



Technical Appendix 3: Archaeology and Architectural Heritage Impact Assessment

GORTNALUG 110KV SUBSTATION AND GRID CONNECTION

20/03/2026



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EXECUTIVE SUMMARY

- 3.1. Neo Environmental Ltd has been appointed by Renewable Energy Systems (RES) Ltd on behalf of Ballydonagh Solar Limited to undertake an Archaeology and Architectural Heritage Impact Assessment (“AAHIA”) for a new 110k V Air insulated substation (AIS) and grid connection with associated infrastructure to facilitate the connection of Ballydonagh (PA Ref: 23/61049 as amended under PA Ref: 2461749) and Ballydonagh Extension (PA Ref: 24/61749 as amended under PA Ref: 2660009) solar farms to national grid (the “Proposed Development”) on lands at Ballydonagh, Kiltormer, Co. Galway, Ireland (the “Application Site”).
- 3.2. All types of heritage assets were identified within appropriate 5km and 2km study zones around the Proposed Development. Baseline information was also obtained through a site walkover survey and desk-based analysis of sources including historic maps, aerial photography, lidar data and consultation with relevant records and databases.
- 3.3. There are no recorded sites (RMP, RPS and NIAH) that are within the Application Site that could be physically impacted by the Proposed Development. In addition, no confirmed features of archaeological significance were identified during the desk-based assessment of the Application Site. As such, **no direct impacts** upon known archaeological and heritage assets are anticipated and no mitigation measures are considered to be necessary in relation to this.
- 3.4. The surrounding archaeology within the SMR/RMP includes enclosures, ringforts, and some quarry’s, indicating that the site lies within a landscape with known archaeological activity. As such, the Application Sites archaeological potential is most likely **Moderate** for Prehistoric and Early Medieval remains throughout its extent. The Geophysical Survey found a number of anomalies within Fields 13, 16, 18 & 22; and a programme of test trenching was undertaken between the 4th and 14th of June 2024 to target any Geophysical anomalies that were detected. All trenches were excavated and metal detected in full, with no archaeological objects recovered. As such, the results of this programme showed that all trenches within the RLB were found to be sterile.
- 3.5. Nonetheless, as well as pre-construction evaluation, it is proposed that an archaeological programme of monitoring be implemented, and that **any groundworks undertaken be monitored by a qualified archaeologist during the construction stage**. The results of such work will also inform the need for any further archaeological work as required. Any requests and requirements for archaeological work is at the discretion of the NMS and Galway County Council.
- 3.6. Indirect effects upon the surrounding heritage assets have been assessed as overall **Minor** in the worst case. Therefore, no specific mitigation is considered to be required for the reduction of any visual impacts.

INTRODUCTION

Background

- 3.7. Neo Environmental Ltd has been appointed by Renewable Energy Systems on behalf of Ballydonagh Solar Limited (the “Applicant”) to undertake a Natura Impact Statement (NIS) and Appropriate Assessment (AA) for a new 110k V Air insulated substation (AIS) and grid connection with associated infrastructure(the “Development”) on lands at Ballydonagh, Kiltormer, Co. Galway, Ireland (the “Application Site”).
- 3.8. The method of connection to the national grid will be a new 110 kV AIS Loop-in station (Gortnalug) with a ‘Loop-in/Loop out’ connection into the existing Ennis -Agannygal-Shannonbridge 110kV circuit. Ballydonagh Solar Limited accepted the Eirgrid Connection Offer (P602-CA-OL) in December 2025.
- 3.9. The Proposed Development comprises a 110kV AIS and associated grid connection infrastructure to facilitate the connection of the permitted Ballydonagh Solar Farm under Ref 2361049, as amended under Ref 25/61903 and Ballydonagh Solar Farm Extension under Ref 2461749, as amended under 26/60009, to the national grid. The applicant is seeking a ten-year permission from the date of consent of the 110kV Substation.
- 3.10. Please see **Figure 300101338-DR-100 Overall Site Layout** for the layout of the Proposed Development.

Development Description

- 3.11. The Proposed Development comprises a 110kV Air Insulated Substation and associated grid connection infrastructure to facilitate the connection of the permitted Ballydonagh Solar Farm under Ref 2361049, as amended under Ref 25/61903 and Ballydonagh Extension Solar Farm under Ref 2461749 , as amended under 26/60009, to the national grid, which revised the approved solar layout to accommodate the Gortnalug substation and grid connection infrastructure.
- 3.12. The Proposed Development comprises a 110kV Air Insulated loop in/ loop out electricity substation (11,300m²) consisting of EirGrid control building (25m x 18m), customer control building (23.1m x 10.8m),110kV bay arrangement, busbar infrastructure foundations, transformer, lightening masts, telecoms pole, CCTV, lighting columns, capacitor bank, reactor bank, harmonic filter, rural supply kiosk, house transformer, neutral earth resistor, resistor, stand by generator, compound roads, drainage, parking and hardstanding, palisade fence and gates.
- 3.13. The grid connection will consist of the removal of c.248m of the existing overhead line and poles from Ennis- Agannygal-Shannonbridge 110kV circuit and the erection of two new

towers (16m height) and c.975m of double 110kV underground circuit and tracks into the proposed substation.

- 3.14. Remaining associated infrastructure consists of entrance; perimeter fencing, access tracks (1907m) (upgraded and localised widening) with water crossings, deposition areas (4,300m²), temporary construction compound; and all associated and ancillary site development, excavation, construction, landscaping and reinstatement works and the provision of site drainage.

Site Description

- 3.15. The area of the proposed Development (the “Application Site”) lies at an elevation of approximately 76.51 – 96.56m AOD and covers a total area of c. 34.8 hectares. It is centred at approximate Irish National Grid Reference (NGR) E 183907 N 220547 and is located in the lands north of the L4301.
- 3.16. The site comprises 13 field parcels of agricultural land, the site is currently being used for pastoral farming. The Application Site is bound by a mixture of trees, hedgerows and post-and-wire fencing. Access will be gained from the south gate entrance from a private lane to an unnamed local road off the L4301 to the southeast of the site.
- 3.17. The surrounding context is predominately agriculture with pockets of forestry and peatland and punctuated by individual properties, farmsteads and ribbon development associated with the minor and regional road network. Fields are typically small to medium in scale and similar in character to the Application Site lands.

Figures and Appendices

- 3.18. The report is supported by the following Figures and Technical Appendices:
- Appendix 3A: Figures
 - Figure 3 – Field Numbers
 - Figure 3.1 – Architectural Heritage Assets
 - Figure 3.2 – Record of Monuments and Places
 - Figure 3.3 – OSI 6” Historic Map (1829 – 1842)
 - Figure 3.4 – OSI 25” Historic Map (1897 – 1913)
 - Figure 3.5 – Test Trenching Plan (consented solar farm)
 - Appendix 3B: Table of Heritage Assets

- Appendix 3C: Geophysical Survey (Consented Solar Farm)

Appendix 3D: Test Trenching Report. Statement of Authority

- 3.19. The assessment has been conducted by registered archaeologists with the Chartered Institute for Archaeologists (CIfA), of Associate (ACIfA) level or above and/or members of the Institute of Archaeologists of Ireland (IAI). The assessment has been conducted in accordance with the appropriate professional guidance outlined in the Codes of Professional Conduct, Institute of Archaeologists of Ireland (adopted April 2006)¹.
- 3.20. Hytham Martin BA (Hons) MSc (Hons) was the primary author of this report. He is an Archaeologist with eight years' experience in fieldwork of all types, three of which were in a supervisory capacity. He has also undertaken a large number of Archaeology & Architectural Heritage Impact Assessments for developments across Ireland, including Environmental Impact Assessments, with particular focus on renewable projects including Solar Farms, BESS and Wind Farms.
- 3.21. Michael Briggs BSc (Hons) MSc MCIfA MIAI was the primary editor of this assessment. He has undertaken a large number of cultural heritage and archaeological impact assessments for developments across the UK and Ireland, with a particular focus on renewable projects, including numerous solar farms throughout the Republic of Ireland and Northern Ireland. He has over 14 years of professional experience, including assessments from the initial stages of feasibility and heritage impacts through to complete programmes of archaeological works and discharge of conditions.
- 3.22. Paul Neary BA H.Dip MA MSc MEnvSc MIAI ACIFA CEnv was the primary editor and had the final sign-off on the report. Paul is dual-qualified as a Chartered Environmentalist and archaeologist. Paul has over 19 years of archaeology and heritage experience, the majority of which relates to Ireland. Paul has worked on large road projects, EIA developments and energy projects across Ireland and the UK. He is licensed to direct archaeology work in the Republic of Ireland and has also held archaeology director licenses in Northern Ireland.

¹ IAI (2006) *IAI Code of Professional Conduct*. IAI

LEGISLATION AND PLANNING POLICY CONTEXT

Planning and Development Act 2024

- 3.23. Part VIII of the Planning and Development Act 2024 outlines the statutory framework for the protection of Ireland’s architectural and archaeological heritage through the planning system. It consolidates and updates the approach established under the 2000 Act and introduces refined obligations on planning authorities for both individual structures and broader historic environments.

Protected Structures

“A planning authority shall include in its development plan a record of protected structures, which shall contain every structure or part of a structure which is, in the opinion of the planning authority, of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest.”²

- 3.24. The protection of these assets is therefore achieved through the maintenance of a Record of Protected Structures (RPS) by each planning authority. The Act further confirms that any existing RPS compiled under the 2000 Act “shall continue in force”³. Protected structures encompass a broad spectrum of buildings and sites and may vary significantly in terms of their sensitivity to development. As such, assets identified within the RPS will be assessed based on their heritage value and sensitivity to potential direct and indirect effects from the Proposed Development.

Architectural Conservation Areas

“a development plan shall include an objective to preserve the character of a place, area, group of structures or townscape, taking account of building lines and heights,” where such places are “of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or [that] contribute to the appreciation of protected structures”⁴.

- 3.25. These areas are designated by the planning authority to protect and manage clusters of heritage assets and their broader settings. While the primary aim of an ACA is to preserve its overall character, certain developments may result in indirect impacts particularly visual or contextual that must be considered in planning assessments. The local planning authority therefore also designates Architectural Conservation Areas (ACAs) where concentrated or important areas of heritage area present. As such, these assets will also be assessed in

² Planning and Development Act 2024, Section 306

³ Ibid., Section 306(4)

⁴ Ibid., Section 331(1)(a)–(b)

addition to the heritage assets it contains. While the purpose of such areas is primarily to protect the architecture and character of the immediate area, indirect impacts can sometimes cause harm to an ACA.

