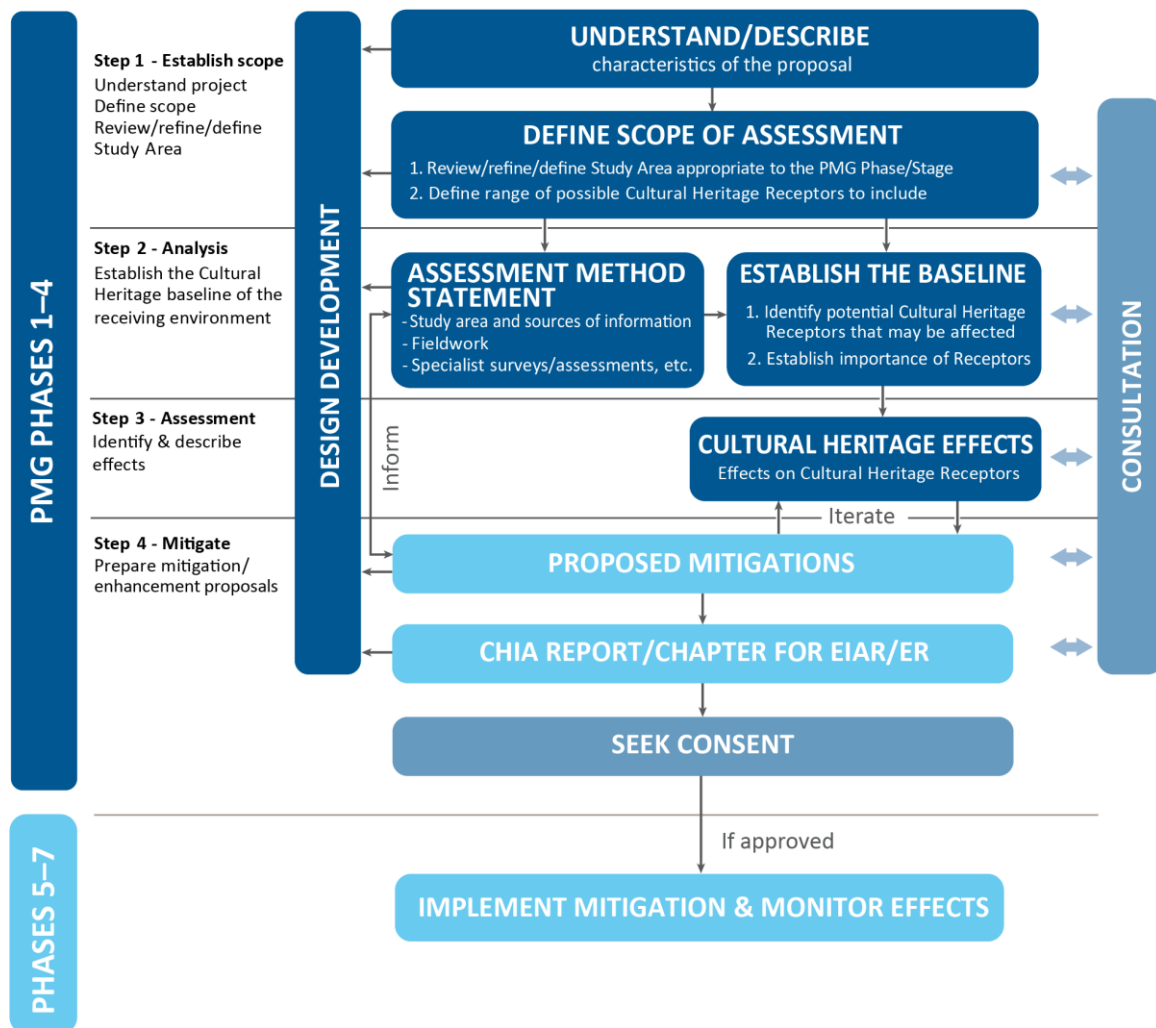


Figure 5.2 - Summary of CHIA process

5.2 Overview of CHIA Outputs

For each iteration of CHIA throughout the PMG phases, the Cultural Heritage Professional will produce and submit various outputs including Assessment Method Statements, Cultural Heritage Datasets (CHDs), geospatial data/mapping, reports/chapters, and Project Archives, and have input to the MCA for the Project. Some of these key outputs are defined below in **INFORMATION BOX 4**, with specific outputs for national road and greenway projects set out in Table 5.2 .

The level of assessment required, and methods to be used, will be determined by the Project Archaeologist in consultation with the Project Manager and with reference to these guidelines.

INFORMATION BOX 4: Key outputs

Assessment Method Statements

For all Projects, the Cultural Heritage Professional will need to produce and submit to the Project Archaeologist an Assessment Method Statement at the commencement of each Phase or Stage, as applicable. The Assessment Method Statement shall set out key information (e.g. the name(s) and qualifications of the Cultural Heritage Professional(s) undertaking the assessment; confirmation of Study Areas/Assessment Corridors; the methods to be used; timelines; milestones; and outputs). The Assessment Method Statement shall be submitted in draft form, and the Cultural Heritage Professional will apply amendments agreed in consultation with the Project Archaeologist/Project Manager. The final Assessment Method Statement shall be adhered to throughout the relevant Phase, unless otherwise agreed with the Project Archaeologist and approved by the Project Manager. For more information on Assessment Method Statements, refer to **Section 5.3.4**.

Cultural Heritage Datasets

A Cultural Heritage Dataset (CHD) is a structured dataset containing data relevant to each identified Cultural Heritage Receptor, including but not limited to geospatial data. The dataset can be produced and analysed using spreadsheets, databases, and Geographical Information Systems (GIS). The production and revision of the CHD is an iterative process throughout Phases 1–4, and its contents and level of detail will be proportionate to the PMG Phase. Cultural Heritage Professionals are required to deposit raw survey data (i.e. data produced in relation to Lidar assessments, geophysical surveys, topographical surveys, etc.) with their CHDs as part of the Project Archive. For more information on the CHD, refer to **INFORMATION BOX 5, Section 5.3.3 and Appendix 5**.

Multi-Criteria Analysis (MCA)

MCA is an appraisal tool used to estimate the likely impact of interventions on the Environment, Economy and Engineering. It is used throughout the Phase 2 Options Selection process to evaluate and rank options against a set of criteria on the basis of a scoring procedure. For more information, see **Sections 5.5.8** of these guidelines and TII 2016, **PE-PAG-02031**.

Cultural Heritage Mitigation Plans

The Cultural Heritage Mitigation Plan (CHMP) is prepared by the Cultural Heritage Professional during Phase 3. The CHMP outlines the specific measures proposed to mitigate adverse effects on Cultural Heritage, including receptors to be avoided and protected during construction. The measures set out in the CHMP can be incorporated into the Schedule of Environmental Commitments (for Projects requiring EIA) and the Construction Environmental Management Plan (CEMP). For more information on the CHMP and CEMP, refer to **Sections 6.5.4 and 6.5.5**.

Project Archives

At the end of PMG Phase 3, or as otherwise required, the Cultural Heritage Professional shall submit a Project Archive to the client. This archive will comprise the CHD and associated spatial data, completed reports (each in PDF/A format and consisting of a single file), impact assessment spreadsheets, photographs, field records, and any other Cultural Heritage data/records generated by the CHIA. The spatial data will include vector layers in ESRI shapefile or geodatabase format (GIS, using the Irish Transverse Mercator coordinate reference system) and/or AutoCAD using standard attributes and layering conventions (refer to **Appendix 5**).

Table 5.2 - TII Project Phases and CHIA Outputs – national road and greenway projects.

PMG Project Phase	Project Phase Stages and Process	Output Ref.	Output Description
Phase 0 Scope and Strategic Assessment	Assignment of Project Archaeologist (Greenways)	N/A	N/A
Phase 1 Concept and Feasibility	Assignment of Project Archaeologist (National Roads)	N/A	N/A
	Constraints Study	1.0a	Assessment Method Statement, to include the range of Cultural Heritage Receptors to be considered, sources of information, etc.
		1.0b	Cultural Heritage Dataset (CHD) to record baseline Cultural Heritage Receptors
		1.0c	Mapping/geospatial data for Cultural Heritage Receptors
		1.0d	Constraints Study Report (National Roads)
Phase 2 Options Selection	Stage 1 – Preliminary Options Assessment	2.0a	Assessment Method Statement, to include methodology for assessing impacts on Cultural Heritage and comparing options
		2.0b	Updated CHD based on additional research, fieldwork, etc.
		2.0c	Updated mapping/geospatial data for Cultural Heritage Receptors
		2.0d	CHIA report/chapter (using CHD) as part of Stage 1 of Options Report (if required)
		2.0e	CHIA input under Environment to MCA/Project Appraisal Deliverables
	Stage 2 – Project Appraisal Matrix (assessment of a reduced number of options)	2.1a	Assessment Method Statement, to include methodology for assessing impacts on Cultural Heritage and comparing options

PMG Project Phase	Project Phase Stages and Process	Output Ref.	Output Description
		2.1b	Updated CHD based on additional research, fieldwork, specialist surveys/assessments, consultations, etc.
		2.1c	Updated mapping/geospatial data for Cultural Heritage Receptors
		2.1d	CHIA report/chapter (using updated CHD) as part of Stage 2 Options Report (if required)
		2.1e	CHIA input under Environment to MCA/Project Appraisal Deliverables
	Stage 3 – Selection of a Preferred Option	N/A	Generally, no outputs are required from the Cultural Heritage Professional during this stage apart from clarification and consultation with respect to the CHIA
Phase 3 Design and Environmental Evaluation	Project Design Development (taking account of technical and environmental inputs) Progress project towards publication for Phase 4	3.0a	Phase 3 Assessment Method Statement, to include methodology for assessing impacts on Cultural Heritage
		3.0b	Updated CHD based on additional research, fieldwork, specialist surveys/assessments, consultations, etc.
		3.0c	Updated mapping/geospatial data for Cultural Heritage Receptors
		3.0d	Detailed CHIA report/chapter for the proposed project (based on detailed design and updated CHD), including description of baseline; assessment of direct and indirect effects on Cultural Heritage; interactions; cumulative effects; detailing of mitigation measures, etc.; either as standalone CHIA report, or, where required, as a chapter of the EIAR (or ER for Part 8 developments).

PMG Project Phase	Project Phase Stages and Process	Output Ref.	Output Description
		3.0e	Cultural Heritage Mitigation Plan (CHMP) and input to Schedule of Environmental Commitments and Construction Environmental Management Plan (CEMP)
		3.0f	CHIA input to Project Appraisal Deliverables, where required
		3.0g	Project Archive (to include CHD, Receptor Survey Forms, field notes, photographs, consultations with third parties, etc.)
Phase 4 Statutory Processes	Approval Process (respond to any requests from Competent Authority; prepare for and participate in Oral Hearing, if required; review approval and conditions)	4.0a	CHIA input to responses to queries and submissions, where required
		4.0b	Draft Brief of Evidence on CHIA for Oral Hearing, where required
		4.0c	Final Brief of Evidence on CHIA for Oral Hearing, where required
		4.0d	Present Brief of Evidence and respond to questions at Oral Hearing, where required
		4.0e	Review CHIA aspects of approval and the Schedule of Environmental Commitments, where required
		4.0f	Draft Method Statements for licence application for archaeological works
		4.0g	Cultural Heritage input to the updated CEMP, where required
		4.0h	Phase 4 Project Archive

5.3 Step 1: Establish Scope of Assessment and Confirm Study Areas

5.3.1 Step 1(a): Project Set Up

Prior to commencement of the CHIA at the beginning of each PMG Phase, the Cultural Heritage Professional shall undertake an initial review of the proposed project and scope of the required CHIA.

This will necessitate consulting the Project Archaeologist/Project Manager to confirm the project study area, programme, key stages, outputs, and communication requirements/protocols.

The CHIA shall be proportionate to the nature of the project (motorway, town bypass, greenway, active travel scheme, etc.), the Phase of the project, and the likely effects on Cultural Heritage. Establishing the scope shall have regard to the information provided in **Section 4** with respect to project thresholds and phases. The basis for any decisions made in relation to the purpose and scope of the CHIA should be recorded and agreed with the Project Archaeologist/Project Manager.

At the earliest opportunity, the Cultural Heritage Professional shall advise the Project Archaeologist/Project Manager of any likely programme implications for the CHIA and the surveys required (e.g. walkovers and acquisition of Lidar data are best undertaken between late autumn and early spring when vegetation is lower).

5.3.2 Step 1(b): Confirm the Study Area/Assessment Corridors for Each Phase

The project study area shall cover an area which will enable appropriate options to be developed and examined. The development of the Study Area is iterative in nature as the findings of the constraints, risks and opportunities study, and design development may instigate a re-evaluation of its extent within the constraints of the project scope identified during Phase 0. The potential impact of options on the receiving environment shall be determined from this.

The Study Area/Assessment Corridors will change over the course of PMG Phases 1–3, reflecting the refinement of the potential area of development, commencing with a project study area at Phase 1 Constraints Study.

Assessment Corridors will then be defined for the feasible options (Phase 2 Stage 1) and refined options (Phase 2 Stage 2). This will lead to the identification of the Preferred Option (Phase 2 Stage 3), which will in turn be further refined in terms of detailed design and assessed for the EIA (Phase 3) (see **Figure 5.3** to **Figure 5.5** below).

Study Areas/Assessment Corridors need to be sufficient and suitable to capture the information required to inform options selection and assessment. As such, the Study Areas/Assessment Corridors used for a project need to take account of the landscape/townscape through which a project is proposed to run. The Study Areas/Assessment Corridors may vary along the length of a project if the topography or landscape it runs through varies considerably. For example, when assessing the likely impacts of a proposed bypass on Cultural Heritage, it may be appropriate to exclude urban areas from the Study Area if no significant effects on Cultural Heritage are likely to occur within the town being bypassed.

Once the characteristics of the proposed project are established, the Cultural Heritage Professional shall liaise with the Project Archaeologist and Project Manager prior to commencement of the CHIA to confirm the project study area or Assessment Corridors (depending on the Phase). The Cultural Heritage Professional, in consultation with the Project Archaeologist, shall ensure that the Study Area/Assessment Corridors are appropriate to assess the likely direct and indirect effects on Cultural Heritage, and shall recommend amendments if required in their Assessment Method Statements (see **INFORMATION BOX 4** above and **Section 5.3.4**). Further guidance on the evolution of the Study Area/Assessment Corridors throughout the PMG phases on a typical road project is given below.

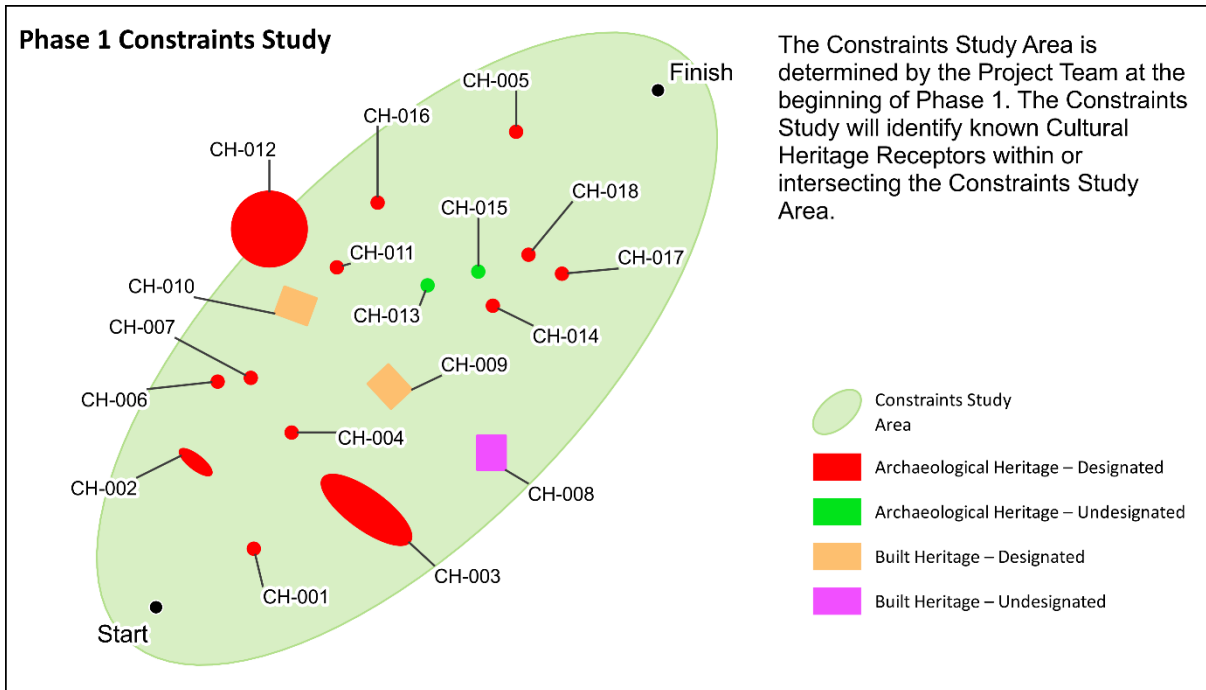


Figure 5.3 - Evolution of the Study Area/Assessment Corridors: Phase 1–Constraints Study

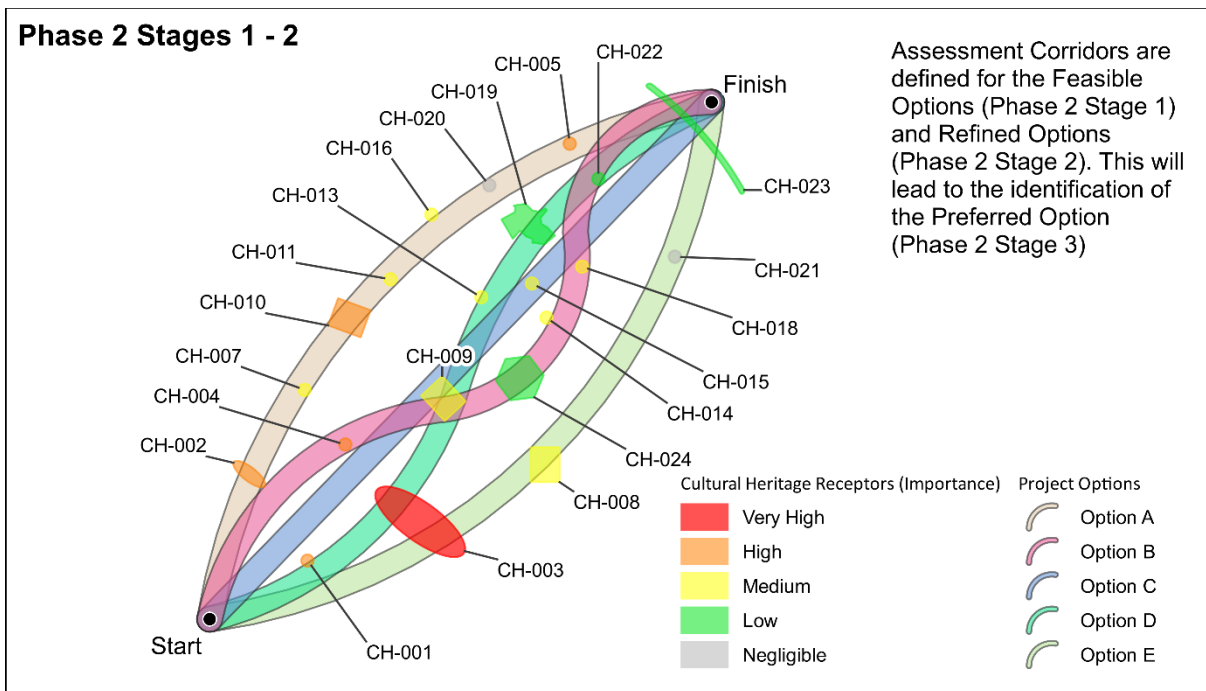


Figure 5.4 - Evolution of the Study Area/Assessment Corridors: Phase 2–Options Selection

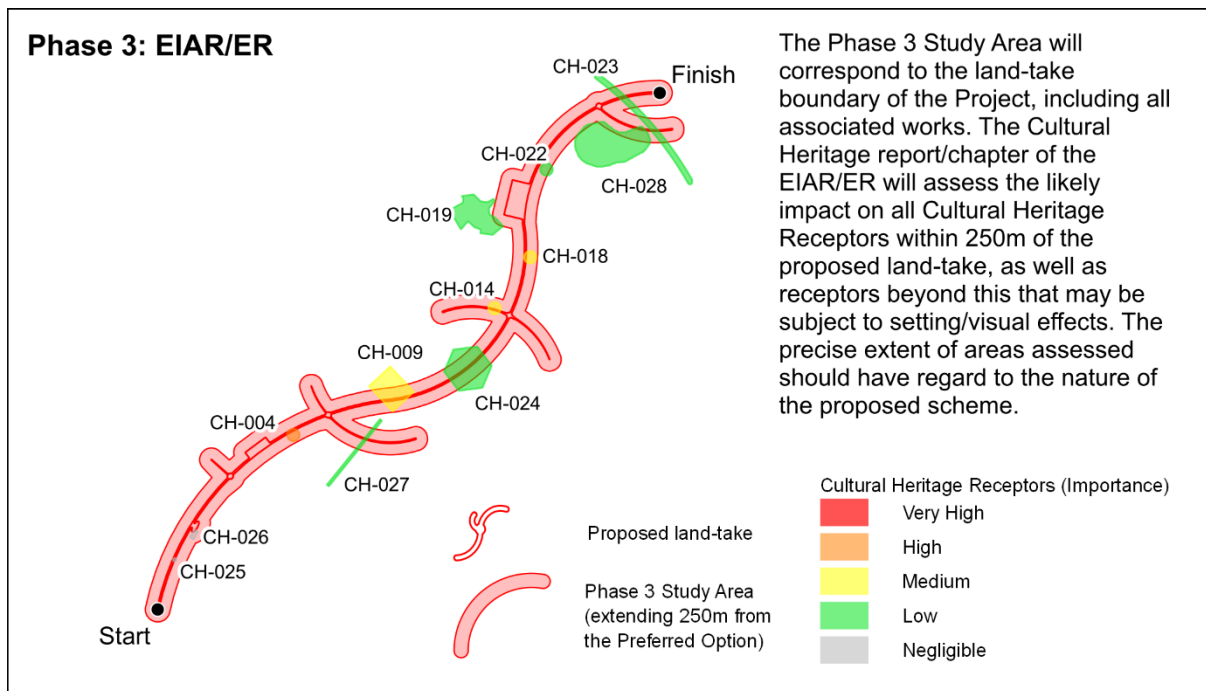


Figure 5.5 - Evolution of the Study Area/Assessment Corridors: Phase 3—Environmental Evaluation

5.3.2.1 Phase 1 Concept and Feasibility (Constraints Study)

For the Phase 1 Constraints Study, the Study Area to be used for the purposes of mapping known constraints (and opportunities) will be as determined by the Project Manager in consultation with the Project Archaeologist. However, the Study Area should be reviewed by the Cultural Heritage Professional, at a high level, using key statutory documentation (e.g. statutory heritage inventories, County Development Plan) to ensure that it takes adequate account of the Cultural Heritage environment. This may result in proposals to either remove an area from the project study area at the outset (e.g. because of important designation and sensitivity such as the presence of a World Heritage Property or property on the World Heritage Tentative List), or alternatively to include an adjoining area in the assessment due to potential effects on Cultural Heritage (e.g. a demesne associated with a country house beyond the Study Area) or to consider additional areas likely to be of lower Cultural Heritage sensitivity but with the potential to meet the overall project objectives. Refer to **Figure 5.3** above.

5.3.2.2 Phase 2 Options Selection (Stages 1–2)

For Cultural Heritage, where new alignments are being considered, the Assessment Corridor for each Route Option within rural greenfield environments shall generally extend to a width of 500m (i.e. 250m from the centreline of each Route Option; see **Figure 5.4** above). This Assessment Corridor may need to be widened around proposed junctions, bridges, and intersections. The Assessment Corridors employed for projects in other environments may also need to be altered to a more appropriate scale (e.g. being much narrower for the urban element of a project). The Assessment Corridors may also need to be expanded to identify potential impacts on important receptors due to setting change. The actual Assessment Corridors to be assessed shall be set out in the Assessment Method Statement and agreed between the Cultural Heritage Professional and the Project Archaeologist/Project Manager at the commencement of each Phase 2 stage.

5.3.2.3 Phase 3 Design and Environmental Evaluation

The Cultural Heritage report/chapter of the EIAR/ER prepared during Phase 3 will assess the likely direct and indirect effects on the identified Cultural Heritage Receptors, including setting/visual effects.

The Cultural Heritage Professional should review the given Study Area using their professional experience and judgement.

The Study Area for the Phase 3 assessment should correspond to the land-take boundary of the proposed project and incorporate any other lands required to build the scheme, plus an additional 250m surrounding these (see **Figure 5.5** above). This ensures that associated infrastructure such as access routes, wayleaves, quarries, drainage systems, attenuation ponds, construction compounds, temporary working areas, spoil disposal areas, machinery access routes, accommodation works, etc., are all included in the assessment as required by the EIA Directive. The Study Area to be used shall be described in the Phase 3 Assessment Method Statement and, where the Cultural Heritage Professional proposes variations from the given Study Area, the reason(s) for variation shall be explained.

As at Phase 2, the Study Area may need to be expanded to identify potential impacts on important receptors due to setting change. This should take account of the greater visibility of some elements such as bridges. It may be useful to refer to any available Zone of Theoretical Visibility models showing the likely extent of visibility of a development. This should be undertaken in liaison with the Landscape Professional who will produce this, if deemed appropriate. In any event, consultation should be undertaken with the Landscape Professional to seek their input regarding potential significant visual effects on Cultural Heritage Receptors. The Cultural Heritage Professional and Landscape Professional shall, therefore, collaborate and coordinate on their assessments to ensure that all significant setting/visual effects on Cultural Heritage Receptors are identified, assessed, and mitigated, where necessary, in accordance with TII's LCA/LVII guidance and standards (TII 2020a (**PE-ENV-01101**) and TII 2020b (**PE-ENV-01102**)).

5.3.3 Step 1(c): Scope of the CHIA

The Cultural Heritage Professional shall outline in the relevant Phase Assessment Method Statement the scope of the CHIA they will be undertaking, including sources of information, fieldwork and any specialist surveys/assessments required to establish the Cultural Heritage baseline and assess impacts. The proposed methodology and level of detail should be tailored in scope and scale to meet the requirements of the project and the PMG Phase, as well as the likely impacts on Cultural Heritage Receptors. The information gathered will be used to prepare the Cultural Heritage Dataset (CHD) that shall be used throughout the assessment.

5.3.3.1 Cultural Heritage Dataset

The data collected through desktop study, fieldwork, specialist surveys/assessments and consultations shall be used to create and maintain a comprehensive and robust CHD comprising all known and potential Cultural Heritage Receptors for the project (refer to **INFORMATION BOX 4** above and **INFORMATION BOX 5** below). The suggested format and contents of the CHD are given in **Appendix 5**. It is crucial that the structure of the CHD is designed from the outset to incorporate any new information that may be added throughout Phases 1–4, including information on impacts and mitigation/enhancement measures. The proposed format and data fields shall be outlined in the Assessment Method Statement submitted for approval by the Project Archaeologist/Project Manager.

INFORMATION BOX 5: Cultural Heritage Datasets

The CHD is a structured dataset containing data relevant to each identified Cultural Heritage Receptor, including, but not limited to, geospatial data. The dataset can be produced and analysed using spreadsheets, databases, and GIS. Outputs generated from the CHD can include reports, tables, statistics, maps, and drawings.

All relevant Cultural Heritage Receptors should be included in the CHD, whether archaeological monuments, built heritage structures/features or other Cultural Heritage sites. Each entry should be associated with vector data representing its location (centroid) and, depending on the Phase of the Project, its known or reasonably assumed extents.

The CHD is critical to the efficient assessment and mitigation of impacts on Cultural Heritage as TII Projects progress through the PMG Phases, including post-approval. As a Project progresses through design and environmental evaluation, the assessment narrows in geographical extent but increases in focus/detail, and this will be reflected in the CHD (see **Figure 5.6** below).