Archaeological and Natural Heritage

- 3.26. In addition to architectural heritage, the 2024 Act strengthens the statutory framework for archaeological and natural heritage protection. Section 50 mandates that planning authorities “prepare a strategy for the conservation, protection, management and improvement of the natural, archaeological and built heritage” within their areas⁵. Under Section 87, authorities may attach planning conditions to protect features of archaeological or historical interest, including “excavation or recording of places, caves, sites, features, wrecks or objects of archaeological, geological, historical, scientific or ecological interest”⁶. Section 183 further requires that proposals likely to affect legally protected monuments be considered during the planning process⁷. Special planning control schemes may also incorporate objectives for the protection of archaeological and architectural heritage under Section 335⁸.

Project Ireland 2040

- 3.27. Project Ireland 2040 was adopted on 29th May 2018 as the joint publication of two main documents; the National Planning Framework and the National Development Plan. In their own words, these documents align their “investment strategy with our strategic planning documents to, for the first time in the history of our State, create a unified and coherent plan for the country”. Project Ireland 2040 therefore offers an overall strategy document for development within Ireland but does not contain any specific policies relating to archaeology or heritage within development management.

Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023

- 3.28. The Historic and Archaeological Heritage and Miscellaneous Provisions Act⁹ was signed into law on October 13th 2023, with the intention of superseding the National Monuments Acts 1930 to 2014.
- 3.29. Measures laid out within the document then subsequently came into effect on 31st May 2024, with such measures in place to allow for the creation and maintenance of databases for archaeological sites, architectural heritage and historic wrecks. As part of this, plans are

⁵ Ibid., Section 50(1)

⁶ Ibid., Section 87(1)(l)

⁷ Ibid., Section 183

⁸ Ibid., Section 335(2)(b)

⁹ Department for Housing, Local Government and Heritage (2023) *Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023*. DHLGH: Dublin.

included for the establishment of a new 'Register of Monuments' to incorporate and supersede the existing Record of Monuments and Places (RMP). However, as this has not been created at the time of this assessment, the RMP database and the additional subsets of National Monuments under ownership or guardianship of the Minister for Housing, Local Government and Heritage, or the relevant county council, will continue to be consulted and referred to.

Heritage Act 1995

- 3.30. The Heritage Act¹⁰ seeks to promote the profile of both archaeological and architectural resources within Ireland. The Heritage Council was established in order to help achieve this and, as required by Section 2 of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999, the DAHG subsequently established the National Inventory of Architectural Heritage (NIAH) in order to undertake a nationwide survey of the Irish architectural heritage. This survey provides a comprehensive overview of the architectural resource within Ireland and is still currently ongoing. The Act also contains the following definitions within Section 2:

Architectural Heritage

“all structures, buildings, traditional and designed, and groups of buildings including street-scapes 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, and, without prejudice to the generality of the foregoing, includes railways and related buildings and structures and any place comprising the remains or traces of any such railway, building or structure”

Heritage Building

“any building, or part thereof, which is of significance because of its intrinsic architectural or artistic quality or its setting or because of its association with the commercial, cultural, economic, industrial, military, political, social or religious history of the place where it is situated or of the country or generally, and includes the amenities of any such building”

Heritage Gardens and Parks

“areas of natural heritage, and gardens and parks whose plant collections, design, design features, buildings, setting, style or association are of significant scientific, botanical, aesthetic or historical interest or which illustrate some aspect of the development of gardening or of gardens and parks”

¹⁰ OAG (1995) Heritage Act, in *Irish Statute Book*. Dublin: Stationery Office.

Monument

“includes the following, whether above or below the surface of the ground or the water and whether affixed or not affixed to the ground:

- (a) Any artificial or partly artificial building, structure or erection or group of such buildings, structures or erections,*
- (b) Any cave, stone or other natural product, whether or not forming part of the ground, that has been artificially carved, sculptured or worked upon or which (where it does not form part of the place where it is) appears to have been purposely put or arranged in position,*
- (c) Any, or any part of any, prehistoric or ancient –*
 - (i) Tomb, grave or burial deposit, or*
 - (ii) Ritual, industrial or habitation site, and*
- (d) Any place comprising the remains or traces of any such building, structure or erection, any such cave, stone or natural product or any such tomb, grave, burial deposit or ritual, industrial or habitation site, situated on land or in the territorial waters of the State, but does not include any building, or part of any building, that is habitually used for ecclesiastical purposes.”*

Framework and Principles for the Protection of the Archaeological Heritage

3.31. While the international and national legislation details the definitions and requirements for protection of archaeology and cultural heritage, the specifics of this protection is laid out in Part III of the Framework and Principles for the Protection of the Archaeological Heritage¹¹ document.

Archaeological Assessment

“The first option in all circumstances must be non-destructive investigation and study. Non-destructive techniques should wherever possible be used instead of destructive ones.” (Section 3.2(b))

“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.” (Section 3.6.2)

¹¹ Department of Arts, Heritage and the Gaeltacht (DAHG) (1999) *Framework and Principles for the Protection of the Archaeological Heritage*. Dublin: Stationery Office.

“It is always essential that the report on archaeological assessment contain an archaeological impact statement describing the possible direct or in-direct effects of the Proposed Development on elements of the archaeological heritage.” (Section 3.6.4)

- 3.32. This impact assessment constitutes a non-destructive investigation into the possible direct and indirect impacts of the Proposed Development. A site visit will be undertaken as part of the archaeological assessment within this report. This will provide considerably more information on any existing archaeological assets present within the site boundary and inform any further assessment or mitigation strategy.

Mitigation Requirements

- 3.33. If significant possible direct impacts are identified, mitigation in the form of further archaeological works may be required. In this case such works:

“should only be carried out if it is a necessary and appropriate follow-on to the results of suitable non-destructive methods in order to secure the further progression of archaeological research, or otherwise where there is no practicable or archaeologically acceptable alternative.” (Section 3.2)

“Whenever the archaeological heritage is affected, or proposed to be affected, by development the approach to be followed must be preservation in-situ or preservation by record through archaeological excavation and recording.” (Section 3.3)

“There should always be a presumption in favour of avoiding developmental impacts on the archaeological heritage. Preservation in-situ must always be the first option to be considered rather than preservation by record in order to allow development to proceed, and preservation in-situ must also be presumed to be the preferred option.” (Section 3.4)

“Where archaeological sites or monuments (or portions of such) are to be removed due to development then it is essential that the approach of preservation by record be applied.” (Section 3.5)

- 3.34. Therefore in the case of direct impacts upon any known or unknown archaeological resource, preservation in situ is the preferred option for mitigation, through the use of buffer zones or non-penetrative construction methods for example. Where this is deemed unviable, preservation by record must be implemented in agreement with the relevant authorities and IAI standards. Such methods may involve test excavations (Section 3.6.5(b)) where an archaeological site or monument, or sub-surface features, are thought to be directly impacted by the Proposed Development. Otherwise a system of archaeological monitoring may be sufficient where *“only slight grounds for believing that the particular location contains archaeological deposits or features” (Section 3.7.2(i)).*

National Cultural Institutions Act (1997)

- 3.35. The National Cultural Institutions Act (1997)¹² does not provide any specific policies or guidance on protection of heritage and archaeology, but contains legislation on several aspects of cultural heritage, including “*Indemnities in Respect of Certain Cultural Objects*”, “*Provisions Relating to Heritage Collections*” and “*Acquisition of Certain Cultural Objects*”. The Act also establishes the bases for the National Museum, Library and Gallery of Ireland. As such, the Act does not apply directly to this assessment but provides context for other legislative and policy documents.

Architectural Heritage (National Inventory) and National Monuments Act (1999)

- 3.36. The Architectural Heritage (National Inventory) and National Monuments Act (1999)¹³ is another legislative document that details the legal maintenance and protection of heritage as well as the punitive measures for any violations. As such, this Act also provides context for other legislative and policy documents. However, the Act provides a definition of ‘architectural heritage’ as:

“all –

- (a) *structures and buildings together with their settings and attendant grounds, fixtures and fittings,*
- (b) *groups of such structures and buildings, and*
- (c) *sites.*

Which are of architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest” (Section 1).

Best Practice Planning Guidance Report for Large Scale Solar Energy Development in Ireland¹⁴

- 3.37. This guidance document was produced in November 2023 as a set of policy and guidance recommendations published by the Irish Solar Energy Association (ISEA) to assist potential developers, stakeholders and Local Authorities in site selection, preparation of applications for planning consent and considerations relating to construction, associated infrastructure and operational procedures from a planning and environmental perspective. This includes sections on archaeology and heritage which detail how to set out policies for their protection

¹² OAG (1997) National Cultural Institutions Act, in *Irish Statute Book*. Dublin: Stationery Office.

¹³ OAG (1999) Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, in *Irish Statute Book*. Dublin: Stationery Office.

¹⁴ Fehily Timoney (2023) *Best Practice Guidance Report on Solar Energy Development for Applicants and Planning Authorities*. Dublin: ISEA

and development management. Section 3.4.12 regarding 'Cultural Heritage and Archaeology' states:

"A high level review should be undertaken of all known archaeological, architectural and other cultural heritage sites which may be located within or affected by a proposed development. This can typically be undertaken by a suitably qualified archaeologist either as a desktop study or site based constraints study. Potential vulnerable receptors that should be identified include:

- *UNESCO World Heritage Properties and sites included on the World Heritage Tentative List;*
- *National Monuments, Recorded Monuments and other known archaeological sites included within the Sites and Monuments Record (SMR) maintained by the National Monuments Service;*
- *Wrecks and /or other underwater cultural heritage that may be affected by the development (e.g. impact on watercourses);*
- *Structures and Gardens listed in the National Inventory of Architectural Heritage (NIAH)*
- *Record of Protected Structures (RPS) designated by each Local Authority in the relevant County Development Plan"*

3.38. Section 3.4.12 regarding 'Archaeology/Cultural Heritage' states:

"Any applicant or developer should consider a suitably qualified archaeologist as part of their design team where appropriate to provide on-going advice as well as consulting with the relevant Local Authority and the NMS and Architectural and Built Heritage Unit (ABHU) of the Department (DAU) where required in areas of archaeological potential.