The revised and updated CHD shall be submitted as part of the outputs for each Phase. The CHD shall also be presented in a suitable format for inclusion as an appendix to the EIAR/ER.

Mapping derived from the CHD shall be submitted in a GIS or Computer Aided Design (CAD) format with the entities mapped having (as an attribute) the unique identifier for each Cultural Heritage Receptor. This identifier shall correspond to the equivalent unique identifier on the spreadsheet/database so that the tabular CHD can be easily appended to the GIS CHD.

Cultural Heritage Professionals shall curate raw survey data (i.e. from Lidar assessments, geophysical surveys, topographical surveys, etc.) with all other CHD data in their Project Archives.

For suggested structure and content of the CHD, refer to **Appendix 5**. This may be tailored to suit the nature and scale of the Project and the Phase of the assessment, in consultation with the Project Archaeologist.

All Cultural Heritage Receptors likely to be impacted by the project, both positively and negatively, should be included in the CHD/CHIA. The Cultural Heritage Professional(s) undertaking the work shall therefore have the necessary skills and expertise to identify and assess all relevant Cultural Heritage issues (i.e. Archaeological Heritage, Built Heritage, and Intangible Cultural Heritage). Where other expertise or specialist input is required (e.g. in relation to Lidar analysis, geophysical surveys, or underwater assessments), the nominated specialist(s) shall be identified in the Assessment Method Statement for approval by the Project Archaeologist/Project Manager.

The level of detail captured in the CHD will be proportionate to the Phase of the project, the geographical scope of the successive Study Areas/Assessment Corridors and the likely direct and indirect impacts/effects. This will ensure that each stage of the assessment achieves an appropriate level of detail, and that the assessments are robust and reliable.

For example, during the Phase 1 Constraints Study when the geographical scope of the assessment is at its greatest extent, the level of detail within the CHD will be relatively low, though there may be many Cultural Heritage Receptors documented. During Phase 3, when the geographical scope of the assessment is confined to the Preferred Option (i.e. the proposed development), there will be a corresponding increase in the level of detail recorded for each Cultural Heritage Receptor within the CHD arising from the more focused desktop research, fieldwork, specialist surveys/assessments, consultation inputs, etc., required for the EIAR (refer to **Figure 5.6** below).

The following subsections (**5.3.3.2**, **5.3.3.3** and **5.3.3.4**) set out the kinds of Cultural Heritage Receptors commonly encountered on TII projects under the headings of Archaeological Heritage, Built Heritage and Intangible Cultural Heritage, respectively.

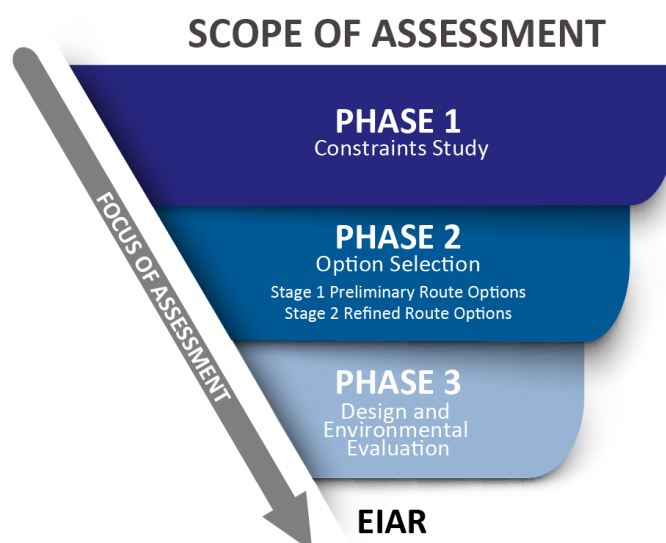


Figure 5.6 - Relationship between scope and focus of the assessment

5.3.3.2 Archaeological Heritage

Having regard to the considerations in **INFORMATION BOX 6** below, and to the definitions outlined in **Appendix 2**, for the purposes of these guidelines, Archaeological Heritage includes:

- archaeological sites and monuments from any period, both recorded on a statutory or non-statutory inventory (e.g. RMP, SMR) and previously unrecorded sites and monuments, and their immediate and wider settings,
- areas of archaeological potential (see below for further information),
- underwater archaeology, including but not limited to wrecks and underwater Archaeological Objects, and
- Archaeological Objects including faunal remains, osteoarchaeological (human) remains, archaeobotanical (plant) remains and other deposits of palaeo-environmental/geoarchaeological importance.

Archaeological sites, monuments and objects occur in every type of terrain—upland, lowland, estuarine, riverine, coastal, lacustrine, agricultural land, bogland (raised and blanket) and urban contexts—as well as under water. The examples given in Table 5.3 below are illustrative and not exhaustive, and in some cases reflect an overlap between Archaeological Heritage and Built Heritage. It should also be remembered that archaeology extends beyond sites, monuments, and objects to include natural deposits containing evidence relating to the past environment.

Table 5.3 - Examples of Archaeological Heritage Receptors (based on Ó Súilleabháin et al. (2017))

Category	Receptor Types
Agriculture	Field systems, booley huts, drainage systems, cultivation ridges, lime production sites/kilns.
Coastal features	Shell middens, promontory forts, fisheries, Martello Towers, signal towers, coastguard stations.
Food Processing	Burnt mounds/ <i>fulachtaí fia</i> , cereal-drying kilns, watermills, windmills.
Funerary and Mortuary Practice	Passage tombs, barrows, wedge tombs, boulder burials, cemeteries and children's burial grounds (<i>cillíní</i>).
Industry	Mills, millponds, millraces, mines, quarries, spoil heaps, engine houses, factories, cloth mills, kilns, breweries and distilleries, saw mills.
Ritual and Ceremony	Rock art, megalithic art, summit cairns, henges, stone circles, stone rows/pairs, standing stones, ogham stones, early church/monastic sites.
Settlement	Hillforts, ringforts/cashels, souterrains, crannógs, mottes, moated sites, deserted settlements, tower houses, castles, clachans, vernacular houses, designed landscapes.
Transportation	Routeways/roads, bridges, canals, railways.
Underwater Archaeology	Wrecks, submerged archaeological features and objects, bridges, fish traps.

The unknown, buried archaeological remains that may occur along a project route pose a considerable challenge, as the discovery of a previously unknown archaeological site during construction may lead to considerable impacts on budget and programme as well as on the Cultural Heritage resource. Early identification is key to protecting the archaeological resource, avoiding delays and unexpected costs, and contributing to the proper management of the project generally. Different techniques are therefore employed throughout Phases 1–3 to obtain a fuller understanding of the archaeological potential of the receiving environment of the project and to ensure, as far as reasonably practical, that all archaeological sites and monuments are identified prior to project approval and construction, including those with no surface expression. Identification of previously unknown archaeological sites and areas of archaeological potential can arise from:

- assessment of the terrain and topographical features through fieldwalking and site inspections,
- examination of the type, density, and distribution of archaeological sites within a given landscape,
- proximity to previously recorded archaeological monuments or newly identified potential archaeological sites,

- locations in the Study Area/Assessment Corridors where Archaeological Objects have been found previously that can indicate areas of archaeological importance, settlement, or activity, though there may be no known record of a monument at the location,
- placename evidence,
- historical research and folklore,
- remote sensing (e.g. anomalies identified through Lidar analysis or geophysical surveys),
- analysis of aerial photography and satellite imagery,
- analysis of historic maps, and
- local consultations.

In addition to discrete archaeological sites and monuments, the CHIA should also have due regard to their context, including archaeological landscapes and features such as field systems and designed landscapes, which may require consultation with other environmental specialists. Individual receptors might point to an important Cultural Heritage landscape or area of archaeological potential that is more than the sum of the individual parts (e.g. a relict pre-Famine settlement, or an area of peatland with evidence or potential for extensive archaeological preservation).

Reference should also be made to any HLC assessments applicable to the project's Study Area (refer to **Section 4.3.4**). As noted throughout these guidelines, setting assessments and visual impact assessments, where required, should be carried out by the Landscape Professional in consultation with the Cultural Heritage Professional for Cultural Heritage Receptors on a case-by-case basis and in accordance with TII's LCA and LVIA guidance and standards (TII 2020a and 2020b) (refer to **Section 4.3.1**).



Plate 5.1 - Wade/metal detector survey (Photo: ACSU)

5.3.3.3 Built Heritage

Having regard to the considerations in **INFORMATION BOX 6** below, and to the definitions outlined in **Appendix 2**, for the purposes of these guidelines, Built Heritage includes:

- designated Protected Structures, proposed Protected Structures, and ACAs listed on the relevant development plan,
- buildings, historic gardens, and designed landscapes recorded on a statutory or non-statutory Built Heritage inventory (e.g. RPS, NIAH), and
- previously unrecorded (non-designated) Built Heritage Receptors, where merited.

Identification of previously unrecorded Built Heritage Receptors can arise from:

- analysis of historic maps,
- analysis of aerial photography and satellite imagery,
- historical research and folklore,
- fieldwalking and site inspections, and
- local consultations.

Table 5.4 below gives some examples of Built Heritage types commonly encountered on TII projects. These lists are illustrative and not exhaustive, and the Cultural Heritage Professional, in consultation with the Project Archaeologist, where necessary, shall use their professional experience and judgement when determining the Built Heritage Receptors that need to be considered.

In many cases, buildings, structures, and features may have no statutory protection, but may add to the character of an area and a community's sense of place and history. For example, a forge is likely to have been an important focal point for a local community throughout the nineteenth and early twentieth centuries and may have high social and local historical value. Therefore, Cultural Heritage Professionals should not confine their assessments to previously recorded/designated Built Heritage Receptors.

Table 5.4 - Examples of Built Heritage Receptors

Category	Receptor Types
Agriculture	Farm buildings, sheepfolds, drystone field walls, booley huts, drainage systems, scratching posts.
Civil and Social	Public buildings, hospital buildings, school buildings, workhouses, courthouses, gaols, water fountains/pumps, post boxes, stadiums, benchmarks.
Designed Landscape	Country houses, demesne lands/parkland, demesne walls, entrance gates, lodges, follies, outbuildings, walled gardens.
Ecclesiastical	Churches, chapels, graveyards, meeting houses.
Industrial	Mills, breweries, railways, distilleries, forges, mines, quarries.
Maritime and Riverine	Harbours, quay walls, lighthouses, fish passes, weirs, bridges, coastguard stations.

Category	Receptor Types
Military and Defence	Barracks, Martello Towers, signal towers, boundary stones, pill boxes.
Monuments	Roadside memorials, plaques, statues, historic monuments.
Transport and Communications	Road bridges, railway bridges, footpaths, cobbled surfaces, stations, tracks, canals, canal locks, toll houses, milestones, stiles, telephone boxes, masts.
Urban	Houses, shops, public houses, parks, vent pipes, streetscapes.
Vernacular	Cottages, farmhouses, byres, barns gate piers.

As pointed out in **Section 2.6**, the immediate and wider setting of a Cultural Heritage Receptor may be subject to statutory protection along with the principal receptor (e.g. in the case of Protected Structures, the curtilage would also be protected, and the attendant grounds may also fall under the same or a separate designation). Consultation with the Local Authority may be needed to ascertain the extent of protection, while the input of a Landscape Professional may be required to undertake setting assessments and visual impact assessments.

5.3.3.4 Intangible Cultural Heritage

Intangible Cultural Heritage includes places and features in the cultural, natural and built environment that are of importance due to the values we attach to them, which go beyond the physical (i.e. tangible). They could be places where an historic event took place (e.g. a War of Independence ambush site) or a natural feature, such as a hill, spring or tree, that has mythological or sacred associations (refer to **Section 2.5** and **Appendix 2**).

Tangible and Intangible Cultural Heritage often overlaps. For example, tangible Cultural Heritage Receptors may have intangible values associated with them that need to be identified and evaluated as part of the assessment. As stated above in **Section 2.5**, intangible aspects (associative values) of Built Heritage receptors are included in the categories of special interest for Protected Structures as set out in the Planning and Development Act 2000 (as amended), and in the evaluative criteria applied under best practice for assessing the importance of archaeological sites (e.g. historical and social interest, amenity value). It is, therefore, critical that intangible values or associations are considered when assessing the importance of Archaeological and Built Heritage receptors.

Many sites are purely ‘tangible’ and have no known intangible associations (e.g. a previously unknown archaeological site identified through Lidar analysis). Conversely, intangible heritage may have no physical presence in the landscape beyond the place itself (e.g. a location where an historic event occurred but left no physical mark on the landscape).

Some natural features, such as rock outcrops, hills, rivers, lakes, springs, or trees, may have associated folklore/mythology. This may be general (i.e. applying to all trees of a particular species, such as yew or hawthorn) or specific (i.e. relating to one particular tree in a project’s Study Area). Generally, only sites/features that have specific and demonstrable Cultural Heritage value(s) should be included in the assessment (refer to **INFORMATION BOX 6** below).

Intangible Cultural Heritage Receptors and associative values can be identified through:

- a search of a statutory inventory of Intangible Cultural Heritage or other designations, such as UNESCO City of Literature,
- documented folklore (e.g. the National Folklore Collection and other published material),

- historical research including, for example, early medieval and medieval literature, and
- local consultations.

Table 5.5 below gives some examples of Intangible Cultural Heritage and tangible Cultural Heritage Receptors with potential intangible heritage aspects that may be encountered on TII projects. As with the lists above, this is illustrative and not exhaustive, and many such places/features may have no statutory protection but may be of interest and importance to a local community. For example, a rag bush may be a focus for past and present devotion; places in a landscape may have inspired the works of a renowned artist, poet, novelist, or musician and may continue to be of inspiration to people today. The examples given in this table Table 5.5 can make a meaningful contribution to local communities by enhancing their sense of place and history, which in turn contributes to social cohesion and wellbeing. As such, they are vital factors to be considered in delivering on TII’s Sustainability Principles, in particular Sustainability Principle 6, which seeks to maintain social value (see **Section 1.10**).

Table 5.5 - Examples of Intangible Cultural Heritage Receptors

Category	Receptor Types
Boundaries	Townland, parish, civil parish, barony, county, provincial and State.
Conflict	Locations of ambushes, assassinations, executions, faction fights, battles.
Cultural expression	Locations of <i>féile</i> , jamborees, bonfires, <i>céilí</i> , mass meetings/rallies, Traveller fairs, harness racing, language (Cant/Gammon).
Devotion	Pilgrim paths, locations of patterns, mass rocks, holy wells, rag trees.
Food and agriculture	Fields, ice ponds, fish ponds, fish traps, areas of commonage.
Memory	Roadside memorials, commemorative monuments.
Myth and legend	Sites with legendary or mythological associations (story places), fairy forts, fairy bushes, rivers, hills.
Resource gathering	Quarries, bogs, brickmaking sites, clay extraction, turf harvesting, wells.
Sport and recreation	Sports grounds/courses, racecourses, fox coverts, duck decoys.
Trade and exchange	Locations of fairs, markets, marts, cooperative societies.
Transport and communication	Ferry crossings, milestones, piers.

Having regard to the considerations in **INFORMATION BOX 6** below, and to the definitions outlined in **Appendix 2**, the following should be factored into any assessment of Intangible Cultural Heritage Receptors in so far as such matters can be ascertained:

- any existing use or importance attributed under customary practice (e.g. religious devotion, turf cutting, hunting, horseracing, sports),

- any former or reputed use or importance which may be attributed based on folk tradition and/or the historical record (e.g. fairy forts, brickmaking sites, named fields),
- associated religious or sacred beliefs, ritual and/or ceremonial usage (e.g. ritual observances at a holy well or rag tree),
- any potential historical, archaeological, sociological, anthropological, and/or ethnographical interest (e.g. a place where an important historical or mythical event(s) occurred, riverscapes/landforms with creation myths, the Táin route, Gaeltacht area),
- aesthetic value, and/or
- amenity value.

In certain situations, it may be necessary to engage an oral historian, folklorist and/or ethnographer/anthropologist to record and evaluate these intangible heritage values. Similarly, where a project in a Gaeltacht area requires an Irish Language Impact Assessment, it is generally not within the remit of the Cultural Heritage Professional to do this, as such assessments require particular competencies and expertise and may be carried out in the context of the Population and Human Health environmental factor. However, given the interaction with Cultural Heritage, the CHIA should refer to such an assessment and incorporate its findings, where necessary.

INFORMATION BOX 6: Considerations for including Cultural Heritage Receptors

In considering Cultural Heritage Receptors to be included in the CHIA, the Cultural Heritage Professional shall have regard to the Cultural Heritage definitions outlined in **Appendix 2** and the following considerations:

- Is the Cultural Heritage Receptor of a type that would experience an adverse effect because of a potential impact?
- Can the Cultural Heritage Receptor be spatially defined in relation to the proposed Project?
- Is there documentable evidence of the Cultural Heritage Receptor's importance with reference to its specific archaeological, architectural, cultural, historical, artistic, scientific, social, traditional and/or technical interest?

These considerations are not intended as 'tests' for the inclusion or exclusion of receptors. However, the Cultural Heritage Professional must be able to support and justify their inclusion and to discuss/defend their decisions at Oral Hearing, if required.



Plate 5.2 - Holy well – a common example of our intangible heritage (Photo: TII)

5.3.4 Outputs from Step 1 – Establish Scope and Confirm Study Areas

STEP 1 OUTPUTS

The key output from Step 1 (Study Area and Scope) is an **Assessment Method Statement (Output Refs. 1.0a, 2.0a, 2.1a, 3.0a)** that includes:

- name(s) of the Cultural Heritage Professional(s) who will undertake the CHIA, including their qualifications, experience, and any professional memberships (where applicable),
- confirmation of the Cultural Heritage objectives for the Phase (i.e. to reduce adverse effects and enhance opportunities for Cultural Heritage),
- assumptions and proposed actions,
- confirmation of the Study Area/Assessment Corridors, and reasonings for any proposed amendments for Cultural Heritage to any given Study Areas/Assessment Corridors,
- level of assessment to be undertaken, commensurate with the nature and scale of the Project, the PMG Phase, the required assessment/approvals processes, and the nature of the receiving Cultural Heritage environment,
- range of Cultural Heritage Receptors to be considered by the nominated Cultural Heritage Professional(s) (i.e. Archaeological Heritage, Built Heritage and/or Intangible Cultural Heritage),
- methodology for desktop research (including main sources of information) and fieldwork,
- details of any specialist surveys/assessments and consultation to be carried out,
- means of coordination with other specialists (e.g. Landscape, Biodiversity, Population and Human Health),
- methodology for measuring distances between Cultural Heritage Receptors and Project Options/Preferred Option,
- criteria for determining the importance of Cultural Heritage Receptors,
- methodology for assessing and describing impacts on Cultural Heritage,
- methodology for Options Appraisal/MCA/impact assessment, etc.
- format and contents of outputs, including CHDs, reports, figures, GIS/CAD files, etc., and
- agreed programme, key milestones, and outputs.

The Assessment Method Statement should be a concise summary of the above matters, for agreement by the Project Archaeologist and Project Manager prior to commencement of the CHIA at each PMG Phase. The final Assessment Method Statement shall be adhered to throughout the relevant Phase, unless otherwise agreed with the Project Archaeologist and approved by the Project Manager.

5.4 Step 2: Analysis of the Cultural Heritage Baseline

The analysis of the Cultural Heritage aspects of the receiving environment shall be undertaken through a combination of desktop study, fieldwork, specialist surveys/assessments, and consultations. Compilation and mapping of the initial baseline constraint data (CHD) shall be undertaken in PMG Phase 1. The baseline data shall be augmented with additional detail as necessary and proportionate to each subsequent Phase of the Options Selection and Design and Environmental Evaluation process.

In addition to identifying/mapping Cultural Heritage Receptors, the Cultural Heritage Professional shall identify at each Phase any Cultural Heritage Receptors that they consider (using professional judgement) are key constraints, these being receptors deemed to merit highlighting for particular attention by virtue of impacts upon them being perceived as representing an elevated risk (constraint) to the timing, delivery and/or cost of the project. Practitioners should note that key constraints will not necessarily enjoy or need statutory protection designation to be deemed as key constraints for the purpose of CHIA.

For more information on Constraints Studies, see **Section 6.3** below.

5.4.1 Sources of Information

The desktop research carried out for the CHIA aims to establish a baseline of tangible and intangible Cultural Heritage Receptors within the receiving environment and to understand, as fully as possible, their Cultural Heritage interest and importance so that the likely direct and indirect effects of the project can be understood.

The sources of information to be consulted during the desktop study shall include both statutory and non-statutory heritage inventories, archives (national and local), publications, online resources, and other readily accessible sources. This research should be focused and proportionate to the nature and scale of the project and the Phase of assessment, and it should be relevant for assessing the likely direct and indirect effects on Cultural Heritage Receptors.

The suggested sources of information throughout the PMG phases are listed below and in **Figure 5.7**. A broader list of suggested resources is provided in **Appendix 6**. These are non-exhaustive lists for guidance purposes only. The Cultural Heritage Professional shall take all reasonable steps to consult the necessary sources to carry out the CHIA on a case-by-case basis, in line with the agreed methodology set out in the Assessment Method Statement.

The main sources of information for the Archaeological and Built Heritage are currently:

- World Heritage Properties and Tentative List,
- Statutory inventories of archaeological monuments and wrecks, including the Record of Monuments and Places (RMP), Sites and Monuments Record (SMR), Lists of National Monuments and Preservation Orders, and the Wreck Inventory of Ireland Database,
- Record of Protected Structures (RPS) and Architectural Conservation Areas (ACAs) included in the relevant development plans,
- Archive of the National Museum of Ireland,
- National and local libraries/archives,
- Previous archaeological investigations,
- Cartographic sources, including historic mapping, and
- Satellite and aerial imagery.

For Intangible Cultural Heritage, the main sources of readily available archival information are currently:

- National Inventory of Intangible Cultural Heritage,
- National Folklore Collection (Main Collection and Schools Collection),
- Available literature, including early medieval and medieval literature (narrative tales, hagiography, *Dindshenchas*, etc.),

- Placenames Database of Ireland, Ordnance Survey Name Books and Letters, and other relevant archival records for placename analysis (toponymy).


In relation to history, the Cultural Heritage Professional shall review an appropriate range of published and unpublished primary and secondary sources to gain a sufficient understanding of the general history of the receiving environment relevant to the project and the historical importance of Cultural Heritage Receptors potentially impacted. Relevant local history and folklore should also be collected through consultation with the local community (refer to **Section 5.4.4**).



Plate 5.3 - Recording a previously unrecorded Cultural Heritage Receptor (Photo: AMS)

	Constraints Study Phase 1	Preliminary Route Options Phase 2 Stage 1	Project Appraisal Matrix (Refined Route Options) Phase 2 Stage 2	Preferred Option Phase 2 Stage 3	Design and Environmental Evaluation Phase 3
Sources of Information	<ul style="list-style-type: none"> • Archival sources • Cartographic sources (including historic mapping) • Development Plans/Heritage Plans • Online datasets • Published literature/sources • Satellite and aerial imagery/Lidar data • Statutory and non-statutory heritage inventories 	<ul style="list-style-type: none"> • Archival sources • Cartographic sources (including historic mapping) • Development Plans/Heritage Plans • Online datasets • Previous archaeological investigations • Published literature/sources • Satellite and aerial imagery/Lidar data • Statutory and non-statutory heritage inventories 	<ul style="list-style-type: none"> • Archival sources • Cartographic sources (including historic mapping) • Development Plans/Heritage Plans • Environmental Information • Information from public consultations • Online datasets • Previous archaeological investigations • Published literature/sources • Satellite and aerial imagery • Statutory and non-statutory heritage inventories 	<p>Confirm/clarify assessment, as required by the Project Manager</p>	<ul style="list-style-type: none"> • Archival sources • Cartographic sources (including historic mapping) • Development Plans/Heritage Plans • Environmental Information • Historical photographs • Information from public consultations • Online datasets • Previous archaeological investigations • Published literature/sources • Satellite and aerial imagery • Specialist Reports (e.g. geophysical survey reports, Lidar assessment reports) • Statutory/non-statutory inventories

	Constraints Study Phase 1	Preliminary Route Options Phase 2 Stage 1	Project Appraisal Matrix (Refined Route Options) Phase 2 Stage 2	Preferred Option Phase 2 Stage 3	Design and Environmental Evaluation Phase 3
Fieldwork	N/A	<ul style="list-style-type: none"> • Surveys from accessible land • Targeted site inspections <p>Specialist Surveys/Assessments*</p> <ul style="list-style-type: none"> • Application of the TII Automatic Detection of Archaeological Features Lidar software 	<ul style="list-style-type: none"> • Consultations with landowners/special interest groups (e.g. local heritage groups) • Surveys from accessible land • Targeted site inspections and built heritage surveys <p>Specialist Surveys/Assessments*</p> <ul style="list-style-type: none"> • Lidar analysis • Geoarchaeological/palaeo-environmental assessments • Geophysical surveys • Targeted test excavations • Topographical surveys • Underwater surveys 	Confirm/clarify assessment, as required by the Project Manager	<ul style="list-style-type: none"> • Consultations with landowners/special interest groups (e.g. local heritage groups) • Full walkovers • Site inspections • Built heritage surveys <p>Specialist Surveys/Assessments*</p> <ul style="list-style-type: none"> • Lidar analysis • Geoarchaeological/palaeo-environmental assessments • Geophysical surveys • Test excavations • Topographical surveys • Underwater surveys

Cultural Heritage Dataset


* Undertaken, where required, following agreement with TII-assigned Project Archaeologist, usually under a separate contract.

Figure 5.7 - Main sources of information and fieldwork for CHIA of TII projects (refer to Appendix 6 for more information on sources)

5.4.2 Fieldwork

The fieldwork carried out by the Cultural Heritage Professional to inform the CHIA falls into the following broad categories:

1. Surveys from accessible land,
2. Site inspections,
3. Walkovers,
4. Specialist surveys, and
5. Local consultations.

The types of fieldwork, surveys and local consultations proposed to be carried out shall be set out in the Assessment Method Statements submitted by the Cultural Heritage Professional for approval by the Project Archaeologist/Project Manager at the commencement of each Phase. As with the desk study, the types and level of fieldwork and local consultations shall be proportionate to the nature and scale of the project, the PMG Phase and the likely effects on Cultural Heritage (refer to **Figure 5.7** above).

No fieldwork is required for the Phase 1 Constraints Study. (For greenways, the Constraints Study Report will be finalised in Phase 2; see Table 5.2) In most cases, an initial high-level survey from accessible land shall be carried out during Phase 2 Stage 1 to obtain a basic familiarity with the receiving environment, Preliminary Route Options, and the wider landscape. This survey will:

- verify the location and extent of known Cultural Heritage Receptors within, intersecting and/or adjacent to the Assessment Corridors,
- note additional, unidentified Cultural Heritage Receptors, and
- provide a preliminary photographic record of individual features of merit likely to be impacted by a particular route.

Targeted site inspections may also be undertaken, where necessary, at this stage and where landowner permission has been obtained in advance. A similar round of fieldwork shall be carried out during Phase 2 Stage 2 to examine the refined options and areas of potential identified from further research (e.g. Lidar analysis), local consultation, etc. Site visits and Built Heritage surveys can also be used to document the extent and condition of Cultural Heritage Receptors to inform the CHIA. At Phase 3, full walkovers of the Preferred Option shall be carried out with more detailed site inspections undertaken of all potential Cultural Heritage Receptors likely to receive impacts, including more detailed surveys of Built Heritage Receptors. Consultations with landowners/special interest groups (e.g. local heritage groups) shall also be undertaken during Phase 2 Stage 2 and Phase 3 (see **Section 5.4.4** below for more on this).

A central consideration for the field survey is to note and record any Cultural Heritage Receptors that may lie outside the Study Area as originally defined but may still be of relevance (e.g. important Cultural Heritage Receptors that may experience significant visual effects). Defining both the immediate and the wider setting of Cultural Heritage Receptors should be done on a case-by-case basis using professional judgement and should have regard to any statutorily protected surrounding areas (e.g. the curtilage of a Protected Structure). The Cultural Heritage Professional shall liaise with the Landscape Professional in relation to potential visual/setting effects on Cultural Heritage Receptors and agree the need for LVIA with the Project Archaeologist/Project Manager (see **Section 4.3.1**).