The location and design of solar farms should be informed and influenced by archaeological assessments and constraint studies to avoid impacts to known archaeological resources and features. Ideally proposed solar farms should be sited so as to avoid impacts to known archaeological sites (which could include visual impact) and take into account likely impacts on potential archaeological sites within the footprint of a solar farm development site.

Potential solar farm sites should also have regard to tourism and heritage assets, often in relation to visual impact and proximity to such sites. It is recommended that any developer/applicant review any designated or protected sites within a Local Authority Development Plan or National Designation or Policy".

Galway County Development Plan 2022 – 2028

- 3.39. The Galway County Development Plan (CDP) 2022 – 2028¹⁵ is replaced the former 2015 – 2021 CDP, which was adopted by the Elected Members of Galway County Council at the conclusion of the Special Meeting on the 9th of May 2022, and came into effect on the 20th of June 2022. Chapter 12 of the CDP relates to “Architectural, Archaeological and Cultural Heritage”. Of these policies and objectives, the following are considered to be relevant to this heritage impact assessment.

AH 1 – Architectural Heritage

“Ensure the protection of the architectural heritage of County Galway which is a unique and special resource, having regard to the policy guidance contained in the Architectural Heritage Protection Guidelines 2011 (and any updated/superseding document).”

AH 2 (a) – Protected Structures

“Ensure the protection and sympathetic enhancement of structures included and proposed for inclusion in the Record of Protected Structures (RPS) that are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, together with the integrity of their character and setting.”

AH 3 – Protection of Structures on the NIAH

“Give regard to and consideration of all structures which are included in the NIAH for County Galway, which are not currently included in the Record of Protected Structures, in development management functions.”

AH 3 – Architectural Conservation Areas

“Protect, conserve and enhance the special character of the Architectural Conservation Areas (ACA) included in this plan through the appropriate management and control of the design, location and layout of new development, modifications, alterations or extensions to existing structures, surviving historic plots and street patterns and/or modifications to the character or setting of the Architectural Conservation Area. Works within the ACA shall ensure the conservation of traditional features and building elements that contribute to the character of the area. The special character of an area includes its traditional building stock and material finishes, spaces, streetscape, shop fronts, landscape and setting. New proposals shall have appropriate regard to scale, plot, form, mass, design, materials, colours and function.”

¹⁵ Galway County Council (2022). *Galway County Development Plan 2022 – 2028*. GCC.

AH 10 – Designed Landscapes

“Protect the surviving historic designed landscapes in the County and promote the conservation of their essential character, both built and natural. Consider protection of the designed landscape by inclusion in an Architectural Conservation Area.

Development proposals in designed landscape shall be accompanied by an appraisal of the contributing elements and an impact assessment.”

ARC 4 – Protection of Archaeological Sites

“Protect archaeological sites and monuments their settings and visual amenity and archaeological objects and underwater archaeological sites that are listed in the Record of Monuments and Places, in the ownership/guardianship of the State, or that are subject of Preservation Orders or have been registered in the Register of Historic Monuments, or that are newly discovered and seek to protect important archaeological landscapes.”

ARC 5 – Development Management

“All planning applications for new development, redevelopment, any ground works, refurbishment, and restoration, etc. within areas of archaeological potential or within close proximity to Recorded Monuments or within the historic towns of County Galway will take account of the archaeological heritage of the area and the need for archaeological mitigation.”

ARC 6 – Burial Grounds

“Protect the burial grounds, identified in the Record of Monuments and Places, in co-operation with the National Monuments Service of the Department of Housing, Local Government and Heritage. Encourage the local community to manage burial grounds in accordance with best conservation and heritage principles.”

ARC 7 – Battlefield Sites

“Protect the Battle of Aghrim site and other battlefield sites and their settings.”

ARC 9 – Recorded Monuments

“Ensure that any development in the immediate vicinity of a Recorded Monument is sensitively designed and sited and does not detract from the monument or its visual amenity.”

ARC 10 – Zones of Archaeological Potential

“To protect the Zones of Archaeological Potential located within both urban and rural areas and around archaeological monuments generally as identified in the Record of Monuments and Places. Any development within the ZAPs will need to take cognisance of the potential for subsurface archaeology and if archaeology is demonstrated to be present appropriate mitigation (such as preservation in situ/buffer zones) will be required.”

ARC 11 – Industrial and Post Medieval Archaeology

“Protect and preserve the archaeological value of industrial and post medieval archaeology such as mills, limekilns, bridges, piers, harbours, penal chapels and dwellings. Proposals for refurbishment, works to or redevelopment/conversion of these sites should be subject to careful assessment.”

ARC 12 – Archaeology and Infrastructure Schemes

“Have regard to archaeological concerns when considering proposed service schemes (including electricity, sewerage, telecommunications, water supply) and proposed roadwork’s (both realignments and new roads) located in close proximity to Recorded Monuments and Places and their known archaeological monuments.”

- 3.40. The scope of this impact assessment has therefore included all of the classes of archaeological and architectural heritage assets defined within the above documents. This will ensure that the design of the Proposed Development does not cause significant harm, direct or indirect, to any assets or their settings, in order to comply with policies at both national and local levels.

ASSESSMENT METHODOLOGY

Aims and Objectives

3.41. The aims of the assessment are as follows:

- To identify all known heritage assets within the study zone based on all available public resources;
- To identify the archaeological potential of the Application Site through collation of results from the desk-based assessment, site walkover survey and geophysical (magnetometry) survey;
- To determine what if any level of recording will be required for any extant remains;
- To assess the significance of any direct or indirect effect of the Proposed Development on cultural heritage assets and their settings and potential archaeological remains within the study zone, from construction through to decommissioning;
- To identify mitigation measures where possible and aid in the design process to reduce the potential impacts of the proposed scheme;
- To provide recommendations for any further archaeological/heritage assessment work that should be undertaken as part of the Proposed Development.

Desk Based Assessment

Scope of Assessment

3.42. The desk-based assessment was conducted to ascertain all historical and archaeological information relevant to the Application Site and the local area. NMSCs and HGDLs were assessed within a 5km study zone, while ACAs and sites within the RMP, RPS and NIAH were assessed within a 2km study zone. The sizes of these study zones were selected to ensure that comprehensive and informative data was collated to characterise the direct and indirect effects that the Proposed Development may have on historical and archaeological assets within the local area.

3.43. Due to the nature of the records, some degree of overlap was possible, and some assets may have been repeated. However, where historic structures are recorded within both the RPS and the NIAH, efforts have been made to reduce duplication. Buildings of historic interest that are recorded within the NIAH are treated as having the same level of protection as those recorded as Protected Structures for the purposes of this assessment.

3.44. Historical databases and various archives were consulted to identify the designated assets and undertake the DBA. These assets were imported into ArcGIS Pro as shapefiles in order to determine their locations relative to the Application Site and produce the figures supporting this assessment. The main sources which were consulted include the:

- Record of Monuments and Places (RMP) held by the National Monuments Service (NMS);
- Sites and Monuments Record (SMR);
- National Inventory of Architectural Heritage (NIAH);
- Record of Protected Structures (RPS);
- Archaeological Survey of Ireland (ASI);
- Database of Historic Gardens and Designed Landscapes (HGDL);
- National Museum of Ireland (NMI) topographical files;
- Database of Irish Excavation Reports¹⁶;
- Historic Maps;
- Aerial imagery via Google Earth, Bing Maps and ArcGIS Pro global mapping;
- Cambridge University Collection of Aerial Photography;
- National Collection of Aerial Photography;
- <http://www.britainfromabove.org.uk/>;
- Open Topographic Data Viewer (LIDAR) at <https://dcenr.maps.arcgis.com/apps/webappviewer/>; and
- Placenames Database of Ireland.

Assessment Criteria

3.45. All assessments of significance and impacts have been undertaken in line with the following table and terminology, where the magnitude of impact and importance/sensitivity of a heritage asset and its setting are qualitatively determined through professional judgement, and effects of 'moderate adverse' would be considered significant:

¹⁶ <http://www.excavations.ie/>

Table 3-1: Significance of Direct Effects

Magnitude of Impact	Importance/Sensitivity of the Heritage Asset/Setting			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Negligible	Minor	Negligible	Negligible	Negligible

Map Regression Analysis

3.46. Analysis of historic maps can reveal the changes in landuse and field boundaries in the area and can highlight potential areas of archaeological interest that may have been lost in the subsequent years. Relevant maps were consulted to undertake this analysis as part of the desk-based assessment and site walkover survey.

Aerial Photography and Placename Assessments

3.47. To identify potential archaeological features within the Application Site that are not recorded within the relevant databases, aerial photography of the land was examined in order to identify any cropmarks or markings within the Application Site that may be indicative of previously unknown features.

3.48. Similarly, a placename analysis of the baronies, townlands and parishes containing the land was undertaken as this can often determine the historical landuse associated with the Application Site even when other evidence of this usage has been lost.

Lidar Data

3.49. Lidar datasets for the region were consulted to identify what data may exist for land inside the proposed development site. Relevant data that can be useful for archaeological purposes comprise Digital Terrain Model (DTM) and Digital Surface Model (DSM) of 0.5m, 1m and 2m resolutions. These datasets are relatively recent and updated on a regular basis, so were consulted more than once during the assessment. However, no Lidar datasets were available for the lands present within the Proposed Development at the time of this report.

Assessment of Direct Effects

3.50. Potential direct effects during the construction phase are considered as physical disturbance of known or associated archaeological remains. These impacts can be caused through the construction processes within the footprint of the Development, including ancillary works

such as access tracks. Direct impacts can affect both above ground and subsurface remains, which will both be considered within this assessment. The presence and character of any existing archaeological features will be identified within the site boundary, and the archaeological potential of the site assessed through a desk-based assessment of the surrounding archaeological resource and landscape. The significance of any impacts will be determined by considering the construction methodology within the Application Site and to what extent this would disturb any sub-surface remains.

Assessment of Indirect Effects

3.51. The assets that were identified through the sources previously listed were assessed for their significance and sensitivity of their settings. The magnitude of the visual impacts upon these assets was determined by considering the views and intervisibility shared with the Proposed Development, as well as the nature, character, date, extent, setting and surviving remains of the feature where relevant. Indirect effects were then assigned using this information on the following scale:

- Major
- Moderate
- Minor
- Negligible

3.52. Indirect effects of 'moderate' or above are considered significant and appropriate mitigation measures have been recommended where appropriate to lower the potential impact.

Visual Impact Assessment

3.53. A Zone of Theoretical Visibility (ZTV) was produced to identify sites with a greater potential for being indirectly impacted by the Proposed Development. The ZTV has been overlaid on the heritage assets within the study zones, to identify those that will potentially be visually impacted by the Proposed Development during the operational phase.

3.54. Digital Terrain Modelling sourced from digital height data derived from Ordnance Survey Ireland, with the viewer height set at 8.5m high was used to calculate the ZTV based off the location of the substation (Field 15) and accompanying infrastructure. This viewshed was considered appropriate to take into consideration the maximum height of the main development infrastructure and its visibility from the perspective of all heritage assets found within both the 2km and 5km study zones. The Visual Impact Assessment has taken into account ancillary infrastructure, including lighting masts and grid connection towers which may extend to a height of up to 16m. These elements are functional in their form and visually integrate with existing infrastructure within the receiving environment. On this basis, they are

not considered to give rise to intrusive effects, and no adverse impacts on heritage assets or their setting have been identified.

- 3.55. The produced ZTV was 'bare earth' and therefore did not account for any elements in the landscape such as trees, hedgerows, walls or buildings that may help screen views, nor account for the influences of the weather upon any views.

The Importance of Setting

- 3.56. Setting can be important to the way in which historic assets or places are understood, appreciated and experienced.
- 3.57. Where development is proposed it is important to identify and define the setting of the heritage asset and to assess how development might impact upon this resource. Setting often extends beyond the property boundary, or 'curtilage', of an individual historic asset into a broader landscape context. Less tangible elements can also be important in understanding the setting. These may include function, sensory perceptions or the historical, artistic, literary and scenic associations of places or landscapes. In the light of this guidance, development proposals should seek to avoid or mitigate detrimental impacts on the settings of historic assets.

Site Visit

- 3.58. No distinct archaeological walkover survey of the Application Site was conducted for lands intended for the SID development; however, a prior walkover survey was conducted for the original solar farm. The survey was undertaken for the consented solar farm (which includes the full Application Site for the Proposed Development), and was conducted between the 10th – 13th May 2022 by Robert Mulraney.

Assessment Limitations

- 3.59. The consulted sources contain records of known archaeological and historic features. The record is not an exhaustive record of all surviving historic environment features and does not preclude the possible existence of archaeological remains of significance within the study zone, which are at present unknown or have been added to the records recently. It was assumed that official data provided by public bodies was accurate and up-to-date.

BASELINE CHARACTERISATION

3.60. The following section outlines the historical and archaeological background within the extent of the study zones and the local area. This provides a clear depiction of the context and significance of the heritage assets that could potentially be impacted by the Proposed Development. The report outlines an assessment of the direct and indirect impacts of the Proposed Development and proposed mitigation measures. The potential for disturbing any remains within the footprint of the Proposed Development has been assessed and recommendations produced for any further investigative work.

Archaeological Period Classifications

3.61. The period classifications below provide chronological context for the archaeological assets which are discussed as part of this report.

- Mesolithic (8000BC – 4500BC)
- Neolithic (4500BC – 2500BC)
- Bronze Age (2500BC – 500BC)
- Iron Age (500BC – AD400)
- Early Medieval (AD400 – AD795)
- Viking Age (AD795 – AD1169)
- Medieval (AD1169 – AD1535)
- Post Medieval & Modern (AD1535 onwards)

Archaeological and Cultural Heritage Assets

3.62. The full list of assets identified within their respective study zones is presented within **Table 1: Appendix 3B**. A total of 8 HGDLs were identified within the 5km study zone (**Figure 3.1: Appendix 3A**), while seven sites within the RPS, seven historic building within the NIAH and 70 sites within the RMP were identified within the 2km study zone (**Figure 3.2: Appendix 3A**). These assets have therefore been assessed for potential indirect effects within this report. However, no ACAs or World Heritage Sites were identified within their respective study zones.

Historical Background

Mesolithic Period (8000 – 4000 BCE)

- 3.63. The Mesolithic Period in Ireland sees the first evidence of human activity which occurred after the last glacial maxim. Unlike the later Neolithic Period that shows evidence of a sedentary lifestyle, which sees the introduction of animal and plant husbandry, extensive settlements and megalithic structures; the Mesolithic peoples were a hunter gatherer society that mostly existed in small groups or bands and were usually identified by their tool usage in coastal areas (Lynch 2017, p26)¹⁷.
- 3.64. While Mesolithic settlement activity has widely been associated with coastal and riverine areas, and while there is indeed evidence of Mesolithic activity in Co. Galway, there is no evidence for Mesolithic activity within or near to the Application site.

Neolithic Period (4000 – 2500 BCE)

- 3.65. The Neolithic Period in Ireland sees a rapid change in the use of the landscape and a large increase in the number of settlements, monuments and megalithic structures throughout the country. The introduction of agriculture, the clearance of forests, the first use of pottery and a sedentary lifestyle see the introduction of a 'Neolithic Package' that found way from Anatolia to Europe, and eventually into Ireland c. 6000 years ago (Robb 2013, 658)¹⁸.
- 3.66. While Co. Galway itself is replete with Neolithic sites such as Portal Tombs, Court Tombs and Unclassified Tombs, with 38 megaliths in Connemara alone, as well as Neolithic earthen enclosures; there is no notable evidence for Neolithic activity within or near to the Application Site or within the 5km and 2km study zones (see **Appendix 3B – Table of Heritage Assets**).

Bronze Age Period (2500 – 500 BCE)

- 3.67. In Ireland, as well as the rest of Europe, major technological change as well as significant changes in pottery and burial fashions occur towards the end of the third millennium BCE. These changes, and other developments that took place, traditionally mark the commencement or opening of the period which has traditionally been referred to as the 'Bronze Age' (Waddell 1998, 113)¹⁹.
- 3.68. This period is mostly represented by various types of burial monuments such as wedge tombs, bowl barrows and ring-barrows extant within this county; a tradition that carries on into the Early Iron Age. Evidence of settlement in Co. Galway is present, with a number of Wedge-

¹⁷ Michael Lynch. 'The Later Mesolithic on the North-West Coast of Clare'. *Archaeology Ireland*, Vol. 31, No. 4 (Winter 2017), pp. 24-29

¹⁸ John Robb. 'Material Culture, Landscapes of Action, and Emergent Causation: A New Model for the Origins of the European Neolithic'. *Current Anthropology*, Vol. 54, No. 6 (December 2013), pp. 657-683

¹⁹ John Waddell. (1998) *The Prehistoric Architecture of Ireland*. Galway: Galway University Press.

Tombs discovered along the western coastal areas and the north of the county. Within the 2km study zone there is one 'Barrow – mound barrow' (NA88) that may indeed be Bronze Age in origin. Furthermore, there are three excavations approximately 2.50km southeast of the Proposed Development. The first one was part of the N7 Castletown–Nenagh road scheme²⁰ and revealed a number of Bronze Age pits, as well as early modern activity. The second excavation, as part of the same road scheme²¹, discovered a burnt mound and pit, and the third excavation²² also revealed a pit dating to the Bronze Age. There is no 'excavated' evidence of such sites closer to or within the Application Site, nor within the 2km or 5km study zone.

Iron Age Period (500 BCE – 400 CE)

- 3.69. Evidence for Iron Age activity or settlement, like most of Ireland, is extremely hard to find in Co. Galway. There does not appear to be large ritual centres or 'Royal Sites' similar to those found around the rest of the country such as the 'Hill of Tara' Co. Meath, 'Dún Ailinne' Co. Kildare or 'Emain Macha' (Navan Fort) in Co. Armagh, which show continuous use from the Neolithic into the Early Medieval Period.
- 3.70. While there are quite a few examples of Iron Age Hillforts in Galway such as Knockacarrigeen Hillfort [GA043-033006], which lies c. 53km to the northwest of the Application Site, there are none within close proximity to the Proposed Development. As mentioned prior, the Prehistoric 'Barrow – mound barrow' (NA88) has the potential of being either an Iron Age or Bronze Age date given that no definitive exploration of this RMP has taken place. Further to this, there are six enclosures (NA26, NA31, NA44, NA46, NA90 & NA92) within the 2km study zone that may be prehistoric or possibly Iron Age in origin. Nonetheless, it appears that there is no further evidence of Iron Age activity close to or within the Application Site.

Early Medieval Period (400 – 795 CE)

- 3.71. The Early Medieval period is characterised by irrevocable change through the adoption of Christianity and is seen as the point of transition from the prehistoric period into the historic period. This era also sees evidence for an extensive increase in population with the construction of Early Medieval settlement enclosures such as Rathes, Cashels and Crannogs. Most were occupied between the sixth and ninth centuries CE, and due to significant social and economic changes, the majority began to be abandoned by about the tenth century. There are over 45,000 known examples of the simple sub-circular earthen-banked variety, and over 3,000 excavations of these have been undertaken (Kerr 2017-18, 62)²³.

²⁰ <https://excavations.ie/report/2007/Tipperary/0018722/>

²¹ <https://excavations.ie/report/2007/Tipperary/0018721/>

²² <https://excavations.ie/report/2007/Tipperary/0018719/>

²³ Thomas R Kerr, 'Regional Settlement Patterns In Early Medieval Ireland?', *Ulster Journal of Archaeology*, Third Series, Vol. 74, PAPERS IN HONOUR OF CHRIS LYNN (2017–18), pp. 62-67

- 3.72. Like many counties in Ireland, Early Medieval settlement enclosures such as Rathes, Cashels or indeed Crannogs are ubiquitous throughout Co. Galway. There is a very high density of these assets within the general vicinity of the Proposed Development, with 19 Rathes present within the 2km study zone (see **Appendix 3B – Table of Heritage Assets**).
- 3.73. While there are numerous examples of recorded raths within the 2km study zone of the Proposed Development at further distances, most of these RMPs, unfortunately, have not been excavated and only identified through morphology. As such there are no thorough descriptions, assemblages or dates available for study. Nonetheless, the quantity of such assets within the vicinity of the Proposed Development, within the 2km study zone and within the county itself highlights a densely populated region during the Early Medieval period.