The information recorded during all rounds of fieldwork shall be documented in field notes and a series of Receptor Survey Forms and added to the CHD (see the standards for an example of a Receptor Survey Form for Phase 3). At Phase 3, the details outlined below in **INFORMATION BOX 7** should be noted and recorded for each Cultural Heritage Receptor. The process should be supported by a representative photographic record (recording the viewpoint location and date of photography) and annotated mapping, completed during the field survey.

INFORMATION BOX 7: Recording receptors during Phase 3

At Phase 3, the following details should be noted and recorded for each Cultural Heritage Receptor based on site inspections and with reference to the EPA's EIA guidance (EPA 2022, p.45):

- **Context:** the location, scale, setting, aspect and spatial extent of the Cultural Heritage Receptor, and relationship to other relevant receptors (e.g. intervisibility),
- **Character:** any distinguishing aspects (e.g. age, type, condition, material used, unusual features, etc.),
- **Categories of Interest:** Archaeological, architectural, historical, artistic, cultural, scientific, technical, traditional, religious, spiritual and/or social,
- **Importance:** Very High, High, Medium, Low, Negligible (refer to Section 5.5.1),
- **Sensitivity:** How sensitive is the receptor to change? Would the proposed Project detract from the character of the receptor?



Plate 5.4 - Recording a Built Heritage receptor during fieldwork (Photo: TII)

5.4.3 Specialist Surveys and Advance Assessments

Specialist surveys, such as underwater surveys, geophysical surveys and geoarchaeological/palaeo-environmental assessments, would usually be carried out, if required, during Phase 2 Stage 2 and/or Phase 3.

Lidar analysis may also take place during Phase 2 Stage 2 or Phase 3 as determined by the Project Archaeologist/Project Manager (refer to **Figure 5.7** above). (Note that Lidar data may be available during Phase 1, and during Phase 2 Stage 1, use can be made of the TII Automatic Detection of Archaeological Features Lidar software.) These surveys and analyses help to deliver more informed and robust assessments and better outcomes, as likely adverse effects to previously unrecorded archaeological sites might be avoidable through consideration of alternatives (e.g. revisions to the design). The Cultural Heritage Professional will prepare a scope for such specialist surveys, where recommended, to be agreed with the Project Archaeologist/Project Manager.

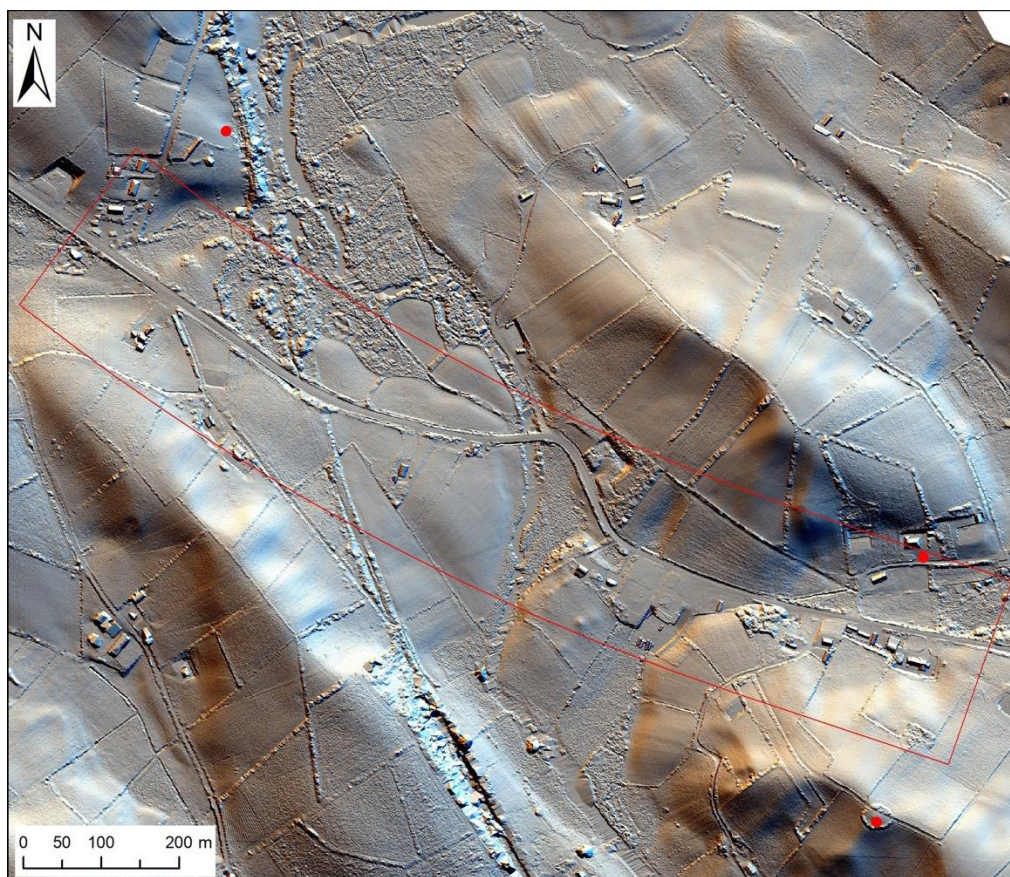


Plate 5.5 - Multi-directional hillshade visualisation for a bridge scheme (Image: TII)

Invasive investigations (e.g. targeted archaeological test excavations) may also need to be carried out during Phase 2 Stage 2 and/or Phase 3, as required, to determine the presence, nature, character, extent and importance of certain Cultural Heritage Receptors. Specialist Built Heritage surveys, such as a condition survey or conservation assessment, may also be warranted in certain instances to inform the impact assessment and mitigation for a particular building during Phase 3. Such advance works should be proportionate to the nature and scale of the project, the Phase of the assessment, the nature and importance of the Cultural Heritage Receptor, and consideration of cost/benefits, and shall be informed by other forms of research (e.g. desktop research, site inspection, consultation, etc.).

The Cultural Heritage Professional shall ensure that all relevant findings from the specialist surveys/assessments are considered in ongoing assessment work.

For example, if archaeological test excavations determine a feature identified through Lidar analysis or geophysical survey to be of no archaeological interest, then that feature shall be excluded from further assessment. The Cultural Heritage Professional shall also liaise with the relevant specialist(s) to ensure that the reporting and data provided by the specialist(s) are compatible with the standardised data structure as set out in the CHD (see **Appendix 5**).



Plate 5.6 - Geophysical surveying to detect subsurface archaeological features (Photo: TII)



Plate 5.7 - Dive survey underway to identify underwater cultural heritage (Photo: AMS)

5.4.4 Consultation

Consultation occurs throughout the CHIA/EIA process and takes several forms, including:

- consultation with prescribed bodies (Statutory Consultees), local authorities and other stakeholders,
- non-statutory public consultations (Project website, public events, etc.), and
- local consultations (landowners/occupiers, householders).

Consultation processes are outlined in the relevant PMGs and PMMs and are addressed below with specific reference to Cultural Heritage.

In addition to these external consultations, CHIA will also require review, coordination and input from the Project Team and other project specialists. For example, as outlined elsewhere in these guidelines, the Cultural Heritage Professional shall liaise with the Landscape Professional to coordinate LVIA and setting assessments for Cultural Heritage Receptors as needed (see **Sections 4.3.1**), while the Biodiversity Specialist shall be consulted to ensure that test excavations do not encroach onto any sensitive habitats or adversely impact inland fisheries. Conversely, Cultural Heritage Professionals need to be aware of any mitigations for other environmental factors that could impact Cultural Heritage (e.g. woodland planting impacting an archaeological site).

5.4.4.1 Consultation with prescribed bodies (statutory consultations), local authorities and other stakeholders

Under Section 51 of the Roads Acts 1993 (as amended), the Statutory Consultees for road projects include:

- An Taisce – The National Trust for Ireland,
- Bord Fáilte (now Fáilte Ireland),
- Commissioners of Public Works (OPW),
- Environmental Protection Agency,
- Minister for Housing, Local Government and Heritage,
- the prescribed authority in Northern Ireland, and
- any other prescribed body or person as defined in the relevant legislation.

The statutory EIA process provides for a copy of the EIAR to be submitted to the Statutory Consultees, and for those consultees and the general public to make a submission to An Bord Pleanála. (For more information on statutory consultation and notification, including the role of the Development Applications Unit in coordinating heritage and nature conservation related responses to EIARs, see *Environmental Impact Assessment of National Road Schemes – A Practical Guide* (NRA 2008, pp.68–70).) During the preparation of the EIAR, consultation with the Statutory Consultees is carried out by the Project Team with the involvement of the Project Archaeologist and/or Cultural Heritage Professional, as required. For example, the Project Archaeologist and/or Cultural Heritage Professional may need to liaise with the NMS to agree a strategy for archaeological investigations such as geophysical surveys, underwater surveys, and/or archaeological test excavations, and formulate appropriate mitigation measures for archaeological sites potentially impacted by the project.

The Project Manager shall ensure that all relevant stakeholders are consulted and lists of suggested potential stakeholders are provided in the PMMs. For example, they shall consult with:

- Inland Fisheries Ireland regarding the protection, management, and conservation of inland fisheries and sea-angling resources,
- Waterways Ireland in relation to their requirements (e.g. any interaction with the canal system requires specific agreements that require signoff from the North South Ministerial Council which meets on a six-monthly basis (TII 2023c, **PE-PMG-02042**), and
- National Parks and Wildlife Service in relation to the protection, management, and conservation of national parks, Natural Heritage Areas, Special Areas of Conservation, and Special Protection Areas.

Geological Survey Ireland shall also be notified prior to any archaeological excavations proposed within the boundary of a County Geological Site.

The Cultural Heritage Professional should also, at the appropriate stage of assessment, consult the Local Authority's Architectural Conservation Officer/Heritage Officer to clarify the status and curtilage of a structure on the RPS, and/or to determine whether a structure in their ownership is considered a National Monument. The Local Authority County Archaeologist should also be consulted where one is in place.

The Project Manager, in consultation with the Project Archaeologist and relevant Cultural Heritage Professionals, may also need to undertake consultations with the Local Authority to establish if there is a requirement for planning permission for a specific proposal (e.g. regarding proposed interventions to a Protected Structure or proposed Protected Structure to facilitate archaeological test excavations) or to otherwise clarify the kind of works that would or would not materially affect the character of a Protected Structure or proposed Protected Structure by seeking a declaration under Section 5 or Section 57 of the Planning and Development Act 2000 (as amended).

5.4.4.2 Public Consultations

Public consultation and engagement are crucial elements in the planning and delivery of TII projects, in accordance with the *TII Statement of Strategy*, *TII Sustainability Implementation Plan*, the PMGs and the Aarhus Convention on public access to information and decision-making in environmental matters (see **Appendix 3**). The Public Consultation process, which is implemented from the early planning stages, is intended to engage the public, and, in particular, those who might be directly affected, about the project proposal.

Public consultation typically involves advertisements in the public media, a project website, holding public information sessions and inviting submissions. Consultation provides an opportunity for members of the public to highlight matters of concern to be considered by the Project Team in advancing the proposed project. For a national road project, for example, the project options are presented during the second round of public consultation, and the public is invited to raise any local issues (including Cultural Heritage issues) that may not have been considered in the options identification process (NRA n.d.). The Project Archaeologist shall advise the Project Manager of any local interest groups (e.g. local archaeological and historical societies) that should be invited to public consultation events.

5.4.4.3 Local Consultations

In parallel with the above consultation processes, fieldwalking and site inspections provide an opportunity for Cultural Heritage Professionals to engage with landowners/occupiers and householders from whom local folklore and other location-specific information can be sought.

Oral tradition and information about local history may not be written down or be readily accessible to researchers in other formats. Consultation helps to ensure that potential Cultural Heritage Receptors known to landowners/residents are captured in the baseline, enhances our understanding of place (TII 2023f, p.8), and helps to evaluate Cultural Heritage Receptors more holistically by considering their importance to the local community. The Cultural Heritage Professional should, therefore, access local expertise and knowledge regarding aspects of culture that may be wholly or partly oral in nature (e.g. folklore, history, mythology), in addition to information about archaeological and built heritage.

Any information of relevance to the CHIA collected during these consultations shall be added to the CHD to assist with the proper evaluation and impact assessment of the potential Cultural Heritage Receptor(s) involved. The Cultural Heritage Professional shall carry out an inspection of any potential Cultural Heritage Receptors brought to their attention by landowners/residents and record relevant folklore and other information provided for the purposes of the CHIA.

The collection and recording of oral history shall adhere to best practice in recording methods, ethical standards, and archiving. The requirements of the General Data Protection Regulation (GDPR) shall be met in relation to the collection and storage of any personal information. In certain situations, it may be necessary to engage a specialist such as a folklorist, oral historian and/or ethnographer/anthropologist to undertake this work and/or to carry out further research (refer to **Appendix 1**).

5.4.5 Outputs from Step 2 – Analysis

STEP 2 OUTPUTS

Key outputs from Step 2 (Analysis) are:

- A **Cultural Heritage Dataset** recording relevant information for all potential Cultural Heritage Receptors within the Study Area/Assessment Corridors (**Output Refs. 1.0b, 2.0b, 2.1b, 3.0b**),
- **Mapping/geospatial data** of Cultural Heritage Receptors within the Study Area/Assessment Corridors (**Output Refs. 1.0c, 2.0c, 2.1c, 3.0c**), and
- **Specialist reports** where applicable (e.g. geophysical surveys, Lidar assessments, underwater surveys, test excavation reports).

5.5 Step 3: Assessment of Likely Impacts and Effects

The third step in the CHIA process is to identify and describe the likely direct and indirect impacts of the project on Cultural Heritage Receptors and assess the significance of their effects. The significance of effects (i.e. changes arising from the project) is directly related to the importance of each Cultural Heritage Receptor and its setting.

(The term ‘importance’ is used here to describe the significance or value placed on a Cultural Heritage Receptor and is not to be confused with ‘significance of effect’ and ‘significant effects’.)

Step 3 therefore involves, in the first instance, rating the importance of Cultural Heritage Receptors. For more information on EIA requirements and approaches, refer to EPA (2003; 2022), NRA (2008) and DHPLG (2018).

5.5.1 Step 3(a): Rating the Importance of Cultural Heritage Receptors

Determining the importance of Cultural Heritage Receptors is a key component of the CHIA process and relies on the professional judgement of the Cultural Heritage Professional. The assessment of importance is based on the evidence derived from some or all of the following: desktop research, fieldwork, specialist surveys and assessments, and consultation.

The importance ratings assigned by the Cultural Heritage Professional will influence the way decisions are made during the planning and evaluation of the project. It is essential to note, however, that assessment of importance is a subjective, iterative process based on information available at the time, and that importance ratings may change during Phases 2–3 as new information comes to light. Importance need only be considered where it is relevant to the CHIA for the Options Selection and Environmental Evaluation Phases/Stages of the project. It is not necessary to evaluate all potential Cultural Heritage Receptors in the project study area unless they are likely to be impacted.

In undertaking these assessments, the Cultural Heritage Professional should be aware of, refer to and take account of the regulatory and policy framework, relevant legislation, treaties, and guidance (see **Appendix 3**). However, it is crucial to note that not all Cultural Heritage Receptors are either known or protected by legislation which means that the Cultural Heritage Professional will need to make their own determinations of importance in many cases. Nor should importance ratings be assigned to Cultural Heritage Receptors in a mechanistic way (e.g. solely based on designation) as all receptors need to be considered on their own merits.

The tangible and intangible aspects of Cultural Heritage Receptors, which are closely related, must also be considered when assessing importance. A castle, for example, could be of architectural as well as archaeological interest and may also be documented in the historical record and feature in local folklore. The Cultural Heritage Professional should, therefore, aim to identify all relevant aspects of cultural importance—tangible and intangible—commensurate with the scale of the project, its likely impacts, and the PMG Phase.

It is suggested that a five-level rating system (**Very High–High–Medium–Low–Negligible**) be used to describe the importance of Cultural Heritage Receptors. As noted, assessment of importance is informed by professional judgement, but it shall be guided by the examples and factors set out in **Table 5.6** and **INFORMATION BOX 8** below.

Table 5.6 - Suggested guidance for assessing the importance of Cultural Heritage Receptors

Importance	Suggested Examples (in alphabetical order)
Very High	<p>Designated Built Heritage Receptors rated as being of international importance, including associated historic gardens and designed landscapes.</p> <p>Designated features of international intangible heritage value.</p> <p>Designated historic landscapes of international value.</p> <p>National Monuments.</p> <p>Other designated Cultural Heritage Receptors of international importance.</p> <p>World Heritage Properties.</p>
High	<p>Architectural Conservation Areas.</p> <p>Built Heritage Receptors rated as being of national importance by the NIAH, including associated historic gardens 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>Other designated or undesignated Cultural Heritage Receptors of demonstrable national importance.</p> <p>Places or features of national intangible heritage value.</p> <p>Protected Structures.</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>Undesignated receptors of high quality and importance.</p> <p>World Heritage Tentative List properties.</p>
Medium	<p>Built Heritage Receptors rated as being of regional importance by the NIAH, including associated historic gardens and designed landscapes.</p> <p>Historic landscapes of regional value (designated or undesignated).</p> <p>Historic townscapes or built-up areas with demonstrable historic integrity in their buildings or built settings (e.g. including street furniture and other structures).</p> <p>Other designated or undesignated receptors of regional Cultural Heritage importance.</p> <p>Places or features of regional intangible heritage value.</p> <p>Recorded Monuments (or sites and monuments scheduled for inclusion on the RMP).</p>
Low	<p>Built Heritage Receptors rated as being of local importance by the NIAH, including associated historic gardens and designed landscapes.</p> <p>Historic landscapes whose value is limited by poor preservation and/or poor survival of contextual associations.</p> <p>Historic townscape or built-up areas of limited historic integrity in their buildings, or built settings (e.g. including street furniture and other structures).</p> <p>Other designated or undesignated Cultural Heritage Receptors of local importance.</p> <p>Places or features of local intangible heritage value.</p> <p>Receptors compromised by poor preservation of contextual associations with inherent, albeit limited, Cultural Heritage value.</p> <p>Undesignated historic buildings of modest quality in their fabric or historical association.</p>
Negligible	<p>Receptors/landscapes with very little surviving Cultural Heritage interest.</p>

Evaluations of importance will be based on current knowledge and standard methods of assessment. Some typical criteria/guiding factors for evaluating the importance of Cultural Heritage Receptors are outlined below in **INFORMATION BOX 8**. This may not be exhaustive and should be adapted based on the characteristics of the receptor. The Cultural Heritage Professional should use their professional judgement and experience to review and adapt these criteria as necessary, assign importance ratings, and document the rationale in their reporting. The Cultural Heritage Professional may be called upon to justify and defend their assessments (e.g. during an Oral Hearing); therefore, they must have adequate supporting evidence for their reasoned conclusions.

INFORMATION BOX 8: Criteria for assessing importance

Amenity Value: Regard should be taken of the existing and potential amenity value of a Cultural Heritage Receptor,

Condition/Preservation: A Cultural Heritage Receptor should be assessed in relation to its present condition and surviving features—this assessment can only be based on a field inspection. Well-preserved sites should be highlighted,

Fragility/Vulnerability: It is crucial to understand the level of threat to Cultural Heritage Receptors from erosion, natural degradation, climate change, agricultural activity, land clearance, neglect, careless treatment and/or development. These considerations will assist with determining cumulative effects,

Group Value: The value of a Cultural Heritage Receptor may be greatly enhanced by its association with related contemporary receptors in a specific area, or with receptors from different periods indicating an extended time presence. In some cases, it may be preferable to protect the complete group, including associated and adjacent land, rather than to protect individual receptors within that group,

Local Interest: It is vital to determine the local interest of Cultural Heritage Receptors. While some receptors may not appear in any official listings or designations, they can be of importance to a dedicated interest group and/or members of the local community (EPA 2003, p.27),

Rarity: The rarity of some receptor types can be a central factor affecting response strategies for development, whatever the condition of the individual receptor. It is essential to recognise receptors that have a limited distribution or are few in number,

Special Interest: The archaeological, architectural, historical, artistic, cultural, scientific, technical, traditional and/or social (including religious or spiritual) interest of the Cultural Heritage Receptor is central to the assessment of importance,

Status: Designation and level of statutory protection associated with a Cultural Heritage Receptor are crucial but are not the primary considerations,

Visibility in the Landscape: Receptors that are highly visible in the landscape have a heightened physical presence. The inter-visibility between receptors may also be explored in this category, along with how a particular receptor is experienced from within as well as from a viewscape perspective (i.e. views of the site and from the site may both be key attributes). These aspects should be determined and assessed in consultation with the Landscape Professional where required.

5.5.2 Step 3(b): Describing Impacts/Effects on Cultural Heritage Receptors

TII projects can have a wide range of impacts/effects on Cultural Heritage Receptors. These can be direct, indirect, positive and/or negative.

- **Direct Effect** – where a Cultural Heritage Receptor or its setting is physically located within the footprint of a project which would entail its removal in whole or in part. Direct effects can also be defined as those that are directly attributable to the proposed development.
- **Indirect Effect** – an effect that results indirectly from the proposed project, often occurring away from the development, or because of a sequence of interrelationships or a complex pathway.

- **Positive Effect** – a change which enhances or improves the quality of the Cultural Heritage Receptor.
- **Negative Effect** – a change which reduces the quality of the Cultural Heritage Receptor.

Whether an effect is direct or indirect can be determined by the outcomes of the impact (refer to **INFORMATION BOX 9** below). For example, the EPA recognises the indirect effects on Archaeological Heritage through lowering of water tables which may adversely affect waterlogged archaeological deposits (EPA 2003, p.28). Further information on indirect impacts/effects is given in the relevant European Commission guidelines (refer to **Appendix 4**).

Construction phase effects will vary depending on the location and scale of the proposed development, as well as on the receiving Cultural Heritage environment. Some of these effects will also be relevant to the Landscape environmental factor (e.g. setting and visual effects). The Cultural Heritage Professional may need to recommend Cultural Heritage Receptors requiring LVIA to ensure that visual impacts are properly assessed and that appropriate mitigation measures are formulated, where necessary.

INFORMATION BOX 9: Direct and indirect effects

Direct effects can include:

- total or partial loss of Cultural Heritage Receptors due to physical impacts,
- severance between associated Cultural Heritage Receptors, and
- reduced or enhanced access to a Cultural Heritage Receptor with established amenity value.

Indirect effects can include:

- physical damage because of vibrations caused by construction machinery,
- changes to local hydrology, potentially affecting the preservation of subsurface organic and inorganic archaeological remains,
- changes to the character of a Cultural Heritage Receptor arising from changes in setting,
- changes to views to/from a receptor, including disruption or destruction of designed vistas; and
- reduction in traffic and noise on the existing national road adjacent to a Cultural Heritage Receptor (positive effect).

The Cultural Heritage Professional shall use their experience and professional judgement in the identification and description of the direct and indirect effects of the project on Cultural Heritage, and document the reasoning used to arrive at a considered opinion in the outputs. Assessments are influenced by the subjective experiences and perceptions of the assessor. Therefore, consistency in the application of the methodologies set out in these guidelines and the forthcoming standards is essential, and the correct and consistent use of terminology are critical. In the interest of accessibility and clarity, a series of plain-English statements should be used to clearly spell out the significant effects of the project in relation to Cultural Heritage. The accessibility of the EIAR to members of the public is a key requirement of the EIA Directive and a critical part of the EIA process. The way the EIAR is written and presented should therefore facilitate understanding by members of the public of the technical content of the document (NRA 2008, pp.70–71).

Consideration must be given to the predicted nature and magnitude of the likely impacts and the known nature and assessed importance of the Cultural Heritage Receptor (refer to **Section 5.5.1** above).

The identification and description of effects can only be made once the characteristics, nature, scale, and impact of the proposed project are fully analysed and comprehended. This will vary considerably depending on the project and the context (e.g. a proposed new road versus a minor road upgrade) and the level of design information available to the Cultural Heritage Professional, which will vary from one Phase to the next. For instance, substantially less detail will be available at Preliminary Options stage (Phase 2 Stage 1) than at Design and Environmental Evaluation stage (Phase 3).

Therefore, previously unforeseen effects may become apparent as the design evolves, with the result that impact assessments may be subject to change. Additional receptors are also likely to be identified as the assessment becomes more focussed on the Preferred Option and more detailed investigations are carried out.

The following key characteristics of proposed projects must be considered and analysed for potential impacts on Cultural Heritage, where such information is available:

- horizontal alignment,
- vertical alignment,
- extent and location of cut and fill,
- height and distribution of main junctions and structures,
- site development level and layout,
- extent and location of temporary works areas, construction compounds, attenuation ponds, access routes, offline quarries/borrow pits, tip sites, fill areas, etc., and
- construction programme and phasing proposals.

It is likely that other details will have relevance to the CHIA, and these will emerge as the project moves through the iterative design and assessment stages; for example, design details for bridges, levels, surface water attenuation proposals, as well as mitigation proposals for other environmental factors (e.g. noise barriers, woodland planting). All or some of these project characteristics will have a corresponding impact on the receiving environment and the resulting effects on Cultural Heritage will need to be identified, quantified, and assessed, with mitigation measures developed, where necessary. Where positive and negative effects occur on the same receptor, these should be described and assessed separately.

Once the likely impacts on Cultural Heritage are identified, the description of the change should include both the causation (i.e. action giving rise to the impact) and a quantitative and qualitative assessment of the resulting effects (i.e. consequences) of that impact. Consistency of interpretation and use must apply to effect versus impact. 'Impact' is defined as the change that happens, whilst 'effect' is defined as the result of that change (e.g. 'the impact of the project on the monument will have a significant effect from a Cultural Heritage perspective'). Following EPA guidance (EPA 2022, pp.50–52), the following should be considered as a minimum when describing impacts and effects:

- **Type** of impact/effect (direct, indirect),
- **Quality** of impact/effect (i.e. positive, negative, none),
- **Extent and Context** of impact/effect (e.g. size of the area/number of sites affected; whether the extent, duration, or frequency will conform to or contrast with established (baseline) conditions),
- **Probability** of impact/effect (i.e. likelihood that the identified effects will occur),
- **Duration** of impact/effect (e.g. momentary, brief, temporary, short-term, medium-term, long-term, permanent, reversible, etc.), and

- **Frequency** of impact/effect (i.e. will occur once, rarely, daily, monthly, constantly, etc.).

Consideration of these aspects of the proposed project allows for an assessment of the magnitude of impact (refer to **Table 5.7** below). The magnitude of impact on a particular Cultural Heritage Receptor depends on the nature, scale, duration, and reversibility of the change that is envisaged and the location in which it is proposed.

For example, direct and indirect impacts may pertain to the entire receptor or parts thereof. Their magnitude can range from 'Very High', in the case of permanent, drastic alterations or demolitions, to 'Negligible' or 'None' where little or no change will occur. Such impacts/effects can either be 'Positive' (i.e. beneficial) or 'Negative' (i.e. adverse) depending on whether the receptor being impacted is enhanced or degraded because of the impact. A 'Neutral' impact/effect will be neither 'Positive' nor 'Negative'.

Table 5.7 - Suggested Criteria for the Assessment of the Magnitude of Impacts on Cultural Heritage

Magnitude of Impact	Criteria/Typical Descriptions
Very High	Major alteration to, or complete loss of, a Cultural Heritage Receptor. Effects likely to be experienced at a very large scale; considered permanent and irreversible.
High	Notable or long-term change to a Cultural Heritage Receptor.
Medium	Moderate or long-term change over a restricted area or a moderate change to a Cultural Heritage Receptor.
Low	Minor, short- or medium-term change over a restricted area or a minor change to a Cultural Heritage Receptor.
Negligible	Imperceptible change to a Cultural Heritage Receptor.

5.5.3 Step 3(c): Assessing the Significance of Effects on Cultural Heritage Receptors

For CHIA on TII projects, all effects, both positive and negative, need to be considered and, where required, appropriate mitigation measures put in place for adverse impacts determined to be significant. Nevertheless, Cultural Heritage chapters of EIARs should focus on the likely significant effects as recommended in the EPA guidelines (EPA 2022, pp.64–65). The CHIA itself must be proportionate to the scope, extent, and likely impact of the proposed development and to the importance and sensitivity of the receiving Cultural Heritage environment.

Predicting significance of effect is partly objective and partly subjective and relies on the professional judgement of the Cultural Heritage Professional. This can lead to differences of opinion. Therefore, the CHIA report or EIAR/ER Cultural Heritage chapter should clearly lay out the basis of these judgements, including definitions of significance of effect ratings, so that the weight attached to various factors is demonstrated and the rationale for the assessment is transparent. Cultural Heritage Professionals may be required to explain and defend their assessments at Oral Hearings.

Following EPA guidance (EPA 2022, p.50), effects can range from 'Imperceptible' to 'Profound' in terms of their significance depending on the importance of the receptor and the magnitude of the impact.

For example, a direct impact of Very High magnitude on a receptor of Very High importance (such as a World Heritage Property) will have a Profound adverse effect, whereas the same impact on a receptor of Low importance will generally be considered to have only a Moderate or Slight adverse effect (i.e. magnitude of impact x importance rating = significance of effect). The EPA guidelines include a chart showing the typical classifications for significance of effects (ibid., fig.3.4, p.53). These classifications are defined in the EPA guidelines and advice notes (EPA 2003, 2022) and are provided in **INFORMATION BOX 10** below for guidance purposes.

The EPA chart illustrates how significance of effect can be determined by comparing the magnitude of the impact against the importance of the receptor.

When assessing impacts and effects, all likely effects on Cultural Heritage should be considered including construction/operation/decommissioning (where appropriate); positive/negative; short-term/long-term; direct/indirect; do-nothing; residual; worst-case; cumulative; and the potential for likely significant effects arising from the interaction between environmental factors (e.g. Cultural Heritage and Biodiversity). These, and other related terms, are comprehensively defined in the EPA’s EIA guidelines and advice notes (EPA 2003, 2022).

INFORMATION BOX 10: Describing Significance of Effect	
<p>Describing the Significance of Effects (based on EPA 2022, table 3.4, p.50) Cultural Heritage Professionals may adapt these definitions; however, they must define them in their reports.</p>	<p>Profound An effect which obliterates a Cultural Heritage Receptor of high or very high importance.</p>
	<p>Very Significant An effect which, by its character, magnitude, duration or intensity considerably alters most of an important aspect of the Cultural Heritage Receptor.</p>
	<p>Significant An effect which, by its character, magnitude, duration or intensity alters an important aspect of the Cultural Heritage Receptor.</p>
	<p>Moderate An effect that alters the character of the Cultural Heritage Receptor in a manner that is consistent with existing and emerging baseline trends.</p>
	<p>Slight An effect which causes noticeable changes in the character of the Cultural Heritage Receptor without affecting its importance.</p>
	<p>Not significant An effect which causes noticeable changes in the character of the Cultural Heritage Receptor but without significant consequences.</p>
	<p>Imperceptible An effect capable of measurement but without significant consequences.</p>

As previously noted, in the interest of accessibility and clarity, a series of plain-English statements should be used to clearly spell out the significant effects. For example, ‘The construction of the proposed road will directly impact a well-preserved ringfort with upstanding banks and ditches.

This impact will very likely result in the permanent loss of the monument and, as such, the magnitude of the Cultural Heritage impact is very high. This monument is of high importance and subject to statutory protection. Therefore, the Cultural Heritage effect is assessed as being profound and negative’.

5.5.4 Interaction of Effects

Because of the overlaps and interactions between Cultural Heritage and certain other environmental factors (refer to **Sections 1.11** and **4.3**), care must be taken to coordinate the assessment process across these factors. This will require liaison between the various specialists from an early stage and throughout the design and environmental evaluation processes to understand sensitivities, identify gaps, eliminate any contradictions in the assessments, and coordinate mitigation measures.

Because other competent experts are responsible for examining other environmental factors (e.g. Landscape (LCA/LVIA), Biodiversity, Land and Soils), to be a complete assessment, the CHIA must have regard to and cross-reference, as appropriate, (but not seek to replicate, contradict, or supersede) any other assessments that are relevant to understanding the overall baseline or receiving environment of the project study area. This requires consultation and coordination between the Cultural Heritage Professional and these other specialists. For example, Cultural Heritage Professionals and Landscape Professionals should ensure that assessments of setting and visual effects regarding Cultural Heritage Receptors are consistent in their relevant EIAR/ER chapters. Contradictory assessments of setting/visual effects between chapters will undermine the EIAR/ER and may lead to challenges during the statutory processes (refer to **Section 4.3.1**).

Identification of potential interactions should, as a minimum, be carried out in a Project Team or workshop environment, with the involvement of the Cultural Heritage Professional and Project Archaeologist. Any Cultural Heritage interactions identified should be recorded and assessed in the same manner as other effects on Cultural Heritage.

It is also critical for the various specialists to be aware that their mitigation proposals may affect other topic areas (e.g. the installation of noise barriers may result in a visual impact on an important Built Heritage Receptor, while sensitive habitats and water quality need to be protected from impacts potentially arising from archaeological investigations). Mitigation proposals or measures will be subject to Design Risk Assessment and coordination with other disciplines and proposals for the development (refer to **Section 5.4.4**).

Further information on impact interactions is given in the EPA guidelines (2022) and relevant European Commission guidelines (refer to **Appendix 4**).

5.5.5 Cumulative Effects on Cultural Heritage Receptors

The assessment of cumulative effects is required by the EIA Directive and must be considered as part of the CHIA. 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, p.52).

The baseline for assessing cumulative effects includes the project considered within the CHIA and other proposed developments with planning permission that are likely to give rise to significant cumulative effects on Cultural Heritage.

Existing projects, those under construction and other projects permitted but not yet constructed or commenced, should all be included in the assessment. However, the projects considered need to be of a context, nature, and scale to be relevant to the cumulative assessment for likely significant effects in the CHIA.

The scope of the cumulative assessment should be agreed with the Project Manager/Project Archaeologist in consultation with the Environmental Coordinator (where applicable) to ensure consistency across the assessment of all environmental factors.

The same principles used for the assessment of the effects on Cultural Heritage of the proposed project (outlined above) should be used in the assessment of cumulative effects and this should extend to consideration and assessment under both construction and operational stages.

Further information on cumulative effects is given in the EPA guidelines (2022) and relevant European Commission guidelines (refer to **Appendix 4**).

5.5.6 Residual Effects

It will not always be possible or practical to fully mitigate all adverse effects on Cultural Heritage (refer to **Section 5.6** for information on mitigation).

Residual effects are ‘the degree of environmental change that will occur after the proposed mitigation measures have taken effect’ (EPA 2022, p.52), or the remaining environmental ‘costs’ of a project that could not be reasonably avoided (ibid., p.62) (e.g. the removal of an archaeological site from the environment; demolition of a building of Built Heritage merit). As residual effects are a key consideration in deciding whether a project should be permitted or not (ibid., p.62), it is essential that they are clearly described in the CHIA report/chapter as part of the Phase 3 outputs.

The method for assessment of residual effects follows the same approach as significance of effect, but with mitigation in place. For transparency, this is to be presented in the same way with residual magnitude of impact and residual significance of effect given for each affected Cultural Heritage Receptor, and positive and negative effects presented separately. It is assumed that in most cases, mitigation will reduce the significance of an adverse effect.

In addition, in the interest of accessibility and clarity, a series of plain-English statements should be used to clearly spell out the significant residual effects of the project in relation to Cultural Heritage (for example, ‘Three archaeological monuments will be wholly removed through archaeological excavation, resulting in a moderate residual negative effect following mitigation, which will involve preservation by record and dissemination of findings’).

5.5.7 Options Appraisal

During Phase 2, the Cultural Heritage Professional shall analyse and compare the project options using the CHD to identify the likely effects on Cultural Heritage and arrive at a preferred option from a Cultural Heritage perspective. They shall adopt a quantitative approach to the assessment of the options and outline their findings in an Options Appraisal Table (see the Standards Document **PE-ARC-02010** for an example; see also **Section 5.5.8** below on Multi-Criteria Analysis (MCA)). This results in a numerical appraisal of the number of predicted impacts at the various levels of significance; however, qualitative assessment and professional judgement shall also be applied to arrive at the preferred option from a Cultural Heritage perspective.

The Cultural Heritage Professional shall rank the options in terms of their preferences (first preference, second preference, and so on, to the least preferred option).

This ranking shall be outlined in the Options Appraisal Table. Ranking of options based on the sum of the quantitative scores serves as a guide to the likely overall impact of each option and as a record of the assessment.

However, the option with the lowest number of predicted impacts will not necessarily be the preferred option from a Cultural Heritage perspective (e.g. an option having a Profound effect on one Cultural Heritage Receptor is likely to be ranked lower in terms of preference than an option having several Imperceptible effects). Each options selection process will have unique Cultural Heritage considerations, and the resulting constraints, sensitivities and effects will vary.

Therefore, where professional judgement influences the selection of a preferred option, this shall be clearly documented in the accompanying Phase report.

It is also imperative to note that while the scores applied to the option assessments are likely to focus on adverse effects, it is possible for positive effects to occur on individual receptors either because of the proposed design (e.g. providing an alternative route further away from a monument, thereby improving its setting) or through mitigation (e.g. enhancement of amenities).

Where Cultural Heritage Receptors are likely to be subject to both positive and negative effects, these shall be assessed and documented separately (e.g. dismantling a gated entrance (negative effect) and reconstructing it elsewhere to restore linkages with a country house within a demesne (positive effect)).

The Cultural Heritage Professional may be required, in the context of project appraisal, to assign each option an overall score based on a scoring scale such as outlined below in **Table 5.8**. The Cultural Heritage Professional shall set out their proposed scoring methodology in the Assessment Method Statement at the outset of the relevant Phase for agreement with the Project Archaeologist. In the interest of avoiding unnecessary mathematical calculations with multiple variables, it is not necessary for the Cultural Heritage Professional to apply a score for each effect on individual receptors. Rather, a single score should be assigned to the options based on the mixed-method assessment outlined below for MCA, and with clearly documented professional judgement.

Table 5.8 - Example of Overall Ratings (after TII 2023b, p.14).

Score	Overall Option Assessment
7	Major Positive
6	Moderate Positive
5	Minor Positive
4	Neutral
3	Minor Negative
2	Moderate Negative
1	Major Negative

5.5.8 Multi-Criteria Analysis

Multi-Criteria Analysis (MCA) is an appraisal tool used to estimate the likely performance of options against a set of project objectives across a range of criteria such as Environment, Economy and Engineering. All environmental disciplines contribute to the MCA process on national road and greenway projects.

Prior to commencement of Phase 2 assessment, the Cultural Heritage Professional shall refer to the relevant TII PE-PAG unit which sets out the current TII Project Appraisal Guidelines (PAG) on MCA (TII 2016). National road projects with a value of less than €5m follow a different appraisal process as set out in PAG Unit 2.0. The appraisal of greenway projects is covered by PAG Unit 13.0 Appraisal of Active Modes (TII 2023b (**PE-PAG-02036**)), in line with TII's remit as Approving Authority for certain greenway projects.

As already outlined above in Section 5.5.7, the Cultural Heritage Professional's approach to MCA shall involve a mixed method of both quantitative and qualitative analysis and shall be outlined in the Assessment Method Statement submitted for the approval of the Project Archaeologist prior to the commencement of Phase 2 assessments.

Having determined the importance of the Cultural Heritage Receptors likely to be affected by the proposed project (refer to Section 5.5.1), and the potential consequences of change to these receptors, including the consideration of alternatives (e.g. alternative route and/or transport options), the assessment made by the Cultural Heritage Professional feeds directly into the decision-making process for the project through MCA.

5.5.9 Outputs from Step 3 – Assessment

STEP 3 OUTPUTS

Key outputs from Step 3 (Assessment) are:

- a **CHIA report or chapter** for inclusion in the overall Options Report and/or EIAR/ER (depending on the PMG Phase), describing the results of desktop research, fieldwork, specialist surveys/assessments, and consultations, including likely effects on Cultural Heritage; for Phase 3 this shall include type, quality, magnitude and significance of impact/effect, cumulative effects, and residual effects (**Output Refs. 2.0d, 2.1d, 3.0d**),
- **updated CHD and mapping/geospatial data** based on additional research, fieldwork, specialist surveys/assessments, consultations, etc. (**Output Refs. 2.0b, 2.0c, 2.1b, 2.1c, 3.0b, 3.0c**),
- completed Receptor Survey Forms, field notes, and photographic records for each Cultural Heritage Receptor to be submitted as part of the **Phase 3 Project Archive (Output Ref. 3.0g)**, and
- Cultural Heritage input into the **MCA** for the Project (Phase 2) (**Output Refs. 2.0e, 2.1e**).

5.6 Step 4: Mitigation and Enhancement

5.6.1 Types of Mitigation

Measures to avoid, prevent and reduce adverse effects on Cultural Heritage shall be considered at each Phase of project delivery. In accordance with the EIA Directive as implemented through national legislation and regulations, as well as government policy, avoidance of significant adverse effects through the preservation of Cultural Heritage Receptors, wherever possible, should be sought in the first instance, with an emphasis on preserving the more important receptors. Where avoidance is not possible, then measures shall be devised to reduce or remedy/offset adverse effects as far as practicable (refer **INFORMATION BOX 11** and **Figure 5.8** below).

INFORMATION BOX 11: Mitigation measures

Mitigation measures can include:

- Primary mitigation measures developed through an iterative design process focused on avoidance and prevention which have become integrated components of the Project design,
- Standard construction practices for preventing and minimising effects on Cultural Heritage (e.g. fencing/barriers), and
- Measures designed to address any adverse effects remaining after primary measures and standard construction practices have been incorporated into the Project (e.g. screening or planting to reduce long-term visual/setting effects).

Where significant adverse effects cannot be avoided, these shall be remedied/offset through compensation and enhancement measures such as preservation by record, dissemination of knowledge (e.g. through publication of excavation reports/books), awareness raising, and amenity enhancements, wherever possible, in the interests of community benefit and sustainable development.

As set out below in **Figure 5.8**, appropriate mitigation measures to avoid, prevent and reduce adverse effects on Cultural Heritage can include:

- consideration of alternatives (e.g. a design solution) to **avoid** preventable impacts (which should always be a key objective),
- fencing off a vulnerable Cultural Heritage Receptor to **prevent** accidental damage from machinery movements during construction, and/or
- using screening/planting to **reduce** the visual impact of new infrastructure on a Cultural Heritage Receptor.

Where adverse effects are unavoidable, these shall be remedied/offset as far as possible and, as a last resort, through compensatory measures; that is:

- **remedying** the effect (e.g. reinstating buildings, walls or features, etc., of Cultural Heritage merit that must be (re)moved to accommodate the project), or
- **offsetting** the effect (e.g. preserving cultural values through means such as excavation, building recording, topographical surveys, oral history recording, and publication (preservation by record) and/or providing new amenity areas, heritage interpretation, reconstructions, etc.

Avoidance

When no impact is caused, often through consideration of alternatives (i.e. a design solution). Every effort should be made to avoid and preserve Cultural Heritage Receptors *in situ*, where feasible. Avoidance is generally the most cost-effective form of mitigation and may be viewed as part of the consideration of alternatives.

Prevention

When a potential impact is prevented by a measure to avoid the possibility of the impact occurring. Usually refers to technical measures. Prevention measures are also put in place to prevent the effects of accidental events from giving rise to adverse effects (e.g. fencing off a site to prevent accidental damage during construction).

Reduction
When an impact is lessened. This is a common strategy for dealing with effects which cannot be avoided, and can involve reducing the effect and reducing exposure to the effects (e.g. using barriers or planting to screen off a project and reduce the visual impact on a Cultural Heritage Receptor).
Remedy/Offset
When adverse effects are compensated for or resolved by a remedial action such as excavation, recording and publishing ('preservation by record'), or when an adverse effect is balanced by a positive effect (e.g. provision of a new amenity area to compensate for the unavoidable loss of access to the grounds of an historic house).

Figure 5.8 - Cultural Heritage mitigation measures

5.6.2 Types of Enhancement

Enhancement opportunities aim to deliver positive, sustainable outcomes and may include:

- facilitating/improving access to Cultural Heritage Receptors,
- creating new opportunities for users to engage with Cultural Heritage (e.g. designing greenways that allow users to passively engage with historic infrastructure such as disused railway lines, bridges, etc.),
- disseminating new Cultural Heritage knowledge through public lectures, publications, Heritage Week events, etc.,
- providing suitably located and accessible information panels or other forms of interpretation to enhance understanding and appreciation of Cultural Heritage,
- presenting folklore, historical and/or mythological site information in local visitor centres or other Cultural Heritage venues,
- preparing information packs and learning material for local schools,
- providing research archives for public use, and
- liaising with interested parties (archaeological/historical societies, schools, community groups, Heritage Officers, and researchers).

The Cultural Heritage Professional shall recommend such opportunities for consideration by the Project Archaeologist and Project Manager for inclusion in the Schedule of Environmental Commitments for the EIAR/ER, where appropriate.



Plate 5.8 - Restored 19th-century public drinking fountain and memorial (Photos: TII)

5.6.3 Developing Cultural Heritage Mitigation Measures and Enhancement Opportunities

Development of Cultural Heritage mitigation measures and enhancement opportunities should be an iterative process between the Project Designers, the Project Archaeologist, and the Cultural Heritage Professional. Other relevant specialists shall be consulted, where necessary, to ensure that proposed measures are appropriate to all environmental factors and do not give rise to unintended negative effects (e.g. for Biodiversity).

Working with the Cultural Heritage Professional in the options selection and the design phase of the Preferred Option, the Design Team shall aim to:

- enhance as well as protect the cultural environment,
- avoid important Cultural Heritage Receptors, wherever possible, including their settings, through consideration of alternatives (e.g. design solutions),
- weigh heritage impacts against other issues being considered as part of the assessment process,
- prevent accidental impacts to Cultural Heritage Receptors, wherever possible, including their settings, when undertaking activities in their proximity (e.g. geotechnical investigations, construction),
- reduce the magnitude of unavoidable impacts on Cultural Heritage Receptors through design, and
- as a last resort, remedy/offset any likely significant adverse effects on Cultural Heritage which are unavoidable.

Where a Cultural Heritage Receptor is subject to statutory protection, avoidance of impacts will be a legal requirement unless the relevant approvals are in place.

The CHD prepared as part of the baseline studies (refer to **Sections 5.3** and **5.4** and **Appendix 5**) shall be used as the key reference for the consideration, development, and description of mitigation measures and enhancement opportunities. This will ensure that the measures proposed are grounded in and respect the key characteristics of each Cultural Heritage Receptor affected by the project and that the measures proposed are appropriate.

The specific mitigation measures proposed to address adverse effects on Cultural Heritage, and enhancement measures, where applicable, shall be outlined in the CHIA report/chapter and the CHD and in a format suitable for inclusion within a Schedule of Environmental Commitments where a project is subject to EIA. (For an outline of the Schedule of Environmental Commitments, refer to NRA (2008, pp.63–5).) These measures shall also be outlined in detail in the draft Cultural Heritage Mitigation Plan (CHMP) as part of the Phase 3 outputs (refer to **Section 6.5.4** below).



Plate 5.9 - Preservation by record (Photo: AMS)

The Cultural Heritage Professional shall set out what is required for mitigation and enhancement to be effective in sufficient detail to allow a clear understanding in the statutory approval phase of the project (Phase 4) and for detailed plans and specifications to be prepared for approval prior to implementation.

The Cultural Heritage Professional shall have regard to the costs of such mitigation and enhancement measures. Where a project requires an Appropriate Assessment, Cultural Heritage mitigations/enhancements should be considered for any potential adverse impacts they may have on other environmental factors (e.g. advance archaeological investigations involving extensive test excavations; see **Section 4.3.3**).

All mitigation and enhancement measures should be effective, practical, and safe for the user, and ideally self-sustaining in the medium and longer terms. Consideration should be given to ease of establishment, to minimising maintenance, and to the long-term development of the proposed measure so that it does not become a safety concern in later stages (e.g. provision of roadside interpretive signage that may distract/endorse road users), and resilience to climate change.

Measures should be developed with due regard to receptor type, legal status, sensitivity, level of importance, and the significance of effect, which will ensure that the measures are appropriate, specific, and represent value for money.

5.6.4 Outputs from Step 4 – Mitigation and Enhancement

STEP 4 OUTPUTS

Key outputs of Step 4 (Mitigation and Enhancement) are:

- **mitigation and enhancement proposals** for consideration by the Project Team set out in the relevant reports/chapters (**Output Refs. 2.0d, 2.1d, 3.0d**), and
- a **Cultural Heritage Mitigation Plan (CHMP)** and Cultural Heritage input to the Schedule of Environmental Commitments and Construction Environmental Management Plan (CEMP), where applicable (**Output Ref. 3.0e**).

6. CHIA through the Project Phases & Stages

6.1 Introduction

Section 5 above has outlined the four key steps to be followed when carrying out CHIA during each of the PMG Phases in terms of:

1. establishing the scope and confirming the study area,
2. analysing data to establish the Cultural Heritage baseline,
3. assessing the likely direct and indirect effects of the project on Cultural Heritage, and
4. developing measures to mitigate adverse effects on Cultural Heritage and enhance opportunities.

This section describes the approach and process for each individual Phase.

6.2 Phase 0: Scope and Strategic Assessment

This Phase will not require the input of a Cultural Heritage Professional. For greenway projects, Phase 0 is referred to as Scope and Pre-Appraisal (TII 2022 (**PE-PMG-02047**)) and a Project Archaeologist will be assigned to the project during this Phase.

6.3 Phase 1: Concept & Feasibility (Constraints Study)

For national roads, a Project Archaeologist will be assigned during this Phase, and a Project Team and Technical Advisors will be appointed. This Phase will include the preparation of a Constraints Study by a Cultural Heritage Professional. For greenways, the Constraints Study Report will be finalised in Phase 2 (see Table 5.2).

PHASE 1 OVERVIEW OF ESSENTIAL REQUIREMENTS

TASKS

- √ Prepare an Assessment Method Statement confirming the Study Area and outlining the scope of the study, including the range of Cultural Heritage Receptors to be considered, methodology to be used, sources of information, and the format of outputs.
- √ Carry out desktop research with reference to the sources of information suggested by these guidelines (see **Section 5.4.1**, **Figure 5.7** and **Appendix 6**).
- √ Identify and map the Cultural Heritage Receptors within the project study area and identify key constraints.
- √ Prepare the CHD containing essential data relevant to each identified Cultural Heritage Receptor.
- √ Identify any transboundary issues that need to be considered.
- √ Prepare a Constraints Study Report.

OUTPUTS

- Phase 1 Assessment Method Statement (**Output Ref. 1.0a**).
- CHD recording the known Cultural Heritage Receptors (**Output Ref. 1.0b**). Mapping/geospatial data for the Cultural Heritage Receptors (**Output Ref. 1.0c**)
- Constraints Study Report (Output Ref. 1.0d; note: for greenways, this may be submitted during Phase 2)

For national roads, the Constraints Study shall be carried out by the Cultural Heritage Professional during Phase 1 to establish the initial baseline for the assessment. For greenways, as well as constraints, this study shall identify Cultural Heritage opportunities to enable a good user experience (TII 2022 (**PE-PMG-02047**), p.17). (These opportunities will assist in the development of options for greenways that address the 'Five S criteria': Scenic, Sustainable, Strategic, Segregated, with lots to See and do). The scope of this Constraints Study, methodology and the format of outputs shall be set out in the Phase 1 Assessment Method Statement for approval by the Project Archaeologist prior to commencement.

The focus of the Phase 1 Constraints Study shall be identifying and mapping Cultural Heritage Receptors within the project study area based on publicly available information (refer to **Section 5.4.1**, **Figure 5.7** and **Appendix 6**; for discussion of the Study Area, refer to **Section 5.3.2** and **Figure 5.3** above).

The level of detail for the Constraints Study shall be proportionate to this Phase, the nature and scale of the project, and the potential for direct and indirect effects on Cultural Heritage.

The Cultural Heritage Professional shall use their judgement to determine what should or should not be included with reference to the agreed methodology set out in the Assessment Method Statement and through consultation with the Project Archaeologist. Transboundary issues, which may relate to national (i.e. Northern Ireland) borders, should also be considered.

It is not necessary at this point to attempt to identify all potential Cultural Heritage Receptors inside the project's Study Area.

However, any receptors likely to be constraints should be identified through desktop research as far as reasonably practical.

As well as previously recorded and designated Cultural Heritage Receptors, this may include other sites/areas that may have no statutory protection but are readily identifiable in historic mapping, publicly available orthophotography, and other sources as being of potential interest/merit.

The findings of the Constraints Study shall be presented in a brief Constraints Study Report accompanied by a CHD and associated mapping/geospatial data. The CHD should contain essential data relevant to each of the Cultural Heritage Receptors within the project's Study Area (see **Appendix 5**). Highly detailed CHDs and reports are not required at this early stage. However, the report should provide some basic advice to the Design Team (e.g. the need to avoid adverse effects and enhance opportunities for Cultural Heritage, where possible; the legal implications of having certain site types within the Study Area). The Cultural Heritage Professional shall also identify any Cultural Heritage Receptors that they consider (using professional judgement) to be key constraints.

6.4 Phase 2: Options Selection

6.4.1 Phase 2 Purpose and Scope

Phase 2 Options Selection involves an examination of alternative options to determine a Preferred Option(s) for the project (TII 2023a (**PE-PMG-02041**)). This phase ensures compliance with Article 5(1)(d) of the EIA Directive:

'[The information to be provided by the developer shall include at least:] a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment'.

This phase of project delivery comprises three distinct stages which may run consecutively or be amalgamated for smaller projects:

- **Stage 1 – Preliminary Options Assessment** (examination of feasible options),
- **Stage 2 – Project Appraisal Matrix** (examination of refined options), and
- **Stage 3 – Preferred Option** (selection of the Preferred Option).

The Cultural Heritage requirements for Phase 2 are set out below.

6.4.2 Phase 2 Stage 1 – Preliminary Options Assessment

PHASE 2 STAGE 1: OVERVIEW OF ESSENTIAL REQUIREMENTS

TASKS

- √ Prepare an Assessment Method Statement confirming the Assessment Corridors and outlining the scope of the study, including the range of Cultural Heritage Receptors to be considered, methodology to be used, sources of information, fieldwork, and the format of outputs.
- √ Undertake further research with reference to the sources of information suggested by these guidelines (see **Section 5.4.1**, **Figure 5.7** and **Appendix 6**).
- √ Carry out a survey from accessible land and targeted site inspections, where necessary.
- √ Update the CHD with additional data for previously identified and newly identified Cultural Heritage Receptors.
- √ Liaise with the Project Archaeologist, Project Manager, and other relevant professionals to ensure ongoing communication and identification of interactions.
- √ Prepare specification for specialist surveys.
- √ Review the Project options against the baseline Cultural Heritage information and assess the likely effects of each option on Cultural Heritage.
- √ Compare and rank the identified options from a Cultural Heritage perspective in the Phase 2 Stage 1 MCA.
- √ Prepare a Phase 2 Stage 1 CHIA report/chapter on findings.

OUTPUTS

- Phase 2 Stage 1 Assessment Method Statement (**Output Ref. 2.0a**).
- Updated CHD (**Output Ref. 2.0b**) and mapping/geospatial data (**Output Ref. 2.0c**) to assist the identification and refinement of options.
- CHIA report/chapter referencing each of the identified options to be included in the Stage 1 Options Report (**Output Ref. 2.0d**).
- Comparative ranking (MCA) of the identified options relative to their likely effects on Cultural Heritage for input under Environment to MCA/Project Appraisal Deliverables (**Output Ref. 2.0e**).

The purpose of Phase 2 Stage 1 (Preliminary Options Assessment) is to examine all feasible options identified by the Design Team to help select a reduced number of options (or a Preferred Option for smaller projects) for further assessment. Multiple options may be identified at this stage, but the level of design information available is likely to be very limited (e.g. to potential corridors, generic route alignments or similar levels of design). A proportionate CHIA shall be carried out to allow for assessment of likely adverse effects on Cultural Heritage and for comparison and ranking of the options in the MCA.