Viking Period (795 – 1169 CE)

- 3.74. The Viking period in Ireland is primarily recorded through the emergence of settlements at river mouths such as that of Limerick, Wexford and Dublin. As such there is very little archaeological or historical evidence to suggest that the Norse had any real tangible presence in Co. Galway. However, it has been recorded that there had been raids off the Sligo coast and Roscam in the inner waters of Galway Bay. For example, in 811 the Ulaid defeated the Vikings, in 812 Éoga-nacht Locha Léin in the south-west drove back an attack, and later in 812 Fir Umail, near Clew Bay, successfully resisted them while they slaughtered the Conmaicne of west Galway (Larsen 2001, 17)²⁴. Furthermore, a Viking burial was discovered at Eyrephort, Co. Galway whereby grave goods such as an iron sword, a short, tanged, iron dagger and the remains of an iron shield-boss were found confirming a warrior's burial (Raftery 1960, 3-4)²⁵. However, there is no evidence of Viking activity close to or within the Application Site.

Late Medieval Period (1169 – 1536 CE)

- 3.75. The Late Medieval Period is largely characterised through the tangible surviving remnants of large stone castles and architecture, as well as the introduction of many European monastic orders such as the Cistercians, Augustinians, Franciscans and Dominicans with the construction of large cathedrals and monastic houses. In 1171 CE King Henry II of England (1154–1189) came to Ireland and took the formal submission of the Irish kings; thus, becoming the “Lord of Ireland” (Duffy 2005, 15-16)²⁶. Following this, the King made Dublin the centre of his government in Ireland. This area was to be the core of what was known as ‘The Pale’, the part of Ireland most distinctly English in make-up and character (Koch and Minard 2012, 71)²⁷.

²⁴ Anne-Christine Larsen ed. (2001) *The Vikings in Ireland*. Roskilde: The Viking Ship Museum.

²⁵ Joseph Raftery, ‘A Viking Burial in County Galway’, *Journal of the Galway Archaeological and Historical Society*, Vol. 29, No. 1/2 (1960), pp. 3-6

²⁶ Seán Duffy, ed. (2005) *Medieval Ireland: An Encyclopedia*. New York: Routledge.

²⁷ John T. Koch and Antone Minard, Eds. *The Celts History, Life, and Culture Volume 1: A–H*. Oxford: ABC-CLIO.

- 3.76. While the Annals of Connacht recorded that the Anglo-Normans began the process of colonisation of Galway around AD1237, and as such, began to build castles from this period onwards (Holland 1987/1988, 73)²⁸. Although outside the boundaries of The Pale, Co. Galway is replete with heritage assets that date to the Late Medieval Period. Nonetheless, there are very few assets to be found within the vicinity of the Application Site. One possible example is the RMP 'Castle - tower house' [GA100-138001-] which lies approximately 4.20km northeast of the Application Site. As such, while not significant, the archaeological record does show Late Medieval activity within relative proximity of the Application Site.

Post Medieval & Modern (1536 CE – 1800 onwards)

- 3.77. The Post Medieval and Modern periods in Ireland saw profound changes to the cultural/political and agricultural landscape in Ireland. Essentially culminating in 'The Acts of Union 1800-1801', which were parallel acts of the Parliament of Great Britain and the Parliament of Ireland; these 'Acts' united the 'Kingdom of Great Britain' and the 'Kingdom of Ireland' to create the 'United Kingdom of Great Britain and Ireland'.
- 3.78. County Galway, like other counties within Ireland, sees architectural change from the Tudor, Georgian, Edwardian and Victorian styles of the mid to late 19th century; from Gothic architectural motifs to the Neo-Classical styles present during the latter half of this century. All 17 HGDLs, five Protected Structures and six Historic Buildings from the NIAH that were identified within the 5km and 2km (**Appendix 3B – Table of Heritage Assets**) date from this period. These assets, as well as large manors throughout the county, highlight the many changes to the agricultural and architectural landscape that were witnessed during this era. Land containing the Application Site is assumed to have been within agricultural and low intensity usage during these periods and some degree of archaeological potential from these periods is therefore expected.

Placenames Assessment

- 3.79. The names of townlands can sometimes have origins and meanings of historical importance and/or indicate features of interest within their boundaries that are not recorded by other means. This was done by consulting the Placenames Database of Ireland, which collates various historical sources regarding the names of townlands, in particular the Ordnance Survey Parish Namebooks²⁹.
- 3.80. The Application Site resides in the townland of Ballydonnagh, Co. Galway.
- 3.81. The name of the townland Ballydonagh or Bhaile Mhic Dhonncha is first described in 1585 as 'Balledonogh' The name is derived from the Irish term 'Bhaile' meaning townland or homestead and Donncha, which is the Gaelic version of the name Duncan.

²⁸ Patrick Holland, 'The Anglo-Normans in Co. Galway: The Process of Colonization' *Journal of the Galway Archaeological and Historical Society*, Vol. 41 (1987/1988), pp. 73-89

²⁹ O'Donovan, J ex al (1836) *Ordnance Survey Parish Namebooks (OD:AL)*.

Map Regression Analysis

- 3.82. **Figure 3.3: Appendix 3A** contains the 6" historic OSI map of the site from 1829 – 1841, while **Figure 3.4: Appendix 3A** shows the 25" historic OSI map from 1897 – 1913. These maps show the progression of land use and field boundaries in the area and can highlight potential areas of archaeological interest that may have been lost in the subsequent years.
- 3.83. The 6" map (**Figure 3.3: Appendix 3A**) shows that some of the land within the Application Site may have been a mix of agricultural lands, as well as parkland, with some marshy areas at its western extent. The land appears to consist of a number of small to medium sized fields with irregular shape. Adjacent to the southwestern section of the lands there appears to be a small treelined section with more irregular shaped fields, containing a small cluster of buildings and a road that appears to allow access to the surrounding lands. Immediately west of this is the townland boundary of Kiltormer East. North of the Application Site is a possible housing estate depicted and labelled as 'Ballydonagh', with a number of separate dwellings containing plots of land, outbuildings and walled gardens. This estate is adjacent the three RMP sites 'Ringfort – rath' (NA23, NA24 and NA25).
- 3.84. The 25" map (**Figure 3.4: Appendix 3A**) shows that land within the Application Site remains very much the same except for the introduction of field boundaries to decrease the size of certain fields perhaps indicating a change in their usage, as a number of these fields appear to be uncultivated or left fallow. As such, there are now two larger fields west of the SID location in Field 15, the northern most of which now contains a path, or trackway that runs northeast southwest, and which leads to the estate labelled as 'Ballydonagh'. All three RMPs are depicted on this map.

Aerial Photography

- 3.85. Since the depiction of the Application Site on OSI historic mapping all fields within appear to retain a similar shape and size as the previous map. Remnants of the trackway depicted can be seen as cropmarks through aerial photography. The 'Ballydonagh site' now appears to be a cluster of dwellings and agricultural buildings perhaps associated with the surrounding land, and all three RMPs close by are visible. No archaeological features or cropmarks of archaeological potential have been identified from a review of modern aerial photography on Google Earth, Bing Maps, World Imagery Wayback and ArcGIS Pro global mapping.
- 3.86. No historical aerial images of land within the Application Site were identified within the consulted sources, including the National Collection of Aerial Photography (NCAP), Cambridge University Collection of Aerial Photography (CUCAP) and Britain from Above databases. The two RMP features closest to the site are depicted on two oblique shots within the CUCAP

database: Ring-ditch NA09 on AVF041³⁰ from 1968 and Field System NA10 on BGN014³¹ from 1971. However, neither shot includes visibility of any of the fields within the Application Site.

Local Archaeological Fieldwork / Previous Excavations

- 3.87. A search of the Database of Irish Excavation Reports³² identified no previous archaeological fieldwork having been undertaken within or near to the Application Site. The nearest recorded event was a 2009 programme of testing (2009:407) c. 1.86km to west of the Application Site³³ in the village of Kiltormer. No archaeological deposits were encountered. However, Neo Environmental undertook a 2024 programme of testing of across the Application Site as part of the original Ballydonagh Solar Farm. As a result of the testing undertaken it was confirmed that all trenches were sterile with the exception of Trench 23 which contained a small burnt stone spread or pit. 1.2m by 1.4m in size roughly. Trench 23 is not located within this proposed development planning boundary and is located c.500m south east of the application site. As such, the local record of excavations does not indicate any heightened archaeological potential within the Application Site.

Geophysical Survey

- 3.88. Two prior Geophysical Surveys have taken place for the associated Ballydonagh Solar Farm and its Proposed Extension. The first survey took place between the 25th of Oct and the 9th of Nov 2022, with regard to the originally consented solar farm, and was undertaken by Minerex Geophysics Ltd. (MGX), under licence number (22R0338) issued by the National Monuments Survey of the Department of Housing, Local Government and Heritage. This Geophysical Survey overlaps with the lands within the Current RLB boundary of the SID application (see **Appendix 3C – Geophysical Survey (Consented Solar Farm)**). The second survey took place in June 2023 and was undertaken by Archaeological Consultancy Services Unit Ltd. (ACSU), under licence (23R0311) issued by the Department of Housing, Local Government and Heritage, however, is outside the current RLB boundary and therefore not a reliable indicator of activity within the site.
- 3.89. The Geophysical Survey for the originally consented solar farm (**Appendix 3C: Geophysical Survey Report**) concluded that there were seven areas of ‘probable archaeology’ within fields 13, 16, 18 and 22, and one area of ‘archaeology’ within Field 30 which corresponds to NA32. No other magnetic anomalies were present within the current RLB of the Proposed Development. As such, a test trenching programme was initiated as part of a request for

³⁰ <https://www.cambridgeairphotos.com/location/avf041/>

³¹ <https://www.cambridgeairphotos.com/location/bgn014/>

³² <https://excavations.ie>

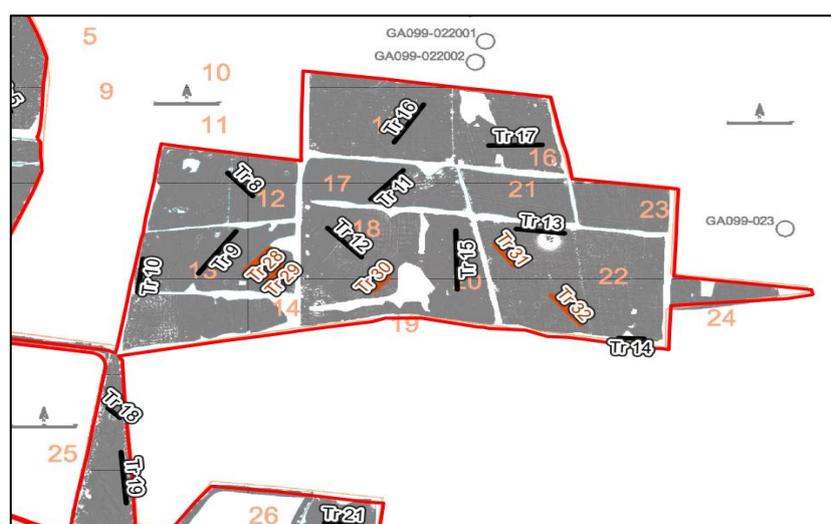
³³ <https://excavations.ie/report/2009/Galway/0020748/> last accessed 12/11/25

Further Information to specifically target these anomalies, as well as other areas within the RLB of the Proposed Development.

Test Trenching

- 3.90. A programme of test trenching was undertaken by Paula Slaughter between the 4th and 14th of June 2024 under licence numbers (24E0385 & 24R0280) from the Dept. of Housing, Local Government and Heritage (see Figure 1 below). The purpose of which was to target any Geophysical anomalies that were detected in order to ascertain these anomalies pertained to hitherto unknown archaeological features (see **Appendix 3D – Test Trenching Report (Consented Solar Farm)**).

Figure 1 Trench Plan of Area A

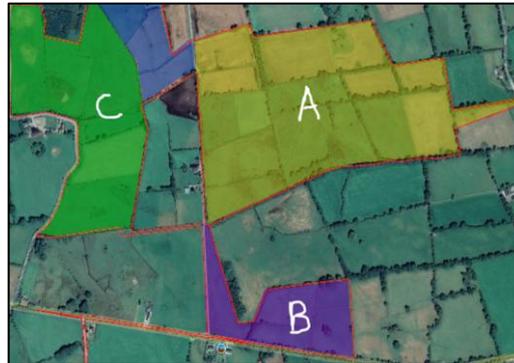


- 3.91. A total of 36 trenches, ranging from 60 – 100m in length (see **Appendix 3A - Figure 3.5 for Individual Trench Lengths**) were excavated across the Consented Solar Farm Site. The trenches targeted all 'possible archaeological features' encountered during the Geophysical Survey and areas which will be subject to significant ground disturbance during construction works. All trenches identified in the Trench Plan were selected to ensure comprehensive coverage of the lands within the Application Site, and selected in agreement with the National Monuments Service (NMS) as part of a Further Information Request during the assessment of the consented solar farm ref; 2361049.
- 3.92. All trenches were excavated in full, and metal detected with no archaeological objects recovered. Trench 16 within (see **Figure 2 above**), which contains the substation location in Field 15, was found to be sterile. Similarly, Trenches 8, 11 and 17, which correspond to the adjacent Fields 12, 16 and 17, were also found to be sterile after excavation. Furthermore, all remaining trenches within the Application Site were also found to be sterile. All works associated with the Proposed Development have been comprehensively addressed in respect of test trenching analysis by virtue of the consented solar farm application. In this regard, the Proposed Development is not anticipated to give rise to any adverse archaeological impacts.

Site Visit

- 3.93. A walkover survey was undertaken for the previously consented solar farm, which includes the Application Site, between the 10th – 13th May 2022 by Robert Mulraney (see **Figure 2** below).

Figure 2 Original Solar Site Visit Map [left] and SID Field Numbers [right]



- 3.94. The above maps show partial extent of the site walkover that took place for the consented solar farm in 2022 in Areas A, B & C. Please note that Field 15 of Area A is the proposed location of the substation, the grid connection is proposed in Fields 17 and 22, and Site Access and tracks are proposed primarily along western boundary of the Application Site within Fields 12, 13, 14 and 25.

Area A

- 3.95. Area A comprises Fields 12 – 24 and are agricultural and separated by a mix of hedgerows and ditches. Fields 12-23 of Area A are within this application RLB.
- 3.96. The westernmost fields (**Fields 12 – 14. Appendix 3C: Plate 2**), of Area A, are flat and featureless. They consist of marginal peat land and few hedgerows. The land is used for grazing as it is considerably poor and contains a lot of rushes. There has been recent groundwork disturbance in this area, and some modern clay water pipes were exposed on the surface. The townland boundary between Ballydonagh and Lissapharson is depicted on the 6" OSI, which remains as a low line of trees with a ditch. Nothing further of archaeological note was observed.
- 3.97. **Field 15** is a large field used for grazing, with a dense field boundary to the west with a ditch. Nothing of archaeological note was observed at the time of the site survey.
- 3.98. The next field to the west is an East-West aligned field (**Field 16**). In the eastern-most half it is hilly and rises to a quarry feature. To the west of this, the field levels out and is somewhat marginal peaty/agricultural land. Moving northwest the quarry consists of a large hill with mounds of old overgrown quarry material. Nothing of archaeological nature detected.

- 3.99. The rectangular E-W aligned field (**Field 17**) is also under long grass and is in parts somewhat marginal agricultural land which gently slopes uphill to the south. Nothing of archaeological nature is noted.
- 3.100. To the southernmost end, is a very large square field with some remains of N-S and E-W orientated hedgerows which divide the field into small compartments (**Fields 18 – 20**). The southern end of **Field 19** contains the townland boundary between Ballydonagh and Lissapharson which is depicted on the 6" OSI, which remains as a line of mature trees with a ditch. Nothing further of archaeological interest was noted.
- 3.101. **Field 22**, a large field also covered in long grass making it difficult to ascertain if any features of archaeological note are present. The land continues to rise into a gentle hill and then slopes west half-way through the field. The southern end on **Field 22**, is the townland boundary between Ballydonagh and Lissapharson, of which a mature hedgerow remains. Moving north of **Field 22** is two rectangular E-W aligned fields (**Fields 21 & 23**). The hedgerow between fields contains numerous mature oak trees but contains nothing else of note.

Area B

- 3.102. Field 25 is an irregular shaped field which is used for grazing. The eastern boundary of which very little remains, was the townland boundary between Ballydonagh and Lissapharson. A very small (c.200m) northwest to southeast orientated portion of trees remain of the boundary. Nothing further of archaeological note was observed.

ASSESSMENT OF DIRECT EFFECTS

Construction Phase

3.103. The main direct effects during the construction phase will result from groundworks and ground disturbance required by the proposal, including:

- bulk excavation works for the substation hardstanding to achieve an earthworks design using cut and fill methodologies to achieve a level area;
- local excavation works may also be required within the substation compound in addition to the bulk excavation works stated above for the building and equipment foundations, fencing, CCTV, drainage and associated buried earthing / cables trenches;
- local excavation works outside the substation compound area, include tower foundations;
- linear excavation works for cable trenches outside the substation compound area;
- topsoil stripping requiring for on-site access tracks, soil deposition areas and assembly areas; and
- Driving of posts to support perimeter fencing.

3.104. Quantitative details on these elements are provided below. All technical details are based on the best information available and are indicative only. They may change due to situations such as ground conditions, micro-siting or changes in technology. Construction involving topsoil stripping has, in general, a lower potential for impacting upon sub-surface remains below the archaeological horizon but retains a similar potential for encountering archaeological remains as construction involving deeper excavation work.

Substation Area

- Total hardstanding area: **12,183.6m²**
- Total cut and fill area (which includes the total substation hardstanding area): 14,091m²
- Deposition/compound areas: **4,300m²**

Access Tracks

- Proposed access tracks are c. 5m in width and will involve an average of 300mm depth of soil removed. Local widening at turns for access reasons. Occasionally they will use a

geosynthetic reinforcement or soil stability to reduce depth. Total length is approximately 1907 (9,535m² in total)

Cable Trenches (Outside Substation Compound)

- Cable trenches are circa 1.3m deep and up to 1m wide, proposed to run alongside the proposed access tracks. These are estimated at 975m in length and a ground disturbance of 975m²

Perimeter Fencing (Outside Substation Compound)

- Property Boundary Fence is a deer fence style with posts. Total length is c.93m with a total of 152 posts. Total Area: 4.6m²

Tower Foundations

- There are two towers, each with a footprint of 6.7m x 6.7m = c.90m² with a foundation depth of up to 1m (subject to detailed design). Total Area 180m²

Vehicle Movements

- 3.105. Vehicle movements are expected to be largely accommodated by the internal site tracks. Where off-road driving is required (e.g., placement or removal of piling), there is potential for ground compression or rutting in adverse/wet conditions. However, this is not expected to have any notable effect on sub-surface archaeology, and the current agricultural use of the Application Site indicates that the ground is already subject to frequent movement of agricultural machinery. The potential for impacts upon archaeology is anticipated to be negligible.

Excavation and Topsoil Stripping

- 3.106. A standard 360° excavator will be used on site to excavate material. Movement of this vehicle will be limited; movement up once during excavation and down once during backfilling. The excavator will be on tracks and will largely move on areas due to be subsequently stripped of topsoil.

Summary of Ground Disturbance

- 3.107. Overall, the proposed footprint constitutes a relatively small percentage of the total area of the Application Site (34.8ha):

- 29,079.6m² for infrastructure (c. 8.36% of the Application Site area); and

3.108. The total ground disturbance area resulting from the Proposed Development is therefore **29,090.8m²** or c. **8.36%** of the Application Site area. As such, the potential for encountering or disturbing below-ground archaeology within the Application Site during the construction phase is considered to be relatively low compared to other types of development.

Known Archaeological and Heritage Assets

3.109. There are no recorded sites within the RMP, RPS and NIAH that are within or near to the Application Site that could be physically impacted by the Proposed Development. In addition, no features of archaeological significance were identified during the site visit or analysis of aerial photographs. As such, **no direct impacts** upon known archaeological and heritage assets are anticipated.

Archaeological Potential

3.110. Due to the absence of any recorded archaeological or architectural features within the Application Site, it is considered to have no confirmed internal indicators for archaeological potential. However, the surrounding archaeology within the SMR/RMP includes enclosures, ringforts, and some quarry's, indicating that the site lies within a landscape with known archaeological activity. As such, this was considered to have a **Moderate** potential for archaeological remains throughout its extent. Furthermore, the AAHIA produced for the Ballydonagh Extension proposal showed that surrounding archaeology within the RMP includes Enclosures, Ringforts, Souterrains and a significant number of Quarry's, indicating that the site lies within the same landscape of known archaeological activity. Furthermore, the Geophysical Survey found a number of anomalies that may correspond to archaeological features such as Rathes, Enclosures and a possible Ring-Ditch present; although subsequent test trenching on the site found no evidence in this regard. Nonetheless, the archaeological potential of the Application Site is still most likely **Moderate** for Prehistoric and Early Medieval remains throughout its extent.