One of the initial project tasks within Phase 2 is to confirm the Assessment Corridors for the examination of options.

For Cultural Heritage, where new alignments are being considered, the Assessment Corridor for each Route Option within rural greenfield environments shall generally extend to a width of 500m (i.e. 250m from the centreline of each Route Option) (refer to **Section 5.3.2.2** and **Figure 5.4** above).

The CHD compiled for the project study area during the Constraints Study (Phase 1) will be updated with additional data added to existing entries for Cultural Heritage Receptors within the Assessment Corridors (see **Appendix 5**). New entries shall also be added to the CHD for any additional Cultural Heritage Receptors within the Assessment Corridors identified through an appropriate level of additional desk-based research and fieldwork, as set out in **Section 5.4** above. The CHD shall be used in the process of carrying out the CHIA during Phase 2 Stage 1, and the findings shall be included in the Stage 1 Options Report.

The CHIA approach and process for the Stage 1 options assessment will include:

- liaison with the Project Archaeologist, Project Manager, and other relevant professionals (e.g. Landscape Professional),
- definition of the purpose and scope of the assessment, including Cultural Heritage objectives,
- a review of the geographical extent of the identified Assessment Corridors, and the appropriate level of detail for baseline study in consultation with the Project Archaeologist,
- a survey from accessible land (with targeted inspections as necessary) to confirm and refine Cultural Heritage information and mapping of the Cultural Heritage Receptors along or adjacent to each option. This will allow suitable and proportionate assessment and comparison of likely significant effects,
- a review of the options against the baseline Cultural Heritage information collected during the Phase 1 Constraints Study and compiled in the CHD,
- Prepare specification for specialist surveys (e.g. archaeo-geophysical surveys)
- high-level identification, description, and assessment of likely effects of each option on Cultural Heritage,
- comparison and ranking of the identified options from a Cultural Heritage perspective in the MCA against agreed objectives, where applicable (i.e. to reduce the impact on and enhance Cultural Heritage), and
- preparation of a Stage 1 CHIA report/chapter describing the methodology used, the Cultural Heritage baseline and the assessment of likely effects on Cultural Heritage. The report will contain tables derived from the CHD relevant to the options under consideration and should highlight any measures that should be considered by the Design Team to mitigate adverse effects (e.g. avoidance of known Cultural Heritage Receptors) and enhance opportunities for Cultural Heritage.

6.4.3 Phase 2 Stage 2 – Refined Options Assessment (Project Appraisal Matrix)

PHASE 2 STAGE 2: OVERVIEW OF ESSENTIAL REQUIREMENTS

TASKS

- √ Review the Phase 2 Stage 1 CHIA report/chapter to identify the issues that need to be covered in the Stage 2 assessment.
- √ Prepare an Assessment Method Statement confirming the Assessment Corridors and outlining the scope of the study, including the range of Cultural Heritage Receptors to be considered, methodology to be used, sources of information, fieldwork, consultations, specialist surveys/assessments and the format of outputs.
- √ Undertake further research with reference to the sources of information suggested by these guidelines (see **Section 5.4.1**, **Figure 5.7** and **Appendix 6**).
- √ Carry out survey(s) from accessible land and targeted site inspections, where necessary.
- √ Consult with any landowners/occupiers and/or special interest groups identified as having Cultural Heritage knowledge/concerns.
- √ Prepare specifications for specialist surveys and assessments.
- √ Incorporate the results of any consultations and specialist assessments or surveys commissioned for the Project.
- √ Update the CHD with additional data for previously identified and newly identified Cultural Heritage Receptors.
- √ Liaise with the Project Archaeologist, Project Manager, and other relevant professionals to ensure ongoing communication and identification of interactions.
- √ Review the refined Project options against the baseline Cultural Heritage information and assess the likely effects of each option on Cultural Heritage.
- √ Identify enhancement opportunities for important Cultural Heritage Receptors.
- √ Compare and rank the identified options from a Cultural Heritage perspective in the Phase 2 Stage 2 MCA.
- √ Prepare a Phase 2 Stage 2 CHIA report/chapter on findings, including measures that should be considered by the Design Team to mitigate adverse effects and enhance opportunities.
- √ Provide input to the Project Appraisal Deliverables (MCA).

OUTPUTS

- Phase 2 Stage 2 Assessment Method Statement (**Output Ref. 2.1a**).
- Further refined and updated CHD (**Output Ref. 2.1b**) and associated mapping/geospatial data (**Output Ref. 2.1c**) relevant and scaled to the identified options, and based on additional research, fieldwork, specialist surveys/assessments, consultations, etc.
- CHIA report/chapter referencing each of the identified options to be included in the Options Report (**Output Ref. 2.1d**).
- Comparative ranking (MCA) of the identified options relative to their likely effects on Cultural Heritage for input under Environment to MCA/Project Appraisal Deliverables (**Output Ref. 2.1e**).

The purpose of Phase 2 Stage 2 is to carry out a more detailed assessment of a reduced number of project options, some of which may have been removed or modified by the Design Team since completion of Phase 2 Stage 1 to avoid likely adverse effects on Cultural Heritage.

These refined options will likely include some of the options from Stage 1 but may also include amended options (to improve performance) or, indeed, new options identified during the Stage 2 process. It is also common for links (i.e. connecting roads) to be identified between options at this stage, which also require assessment.

While it is likely that more project information will be available at Phase 2 Stage 2 than previously, it is still likely to be limited in detail. Nevertheless, whereas Stage 1 may only have had route corridors, notional designs may now be available at Stage 2 to allow for more robust assessments. For example, linear projects may have indicative cut and fill drawings and/or junction strategies, while site-based projects may have indicative site layouts.

Based on Stage 2 desk-based research, fieldwork, consultations, and any specialist surveys/assessments carried out as set out in **Section 5.4** above, the CHD will be further updated and refined, with additional data added to existing entries and new entries made for any additional Cultural Heritage Receptors identified (refer to **Appendix 5**). The CHD shall be used in the process of carrying out the CHIA, and the findings shall be included in the Phase 2 Stage 2 Options Report.

As with Phase 2 Stage 1, the requirement is to prepare a proportionate CHIA to allow for assessment of likely effects on Cultural Heritage and for comparison and ranking of the options in a Stage 2 MCA. All available information should be used in the analysis of options including the information collected from heritage inventories, details of previous archaeological excavations, published local histories, previously completed surveys, consultation, etc. The information gathered from the assessments will assist in identifying a Preferred Option for the project. However, given the likely absence of detailed designs and the consequent difficulty in being certain about impacts and effects, and given that not all Cultural Heritage Receptors may have been identified yet, the Cultural Heritage assessment of each option will remain high-level for this stage.

The CHIA approach and process for the Stage 2 options selection will include:

- liaison with the Project Archaeologist, Project Manager, and other relevant professionals (e.g. Landscape Professional),
- a review of the Phase 2 Stage 1 CHIA report,
- definition of the purpose and scope of the assessment in an Assessment Method Statement, including Cultural Heritage objectives,
- a review of the geographical extent of the identified Assessment Corridors and appropriate level of detail for baseline study (refer to **Section 5.3.2.2** and **Figure 5.4** above),
- review of the identified options against the baseline Cultural Heritage information as compiled in the CHD and updated during Stage 2. In assessing options, all available information and data should be incorporated,
- further desktop research, field surveys and consultations to confirm and refine Cultural Heritage information and mapping of the Cultural Heritage Receptors along or adjacent to each option, including amended or new options and links. When commissioning new surveys, these should be applied to all options, where possible, to allow suitable and proportionate assessment and comparison of likely adverse effects,
- high-level identification, description, and assessment of likely adverse effects of each option on Cultural Heritage,
- identification of enhancement opportunities for important Cultural Heritage Receptors (particularly for greenways),

- consultation with the NMS and Local Authority Heritage Office in relation to likely impacts of the options, particularly likely significant effects and proposed strategies to mitigate these,
- comparison and ranking of the identified options from a Cultural Heritage perspective in the MCA against agreed objectives (i.e. to reduce the impact on and enhance Cultural Heritage),
- preparation of a Stage 2 CHIA report/chapter describing the methodology used, the Cultural Heritage baseline and the assessment of effects on Cultural Heritage. The report will contain tables derived from the CHD relevant to the options under consideration and should highlight any measures that should be considered by the Design Team to mitigate adverse effects and enhance opportunities for Cultural Heritage, and
- input to the Project Appraisal Deliverables (e.g. MCA).

Regarding the sixth bullet above, where a previously completed survey/assessment (e.g. Lidar, geophysical survey) is available for one or more option, but not others, it may not be necessary to undertake similar surveys for all; rather, it is essential that the Cultural Heritage Professional applies their professional judgement when considering options for which varying levels of information are available.

6.4.4 Phase 2 Stage 3 – Preferred Option Selection

The purpose of Phase 2 Stage 3 is to select the Preferred Option for the project with regard to the likely environmental effects, including the likely effects on Cultural Heritage, identified at Phase 2 Stage 2. This is a role of the Project Manager in consultation with the Project Archaeologist, and no outputs are generally required from the Cultural Heritage Professional during this stage. However, some input from the Cultural Heritage Professional may be needed (e.g. clarification and consultation with respect to the CHIA) along with interaction with other members of the Project Team (e.g. confirmation of likely setting/visual effects with the Landscape Professional).

6.5 Phase 3: Design and Environmental Evaluation

PHASE 3: OVERVIEW OF ESSENTIAL REQUIREMENTS

TASKS

- √ Review the Phase 2 Stage 2 CHIA report/chapter, and other relevant reports to identify the issues that need to be covered in the Phase 3 assessment.
- √ Prepare an Assessment Method Statement confirming the Phase 3 Study Area and outlining the scope of the study, including the Cultural Heritage Receptors to be considered, methodology to be used, sources of information, fieldwork, consultations, specialist surveys/assessments and the format of outputs.
- √ Undertake further research with reference to the sources of information suggested by these guidelines (see **Section 5.4.1**, **Figure 5.7** and **Appendix 6**).
- √ Carry out a full walkover of the proposed Project including junctions, connecting roads, attenuation ponds, site compounds, quarries, etc.
- √ Consult with any landowners/occupiers and/or special interest groups identified as having Cultural Heritage knowledge/concerns.
- √ Prepare specifications for specialist surveys and assessments.
- √ Incorporate the results of any consultations and specialist assessments or surveys commissioned for the Project into the CHIA.
- √ Update the CHD with additional data for previously identified and newly identified Cultural Heritage Receptors.
- √ Liaise with the Project Archaeologist, Project Manager, and other relevant professionals to ensure ongoing communication and identification of interactions.
- √ Assess the importance of and magnitude of impact and likely significance of effect upon the Cultural Heritage Receptors affected by the proposed Project. Consult with the NMS and Local Authority Heritage Office in relation to likely impacts of the proposed Project, particularly likely significant effects, and proposed strategies to mitigate adverse effects.
- √ Prepare the CHMP and have input to the Schedule of Environmental Commitments and CEMP, where required.
- √ Prepare a Phase 3 CHIA report/chapter on findings, including measures that will be taken to mitigate adverse effects (e.g. avoidance), remedy/offset unavoidable effects (e.g. preservation by record) and enhance opportunities.
- √ Compile all relevant data and records (Receptor Survey Forms, field notes, photographs, consultations with third parties, etc.) into a Phase 3 Project Archive.

OUTPUTS

- Phase 3 Assessment Method Statement (**Output Ref. 3.0a**).
- Detailed and updated CHD based on additional research, fieldwork, specialist surveys/assessments, consultations, etc. (**Output Ref. 3.0b**).
- Updated mapping/geospatial data for Cultural Heritage Receptors (**Output Ref. 3.0c**).
- Detailed CHIA report/chapter for the proposed Project (based on detailed design and updated CHD), including description of baseline; assessment of direct and indirect effects on Cultural Heritage; interactions; cumulative effects; detailing of mitigation measures, etc., either as standalone CHIA Report or, where required, as a chapter of the EIAR (or ER for Part 8 developments) (**Output Ref. 3.0d**).
- CHMP and input to the Schedule of Environmental Commitments and CEMP where required (**Output Ref. 3.0e**).
- CHIA input to Project Appraisal Deliverables, where required (**Output Ref. 3.0f**).
- Phase 3 Project Archive (**Output Ref. 3.0g**).

6.5.1 Phase 3 Purpose and Scope

The purpose of Phase 3 (Design and Environmental Evaluation) is to develop the project design, following the selection of a Preferred Option, based on both technical and environmental inputs, to a stage where sufficient levels of detail exist to establish land-take requirements and to progress the project through the statutory processes (TII 2023a (**PE-PMG-02041**)). The objective of the Phase 3 CHIA is to identify and assess adverse effects on Cultural Heritage likely to arise from construction and operation of the project, and to minimise the impact on and enhance Cultural Heritage, where possible, within the design. Phasing of construction may also be a relevant consideration.

The environmental assessment will include CHIA as part of the EIA where EIA is required; otherwise, CHIA may be undertaken where Cultural Heritage aspects are considered sufficiently relevant to be assessed in their own right. In the latter scenario, the CHIA will either form a standalone report or be compiled within a project-specific Environmental Report (ER) as part of an alternative process such as Section 177AE (refer to **Sections 3.1** and **6.6.1**).

Phase 3 design will address all aspects of the construction and operation of the project, including all ancillary developments such as attenuation ponds, borrow pits, quarries, etc. As the iterative design and assessments progress, the proposed mitigation measures for all environmental factors assessed will also be refined. All this detail must be reflected and assessed in the CHIA where it is relevant to Cultural Heritage. The process for identifying, assessing, and mitigating effects on Cultural Heritage is set out in detail in **Section 5**. Some key aspects of the process and outputs for Phase 3 are outlined below.

6.5.2 Scoping the Phase 3 CHIA

Scoping for the CHIA at Phase 3 will assist in identifying the issues that need to be covered in the assessment and should include:

- review of the Phase 2 Stage 2 CHIA report/chapter and other relevant reports (e.g. Lidar assessments, geophysical survey reports),
- review of the nature, scale, and complexity of the project to help refine the extent of the Phase 3 CHIA Study Area, if necessary, the likely extent and detail of CHIA required, and whether sufficient project information is available, or if further detail is required, etc.,
- refining the Study Area of relevance to the CHIA if required (see **Section 5.3.2** and **Figure 5.5**) and reviewing existing baseline information, including that gathered during Phase 2 Options Selection. Consider the likelihood that further information or detail will be required (through underwater surveys, geophysical surveys, archaeological test excavations, etc.),
- reviewing the sources of Cultural Heritage information and data utilised during Phase 2, and considering new or additional information to hand (e.g. arising from public and/or statutory consultations) or to be obtained and utilised,
- considering and identifying any additional statutory/non-statutory consultations that may be required (e.g. NMS, Local Authority, local people with relevant Cultural Heritage knowledge),
- preparation of an Assessment Method Statement setting out the Cultural Heritage objectives, assumptions, and proposed methodology for the assessment (e.g. archaeological test excavations, specialist assessments such as geophysical survey, analysis of any newly available data such as Lidar),

- considering the methodology to be used in assessing the likely significance of the effects that may be identified; adapt and record as appropriate, and set this out in the Phase 3 Assessment Method Statement,
- identifying the main Cultural Heritage Receptors that need to be addressed in the Phase 3 assessment, including those requiring LVIA by the Landscape Professional (see **Section 4.3.1**),
- identifying the nature and range of possible effects on Cultural Heritage, including setting and visual effects (in consultation with the Landscape Professional) and especially those deemed most likely to occur and to be of most significance,
- considering the likely interactions with other environmental factors, such as Biodiversity, Landscape, Population and Human Health (see **Section 5.5.3**), and
- considering requirements with respect to the assessment of likely significant cumulative effects on Cultural Heritage and liaising with the Project Team in this regard (e.g. to obtain a list of other relevant projects to be considered by all environmental specialists in the cumulative assessment—see **Section 5.5.5**).

6.5.3 Phase 3 CHIA Approach and Processes

The approach and process for the Phase 3 CHIA will include:

- definition of the purpose and scope of the CHIA,
- liaison with the Project Archaeologist, Project Manager, and other relevant professionals (e.g. Landscape Professional),
- agreeing with the Project Archaeologist/Project Manager the methodology to be used (as set out in the Phase 3 Assessment Method Statement) and any assumptions relied upon,
- detailed review of the geographical extent of the proposed project and confirmation of the Phase 3 Study Area, taking account of associated infrastructure such as proposed drainage systems, attenuation ponds, construction compounds, temporary working areas, quarries, etc., and potential indirect impacts (e.g. from dewatering) (see **Section 5.3**),
- review of the proposed project against the baseline Cultural Heritage information collected during Phase 2 and compiled in the CHD (see **Section 5.4**),
- detailed desktop research, field surveys and consultations, including analysis of the receiving Cultural Heritage environment,
- additional surveys and assessments not carried out previously but required to undertake the appropriate level of assessment for Phase 3 (i.e. full walkover of the proposed project, geophysical surveys, archaeological test excavations, underwater surveys, Lidar analysis, more detailed Built Heritage inspections, local consultation, etc.); additional fieldwork arising from the iterative design process where the project design has been amended to mitigate other environmental constraints,
- refinement of Cultural Heritage information and mapping, including additional information obtained through further research, fieldwork, specialist surveys, and consultations. This will inform the description of the baseline or receiving Cultural Heritage environment within the EIAR/ER, and allow for the suitable and proportionate assessment of likely significant effects and development of site-specific mitigation and enhancement measures,

- identification, description, and assessment of the likely effects on Cultural Heritage of the proposed project (as set out in **Section 5.5**) with tables setting out the significant impacts/effects and categorising them as direct or indirect,
- identification and assessment of all potential impacts/effects (e.g. construction/operation; direct/indirect; cumulative; residual) and interaction of effects (see **Section 5.5**),
- identification of measures required to mitigate adverse effects on Cultural Heritage and enhance opportunities for Cultural Heritage. These measures should be proportionate, implementable, and cost effective, and be recorded in the CHIA report/chapter and CHD (see **Section 5.6**),
- consultation with the NMS in relation to the likely impacts of the proposed project, particularly likely significant effects, and proposed strategies to mitigate these effects for inclusion in the CHMP, CEMP and Schedule of Environmental Commitments,
- consultation with Local Authority in respect of their RPS/ACAs where relevant to the project, including to confirm the extent of curtilage for Protected Structures or proposed Protected Structures, and
- preparation of a Phase 3 CHIA report/chapter on findings, including consideration of the likely evolution of the Cultural Heritage baseline without the project, measures that will be taken to mitigate adverse effects (e.g. avoidance) or, as a last resort, to remedy/offset unavoidable effects (e.g. preservation by record), and enhance opportunities for Cultural Heritage.

The compilation of records such as Receptor Survey Forms, field notes, photographs, consultations with third parties (e.g. landowners/residents, representatives of local history groups) into the Project Archive is essential in this stage as such documentation may be needed to support the evidence presented at Oral Hearing during Phase 4, if required. Refer to **Section 6.6** of these guidelines and the standards for further guidance.

This Phase will likely involve fieldwork/surveys/on-site assessments, and these may generate standalone outputs (e.g. geophysical survey reports, archaeological test excavation reports, monitoring reports for geotechnical investigations). These shall be included as appendices to the main Cultural Heritage report/chapter and incorporated into the Project Archive, and their findings shall be reflected in the CHIA.

For guidance on the approach required for CHIA during Phase 3, including assessing and describing impacts/effects, refer to **Section 5.5**. For more information on EIA generally, refer to the EPA's guidelines (EPA 2022) and advice notes (EPA 2003), the NRA's *Environmental Impact Assessment of National Road Schemes – A Practical Guide* (NRA 2008) and *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment* (DHPLG 2018).

6.5.4 Cultural Heritage Mitigation Plans

The specific measures proposed to mitigate adverse effects on Cultural Heritage, and enhance opportunities, shall be described and documented in a Cultural Heritage Mitigation Plan (CHMP). This plan shall be prepared by the Cultural Heritage Professional during Phase 3 and shall have regard to all relevant standards and guidance (refer to **Appendix 4**).

The CHMP shall include maps and tables showing, where applicable:

- measures proposed for the mitigation of adverse effects on Cultural Heritage (e.g. receptors requiring excavation or building recording),

- Cultural Heritage Receptors to be avoided and protected during construction (through erection of barriers, archaeological monitoring, etc.), and
- Cultural Heritage Receptors to be subject to enhancement measures (e.g. improved access/amenity, provision of interpretation).

The measures set out in the CHMP can be incorporated in the Schedule of Environmental Commitments, with a clear rationale given for each mitigation/enhancement measure. The CHMP will form the basis of the Cultural Heritage input into the preliminary Construction Environmental Management Plan (CEMP) at Phase 3 and the final/updated CEMP during Phases 5/6 (see below).

6.5.5 Construction Environmental Management Plans

As part of Phase 3, the Project Manager shall prepare a preliminary Construction Environmental Management Plan (CEMP) which will outline all environmental issues identified to date and potential impacts that may arise during the construction phase, along with mitigation measures to address these. The Cultural Heritage Professional may be required to input detail to this plan in line with the CHMP.

The CEMP shall be reviewed, modified, and enhanced, as necessary, by the enabling works contractor during Phase 5 and the contractor for the Main Construction Contract during Phase 6, to detail proposed construction or implementation methodologies associated with their work (refer to **Section 6.8**). The preparation of the CEMP should be closely aligned with the requirements of the Schedule of Environmental Commitments (Phase 4) and any development approval conditions (TII 2023c (**PE-PMG-02042**)).

6.6 Phase 4: Statutory Processes

PHASE 4: OVERVIEW OF ESSENTIAL REQUIREMENTS

TASKS

- √ Review Cultural Heritage issues raised in submissions to the consenting process, including requests for further information issued by the Competent Authority and concerns raised by the public, and draft responses, where required.
- √ Review and, if necessary, update the CHIA and prepare errata for the original EIAR.
- √ Prepare a Cultural Heritage Brief of Evidence where a public Oral Hearing is to be held.
- √ Present Brief of Evidence and respond to questions at Oral Hearing, where required.
- √ Review and, if necessary, update the CHMP and Cultural Heritage aspects of the Schedule of Environmental Commitments.
- √ Review and report on any Cultural Heritage aspects addressed in the decision of the Competent Authority and/or planning inspector's report.
- √ Provide input to the updated CEMP, where required.
- √ Draft the archaeological services Method Statements to accompany a licence application for archaeological works, where required.
- √ In the event of a Judicial Review, contribute to affidavits (as may relate to Cultural Heritage) and provide further information/clarification to the legal team, including any additional archaeological sites or monuments that may have been identified since the Project was approved.
- √ Compile all relevant data and records (Receptor Survey Forms, field notes, photographs, consultations with third parties, responses to submissions, etc.) into a final Project Archive for use by the Archaeological Consultant and others with responsibility for implementing the Cultural Heritage mitigations/planning conditions.

OUTPUTS

- Responses to queries and submissions relevant to CHIA, where required (**Output Ref. 4.0a**).
- Draft Brief of Evidence on CHIA for Oral Hearing, where required (**Output Ref. 4.0b**).
- Final Brief of Evidence on CHIA for Oral Hearing, where required (**Output Ref. 4.0c**).
- Present Brief of Evidence and respond to questions at Oral Hearing, where required (**Output Ref. 4.0d**).
- Review CHIA aspects of approval and the Schedule of Environmental Commitments, where required (**Output Ref. 4.0e**).
- Draft Method Statements (including mapping) to accompany a licence application for archaeological works, where required (**Output Ref. 4.0f**).
- Cultural Heritage input to the updated CEMP (**Output Ref. 4.0g**), where required.
- Phase 4 Project Archive (**Output Ref. 4.0h**).

6.6.1 Phase 4 Purpose and Scope

The purpose of Phase 4 is to advance the project through the statutory processes and secure approval from the Competent Authority (i.e. An Bord Pleanála) or the Local Authority Planning Department as applicable. The appropriate statutory process shall have been determined during earlier phases wherein the appropriate environmental evaluation is undertaken and reported.

Phase 4 involves compiling documentation and participating in Oral Hearing(s), where required, to ensure that the proposed project is developed in accordance with planning and environmental legislation (TII 2023a (**PE-PMG-02041**)), thus:

- a proposed road development/Project requiring an EIA will be submitted to An Bord Pleanála pursuant to Section 51 of the Roads Act 1993 (as amended),
- a project requiring an Appropriate Assessment but not an EIA will be submitted to the Board pursuant to Section 177AE of the Planning and Development Act 2000 (as amended),
- a project requiring Part 8 approval will be subject to the requirements of, among other things, Section 179 of the Planning and Development Act 2000 (as amended) and Part 8 of the Planning and Development Regulations 2001 (as amended), and
- 'Sub-threshold' developments (i.e. below the threshold for automatically requiring an EIA) need to be screened for EIA on a case-by-case basis.

For more information on EIA and the approval processes referred to above, see **Sections 3.2** and **3.3**.

During Phase 4, the statutory and non-statutory stakeholders may provide submissions/observations/objections to the proposed project which need to be considered by the Competent Authority or the Local Authority Planning Department as applicable. This is applicable to both EIA and non-EIA projects.

6.6.2 Role of the Cultural Heritage Professional (Phase 4)

The Cultural Heritage Professional will need to provide input to the approvals process by, among other things:

- reviewing Cultural Heritage issues raised in submissions to the consenting process and drafting responses, where required, including relevant submissions catalogued under other environmental factors (e.g. Landscape, Population and Human Health),
- reviewing and drafting responses to any Cultural Heritage related requests for further information issued by the Competent Authority/Local Authority,
- reviewing and, if necessary, updating any aspect of the CHIA (e.g. assessing any changes made to the project because of objections/concerns) and documenting same,
- drafting a Cultural Heritage Brief of Evidence, where a public Oral Hearing is to be held, in relation to Cultural Heritage aspects, including responses to submissions,
- finalising the Cultural Heritage Brief of Evidence,
- preparing errata outlining any errors identified within the original EIAR; the errata report/schedule will inform a review/update of the CHIA, and address any other substantial changes to the proposals (e.g. if new blasting locations/quarries are proposed),
- taking part in Oral Hearing preparation meetings/workshops, as required,
- presenting the Cultural Heritage Brief of Evidence at the public Oral Hearing and responding to any questions on Cultural Heritage aspects from the public, other bodies, or the inspector for the Competent Authority/Local Authority,

- reviewing and, if necessary, updating the CHMP and Cultural Heritage aspects of the Schedule of Environmental Commitments (e.g. receptors that will be subject to archaeological excavation, building recording, topographical surveys, oral history recording, and/or monitoring),
- reviewing and reporting on any Cultural Heritage aspects addressed in the decision of the Competent Authority/Local Authority and planning inspector's report,
- providing input to the updated CEMP, where required (see **Section 6.5.5** above),
- preparing draft archaeological services Method Statement (including mapping) to accompany a licence application for archaeological works, where required (see **Section 6.6.3** below), and
- preparing a detailed Project Archive for use by the Archaeological Consultant engaged to deliver the archaeological requirements of a project post-consent and others with responsibility for implementing the Cultural Heritage mitigations/planning conditions.

In the lead-up to the Oral Hearing, it may be necessary to consult the public and/or public bodies (e.g. NMS, Local Authority) further, and/or carry out additional site visits. This needs to be documented and updates shall be made, if necessary, to the CHD, Schedule of Environmental Commitments and CHMP.

In the event of a Judicial Review, there may be a need for the Cultural Heritage Professional to review affidavits as may relate to Cultural Heritage and provide further information/ clarification to the legal team. As there may be a considerable time gap between the Oral Hearing and the award decision in this situation, additional archaeological sites and monuments may have been identified in the intervening period. The Cultural Heritage Professional shall therefore carry out a review of the statutory inventories and the Database of Irish Excavation Reports (www.excavations.ie) and report on same to the Project Archaeologist/Project Manager, as required.

At the end of Phase 4, the Cultural Heritage Professional shall ensure that all information necessary for the successful implementation of EIAR commitments and procurement of enabling works contracts is supplied to the Project Archaeologist/Project Manager. This will include submission of a detailed Project Archive containing the final CHD, spatial data, maps, field notes, photographs, completed Receptor Survey Forms for the Cultural Heritage Receptors that require mitigation, specialist reports/data, and any other relevant records. As it is highly likely that Phases 5–7 services will be undertaken under a separate contract to the CHIA and by a separate Archaeological Consultant, the information handed over needs to be complete and accurate to ensure the efficient procurement and delivery of these services and the commitments made within the EIAR/Schedule of Environmental Commitments.

6.6.3 Archaeological Method Statements for Licences and Consent

Once approval for the project has been received, the Cultural Heritage Professional shall prepare draft archaeological services Method Statements to accompany applications for relevant archaeological licences/consents as part of the Phase 4 outputs (**Output Ref. 4.0f**). These will address the services to be undertaken during Phase 5 (as listed in **Table 6.1**) and will reflect the mitigations/remediations outlined in the CHMP and final Schedule of Environmental Commitments, as well as any relevant conditions of planning approval.

6.7 Phase 5: Enabling and Procurement

6.7.1 Phase 5 Purpose and Scope

The purpose of Phase 5 is to procure and deliver enabling works contracts, prepare construction and implementation documentation, and procure the construction and/or implementation contract. It involves compiling tender documentation to allow for the appointment of a Contractor to execute the Main Contract and undertake enabling works to facilitate the project (TII 2023a (**PE-PMG-02041**)).

The Cultural Heritage Professional engaged to carry out the CHIA during Phases 1–4 may not have any direct involvement during Phases 5–7 as a separate Archaeological Consultant is usually engaged to deliver the archaeological requirements of a project post-consent (refer to **Section 1.8**). However, Cultural Heritage Professionals need to be aware of and have due regard to the requirements of these phases as set out below, and ensure that the data, records/archives, reports, and other outputs arising from the CHIA are standardised and of the required high quality to ensure the efficient delivery of these post-consent phases.

The objectives of Phase 5 in terms of Cultural Heritage are to ensure the commitments made in the EIAR/ER and/or planning conditions are implemented and that adverse effects on Cultural Heritage are avoided, prevented and reduced, and/or remedied/offset as a last resort, where necessary. This includes ensuring that archaeological and other Cultural Heritage works are carried out in accordance with:

- the approved design and specification,
- the Schedule of Environmental Commitments,
- planning and licensing conditions,
- CHMP and CEMP (where applicable), and
- relevant best practice standards and legislation.

In the case of Archaeological Heritage and Built Heritage, Phase 5 will ensure that any Cultural Heritage Receptors that cannot be preserved *in situ*, or portions thereof, shall be preserved by record in accordance with Government policy. It is best practice to carry out all Cultural Heritage mitigation during Phase 5, prior to the award of the Main Construction Contract (see **Section 6.7.3** below).

In certain situations, the services of an accredited Conservation Architect or Conservation Engineer may be required (e.g. to carry out conservation assessments and condition surveys for specific structures, or to advise on suitable finishes and materials). Similarly, where a project encounters potentially complex Intangible Cultural Heritage issues, the services of an appropriately qualified and experienced folklorist, toponymist, historian, or ethnographer/ anthropologist may be required to record and archive cultural information. Specialists engaged in collecting oral history/folklore in relation to a TII project shall adhere to best practice in recording methods, ethical standards, GDPR and archiving (see **Section 5.4.4.3**).

6.7.2 Phase 5 Outputs

Outputs for ‘Employer Designed’ and ‘Design and Build’ projects by the Archaeological Consultant during Phase 5 shall include:

- schedules and specifications incorporating applicable measures set out in the CHMP, planning conditions and the Schedule of Environmental Commitments from Phases 3 and 4,
- licence applications and final Method Statements relating to archaeological works required post-consent,

- incorporation of Cultural Heritage details in the CEMP for the project, where applicable,
- reports detailing the results of advanced archaeological and built heritage works undertaken (refer to **Table 6-1**),
- dissemination outputs (refer to **Table 6-1**), and
- accompanying spatial data in Irish Transverse Mercator (ITM) format, in a consistent defined data format, to align with Preparation and Delivery Requirements for As-Built Records (TII 2013 (**CC-CMG-04001**)).

6.7.3 Advance Archaeological and Built Heritage Works

Archaeological consultancy services contracts may be required to deliver aspects of the Schedule of Environmental Commitments or may, in any event, be required in advance of the Main Contract. All archaeological works shall be carried out in accordance with the Code of Practice for Archaeology (refer to **Section 1.4**), the approved Schedule of Environmental Commitments, and conditions of planning/licensing. The Project Manager, in conjunction with the Project Archaeologist, shall ensure that all necessary permissions, consents, directions and licences (statutory and non-statutory) are in place for all archaeological aspects of the project.

The following stages apply to archaeological enabling works contracts:

- Stage (i) Test Excavations and Survey Services Requirements,
- Stage (ii) Pre-Excavation Services Requirements,
- Stage (iii) Excavation & Post-Excavation Assessment Services Requirements, and
- Stage (iv) Post-Excavation & Dissemination Services.

Stages (i), (ii) and (iii) above are recommended to be carried out during Phase 5 to minimise the impact on the Main Construction Contract. These works are listed below in more detail in **Table 6.1**. Any further works (e.g. residual monitoring/mitigation) will generally take place during Phase 6.

The Project Manager, in conjunction with the Project Archaeologist, will:

- ensure the incorporation of planning and licensing conditions and Cultural Heritage aspects of the Schedule of Environmental Commitments, if any, into the design and the project plan,
- advise the Roads Authority in relation to the required services,
- oversee procurement of an Archaeological Consultant and/or Specialist Heritage Contractor on behalf of the Roads Authority, and
- supervise the archaeological and built heritage services on behalf of the Roads Authority.

The Roads Authority shall apply for the necessary authorisations for all archaeological aspects of the project using the archaeological services Method Statement initially developed by the Cultural Heritage Professional during Phase 4 as finalised by the Archaeological Consultant appointed to undertake the archaeological services. The Archaeological Consultant shall have input in securing the necessary permissions for archaeological excavations, archaeological monitoring, metal-detecting, dive surveys, etc. in consultation with the Project Archaeologist.

The Roads Authority shall ensure that procedures are in place for reporting any previously recorded and newly identified sites encountered to the Minister.

If, during the archaeological enabling works contracts, a new discovery is made that is considered to be highly important by reason of its historical, architectural, traditional, artistic, cultural or archaeological interest, then the Project Manager, in conjunction with the Project Archaeologist, will determine its preservation requirements in consultation with the relevant authorities and in accordance with regulatory and legal requirements. This may require a separate EIAR to allow for the site to be fully excavated, or for the project to be altered.



Plate 6.1 - Stage (i)a Standard Test Excavations (Photo: AMS)

Table 6.1 - Advance archaeological and built heritage works potentially required post-consent

Stage	Sub-Stage	Type
Stage (i)	Test Excavation & Survey Services	
	Stage (i)a	Standard Test Excavations
	Stage (i)b	Site-Specific Test Excavations
	Stage (i)c	Test Excavations in Wetland/Scrub
	Stage (i)d	Underwater Surveys
	Stage (i)e	Built Heritage Surveys
	Stage (i)f	Townland Boundary Surveys
	Stage (i)g	Topographical Surveys
	Stage (i)h	Metal Detector Surveys
	Stage (i)i	Geophysical Surveys

Stage	Sub-Stage	Type
	Stage (i)j	Aerial Surveys
	Stage (i)k	Monitoring During Construction
	Stage (i)l	Palaeo-environmental/Geoarchaeological Coring, Analysis and Reporting
	Stage (i)m	Test Excavations in Felled Forestry
Stage (ii)	Pre-Excavation Services	
Stage (iii)	Excavation & Post-Excavation Assessment Services	
Stage (iv)	Post-excavation & Dissemination Services	



Plate 6.2 - Stage (iii) Excavations (Photo: TII)

An outline of items to be considered in the preparation of archaeological consultancy services contracts is contained in appendix A5.5 of the PMMs (TII 2023c (**PE-PMG-02042**); TII 2023d (**PE-PMG-02043**)). For further information on the roles of the Project Manager and Project Archaeologist, refer to **Section 1.7**.

Phase 5 outputs by the Archaeological Consultant include input to the final CEMP which is designed to support the Main Contractor in their day-to-day management of the environmental mitigation measures during construction, and TII in their enforcement role during the construction and post-construction phases (refer to **Section 1.9**).

The Archaeological Consultant undertaking post-consent services shall be responsible for:

- completion of Stage (iv) archaeological analysis and reporting,

- deposition of Archaeological Objects and records/archives with the statutory authorities (i.e. NMI, NMS),
- submission of Cultural Heritage reports, associated data and other records to TII for inclusion in the TII Digital Heritage Collections, and
- dissemination of the results of excavations and monitoring to the public.

These works shall be overseen by the Project Archaeologist and delivered by the relevant contractors. As noted above, the Cultural Heritage Professional engaged to carry out the CHIA during Phases 1–4 shall have due regard to these requirements and ensure that the data, reports, records/archives, and other outputs they submit are standardised and of the required high quality to support the delivery of archaeological services by the Archaeological Consultant and accompany the corpus of material to be handed over at Phase 7.

Stage (iv) Dissemination Services include dissemination of the results of excavations and monitoring to the public. This is in part achieved through the upload of reports to the TII Digital Heritage Collections. The Archaeological Consultant shall ensure that the following requirements are met in this regard:

- deposition of Archaeological Objects with the NMI, accompanied by a copy of the investigation report, in accordance with the requirements of the NMI and the conditions of licences for archaeological works (refer to Section 6.7.4 below),
- submission of reports and records with the NMS in line with NMS requirements and the conditions of licences for archaeological works (refer to Section 6.7.5 below),
- submission of all final technical reports, records/archives, and relevant datasets to TII for inclusion in the TII Digital Heritage Collections and dissemination through a publicly accessible platform (refer to Section 6.7.6 below), and
- submission of a spreadsheet (in MS Excel or equivalent) containing the required metadata for all final relevant reports and datasets to facilitate upload to the TII Digital Heritage Collections (refer to Section 6.7.6 below).

6.7.4 National Museum of Ireland Submission Process

All Archaeological Objects that have no known owner at the time of discovery are State property. The NMI is the statutory repository for all Archaeological Objects, including those found during archaeological investigations (see **Appendix 3**). Deposition of Archaeological Objects should be carried out in accordance with the requirements of the NMI and the conditions of licences for archaeological works.

Following completion of any required conservation and specialist analyses, Archaeological Objects are to be deposited at the NMI Collections Resource Centre, which must be arranged in advance with the Irish Antiquities Division, NMI. Deposition occurs after the submission and approval of the specific MS Excel format object records (in accordance with the template provided to excavators by the NMI) and usually following inspection of the collections proposed for deposition. The current procedure for depositing finds in the NMI is outlined in the *Standards for the Care and Treatment of Archaeological Objects from Excavations* (NMI 2022).

6.7.5 National Monuments Service Archive Unit Submission Process

The NMS Archive Unit is the repository for all archaeological investigation reports prepared under licence, as well as excavation site records and archives. Submission of reports and archive material should follow NMS requirements and comply with the conditions of licences for archaeological works.

6.7.6 TII Digital Heritage Collections Submission Process

All final technical reports and relevant datasets and records should be submitted to TII for inclusion in the TII Digital Heritage Collections and dissemination through a publicly accessible platform. The TII collection is part of the Digital Repository of Ireland (DRI) and joint standards for the collection policy, terms and conditions and submission requirements of all types of data and digital assets must be met. DRI's digital platform ensures data meet a high degree of consistency and, once submissions are reviewed, online publication or access to the data is possible. Cultural Heritage Professionals and Archaeological Consultants shall therefore make themselves aware of and comply with DRI metadata requirements and/or standards.

Archaeological Excavation Reports are a subcollection in the TII Collection; all fieldwork reports from monitoring, testing and excavation as well as specialist reports and post-excavation details should be submitted for inclusion. Archaeological geophysical reports are held under a separate subcollection heading and therefore should be marked for submission to that part of the collection. Documents should meet TII standards as set out in *Notes for Authors, Illustrators and Editors in the TII Heritage Series* (TII 2023g (**GE-ARC-01034**)). Any relevant datasets may also be submitted for inclusion in the TII section of the government's open data portal (<https://data.tii.ie>).

To facilitate the upload of reports to the TII Digital Heritage Collections, the Archaeological Consultant shall prepare and submit a spreadsheet (in MS Excel or equivalent, as agreed in advance with the Project Archaeologist) containing the required metadata for each report upon the completion of the reporting requirements in each Stage Service.



Plate 6.3 - Stage (i) core sampling (Photo: NUI Galway)

6.8 Phase 6: Construction and Implementation

6.8.1 Phase 6 Purpose and Scope

Phase 6 involves administration and execution of the Main Contract and, if applicable, the completion of enabling works contracts in accordance with the design, specification, relevant standards and legislation. The Cultural Heritage data collected in previous Phases will be required during this Phase as a range of activities will need to be carried out by the Project Archaeologist following planning consent, including:

- ensuring the integration of Cultural Heritage mitigation and enhancement measures into the design and project implementation plans, and
- consultation and liaison with statutory and non-statutory agencies (e.g. NMS, Local Authority).

The requirements for the implementation of the EIAR commitments, licensing conditions, and/or construction contract requirements as they relate to Cultural Heritage, should be incorporated as contractual requirements for the construction and post-construction phases. These shall be detailed in the CEMP prior to commencement of construction (Phase 5), where applicable, and updated during Phase 6, where required. This may include further works to be carried out by an Archaeological Consultant (e.g. archaeological monitoring during construction) and/or Specialist Heritage Contractor (e.g. vibration monitoring of buildings/structures). The tasks to be carried out by the Archaeological Consultant are outlined below.

6.8.2 Monitoring

Monitoring by or on behalf of Local Authorities, as required under the EIA Directive, is carried out during the construction and operation stages of the project and provides assurance that the mitigation measures are being implemented and are effective in meeting their objectives (EPA 2022, p.61).

Monitoring in this context involves the observation, measurement, and evaluation of the efficiency of mitigation measures. It should not be confused with 'archaeological monitoring' which involves an archaeologist being present during development works to identify and protect archaeological deposits, features, or objects (DAHGI 1999a, p.28).

6.8.3 Role of the Project Archaeologist (Phase 6)

The Project Archaeologist, in conjunction with the Project Manager, shall manage and supervise, as necessary, archaeological and other heritage works required during the Main Contract. This may include archaeological monitoring of the topsoil stripping along the project, while exclusion zones may also be established on the site if archaeological resolution works have not been completed prior to the commencement of the Main Contract.

The Project Archaeologist is responsible for consultation with the relevant Government Department in accordance with the Code of Practice for Archaeology (refer to **Sections 1.4** and **1.7**).

The Project Manager, in conjunction with the Project Archaeologist, shall ensure that any commitments made in the environmental evaluation documentation, or via Ministerial Directions, regarding the protection of the Archaeological Heritage are adhered to during the Main Contract.

In the event of archaeological sites/features being uncovered during the Main Contract, the Project Archaeologist shall determine, in conjunction with the Project Manager and in consultation with the NMS, the preferred means of preservation (i.e. preservation by record or preservation *in situ*) and appropriate protection measures. Should the relevant Minister determine that an archaeological site discovered during the works constitutes a National Monument, then this may require a separate EIAR to allow for the site to be fully excavated, or for the project to be altered (refer to **Appendix 3**).



Plate 6.4 - Archaeological monitoring during works (Photo: TII)

6.9 Phase 7: Close-out and Review

Phase 7 involves the completion of all outstanding contractual and residual issues relating to the project. All relevant reports and datasets/records shall be archived during this Phase, including details showing the extent of archaeological investigations carried out under Phase 5 and Phase 6 and any new archaeological sites that were recorded (including GIS/CAD files).

Confirmation shall be provided that archives and Archaeological Objects have been deposited with the NMS and NMI, respectively. Finally, all archaeological reports and datasets/records shall be provided to TII by the Archaeological Consultant.

The following tasks shall be carried out by the Archaeological Consultant:

- Deposition of Archaeological Objects and archives with the relevant statutory authorities (NMI, NMS).
- Submission of Cultural Heritage reports for inclusion into the TII Digital Heritage Collections.
- Dissemination of the results of excavations and monitoring to the public.
- Provision of datasets/records to TII.

6.9.1 Phase 6 Outputs

Outputs for 'Employer Designed' and 'Design and Build' projects by the Archaeological Consultant during Phase 6 shall include:

- completion of Phase 5 archaeological analysis and reporting,
- schedules and specifications, incorporating applicable measures set out in the CHMP, planning and licensing conditions and the Schedule of Environmental Commitments from Phases 3 and 4,
- licence applications and final Method Statements for the archaeological monitoring of Phase 6 construction works,
- incorporation of Cultural Heritage details into the CEMP for the project, where applicable,
- reports detailing the results of advanced archaeological and built heritage works carried out post-consent (refer to **Table 6-1**),
- dissemination outputs (refer to **Table 6-1**),
- submission of Cultural Heritage reports and datasets/records for inclusion into the TII Digital Heritage Collections, and
- accompanying spatial data in ITM format, in a consistent defined data format, to align with *Preparation and Delivery Requirements for As-Built Records* (TII 2013 (**CC-CMG-04001**)).

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Appendix 1 - Definition of a Qualified and Competent Cultural Heritage Professional

The EIA Directive (transposed into Irish law under Section 52(a) of the European Union (Roads Act 1993) (Environmental Impact Assessment) (Amendment) Regulations 2019) requires EIARs to be prepared by 'competent experts'. Whether a TII project is subject to EIA or not, all Cultural Heritage Professionals who carry out CHIA on TII projects must be suitably qualified, experienced, and competent, and it is the responsibility of the developer (e.g. the Roads Authority) to ensure that this is the case.

The Roads Authority must document the criteria (along with the underlying rationale) it has devised to ensure that its Cultural Heritage Professionals are qualified, competent, and have sufficient expertise for the work they are undertaking. The Roads Authority shall also document how these criteria have been applied in the selection of its Cultural Heritage Professionals. The following guidance is provided to assist Roads Authorities in meeting these responsibilities.

Competence is reflected by an appropriate combination of expertise, experience, skills, and knowledge (EPA 2022, p.14), and can be demonstrated through relevant qualifications, membership of, or accreditation by, a relevant professional body (e.g. Institute of Archaeologists of Ireland, etc.) and/or experience on past projects. The Project Manager in consultation with the Project Archaeologist, shall satisfy themselves that persons carrying out CHIA are qualified, competent, and possess the appropriate expertise in the specialism(s) concerned.

Depending on the PMG Phase and the nature and complexity of the project, a range of specific competencies may be needed (Archaeological Heritage, Architectural/Built Heritage, history, folklore, etc). Requirements may be increased or decreased by, or in consultation between, the Project Manager, Technical Advisor/Environmental Coordinator (where applicable) and the Project Archaeologist on a case-by-case basis.

Some Cultural Heritage Professionals may have the required qualifications, skills, and experience to address all aspects of Cultural Heritage (Archaeological Heritage, Built Heritage, Intangible Heritage), while others may need to subcontract certain tasks to other specialists. Where the Cultural Heritage Professional lacks the required expertise in a particular specialism, they shall ensure that a qualified and competent specialist is engaged to undertake tasks on their behalf, as required.

Minimum qualifications for Cultural Heritage Professionals addressing Archaeological Heritage are a third-level degree (National Framework of Qualifications (NFQ) Level 8, and/or NFQ Level 9, or equivalent levels) in archaeology and/or a related discipline. Such persons shall have professional knowledge and experience of the monumental and portable heritage and related assessment and regulatory processes. Specific tasks may require additional training, expertise and/or qualifications, and consents (e.g. archaeological excavation, archaeological monitoring, geophysical surveys, geoarchaeology, Lidar analysis, dive surveys). Where archaeological test excavations, monitoring, geophysical surveys, metal detection and/or underwater archaeological assessments are required to inform a CHIA, the lead archaeologist undertaking such work shall be suitably qualified and experienced and eligible to hold the relevant excavation or survey licence(s). The appropriate licences/consents shall be obtained prior to commencement of such work, and the lead archaeologist shall ensure compliance with all licensing requirements and conditions.

Minimum qualifications for Cultural Heritage Professionals addressing Built Heritage are a third-level degree (NFQ Level 8, and/or NFQ Level 9, or equivalent levels) in built/architectural heritage, architectural conservation and/or a related discipline. The Built Heritage Specialist shall have relevant experience in some or all of the following activities:

- undertaking Built Heritage surveys,
- evaluating Protected Structures, historic structures, structures in ACAs, and their settings,
- preparing and evaluating architectural heritage assessment reports,

- preparing and evaluating conservation plans and/or conservation management plans,
- preparing practical measures to mitigate adverse impacts on the Built Heritage, and/or
- undertaking other projects which demonstrate a proven experience and knowledge of the Built Heritage in its many forms.

In certain situations, the services of an accredited Conservation Architect and/or Conservation Engineer may be required (e.g. to carry out conservation assessments and condition surveys for specific structures, or to advise on suitable finishes and materials). Landscape historians and ecologists may also need to be involved in CHIA (e.g. when assessing the importance of a designed landscape).

Similarly, where potentially complex Intangible Cultural Heritage issues are encountered on a project, the services of an appropriately qualified and experienced folklorist or ethnographer/anthropologist experienced in recording, interpreting, and evaluating oral history and traditions, and/or a historian familiar with early medieval and medieval literature, may be required.

As a minimum, all Cultural Heritage Professionals carrying out surveys and assessments for CHIA shall have:

- a thorough knowledge of relevant legislation, standards, and guidelines,
- an understanding of the legal context of the decision-making process,
- an ability to identify and evaluate Cultural Heritage Receptors,
- an understanding of the criteria for the evaluation of importance, classification of impacts, and significance of effect,
- appropriate knowledge of the latest and most appropriate methodologies and assessment procedures and the correct interpretation of data,
- an ability to understand and communicate to the Project Team how Cultural Heritage issues may affect the design, construction, and operational phases of a proposed project,
- the capability to produce accurate, focused, and comprehensive research findings,
- a proven background in preparing reports relating to their area of expertise, and
- the ability to prepare Briefs of Evidence and present at public Oral Hearings.

All persons nominated to undertake CHIA and related tasks shall be specified in the Assessment Method Statements which shall be forwarded to the Project Archaeologist and Project Manager for approval prior to the commencement of each Phase.

Appendix 2 - Glossary of Terms

This glossary provides definitions of terms used in these guidelines and standards that may be useful in the preparation of CHIAs.

Term	Definition
Appropriate Assessment	An assessment required under Article 6(3) of the Habitats Directive 92/43/EEC of the effects of a plan or project on the Natura 2000 European network of important ecological sites. The assessment focuses on the plan or project's implications for the site and any potential adverse effects on its integrity.
Approving Authority	An authority, normally the Government Minister, Department or Public Body, with responsibility for implementing Government Policy and for providing funding for capital programmes and projects. In the case of national road and greenway projects, TII normally fulfils the role of the Approving Authority.
Archaeological Consultant	The Archaeological Consultant is a person or company engaged to oversee the archaeological requirements of a project post-consent (Phases 5–7). They may be engaged directly by the developer (Roads Authority) or by the Works Contractor or another subcontractor to carry out specific specialist archaeological tasks. For pre-consent services, see 'Cultural Heritage Professional'.
Archaeological Heritage	The remains and objects and any other traces of humankind from the past, the preservation and study of which help to retrace the history of humankind and our relationship with the natural environment. Archaeological Heritage includes structures, constructions, groups of buildings, developed sites, moveable objects, monuments of other kinds, as well as their context, whether situated on land or under water.
Archaeological Method Statement	A document that accompanies an application for an archaeological excavation licence and outlines the strategy and methodology to be employed during the proposed excavation.
Archaeological Monitoring	An archaeologist being present during development works (which may include conservation works), so as to identify and protect archaeological deposits, features or objects which may be uncovered or otherwise affected by the works.
Architectural Conservation Area	A place, area, group of structures or townscape, taking account of building lines and heights, that is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or contributes to the appreciation of Protected Structures.
Architectural Heritage	An aspect of Built Heritage that includes structures, buildings, traditional and designed, and groups of buildings, including streetscapes and urban vistas, which are of historical, archaeological, artistic, engineering, scientific, social or technical interest, together with their setting, attendant grounds, fixtures, fittings and contents.
Assessment Method Statement	The document outlining, among other things, the methodology for undertaking Cultural Heritage Impact Assessments during the PMG Phases/Stages. The Assessment Method Statement is prepared by the Cultural Heritage Professional and submitted to the Project Archaeologist for approval in advance of each of the relevant PMG Phases/Stages.
Built Heritage	Standing structures that reflect formally designed architecture, specialist craft traditions, or informal vernacular traditions of construction.

Term	Definition
	These structures comprise a wide variety of types, including houses, places of worship, industrial, commercial and transport infrastructure, fortifications, monuments, memorials, walls, quays, and street furniture. The importance of such structures may derive from their architectural quality, aesthetic character, historic associations, artistic production, technical and scientific innovation, and group value.
Competent Authority	The Minister or Public Authority to which an EIAR is required to be submitted (i.e. the authority charged with examining an EIAR with a view to issuing a consent to develop or operate).
Construction Environmental Management Plan	A document that outlines all environmental issues identified prior to construction and potential impacts that may arise during the construction phase of the project, along with mitigation measures.
Contracting Authority	The organisation that procures the construction/implementation contract.
Cultural Heritage	A group of resources inherited from the past which people identify, independently of ownership, as an expression of their constantly evolving values, beliefs, knowledge, and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time. Cultural Heritage is an expression of the lifeways developed by a community and passed on from generation to generation, including customs, practices, places, objects, artistic expression, and values. It includes the Archaeological Heritage, Built Heritage, Portable Heritage and other Tangible and Intangible Cultural Heritage, including, but not limited to, history and folklore.
Cultural Heritage Dataset	A structured dataset containing data relevant to each identified Cultural Heritage Receptor, including geospatial data. The dataset can be produced and analysed using spreadsheets, databases, and GIS. Outputs generated from the CHD can include reports, tables, statistics, maps, and drawings.
Cultural Heritage Impact Assessment	A process for identifying Cultural Heritage Receptors in the study area for a project; identifying the potential impacts of the project on those receptors; and proposing measures to mitigate the effects of these impacts if negative or enhance the effects if positive.
Cultural Heritage Mitigation Plan	A document prepared by the Cultural Heritage Professional during PMG Phase 3 to outline the specific measures proposed to mitigate adverse effects on Cultural Heritage, including Cultural Heritage Receptors to be avoided and protected during construction of a project. These measures can be incorporated into the Schedule of Environmental Commitments (for projects requiring EIA) and the Construction Environmental Management Plan.
Cultural Heritage Professional	A professional who provides Cultural Heritage services during PMG Phases 1–4. Such professionals can include archaeologists, built heritage experts, conservation architects, conservation engineers, folklorists, historians, landscape historians, anthropologists/ethnographers and toponymists.
Cultural Heritage Receptor	Any element of the environment of known or potential Cultural Heritage interest, which is subject, or potentially subject, to impacts/effects because of a project.
Curtilage	The parcel of land immediately associated with a structure, and which is (or was) in use for the purposes of the structure.