3.111. Specific impacts relating to the archaeological potential identified above cannot be accurately ascertained at this stage, but the predicted likelihood of such impacts can be estimated by considering the ground disturbance of the construction methods that will be used.

Operational Phase

3.112. As no additional construction or ground disturbance activities are anticipated during the operational phase of the development, **no direct effects** are expected to occur.

Decommissioning Phase

- 3.113. While no decommissioning phase has been envisaged for this development, potential direct effects upon heritage assets during a possible decommissioning phase – if one were to occur – would be limited to features within the Application Site and may result from ground disturbance through the removal of infrastructure and cabling, as well as from vehicle movements, landscaping and overburden storage. However, as the vast majority of ground disturbance is expected to mirror that which occurs within the earlier construction phase, such effects will occur upon ground that has already been disturbed. Additional ground disturbance upon ‘new’ land during this phase is expected to be very limited. It is therefore anticipated that direct effects during a decommissioning phase will be **Negligible**.

ASSESSMENT OF INDIRECT EFFECTS

Construction Phase

- 3.114. Indirect effects during the construction phase are anticipated to be limited to visual and noise disturbances resulting from the operations of machinery and various construction activities. Impacts arising from this are considered to be temporary, lasting only for the duration of the construction schedule, and will occur primarily within the specified daily working hours. Indirect effects upon heritage assets during this phase are therefore considered to be **Negligible**.

Operational Phase

- 3.115. Indirect effects from the proposal during its operational phase will be predominately derived from visual impacts resulting from views and intervisibility between the above-ground elements of the proposed Development and heritage assets within the surrounding area.
- 3.116. The ZTV was overlain onto the heritage assets map in order to identify those which have a greater potential to be visually impacted by the Proposed Development. The ZTV does not account for intervening hedgerows, trees or built structures, which will limit the intervisibility between the building/monument and the Proposed Development.
- 3.117. Within their respective study zones, a total of two HGDLs, four Buildings within the NIAH that crossover with three Protected Structures and 29 sites within the RMP are located within the ZTV. These assets are therefore assessed for indirect impacts below.

Historic Gardens and Designed Landscapes

Eyreville (NA01 / GA-47-M-812208)

- 3.118. There is very little information held in the database regarding Eyreville, however, it is present on the historic 6" OSI (1836 - 1846). It is shown as a large building set in a large area of land, surrounded by several groves of mature trees. No formal gardens are in existence today.
- 3.119. Views and intervisibility with the Proposed Development may not be possible for Eyreville due to the distance (c.2.39km), and number of intervening roads and treelined field boundaries. Although relatively close to the Application Site, there are no traces of the formal gardens today. In addition, modern development has taken place in the intervening distance which reduces any visual impacts further. As such, indirect effects upon Eyreville are anticipated to be **Negligible**.

Gortnamona (NA02 / GA-47-M-837218)

- 3.120. This asset lies approximately 1.10km north of the Proposed Development. There is very little information held in the database regarding Gortnamona, however, it is present on the historic 6" OSI (1836 - 1846). It is shown as a large building with ancillary buildings, set in a large area of land, surrounded by mature trees, with large formal gardens were to the west. Gortnamona House and some of the original ancillary buildings are still in existence today. However, there is extensive modern development within the site and the formal gardens are no longer there.
- 3.121. Although some views and intervisibility from the Proposed Development are possible for Gortnamona, the house and gardens have seen extensive modern development which has removed the formal gardens and made its sensitivity to any visual impacts as Negligible. In addition, views that may be visible across the landscape will be interrupted by an extensive area of mature woodland making the magnitude of any visual impacts Negligible also. Therefore, indirect effects upon Gortnamona are anticipated to be **Negligible**.

Historic Buildings within the NIAH/Record of Protected Structures*Eyreville: mill (wind) (NA09/NA20/ 30409908)*

- 3.122. Dating from 1760-1800 the windmill, which is located c.2.00km west of the Proposed Development, is described as:

'Freestanding circular-plan windmill-built c.1780. Roofless. Rubble limestone walls. Enlarged irregular door openings to east and west. Slit window with rubble stone lintel to upper level. Set within demesne lands of Eyreville.'

- 3.123. Although some views and intervisibility from the Proposed Development are possible for NA09/NA20, the windmills setting has seen extensive modern development which has made its sensitivity to any visual impacts as Negligible. In addition, views that may be visible across the landscape will be interrupted by intervening vegetation, field boundaries and roads, making the magnitude of visual impact Negligible also. As such, indirect effects upon this asset are anticipated to be **Negligible**.

Gortnamona House & Outbuildings (NA12/NA21 / 30409912 / NA13/NA22 / 30409913)

- 3.124. Located c.1.10km north of the Proposed Development, the c. 1700 - 1800 the house and outbuildings are described consecutively as:

'Detached three-bay three-storey country house, built c.1720, refenestrated c.1860, having central breakfront to front (north) elevation, three-storey return to rear elevation, later two-bay two-storey Gothic Revival addition, built c.1860, to east end of rear elevation, having gabled breakfront with oriel window to east elevation. Further lean-to single-storey addition to south end of return. Now disused and derelict. Main block comprising saltbox-profile pitched

slate roof with rendered end chimneystacks, cut limestone and render eaves course, and cast-iron rainwater goods. Roughcast rendered walls.

Farmyard to rear of Gortnamona House, built c.1800, comprising thirteen-bay two-storey south range with full-width single-storey lean-to addition to south (rear) elevation, three-bay two-storey carriage house west range having external rubble stone staircase, and remains of two-bay single-storey building to east having carriage arches. Now disused. Pitched slate roofs, half-hipped to south end of carriage house, with cut limestone eaves courses. Some corrugated-iron repairs to south range. Rendered chimneystacks, and cast-iron rainwater goods. Rendered walls to yard elevations, rubble stone walls to other elevations. Square-headed window openings with cut limestone sills and some timber fittings. Square-headed door openings, some with timber battened doors. Elliptical carriage arches to yard elevations, camber-arched carriage arch to south gable of carriage house, with cut limestone voussoirs. Rendered boundary wall to north-west'.

- 3.125. Although some views and intervisibility from the Proposed Development are possible for Gortnamona, the house and outbuildings have seen extensive modern development which has made its sensitivity to any visual impacts as Negligible. In addition, views that may be visible across the landscape will be interrupted by an extensive area of mature woodland making the magnitude of visual impacts Negligible also. As such, indirect effects upon Gortnamona are anticipated to be **Negligible**.

Skycur House (NA15/NA19 / 30410701)

- 3.126. Built in c.1830 and located c.1.83km south of the Application Site, the house is described as:

'Detached three-bay two-storey house, built c.1835, having recent three-bay single-storey extension to south. Hipped sprocketed slate roof with centrally located pair of rendered chimneystacks. Lined-and-ruled rendered walls with render plinth course. Square-headed tripartite window openings with cut limestone sills and replacement uPVC windows. Elliptical-headed entrance with spoked fanlight, square-headed doorway and margined sidelights, openings flanked by carved timber colonettes, and with timber panelled door. Multiple-bay single- and two-storey outbuildings to south of house, having pitched slate roofs, rubble stone walls and square-headed openings. Cast-iron piers to vehicular entrance to garden. Cut limestone square-plan piers to road entrance to east, having wrought-iron double-leaf gate, and rendered quadrant walls. Rubble stone boundary walls, with wrought-iron double-leaf gate to farm entrance to south-east'.

- 3.127. Views and intervisibility with the Proposed Development are not expected to be possible for Skycur House. Although relatively close to the Application Site (c.1.83km), the large amount of intervening field boundaries and vegetation screen any views. In addition, it is somewhat surrounded by mature trees which will also screen any possible views. In addition, the asset has been subject to extensive modern development. As such, indirect effects upon Skycur House are anticipated to be **Negligible**.

Record of Monuments and Places

3.128. There is a total of 70 archaeological sites in the RMP that are within the 2km study zone. These sites can be used to evaluate the potential for archaeological remains within the Application Site. However, although 29 RMP sites lie within the calculated ZTV, many typically lack standing remains (for example cropmark sites, findspots, historical records or event records) or are not considered to be sensitive to possible visual impacts (for example quarries, field walls, drainage ditches or milestones).

3.129. Indirect effects upon RMP sites such as the above, or those that are well-screened by vegetation or buildings, are anticipated to be **Negligible**, but indirect effects will be higher where views or intervisibility are possible between the proposal and a heritage asset whose setting is at least partly sensitive to such views. A full list of anticipated indirect effects upon non-designated assets are contained within the table below.

Table 3-2: Assessment of indirect effects upon RMP sites within the 2km study area

Site Ref.	Name	Description	Sensitivity of Asset	Magnitude of Visual Impact	Indirect Effect
NA23 / GA099-022----	Ringfort - rath	<i>On a slight rise in grassland. Poorly preserved circular rath (diam. 38m) defined by a bank from S through W to N. No visible surface trace of E half survives. Two raths (GA099-022001- and GA099-022002-) lie immediately to the S</i>	Medium	Low	Minor
NA24 / GA099-022001-	Ringfort - rath	<i>On a slight rise in grassland, immediately S of a rath (GA099-022----). Marked on 1st ed. of OS map as a pair of conjoined enclosures, see also GA099-022001. This N example, circular in plan (diam c. 40m), was cut by a roadway at N. All that survives is a single length of bank running N-S for 30m. It appears to form NE section of the monument.</i>	Medium	Low	Minor
NA25 / GA099-022002-	Ringfort - rath	<i>On a slight rise in grassland, immediately S of a rath (GA099-022----). Marked on 1st ed. of OS map as a pair of conjoined enclosures, see also GA099-022001-. This S example was subcircular (c. 50m N-S) in plan. It consists of a bivallate rath defined by two poorly preserved banks of earth and stone and an intervening fosse. A field boundary overlies most of the outer bank.</i>	Medium	Low	Minor
NA26 / GA099-023----	Enclosure	<i>On a gentle S-facing slope in grassland. Marked on the OS 6-inch maps as an oval enclosure (c. 32m E-W; c. 30m NW-SE); on the 1838 map it was planted with trees, these are not depicted on the 1946-7 revision of the map clear but it was clipped by a N-S running</i>	Negligible	Negligible	Negligible