Term	Definition
	It should be noted that the meaning of ‘curtilage’ is influenced by other legal considerations besides protection of the architectural heritage and may be revised in accordance with emerging case law.
Designated	A Cultural Heritage Receptor that has been assessed by a relevant authority as important and requiring formal protection and/or inscription on a statutory heritage register.
Design Team	The group of experts, including internal (e.g. NRO/PO) designers and/or external engineering, environmental, valuation and legal advisors, who are responsible for all aspects of the project design, up to and including the award of the Main Construction Contract (and for employer design projects after the awarding of a construction contract). See also Project Team.
Digital Repository of Ireland	A trusted national infrastructure (based in the Royal Irish Academy) for the preservation, curation, and dissemination of Ireland’s humanities, social sciences, and cultural heritage data. This hosts the TII Digital Heritage Collections.
Enabling Works Contracts	Works contracts required in advance of the Main Construction Contract.
Environmental Coordinator	The person (or team) assigned responsibility for overseeing the planning, execution, delivery, and management of the environmental requirements of a project.
Intangible Cultural Heritage	The social practices, rituals and festivities, arts, oral traditions and expressions, language, knowledge, crafts, and sports—as well as the instruments, objects, artefacts, and cultural spaces associated therewith—that communities and individuals recognise as part of their Cultural Heritage. Intangible Cultural Heritage is transmitted from generation to generation, is constantly recreated by groups in response to their environment and history and provides a sense of identity and continuity.
Landscape	An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors. It includes areas, sites, vistas, and features of considerable scenic, archaeological, geological, historical, ecological, or other scientific interest.
Main Construction Contract	The Contract awarded at PMG Phase 6, which appoints a Contractor to (design and) construct a project in accordance with the Contracting Authority’s requirements, environmental commitments, and statutory obligations.
Monitoring	The observation, measurement, and evaluation of environmental data to follow changes over a period of time, to assess the efficiency of control measures, and to record any unforeseen effects in order to undertake appropriate remedial action. This is typically a repetitive and continued process carried out during construction, operation or decommissioning of a project.
National Monument	National Monument means a monument or the remains of a monument the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic, or archaeological interest attaching thereto.
Natura Impact Statement	A statement/report of a scientific examination of the likely and possible impacts of a plan or project on a Natura 2000 site(s), to identify and characterise any possible implications for the site in view of the site’s conservation objectives, and to enable a consent authority to carry out an Appropriate Assessment.

Term	Definition
Portable Heritage	Any Tangible Cultural Heritage that can be moved from one place to another, including moveable archaeological objects.
Project Archaeologist	The individual assigned by TII with responsibility for overseeing the archaeological aspects of a project, in accordance with the Code of Practice for Archaeology.
Project Manager	The person assigned responsibility for the planning, execution, and delivery of a project.
Project Team	The team created to deliver an entire project. Comprises multi-disciplinary team members brought together from different backgrounds, departments and companies, and may include experts from external companies or suppliers. See also Design Team.
Protected Structure	Any structure or specified part of a structure, which is included in, or proposed to be added to, a Local Authority's Record of Protected Structures.
Record of Monuments and Places	A statutory list of monuments and places where archaeological monuments may exist.
Record of Protected Structures	A record compiled by a planning authority for the purpose of protecting structures in its functional area, which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. All county development plans include a Record of Protected Structures.
Recorded Monument	A monument, site or property which is legally protected by its inclusion in the statutory Record of Monuments and Places. These monuments require two months prior written notice to the Minister in advance of commencement of works on or at or in relation to that monument.
Schedule of Environmental Commitments	A document prepared during PMG Phase 3 to summarise the mitigation measures proposed to avoid, reduce or, where possible, remedy/offset adverse effects on the environment. It is updated during the Oral Hearing (PMG Phase 4) to take account of any further mitigation measures agreed by the Sponsoring Agency and/or as required by the Competent Authority to obtain development consent.
Sites and Monuments Record	A publicly-accessible database which contains current information on known archaeological sites and monuments, including whether or not they are scheduled for inclusion in the next issue of the statutory Record of Monuments and Places.
Sponsoring Agency	The Government Department, Local Authority, or other public body or agency that requires a project to be undertaken. In the case of national road and greenway projects, the relevant Local Authority generally fulfils the role of Sponsoring Agency.
Tangible Cultural Heritage	The vast created works of humankind, including places of human habitation, villages, towns and cities, buildings, structures, artworks, documents, handicrafts, musical instruments, furniture, clothing and items of personal decoration, religious, ritual and funerary objects, tools, machinery and equipment, and industrial systems.
Technical Advisor	A person, organisation, or group thereof, engaged, for a limited time period, to provide services that implement established policy objectives; to assist a Contracting Authority in carrying out its operations and functions; or to perform operations or functions that involve skills or capabilities that would normally be expected to reside within the Contracting Authority, but which are not currently available.

Term	Definition
TII Digital Heritage Collections	An online repository established by TII in collaboration with the Digital Repository of Ireland. The collection includes archaeological excavation reports and geophysical survey reports commissioned by TII in relation to Ireland's infrastructure building programme. It also includes seminar papers, audio books and videos.
Transition Zone	A zone, generally within a 50/60km/h speed limit area, passing through areas of low density residential and commercial development and/or industrial areas.
Visual Impact Assessment	The process of evaluating how the views of individuals or groups may be specifically affected by change in the landscape arising from a proposed development. This means assessing changes in specific views and in the general visual amenity experienced by particular people in particular places.
World Heritage Property	Properties which are demonstrated to have Outstanding Universal Value based on the criteria for assessment set out by the World Heritage Committee in the Operational Guidelines to the World Heritage Convention. The Republic of Ireland currently has two properties on the World Heritage List: Brú na Bóinne and Sceilg Mhichíl. Ireland also maintains a Tentative List of those properties it intends to consider for World Heritage nomination.

Appendix 3 - Cultural Heritage Regulatory and Policy Framework

This appendix provides an overview of the regulatory and policy framework within which CHIA is carried out (see also **Figure 3.1** and **Figure 3.2** above). Cultural Heritage Professionals should be aware of, refer to and take account of relevant legislation and guidance as appropriate in undertaking all phases of CHIA. While every effort has been made in preparing these guidelines and standards to ensure references to legislation and regulation are correct, legislation is subject to change and may require legal advice to interpret; there is an onus on the reader to ensure that they are aware of current legislation.

Conventions and Charters

International Charter for the Conservation and Restoration of Monuments and Sites (Venice Charter), 1964

The Venice Charter was adopted by the ICOMOS in 1965 in recognition of the common responsibility to safeguard historic monuments for future generations. The charter sets out guiding principles for the preservation and restoration of ancient buildings, expanding on the basic principles outlined for the first time in the Athens Charter of 1931.

European Convention on the Protection of the Archaeological Heritage (London Convention), 1969

The London Convention affirms that Archaeological Heritage is essential to our knowledge of the history of civilisations. The first step in protecting this heritage should be the application of stringent scientific methods, as illicit excavation—which the Convention was primarily designed to address—can lead to the irreversible loss of scientific information.

The Convention contains fourteen articles that address, among other things, the definition of archaeological objects; agreement to protect deposits and sites/areas of archaeological interest; ensuring that excavations are carried out under authorisation by ‘qualified persons’; dissemination of information and raising public awareness of the value of archaeology for the knowledge of the history of civilisation.

UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage (The World Heritage Convention), 1972

The World Heritage Convention was adopted by UNESCO in Paris in 1972 and was ratified by Ireland in 1991. The Convention defines ‘the kinds of natural and cultural sites which can be considered for inscription on the World Heritage List and sets out the duties of State Parties in identifying potential sites and their role in protecting and preserving them’.

The Operational Guidelines for the Implementation of the World Heritage Convention are updated at intervals; the latest version was issued in July 2021.

ICOMOS Charter on Historic Gardens (Florence Charter), 1982

The Florence Charter on Historic Gardens was drafted by the ICOMOS-IFLA (International Federation of Landscape Architects) International Committee for Historic Gardens and registered by ICOMOS on 15 December 1982 as an addendum to the Venice Charter. The Florence Charter defines an historic garden as ‘an architectural and horticultural composition of interest to the public from the historical or artistic point of view’ and as such is to be considered as a monument that must be preserved in accordance with the spirit of the Venice Charter (ICOMOS 2011b).

European Convention for the Protection of the Architectural Heritage (Granada Convention), 1985

The main purpose of the Granada Convention is to reinforce and promote policies for the conservation and enhancement of Europe's heritage. It was ratified by Ireland in 1997.

The Granada Convention defines Architectural Heritage as:

1. 'monuments: all buildings and structures of conspicuous historical, archaeological, artistic, scientific, social or technical interest, including their fixtures and fittings;
2. groups of buildings: homogeneous groups of urban or rural buildings conspicuous for their historical, archaeological, artistic, scientific, social or technical interest which are sufficiently coherent to form topographically definable units;
3. sites: the combined works of man and nature, being areas which are partially built upon and sufficiently distinctive and homogeneous to be topographically definable and are of conspicuous historical, archaeological, artistic, scientific, social or technical interest (Article 1).'

This definition is widely accepted and used in the formulation of national legislation, policy and guidance for Architectural Heritage, and was incorporated into the Heritage Act 1995. The National Inventory of Architectural Heritage (NIAH) was established to fulfil Ireland's obligations under the Granada Convention.

ICOMOS Charter for the Conservation of Historic Towns and Urban Areas (Washington Charter), 1987

The Washington Charter concerns 'historic urban areas, large and small, including cities, towns and historic centres or quarters, together with their natural and man-made environments'. In Ireland, the Washington Charter is a precursor to the designation of Architectural Conservation Areas under the Planning and Development Acts.

European Convention on the Protection of the Archaeological Heritage (Valetta Convention), 1992

The Valetta Convention superseded the 1969 London Convention and was ratified by Ireland in 1997. Its aims are to protect the Archaeological Heritage as a source of the European collective memory and as an instrument for historical and scientific study. The Valetta Convention defines the Archaeological Heritage as:

'all remains and objects and any other traces of mankind from past epochs:

- i. the preservation and study of which help to retrace the history of mankind and its relation with the natural environment;
- ii. for which excavations or discoveries and other methods of research into mankind and the related environment are the main sources of information; and
- iii. which are located in any area within the jurisdiction of the Parties.

The archaeological heritage shall include structures, constructions, groups of buildings, developed sites, moveable objects, monuments of other kinds as well as their context, whether situated on land or under water (Article 12), (3)).'

The Valetta Convention recognises that Archaeological Heritage is essential to a knowledge of the history of humankind, and is threatened by a range of factors including 'major planning schemes'.

Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention, 1998)

The Aarhus Convention is an international agreement that gives people the right to access information about the environment. It also promotes public participation in decision-making and provides access to justice on environmental matters. It is the leading international agreement on environmental democracy. The Aarhus Convention protects every person's right to live in a healthy environment. It guarantees the public three key rights on environmental issues. It was ratified by Ireland in 2012.

ICOMOS Charter on the Built Vernacular Heritage, 1999

This charter was ratified by ICOMOS in Mexico in October 1999 to establish principles, in addition to the Venice Charter, for the care and protection of our built vernacular heritage. The charter recognises that the built vernacular heritage 'occupies a central place in the affection and pride of all peoples' and 'is the fundamental expression of the culture of a community, of its relationship with its territory and, at the same time, the expression of the world's cultural diversity.'

European Landscape Convention (Florence Convention), 2000

Parties to the Florence Convention agree the importance of European landscapes and of setting out principles for their protection. Ireland signed and ratified the Convention in 2002.

The Florence Convention gives definitions of landscape and various formal/institutional elements for its management and protection. Parties to the Convention agree to recognise landscapes and their protection in law and to establish policies to enable their protection and management. The Convention notes the need to integrate landscape into development/spatial planning and into cultural, social, economic, and environmental policies. Such policies and their implementation should entail engagement with the public and local/regional government.

UNESCO Convention on the Protection of the Underwater Cultural Heritage, 2001

Adopted by UNESCO in 2001, this Convention provides a framework for the protection and management of underwater cultural heritage, which it defines as:

'all traces of human existence having a cultural, historical or archaeological character which have been partially or totally under water, periodically or continuously, for at least 100 years such as:

- i. sites, structures, buildings, artefacts and human remains, together with their archaeological and natural context;
- ii. vessels, aircraft, other vehicles or any part thereof, their cargo or other contents, together with their archaeological and natural context; and
- iii. objects of prehistoric character.'

The Convention provides 'a common legally binding framework for State Parties on how to better identify, research and protect their underwater heritage while ensuring its preservation and sustainability'. In Ireland, underwater cultural heritage is currently protected under the National Monuments Acts 1930 to 2014.

UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (Paris Convention), 2003

Adopted by UNESCO in 2003, this Convention provides a framework for the protection and management of the intangible cultural heritage, which it defines as:

‘the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage’.

The aims of the Paris Convention are to:

- safeguard the Intangible Cultural Heritage,
- ensure respect for the Intangible Cultural Heritage of the communities, groups and individuals concerned, and
- raise awareness at the local, national, and international levels of the importance of the Intangible Cultural Heritage, and of ensuring mutual appreciation thereof.

Ireland ratified the Paris Convention in 2015 and it entered into force in 2016. Ireland’s obligations under the Convention include establishing a National Inventory for Intangible Cultural Heritage to protect, promote and celebrate Irish living Cultural Heritage practices, customs, crafts, and traditions.

Framework Convention on the Value of Cultural Heritage for Society (Faro Convention), 2005

The Faro Convention was opened for signature by Member States in 2005 and entered into force in 2011. Although Ireland has not, at the time of writing, ratified or signed the Faro Convention, its principles are noteworthy. For example, the Convention recognises the potential of Cultural Heritage as a resource for sustainable development and quality of life. It emphasises that every person has a right to engage with the Cultural Heritage of their choice, which includes participating in the processes of identification, study, interpretation, protection, and conservation. It also recognises the need to take into consideration the value attached by each heritage community to the Cultural Heritage with which it identifies.

Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes (The Dublin Principles), 2011

In recognition of the lack of an Industrial Heritage Charter, ICOMOS, working with the International Committee for the Conservation of the Industrial Heritage, developed the ‘Dublin Principles’ of best practice for the conservation of Industrial Heritage. Their adoption by ICOMOS International at their General Assembly in Paris in December 2011 was a major step in the recognition of the importance of Industrial Heritage and the need for its conservation, protection, and enhancement.

The Australia ICOMOS Charter for Places of Cultural Significance (Burra Charter, 2013)

The Australia ICOMOS Charter was adopted by the Australian National Committee of ICOMOS at Burra, South Australia, in 1979. The most recent revision was adopted in 2013. The Burra Charter provides guidance for the conservation and management of places of cultural significance (cultural heritage places) based on the knowledge and experience of Australia ICOMOS members. The Burra Charter has become an internationally accepted standard of practice for those who provide advice, make decisions about, or undertake works at places of cultural significance, including owners, managers, and custodians.

National Legislation

National Monuments Acts 1930 to 2014

In October 2023, the Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 was enacted. It is important to note that most of this Act's provisions will not enter into force until the Minister has made one or more of what are known as 'Commencement Orders'. Accordingly, the National Monuments Acts 1930 to 2014 remain in force and continue to do so at the time of writing.

Under the terms of the National Monuments Acts, the Minister is charged with a range of functions regarding the protection of monuments, wrecks, and Archaeological Objects, including the regulation of activities impacting the Archaeological Heritage (e.g. licensing requirements for archaeological excavation, metal detection and dive surveys).

Different levels of protection apply to a monument depending on which of the categories of designation it falls under (e.g. whether a National Monument or a Recorded Monument). The National Monuments Acts 1930 to 2014 can also protect elements of the Architectural/Built Heritage or offer dual/parallel protection in conjunction with the Planning and Development Act 2000 (as amended) (examples include bridges, mills, warehouses and corn stores).

The following key provisions of the National Monuments Acts should be noted:

- Under the terms of Section 12 of the National Monuments (Amendment) Act 1994 anyone intending to carry out work at or in relation to a Recorded Monument (or a Registered Monument under the terms of Section 5 of the National Monuments (Amendment) Act 1987) must notify the Minister via the National Monuments Service (NMS) at least two months before the works are due to commence. Having notified the Minister, works should not proceed within the two-month notification period except in cases of urgent necessity and with the consent of the Minister. It should be noted that 'works' include Geotechnical/Site Investigations, particularly where ground disturbance is involved (e.g. test pits, boreholes).
- With very limited exceptions, all archaeological excavation (wherever occurring and regardless of whether directed at a known archaeological site or monument) requires an archaeological excavation licence under Section 26 of the National Monuments Act 1930, or Ministerial Consent under Section 14 if carried out on or in proximity to a National Monument. The Minister shall consult the Director of the NMI in writing before granting such consent.
- Section 14A of the National Monuments (Amendment) Act 2004 requires that all archaeological works on an approved road development (i.e. a road development approved by An Bord Pleanála under either or both Sections 49 and 51 of the Roads Act 1993 (as amended) must be carried out in accordance with directions issued by the Minister, following consultation with the Director of the National Museum of Ireland.
- Under the terms of Section 2 of the National Monuments (Amendment) Act 1994, all Archaeological Objects found in the State which have no known owner at the time of finding (i.e. where neither the original owner nor their present legal heirs are known) are State property. The NMI is the State's repository of Archaeological Objects. Finds of Archaeological Objects, including human remains, made other than under an archaeological excavation licence (Section 26), Ministerial Consent (Section 14) or Ministerial Directions must be individually reported to the NMI and not disturbed pending inspection by the NMI (with limited exception).

It should be noted that there is no limitation regarding the date/age of objects in the legal definition of 'Archaeological Objects' and objects of quite recent date may fall within the definition.

- Use of a detection device (e.g. metal detector) to search for Archaeological Objects (or possession of such device on a monument protected under the terms of the National Monuments Acts 1930 to 2014) requires consent under Section 2 of the National Monuments (Amendment) Act 1987 (as amended).
- Section 3 of the National Monuments (Amendment) Act 1987 is the primary piece of legislation for the protection of wrecks over 100 years old and underwater Archaeological Objects irrespective of age. Wrecks that are less than 100 years old, and the potential location of wrecks or Archaeological Objects, may also be protected under Section 3 of the National Monuments (Amendment) Act 1987 by the placement of an 'underwater heritage order' and designation of a 'restricted area' if the wreck, area or object is considered to be of sufficient historical, archaeological or artistic importance to merit such protection. Diving on, survey of, or interference with, wrecks 100 or more years old or underwater Archaeological Objects requires a licence under Section 3 of the National Monuments (Amendment) Act 1987.
- The onus is on applicants for licences (Section 3, Section 26) and consents (Section 14) to demonstrate that the application, including the proposed work or activity and the methodology which will be used, is appropriate. That will include the applicant demonstrating to the satisfaction of the NMS that they have the necessary experience and expertise to undertake archaeological works or have it available as part of their team, where relevant. In the context of TII projects, such applications must be approved by the Project Archaeologist. The Project Manager, in conjunction with the Project Archaeologist, shall ensure that all the necessary permissions, consents, directions and licences (statutory and non-statutory) as required by the National Monuments Acts 1930 to 2014 are in place for all archaeological aspects of the project.
- Alteration of an Archaeological Object requires a licence under Section 24 of the National Monuments Act 1930. The export of Archaeological Objects requires a licence under Section 49 (7) of the National Cultural Institutions Act 1997.
- The National Monuments (Amendment) Act 2004 amends the National Monuments Act 1930 to provide for a situation where an EIA may be required in relation to a changed portion of an already 'approved road development', which is defined as a road development approved under either or both Sections 49 and 51 of the Roads Act 1993 (as amended). Section 5 of the 2004 Act substitutes new provisions for Section 14 of the 1930 Act. Under Section 14A(3) of these provisions, the possibility of having to prepare an EIS (EIAR) for the altered section of a previously approved road scheme only arises where a National Monument is discovered subsequent to the approval of the road by An Bord Pleanála and where neither that approval nor the original EIS (EIAR) deals with the National Monument concerned. In such circumstances, the Minister may issue directions under Section 14A(4)(d) requiring, among other things, the preservation of the monument or its excavation and preservation by record.

For more information, refer to the NRA's *Environmental Impact Assessment of National Road Schemes – A Practical Guide* (NRA 2008); *Framework and Principles for the Protection of the Archaeological Heritage* (DAHGI 1999a); *Policy and Guidelines on Archaeological Excavation* (DAHGI 1999b); *Standards for the Care and Treatment of Archaeological Objects from Excavations* (NMI 2022); and *Archaeology in the Planning Process* (DHLGH/OPR 2021).

Roads Acts 1993 to 2023 and Associated EIA Regulations

The Roads Acts 1993 to 2023 provides for the construction and maintenance of public roads, motorways and related infrastructure. Requirements for EIA are outlined in Sections 50 and 51 of the Roads Act 1993 (as amended) and the European Union (Roads Act 1993) (Environmental Impact Assessment) (Amendment) Regulations 2019. This includes the requirement for the preparation of an EIAR for certain road projects and, submission of the EIAR to An Bord Pleanála (the Competent Authority) for consideration. While statutory public consultation will take place upon submission of the EIAR to the Competent Authority, non-statutory public consultation is facilitated at several stages in the planning process. For more on EIA requirements, see **Section 3.2**. For more on consultation, see **Section 5.4.4**.

Heritage Act 1995

The Heritage Act 1995 is an Act ‘to promote public interest in and knowledge, appreciation and protection of the national heritage’. It established the Heritage Council to provide advice to the Minister and set out policies and priorities for the national heritage. Section 6 (1) of the Act, in setting out the functions of the Council, considers national heritage to include ‘monuments, archaeological objects, heritage objects, architectural heritage, flora, fauna, wildlife habitats, landscapes, seascapes, wrecks, geology, heritage gardens and parks and inland waterways’.

The Act provides, and/or replicates from other legislation, useful definitions for aspects of the national heritage including Archaeology, Archaeological Objects, Architectural Heritage [Built Heritage], landscape, and elements of the natural heritage (flora, fauna, wildlife habitats, geology etc.). ‘Archaeology’ is defined under Section 2(1) of the Act and includes, amongst other things, the study of landscapes. ‘Landscape’ is defined under Section 2(1) of the Act as including ‘areas, sites, vistas and features of significant scenic, archaeological, geological, historical, ecological or other scientific interest’.

National Cultural Institutions Act 1997

Most of the functions of the Minister in relation to the protection of Archaeological Objects are delegated to the Board of the NMI under the terms of the National Cultural Institutions Act 1997. Archaeological Objects found in the State which have no known owner at the time of finding (i.e. where neither the original owner nor their present legal heirs are known) are State property and claimable by the Director of the NMI as the State’s repository for Archaeological Objects. Under Section 49(7) of the National Cultural Institutions Act 1997, it is unlawful to export or attempt to export or sell for export an Archaeological Object (or other articles to which the Act applies) without an export licence issued under Section 50. Application forms for a licence to alter and/or export Archaeological Objects are available from the NMI (for destinations within the EU) or the DHLGH/NMS (for destinations outside the EU).

Planning and Development Act 2000 (as amended) and Planning and Development Regulations 2001 (as amended)

The Planning and Development Act 2000 (as amended) forms the foundation for planning in Ireland. This Act and subsequent amendments and secondary legislation (Planning and Development Regulations 2001) covers a wide range of planning-related issues including the process of applying for and obtaining planning permission for works. It should be noted, however, that the Planning and Development Bill 2023 was published in October 2023, and a new Act is therefore expected.

EIA is required in accordance with EIA Directive 2011/92/EU, as amended by Directive 2014/52/EU as transposed into Irish law through the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018)—which require an assessment of the effects of certain public and private projects on the environment—and the Roads Act 1993 (Environmental Impact Assessment) (Amendment) Regulations 2019 (S.I. No. 279 of 2019).

Schedule 5 of the Planning and Development Regulations 2001 (as amended) identifies the types and scales of development for which an EIA is mandatory, generally based on thresholds of scale, while Schedule 7 provides criteria for determining whether a development would or would not be likely to have significant effects on the environment.

The Act provides for the preservation and protection of the environment and its amenities, including the Archaeological Heritage, Built Heritage, natural heritage, and landscapes. Under Section 51 of the Planning and Development Act 2000 (as amended) planning authorities are required to maintain a Record of Protected Structures (RPS) which includes all structures or parts of structures in their functional areas which, in their opinion, are of 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).

Section 81 makes provision for the creation of Architectural Conservation Areas (ACAs) to preserve the character of a place, area, group of structures or townscape. Part II of the Act requires Planning Authorities to prepare development plans that set out the Council's policies and objectives (including heritage objectives) in relation to proper planning and development.

A Local Authority may carry out works or development in its functional area under Part XI of the Planning and Development Act 2000 (as amended) and Part 8 of the Planning and Development Regulations 2001 (as amended).

For more information, refer to *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment* (DHPLG 2018) and *A Guide to Architectural Heritage* (DHLGH/OPR 2022).

Key Policies and Plans

Framework and Principles for the Protection of the Archaeological Heritage, 1999

Framework and Principles for the Protection of the Archaeological Heritage (DAHGI 1999a) is a seminal policy document that outlines the State's general principles and policies in relation to the management and protection of the Archaeological Heritage. This document states that avoidance of development impacts on Archaeological Heritage, and/or preservation *in situ* of archaeological sites and monuments, is always the preferred option. When a site, or part of a site, must be removed due to development, then preservation by record must be undertaken (i.e. through excavation, recording and publication/dissemination).

It also sets out the roles of Government bodies and the public, and the administrative and legal framework, for protecting the Archaeological Heritage (including Archaeological Objects and Wrecks) and the requirements for archaeological assessment and monitoring (see **Section 4.3.6**). Additional policy and guidelines on archaeological excavation are given in a separate publication (DAHGI 1999b).

National Policy on Town Defences, 2008

This policy addresses the protection, preservation, and conservation of historic urban defences in Ireland. Under this policy, the known and expected circuits of all town defences (both upstanding and buried, whether of stone or embankment construction) and associated features are to be considered a single National Monument and treated as a unit for policy and management purposes. There should be a presumption in favour of preservation *in situ* of archaeological remains and preservation of their character, setting and amenity (DEHLG 2008).

National Development Plan 2018–27

This plan recognises that the State’s heritage portfolio represents a major asset for tourism, as well as reflecting Ireland’s past, its identity, and the sense of place it creates. The State’s natural heritage, biodiversity and Built Heritage will be protected and enhanced as part of this ten-year plan through a multi-million euro programme of public investment.

The National Development Plan also recognises that heritage assets are valued by local communities and are important contributors to wellbeing and social cohesion, and that considerable investment is needed to provide better public access to our historic, built, and natural environment. Enhancing amenities and heritage linked to and integrated with our built, cultural, and natural heritage is a fundamental objective of the National Planning Framework and ‘Enhanced Amenity and Heritage’ is considered a National Strategic Outcome.

Project Ireland 2040

The National Development Plan and National Planning Framework combine to form *Project Ireland 2040* – the Government’s long-term overarching strategy to make Ireland a better country for all its people – which changes how investment is made in public infrastructure. Alongside the development of physical infrastructure, *Project Ireland 2040* supports businesses and communities across all of Ireland in realising their potential.

National Landscape Strategy for Ireland 2015–2025

The *National Landscape Strategy* (DAHG 2015) was formulated to ensure compliance with the European Landscape Convention (Florence Convention) and to establish principles for protecting and enhancing landscape while positively managing its change. The strategy recognises that:

‘Our landscape reflects and embodies our cultural values and our shared natural heritage and contributes to the well-being of our society, environment and economy. We have an obligation to ourselves and to future generations to promote its sustainable protection, management and planning.’

The strategy includes six core objectives and nineteen key actions, including the preparation of a National Landscape Character Assessment and a new set of Landscape Character Assessment Guidelines.

In line with Article 2 of the European Landscape Convention, the National Landscape Strategy recognises landscape as covering rural, urban, and peri-urban areas, encompassing inland water, coastal and marine areas, everyday landscapes, outstanding landscapes, and even degraded landscapes.

Realising our Rural Potential – Action Plan for Rural Development, 2018

The aims of the *Action Plan for Rural Development* are to focus on positive attributes and resources affecting rural Ireland, such as improvements to Ireland’s road network, and to unlock the potential of rural Ireland through a framework of supports at national and local level. It aims to ensure that people who live in rural areas have increased opportunities for employment locally, and access to public services and social networks that support a high quality of life. Partnerships are key to delivery within the Action Plan. Particular focus and importance are placed on safeguarding Ireland’s Archaeological Heritage (DRCD 2018).

Built & Archaeological Heritage Climate Change Sectoral Adaptation Plan, 2019

The *Built & Archaeological Heritage Climate Change Sectoral Adaptation Plan* (DCHG 2019) sets out goals and strategic actions for built and archaeological heritage to address the challenges posed by climate change. It recognises that the direct effects of climate change on heritage may be immediate or cumulative. Damage from catastrophic weather events such as floods and storms is likely to increase at the same time as slow onset environmental-deterioration mechanisms. The way these effects manifest will vary according to the sensitivity of the heritage and its level of exposure. In addition, there will be indirect impacts arising from societal responses to climate change in terms of both adaptation (e.g. changes in land use) and mitigation.

Heritage Ireland 2030 – A Framework for Heritage, 2022

Heritage Ireland 2030 is Ireland's current national heritage plan and recognises the vital role heritage plays in our community, our economy, and our society. It enshrines the shared responsibility of people, communities, businesses, and local and national Government in protecting our heritage and ensuring it is cared for into the future.

Heritage Ireland 2030 is formed around three themes, built on a vision of our heritage being valued and protected for future generations, cherished, and enjoyed. These are:

- Leadership and Heritage,
- Heritage Partnerships, and
- Communities and Heritage.

Each of these themes has specific actions and objectives, shaped by the outcomes of public consultation (DHLGH 2022b).

National Policy on Architecture, 2022

This policy sits within a broad national policy context that includes the National Development Plan and National Planning Framework, the Climate Action Plan 2021, Housing for All, Town Centre First, Our Rural Future, as well as national obligations under the EU Water Framework Directive and sectoral national strategies such as the National Biodiversity Plan 2017–2021, Heritage Ireland 2030 and Culture 2025. These regulations, policies, programmes and strategies respond to European and international commitments which have been put in place to address social and environmental challenges. Government and EU initiatives have set strategic objectives for enhanced amenity and heritage, amongst others.

The National Policy on Architecture recognises that:

'Societal wellbeing requires places that are designed to encourage healthy and inclusive social interaction, accessibility and cultural engagement. Environmental wellbeing requires ... the repair and adaptation of cultural buildings and their settings, and the appropriate design of new buildings and landscapes. The continued development and regeneration of our traditional settlements, villages, towns and cities requires the conservation and re-imagining of our existing built heritage as well as well-considered new architecture' (DHLGH 2022a, p.12).

The National Policy on Architecture has four principal objectives, as follows:

1. **Sustainability:** Respect our past – shape our future: prioritise environmentally sensitive buildings and places to achieve sustainable development goals.
2. **Quality:** Design and deliver quality buildings and spaces for all.
3. **Leadership:** Advocate for leadership to prioritise quality architectural outcomes.

4. **Culture:** Foster a culture which values architecture as both art and science, serving people, place and planet (DHLGH 2022a, p.23).

Appendix 4 - Other Relevant Standards and Guidelines

Cultural Heritage works shall be carried out in accordance with the TII Publications documentation and, in particular, those in the following non-exhaustive list.

Table A.1 - TII Guidance and Standards relevant to Cultural Heritage Impact Assessment and Mitigation

Code	Title	Published	PMG Phase
CC-CMG-04001	Preparation and Delivery Requirements for As-Built Records	March 2013	Phases 5–7
DN-ARC-03076	TII Palaeo-environmental Sampling Guidelines Retrieval, analysis and reporting of plant macro-remains, wood, charcoal, insects and pollen from archaeological excavations [Revision.5: December 2015]	December 2015	Phases 5 & 6
DN-ARC-03077	Dealing with Archaeological Risk at Construction Stage - TII funded Minor & Safety Improvement Schemes	June 2016	Phases 5 & 6
DN-GEO-03028	Location and Layout of On-Line Service Areas	April 2017	Phases 2 & 3
GE-ARC-01033	Communicating Archaeology in the NRA - Publicising Archaeological Discoveries on National Road Schemes in Ireland	December 2010	Phases 5 & 6
GE-ARC-01034	Notes for Authors, Illustrators and Editors in the TII Heritage Series	February 2023	Phases 5 & 6
PE-ARC-02008	Guidelines for the Testing and Mitigation of the Wetland Archaeological Heritage for National Road Schemes	January 2005	Phases 5 & 6
PE-ENV-01101	Landscape Character Assessment (LCA) and Landscape and Visual Impact Assessment (LVIA) of Specified Infrastructure Projects - Overarching Technical Document	December 2020	Phases 2 & 3
PE-ENV-01102	Landscape Character Assessment (LCA) and Landscape and Visual Impact Assessment (LVIA) of Proposed National Roads - Standard	December 2020	Phases 2 & 3
PE-ARC-02010	Cultural Heritage Impact Assessment of TII Projects – Standard	TBC 2024	Phases 1–4
PE-PAG-02031	Project Appraisal Guidelines for National Roads Unit 7.0 - Multi Criteria Analysis	October 2016	Phases 2 & 3
PE-PAG-02032	Project Appraisal Guidelines for National Roads	October 2016	Phase 2
PE-PAG-02036	Project Appraisal Guidelines for National Roads Unit 13.0 – Appraisal of Active Modes	May 2023	Phase 2
PE-PMG-02041	Project Management Guidelines	May 2023	Phases 1–4, Phase 6

Code	Title	Published	PMG Phase
PE-PMG-02042	Project Manager's Manual for Major National Road Projects	May 2023	Phases 1–4, Phase 6
PE-PMG-02043	Project Manager's Manual for Minor National Road Projects	May 2023	Phases 1 & 2
PE-PMG-02047	Project Manager's Manual for Greenway Projects	July 2022	Phase 0–4, Phase 6
RE-ARC-07004	Preparing for the Future: A Reappraisal of Archaeo-geophysical Surveying on Irish National Road Schemes 2001-2010	January 2014	Phase 2, Phase 3, Phase 5
RE-ENV-07008	Environmental Planning of National Road and Greenway Projects	February 2023	Phases 5 & 6
GE-GEN-01101	Guide to the Implementation of Sustainability for TII Projects	July 2023	All

Table A.2 - Other Useful Guidance

Organisation	Title	Published	PMG Phase
An Bord Pleanála	Guidance Note on Providing Spatial Data on Strategic Infrastructure Developments and Strategic Housing Developments	2018	Phases 2 & 3, Phase 6
An Bord Pleanála	Applications for approval for Local Authority Developments made to An Bord Pleanála under 177AE of the Planning and Development Act 2000, as amended (Appropriate Assessment), Guidelines for Local Authorities	N/A	Phase 4
Department of Arts, Heritage and the Gaeltacht	Architectural Heritage Protection: Guidelines for Planning Authorities	2011	Phases 2 & 3, Phases 5 & 6
Department of Arts, Heritage, Gaeltacht and the Islands	Framework and Principles for the Protection of the Archaeological Heritage	1999	Phase 1–3, Phases 5 & 6
Department of Arts, Heritage, Gaeltacht and the Islands	Policy and Guidelines on Archaeological Excavation	1999	Phases 5 & 6
Department of Culture, Heritage and the Gaeltacht	Information Note on Requirement to Submit Reports on Archaeological Excavations in Two Parts	2018	Phase 5
Department of Housing, Local Government and Heritage	NIAH Handbook	2021	Phases 2 & 3, Phases 5 & 6
Department of Housing, Local Government and Heritage	Places for People: National Policy on Architecture	2022	Phases 2 & 3

Organisation	Title	Published	PMG Phase
Department of Housing, Planning and Local Government	Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment	2018	Phase 3
Department of the Environment, Heritage and Local Government	Environmental Impact Assessment (EIA), Guidance for Consent Authorities regarding Sub-threshold Development	2003	Phase 3
Digital Repository of Ireland	Building the Digital Repository of Ireland	2015	Phases 6 & 7
Digital Repository of Ireland	Dublin Core and the Digital Repository of Ireland	2015	Phases 6 & 7
European Commission	Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions	1999	Phase 3
European Commission	Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report	2017	Phase 3
European Commission	Environmental Impact Assessment of Projects: Guidance on Screening	2017	Phase 3
European Commission	Environmental Impact Assessment of Projects: Guidance on Scoping	2017	Phase 3
Environmental Protection Agency	Advice Notes on Current Practice in the preparation of EIS	2003	Phase 3
Environmental Protection Agency	Guidelines on the Information to be contained in Environmental Impact Assessment Reports	2022	Phase 3
Heritage Council	Recording and Conserving Ireland's Industrial Heritage, An Introductory Guide	2002	Phase 5
Inland Fisheries Ireland	Guidelines on the Protection of Fisheries During Construction Works	2016	Phase 3, Phases 5 & 6
Institute of Archaeologists of Ireland	Code of Professional Conduct	2006	All
Institute of Archaeologists of Ireland	Code of Conduct for Archaeological Assessment Excavation	2006	Phase 3, Phases 5 & 6
Institute of Archaeologists of Ireland	Code of Conduct for Archaeological Excavation	2006	Phases 5 & 6
Institute of Archaeologists of Ireland	Code of Conduct for Archaeological Monitoring	2006	Phase 3, Phases 5 & 6

Organisation	Title	Published	PMG Phase
Institute of Archaeologists of Ireland	Code of Conduct for Treatment of Archaeological Objects	2006	Phase 3, Phase 5, Phase 6
Institute of Archaeologists of Ireland	Code of Conduct for Treatment of Human Remains	2006	Phase 3, Phases 5 & 6
Institute of Archaeologists of Ireland	Environmental Sampling: Guidelines for Archaeologists	2007	Phase 3, Phases 5 & 6
National Museum of Ireland	Standards for the Care and Treatment of Archaeological Objects from Excavations	2022	Phases 5 & 6
National Roads Authority	Guidelines for the protection and preservation of trees, hedgerows and scrub prior to, during and post construction of National Road Schemes	2005	Phases 5 & 6
National Roads Authority	Guidelines for the Crossing of Watercourses During the Construction of National Road Schemes	2005	Phases 5 & 6
National Roads Authority	Environmental Impact Assessment of National Road Schemes – A Practical Guide (NRA)	2008	Phase 3
Office of Public Procurement	Capital Works Management Framework (CWMF)	2018	Phase 5
Office of the Planning Regulator/Department of Housing, Local Government and Heritage	Archaeology in the Planning Process	2021	All
Office of the Planning Regulator/Department of Housing, Local Government and Heritage	Appropriate Assessment Screening for Development Management	2021	All
Office of the Planning Regulator/Department of Housing, Local Government and Heritage	A Guide to Architectural Heritage	2022	All

Appendix 5 - Format of the Cultural Heritage Dataset (CHD)

Table A.3 sets out the suggested fields for the Cultural Heritage Dataset at Phase 2, along with content descriptions and links to sources of information. Suggested additional requirements for the CHD at Phase 3 are provided in **Table A.4**. The Phase 1 Constraints Study CHD will largely be limited to the main statutory and non-statutory heritage inventories (National Monuments lists, SMR, RMP, RPS, NIAH, etc.), but should also incorporate any other potentially important Cultural Heritage Receptors identified during the initial desktop research (e.g. from preliminary cartographic or satellite photography analysis).

The fields in this table can be applied to a GIS vector layer and/or to a spreadsheet/database. All relevant Cultural Heritage Receptors should be included in the CHD. A sample entry for Phase 2 is provided in the forthcoming standards, **PE-ARC-02010**.

If the Cultural Heritage Professional wishes to diverge from the suggested structure and content of the CHD, this shall be set out in the Assessment Method Statement to be prepared at each Phase for agreement with the Project Archaeologist.

Table A.3 - Suggested requirements for the Cultural Heritage Dataset (CHD) (Phase 2)

Field Name	Data Type	Description	Source(s)/Notes
ID	Integer	Unique number or primary key applied to each row or entry by geospatial database.	N/A
Receptor No.	Text	Unique identifier assigned by the Cultural Heritage Professional to each Cultural Heritage Receptor in the format CH-001, CH-002, etc. This number should remain with the receptor from the start of the process to the finish and should appear on maps illustrating the CHIA. A single sequence should be followed for all types of Cultural Heritage Receptor.	N/A
Receptor Class	Text	Category of Cultural Heritage Receptor: Archaeological Heritage, Built Heritage, Intangible Cultural Heritage	See Table 5.3, Table 5.4 and Table 5.5

Field Name	Data Type	Description	Source(s)/Notes
Receptor Type	Text	Receptor type, assigned by the Cultural Heritage Professional. Standard terminology shall be used (e.g. ringfort, wreck, vernacular cottage).	See Table 5.3, Table 5.4 and Table 5.5
Distance to Option A	Integer	The shortest distance, expressed in metres (m), between the Cultural Heritage Receptor and Option A	Measurements should be from the known (or reasonably assumed) boundary of the Cultural Heritage Receptor to the Option centreline or the edge of the Assessment Corridor as agreed with the Project Archaeologist and set out in the Assessment Method Statement.
Distance to Option B (etc.)	Integer	The shortest distance, expressed in metres (m), between the Cultural Heritage Receptor and Option B	Measurements should be from the known (or reasonably assumed) boundary of the Cultural Heritage Receptor to the Option centreline or the edge of the Assessment Corridor as agreed with the Project Archaeologist and set out in the Assessment Method Statement.
Receptor Description	Text	Descriptive text of the Cultural Heritage Receptor including its immediate and wider setting, characteristics, size, condition and preservation and any other relevant attributes (e.g. folklore)	
Importance	Text	The importance of Cultural Heritage Receptors shall be evaluated by the Cultural Heritage Professional; A five-level rating system is recommended: Very High - High - Medium - Low - Negligible.	See Section 5.5.1
Receptor Name OS	Text	The name assigned to the receptor on Ordnance Survey mapping if any. Contemporary features within the demesne of landed estates depicted on the 1st edition 6" to 1 mile OS map should be attributed to the estate name.	https://webapps.geohive.ie/mapviewer/index.html

Field Name	Data Type	Description	Source(s)/Notes
Centre X	Integer	Six-digit easting coordinate for the centre of the receptor. Coordinate Reference System: Irish Transverse Mercator EPSG 2157.	
Centre Y	Integer	Six-digit northing coordinate for the centre of the receptor. Coordinate Reference System: Irish Transverse Mercator EPSG 2157.	
Street	Text	Name of street(s) in which receptor is located, where applicable. Spelling to be determined by reference to the Placenames Database of Ireland.	www.logainm.ie Refer to the NIAH Handbook (DHLGH 2021) for guidance on recording location in urban settings
Townland	Text	Name of townland(s) in which receptor is located. Spelling to be determined by reference to the Tailte Éireann National Placenames Gazetteer or the Placenames Database of Ireland.	www.logainm.ie https://data.gov.ie
Civil Parish	Text	Name of Civil Parish(es) in which receptor is located. Spelling to be determined by reference to the Tailte Éireann National Placenames Gazetteer or the Placenames Database of Ireland.	www.logainm.ie https://data.gov.ie
Barony	Text	Name of Barony(ies) in which receptor is located. Spelling to be determined by reference to the Tailte Éireann National Placenames Gazetteer or the Placenames Database of Ireland.	www.logainm.ie https://data.gov.ie

Field Name	Data Type	Description	Source(s)/Notes
County	Text	Name of County(ies) in which receptor is located.	www.logainm.ie https://data.gov.ie
Listed in SMR?	Text	'Yes' or 'No' response.	https://maps.archaeology.ie/HistoricEnvironment/
SMR ID	Text	Thirteen-character identifier assigned to the receptor by the Archaeological Survey of Ireland, determined by reference to Sites and Monuments Record in the Historic Environment Viewer (HEV).	https://maps.archaeology.ie/HistoricEnvironment/
Site Type ASI	Text	Site type assigned by the ASI in the record accessed through the HEV.	http://webgis.archaeology.ie/historicenvironment/
Listed in RMP?	Text	Legal Designation 'Yes' or 'No' response, determined by reference to the relevant RMP	https://www.archaeology.ie/publications-forms-legislation/record-of-monuments-and-places
Scheduled for inclusion in the next revision of the RMP?	Text	Legal Designation 'Yes' or 'No' response, determined by reference to the site description on the HEV	http://webgis.archaeology.ie/historicenvironment/
National Monument?	Text	Legal Designation 'Yes' or 'No' response.	https://www.archaeology.ie/national-monuments/search-by-county Consultation with the Local Authority and/or NMS may be required to confirm the status of National Monuments.
National Monument No.	Text	Identifier assigned to receptor in the National Monuments in State Care: Ownership & Guardianship published list or Local Authority list	https://www.archaeology.ie/national-monuments/search-by-county Contact relevant Local Authority for advice

Field Name	Data Type	Description	Source(s)/Notes
Subject to Preservation Order?	Text	Legal Designation 'Yes' or 'No' response.	https://www.archaeology.ie/sites/default/files/media/publications/po19v1-all-counties.pdf
Listed in Register of Historic Monuments?	Text	Legal Designation 'Yes' or 'No' response.	Contact ASI for advice
Listed in RPS?	Text	Legal Designation 'Yes' or 'No' response.	Refer to relevant RPS/Local Authority
Listed in list of ACAs?	Text	Legal Designation 'Yes' or 'No' response.	Refer to relevant Development Plan/Local Authority
RPS ID	Text	Identifier assigned to receptor in the Record of Protected Structures from the relevant Local Authority Development Plan.	Refer to relevant RPS
Listed in NIAH Building Survey?	Text	'Yes' or 'No' response.	https://maps.archaeology.ie/HistoricEnvironment/ https://www.buildingsofireland.ie/
NIAH Reg. No.	Text	Eight-digit identifier assigned to receptor by the National Inventory of Architectural Heritage, determined by reference to the HEV/Buildings of Ireland website.	https://maps.archaeology.ie/HistoricEnvironment/ https://www.buildingsofireland.ie/
Original Use NIAH	Text	Original use assigned by the NIAH in the record.	https://maps.archaeology.ie/HistoricEnvironment/ https://www.buildingsofireland.ie/
NIAH Importance Rating	Text	Importance rating assigned by the NIAH in the record (International, National, Regional, Local, Record Only).	https://maps.archaeology.ie/HistoricEnvironment/ https://www.buildingsofireland.ie/

Field Name	Data Type	Description	Source(s)/Notes
Listed in NIAH Garden Survey?	Text	Yes' or 'No' response.	https://www.buildingsofireland.ie/
NIAH Survey ID			https://www.buildingsofireland.ie/buildings-search/
Burial Ground ID	Text	Name of burial ground vested in the relevant Local Authority under the terms of the Irish Church Act Sect. 26 (1869) and The Public Health (Ireland) Act Sect. 161 (1878).	
WIID ID	Text	Identifier assigned to a wreck in the National Monuments Service's Wreck Inventory of Ireland Database.	https://www.archaeology.ie/underwater-archaeology/wreck-viewer
Previous Excavation or Survey ID	Text	Licence or registration number(s) assigned by National Monuments Service to archaeological excavation(s)/geophysical survey(s)/ dive survey(s), etc. carried out at the site. Any excavation/survey carried out within the SMR Zone (formerly Zone of Notification) associated with a site on the HEV should be attributed to the site.	https://excavations.ie/advanced-search/ and the NMS archaeological reports finding aid https://www.archaeology.ie/news/updated-finding-aid-archaeological-reports See also TII Digital Heritage Collections https://repository.dri.ie/catalog/v6936m966
Information Source	Text	SMR, NIAH, WIID, etc. For sites not documented in the SMR/NIAH/WIID, etc., please specify the source of information (e.g. local consultation, walkover, NMI registers/topographical files, National Folklore Collection, historical cartography, Lidar data, satellite imagery, etc.).	

Additional CHD requirements for Phase 3 (Environmental Evaluation)

Table A.4 - Suggested additional requirements for the Cultural Heritage Dataset (CHD) (Phase 3)

Field Name	Data Type	Description	Notes
Min X	Integer	Six-digit coordinate for the southwest geographical extent of the receptor: easting. Coordinate Reference System: Irish Transverse Mercator EPSG 2157.	
Min Y	Integer	Six-digit coordinate for the southwest geographical extent of the receptor: northing. Coordinate Reference System: Irish Transverse Mercator EPSG 2157.	
Max X	Integer	Six-digit coordinate for the northeast geographical extent of the receptor: easting. Coordinate Reference System: Irish Transverse Mercator EPSG 2157.	
Max Y	Integer	Six-digit coordinate for the northeast geographical extent of the receptor: northing. Coordinate Reference System: Irish Transverse Mercator EPSG 2157.	
Min Z	Decimal	Lowest elevation of the surface of the receptor: metres to two decimal places. Ordnance Survey Datum Malin Head Height.	
Max Z	Decimal	Highest elevation of the surface of the receptor: metres to two decimal places. Ordnance Survey Datum Malin Head Height.	
Photo Refs.	Text	References to photographs taken during fieldwork that will form part of the Project Archive. This should incorporate the unique reference number(s) as assigned to the Cultural Heritage Receptor by the surveyor.	
Area	Decimal	Area of receptor in hectares, to two decimal places.	

Field Name	Data Type	Description	Notes
Distance	Integer	The shortest distance, expressed in metres (m), between the Cultural Heritage Receptor and the proposed project footprint	Measurements should be from the known (or reasonably assumed) boundary of the Cultural Heritage Receptor to the edge of the proposed project footprint based on current available information
Character	Text	Distinguishing aspects of the receptor (e.g. age, type, condition, material used, and unusual features).	See Information Box 7
Magnitude of Impact	Text	Assessment of the Magnitude of Impact on the Cultural Heritage Receptor. A five-level rating system is recommended: Very High - High - Medium - Low - Negligible.	See Section 5.5.2 and Table 5.7
Sensitivity	Text	How sensitive is the receptor to change? Would the proposed project detract from the character of the receptor?	
Significance of Effect	Text	Assessment of the Significance of the Effect on the Cultural Heritage Receptor. A seven-level rating system is recommended to describe Effects: Profound – Very Significant – Significant – Moderate – Slight – Not Significant – Imperceptible	See Section 5.5.3 of these guidelines and the EPA's EIA Guidelines (EPA 2022, p.53)
Quality of Effect	Text	Assessment of the Quality of the Effect on the Cultural Heritage Receptor (Positive, Negative, None)	See Section 5.5.2
Mitigation Type	Text	Measures proposed for the mitigation of likely adverse effects on the Cultural Heritage Receptor using standard terminology (Avoidance, Prevention, Reduction, or, as a last resort, Remedy/Offsetting)	See Section 5.6
Mitigation Details	Text	Summary of the mitigation proposed.	For example, Remedy/Offsetting might involve, depending on the type of receptor, Stage (i)b Site-Specific Test Excavation, Stage (i)e Built Heritage Survey or Stage (i)f Townland Boundary Survey

Field Name	Data Type	Description	Notes
Enhancement Details	Text	Summary of the enhancement measures proposed, where applicable.	For example, providing information panels or other forms of interpretation to enhance understanding and appreciation of the Cultural Heritage Receptor

Appendix 6 - Information Sources and Repositories

Bearing in mind the objectives and principles of the desktop research set out in **Section 5.4.1**, the following non-exhaustive list of sources and repositories should be consulted, where relevant. Other sources, where practicable, should also be consulted as required on a case-by-case basis.

Archival Sources

- Archive of the National Museum of Ireland
- Bog Commissioners reports and maps
- Bord na Móna records and maps
- Census of Ireland records, including House and Building Returns and Returns of Out-Offices and Farm-Steadings
- Irish Architectural Archive (IAA) records and resources
- Irish Folklore Commission's National Folklore Collection – Schools Collection and Main Collection (www.duchas.ie)
- Irish Historic Towns Atlas (<https://www.ria.ie/research-projects/irish-historic-towns-atlas>)
- Landed Estates Court Rentals
- Local libraries/archives
- National Archives of Ireland
- Office of Public Works (OPW) river drainage files
- Ordnance Survey Name Books, Letters and Memoirs
- Placenames Database of Ireland (www.logainm.ie)
- Public Record Office of Northern Ireland (PRONI)
- Registry of Deeds
- Valuation Office Records, including Griffith's Primary Valuation (1848–62) and Cancelled Books and maps
- Waterways Ireland Digital Archive of engineering drawings, historical photographs, documentaries, and oral histories (<https://archive.waterwaysireland.org>).

Cartographic Sources

- Down Survey maps
- Estate maps/records
- Fire insurance maps
- Grand Jury maps
- Griffith's Valuation of Ireland Mapping 1848–62
- Glucksman Map Library, Trinity College Dublin
- Ordnance Survey maps (first and subsequent editions and town plans, available at <https://digital.ucd.ie/view/ucdlib:40377>)
- Landed Estates Court Maps

Development Plans and Heritage Plans

- County Development Plans or other Local Authority Development Plans for Record of Protected Structures and Architectural Conservation Areas and heritage policies and objectives
- Heritage Plans published by the relevant Local Authority

Environmental Information

Geological Survey Ireland (<https://www.gsi.ie>) makes available a range of useful resources including:

- Geotechnical database (digitised geotechnical and site investigation reports and boreholes),
- Geological mapping (e.g. Quaternary Geology: Sediments), and
- Other datasets (e.g. Goldmine which includes geological memoirs and 6-inch to 1 mile mapping and historic mine records).

For palaeo-environmental/geoarchaeological studies, the following sources should be consulted:

- Geotechnical Investigation reports
- Irish soils and subsoils maps
- National Geotechnical Borehole Database
- Project-specific geotechnical data
- Published analysis of Irish Quaternary pollen sites (for example, the Irish Pollen Site Database, the European Pollen Database)
- Soils and subsoils mapping
- WODAN charcoal and wood database

Historical photographs

Historical photographs are available from repositories such as the National Library of Ireland, the Irish Architectural Archive and Waterways Ireland, and many are available online. For historical aerial photographs, see below under 'Aerial Imagery and Lidar Data'.

Online Datasets

- Historic Environment Viewer (<https://maps.archaeology.ie/HistoricEnvironment/>)
- NIAH Buildings and Garden Surveys (<https://www.buildingsofireland.ie>)
- Placenames Database of Ireland (<https://www.logainm.ie>)

Previous Archaeological Investigations

- Database of Irish Excavation Reports/Excavations Bulletin (<https://excavations.ie>)
- TII Digital Heritage Collections (<https://repository.dri.ie/catalog/v6936m966>)

Published Literature/Sources

- Early medieval and medieval literature (narrative tales, hagiography, *Dindshenchas*, etc.)
- Field name surveys
- Historical depictions in art (e.g. 18th- and 19th-century sketches)
- Newspaper articles

- Parliamentary Papers (e.g. the Poor Law Report, Devon Commission)
- Publications by local archaeological and historical societies
- Relevant published historical, archaeological and folklore literature and periodicals
- Travel journals/accounts

Aerial Imagery and Lidar Data

Aerial imagery includes orthographic (vertical) and oblique imagery, both recent and historical, captured using satellites, drones, aircraft, etc. Orthographic imagery can include satellite imagery from international sources (Google and Bing), national datasets held by Tailte Éireann (formerly Ordnance Survey Ireland), regional datasets held by local authorities for planning purposes, and scheme-specific datasets acquired for the project, including imagery captured in tandem with the acquisition of Lidar data.

In addition, there are datasets of historical images, including orthographic imagery, available online. For example:

- Britain from Above collection which includes aerial photography for Ireland (<https://www.britainfromabove.org.uk>)
- Cambridge University Collection of Aerial Photography (<https://www.cambridgeairphotos.com>)
- Daphne Pochin Mould Collection (https://www.muckcrosshousereseearchlibrary.ie/pochin_mould/)
- Geological Survey Ireland (<https://www.gsi.ie>)
- Irish Independent 'Views from the Air' photography collection (<https://independentarchives.photoshelter.com>).
- Leo Swan Aerial Photography Collection (<https://lswanaerial.locloudhosting.net/collections/show/2>)
- Open Topographic Data Viewer (<https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=b7c4b0e763964070ad69bf8c1572c9f5>)


Statutory and Non-Statutory Heritage Inventories

- National Inventory of Architectural Heritage
- National Inventory of Intangible Cultural Heritage
- National Monuments in State Care
- Preservation Orders
- Published Archaeological Inventories and Surveys
- Record of Monuments and Places
- Record of Protected Structures
- Register of Historic Monuments
- Sites and Monuments Record
- World Heritage Properties and Tentative List Properties
- Wreck Inventory of Ireland Database

Web Map Services

- ArcGIS REST (Representational State Transfer) Web Service: https://services-eu1.arcgis.com/HyjXgkV6KGMSF3jt/arcgis/rest/services/NMS_Open_Data_20230721/FeatureServer
- Data.Gov.ie which also has REST and Web Map Services compatible with GIS: <https://data.gov.ie>
- OGC Web Map Service: <https://www.ogc.org/standard/wms/>



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