		<i>road from NE to SE. No visible surface trace survives</i>			
NA27 / GA099-024----	Quarry	<i>This is a disused gravel pit; it is not an archaeological monument.</i>	Negligible	Negligible	Negligible
NA28 / GA099-025----	Monumental structure	<i>The Archaeological Survey of Ireland (ASI) is in the process of providing information on all monuments on The Historic Environment Viewer (HEV). Currently the information for this record has not been uploaded....</i>	Negligible	Negligible	Negligible
NA29 / GA099-026----	Ringfort - rath	<i>In low-lying grassland. Circular rath (diam. 27.5m), in fair condition, defined by a bank of earth and stone with traces of an external fosse visible from SW to WSW. A gap (Wth 1.9m) at ESE may be original, while another at WSW appears to be modern</i>	Medium	Negligible	Negligible
NA30 / GA099-027----	Ringfort - rath	<i>In level reclaimed grassland. Very poorly preserved circular rath (diam. 46m) defined by a bank and external fosse. The bank is only evident from NE through E to SE, while the fosse is visible all round.</i>	Low	Negligible	Negligible
NA32 / GA099-029----	House - 18th/19th century	<i>The Archaeological Survey of Ireland (ASI) is in the process of providing information on all monuments on The Historic Environment Viewer (HEV). Currently the information for this record has not been uploaded...</i>	Low	Negligible	Negligible
NA33 / GA099-042----	Ringfort - unclassified	<i>On a rise in undulating farmland. Marked on OS 6-inch maps as a subcircular enclosure (N-S 32m, E-W 24m); all that survives is a low rise.</i>	Negligible	Negligible	Negligible
NA35 / GA099-062----	House - 18th/19th century	<i>The Archaeological Survey of Ireland (ASI) is in the process of providing information on all monuments on The Historic Environment Viewer (HEV). Currently the information for this record has not been uploaded...</i>	Negligible	Negligible	Negligible
NA38 / GA099-101----		<i>The Archaeological Survey of Ireland (ASI) is in the process of providing information on all monuments on The Historic Environment Viewer (HEV). Currently the information for this record has not been uploaded.</i>	Negligible	Negligible	Negligible
NA39 / GA099-102----	Ringfort - rath	<i>On a rise in undulating grassland. Poorly preserved subcircular rath (NE-SW 22.4m) defined by two banks and an intervening fosse. Either of two gaps at NNW and SE may be original. A field wall overlies the inner bank from SSW to NW.</i>	Medium	Negligible	Negligible
NA40 / GA099-103----	Ringfort - rath	<i>In low-lying grassland. Circular rath (D 29m), in fair condition, defined by a degraded scarp. A gap (Wth 3.5m) at ENE may be original.</i>	Low	Negligible	Negligible

NA41 / GA099-104----	Ringfort - rath	<i>On a rise in undulating grassland. Poorly preserved subcircular rath (D 27.3m) defined by two banks and an intervening fosse. The inner bank survives intermittently from W to NW, while the fosse and outer bank survive from SE through S to SW. A gap (Wth 2.85m) at W may be original.</i>	Medium	Negligible	Negligible
NA42 / GA099-105----	House - 18th/19th century	<i>The Archaeological Survey of Ireland (ASI) is in the process of providing information on all monuments on The Historic Environment Viewer (HEV). Currently the information for this record has not been uploaded...</i>	Negligible	Negligible	Negligible
NA43 / GA099-109001-	Castle - unclassified	<i>Within the SE quadrant of an enclosure (GA099-109002-). Indicated on the OS 6-inch maps as the site of 'Lisheennora Castle'. No visible surface trace survives.</i>	Negligible	Negligible	Negligible
NA44 / GA099-109002-	Enclosure	<i>On a slight rise in flat grassland. Very poorly preserved circular enclosure (diam. 29.2m) defined by a scarp. From N to E the enclosing element and part of the interior have been destroyed as a result of the construction of a house which is now ruined. The site of 'Lisheennora Castle' (GA099-109001-) is recorded on the OS 6-inch maps within its interior.</i>	Negligible	Negligible	Negligible
NA46 / GA099-122----	Enclosure	<i>The Archaeological Survey of Ireland (ASI) is in the process of providing information on all monuments on The Historic Environment Viewer (HEV). Currently the information for this record has not been uploaded...</i>	Low	Negligible	Negligible
NA48 / GA099-124----	Ringfort - rath	<i>On the crest of a prominent ridge in level grassland. Circular rath (diam. 31m), in fair condition, defined by a bank overgrown with hawthorn trees and bushes. A gap (Wth 2.5m) at SW may be original.</i>	Low	Negligible	Negligible
NA54 / GA099-155----	Windmill	<i>The Archaeological Survey of Ireland (ASI) is in the process of providing information on all monuments on The Historic Environment Viewer (HEV). Currently the information for this record has not been uploaded.</i>	Medium	Negligible	Negligible
NA55 / GA099-156----	Ringfort - rath	<i>On a gentle rise in undulating grassland. Circular rath (diam. 31.4m), in fair condition, defined by a bank which is planted with trees from S through W to N. A gap (Wth 2m) at SE may be original.</i>	Medium	Negligible	Negligible
NA61 / GA099-172----	Ringfort - rath	<i>In flat reclaimed farmland, formerly demesne land. Marked on the 1838 edition of the OS 6-inch map as a roughly circular enclosure planted with fir trees and named 'Lisnatrap Fort'; on the OS 1:2500 plan (surveyed 1912-16) it is depicted as a walled mixed tree plantation. The wall appears to overlie an enclosing bank from NW to NE and from SE to</i>	Negligible	Negligible	Negligible

		<i>SW. On inspection in November 1967 the bank was barely perceptible and several old trees were growing along its perimeter (SMR file). On re-inspection in April 1983 no visible surface trace survived, however, its outline is visible on the OSi digitalglobe aerial photograph (Google 2018). Possibly a rath that was subsequently reused as a landscape feature.</i>			
NA63 / GA099-174001-	Ringfort - rath	<i>In undulating grassland. Marked on the OS 6-inch maps as a circular enclosure (diam. c. 34m). When initially visited by the Survey in April 1983 all that survived of this rath was a platform curving from E through S to SW. On re-inspection in March 1987 no visible surface trace survived; it had been levelled as a result of field-reclamation works. However, its outline is visible on the OSi digitalglobe aerial photograph (Google 2018). A field system (GA099-174002-) may be associated.</i>	Negligible	Negligible	Negligible
NA64 / GA099-174002-	Field system	<i>The Archaeological Survey of Ireland (ASI) is in the process of providing information on all monuments on The Historic Environment Viewer (HEV). Currently the information for this record has not been uploaded...</i>	Negligible	Negligible	Negligible
NA68 / GA099-180----	Designed landscape feature	<i>In pastureland. Marked on the 1838 edition of the OS 6-inch map as an enclosed roughly triangular-shaped tree plantation; a N-S running roadway lies immediately to the W. On the OS 1:2500 plan (surveyed 1912-16) the enclosing wall is subcircular in plan, curving from NNW through E to S, and hachures are depicted off the wall from NE to S. On the 1946-7 revision of the 6-inch map only a line of hachures is shown curving from NNE to S; all the trees have been cleared away. On inspection in April 1983 only a natural mound of no archaeological significance was noted. The cartographic evidence suggests that this was most likely a landscape feature.</i>	Negligible	Negligible	Negligible
NA85 / GA100-149----	Ringfort - rath	<i>On a hillock in rolling pastureland. Circular rath (diam. 29m), in fair condition, defined by a bank except from SE to SW where a scarp forms the enclosing element. A field boundary overlies the bank. Trees have been planted around the perimeter of the monument and within the interior.</i>	Low	Negligible	Negligible
NA90 / GA107-174----	Enclosure	<i>The Archaeological Survey of Ireland (ASI) is in the process of providing information on all monuments on The Historic Environment Viewer (HEV). Currently the information for this record has not been uploaded...</i>	Negligible	Negligible	Negligible

NA91 / GA107-182----	Quarry	<i>On a hillock in grassland. A hachured feature marked on the 1945 revision of the OS 6-inch map proved on inspection in 1984 to be a disused quarry indicated by a series of grass-covered mounds and hollows. As it is of post-AD 1700 date it does not come within the remit of the Archaeological Survey of Ireland.</i>	Negligible	Negligible	Negligible
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Summary of Indirect Effects

- 3.130. There were no NMSCs identified within the 5km study zone around the Proposed Development. As such, this heritage resource will not be impacted by the Proposed Development.
- 3.131. There is one HGDLs identified within the 5km study zone that is within the ZTV of the Proposed Development. **Negligible** indirect effects are anticipated for Gortnamona (NA02).
- 3.132. There were four historic structures within the RPS/NIAH that are within the 2km study zone and the ZTV of the Proposed Development. **Negligible** indirect effects are anticipated for all of these assets.
- 3.133. There were 29 archaeological sites identified in the RMP that are within the 2km study zone and the ZTV of the Proposed Development. **Minor** indirect effects are anticipated for ‘Ringfort-raths’ (NA23/NA24/NA25), while **Negligible** indirect effects are anticipated for the remaining 26 assets.
- 3.134. There were no ACAs or World Heritage Sites identified in their respective study zones.

Decommissioning Phase

- 3.135. Similar to the construction phase, indirect effects during a possible decommissioning phase would be anticipated to be limited to visual and noise disturbances resulting from the operations of machinery and various construction activities. Impacts arising from this would be considered to be temporary, lasting only for the duration of the decommissioning schedule, and would occur primarily within the specified daily working hours. Indirect effects upon heritage assets during this phase would therefore be **Negligible**.

CUMULATIVE EFFECTS

- 3.136. Cumulative effects may occur where the combination of separate impacts resulting from different developments build up to be potentially significant. As such, where individual impacts may be minor, they may contribute to a more significant collective impact. Such impacts can be direct or indirect; however, as recorded development has been extremely limited within the Application Site, **no significant additional cumulative direct effects** are anticipated and will be sufficiently mitigated by the implementation of the aforementioned mitigation measures.
- 3.137. Cumulative indirect effects upon heritage assets are primarily considered to be visual in nature and may occur where they act as receptors to more than one development with which they have visibility. However, while some degree of cumulative visual effects are expected to occur through shared views with existing or consented developments in the local landscape, these cumulative visual effects are not expected to result in any significant cumulative effects on the settings of any heritage assets.
- 3.138. Although nearby consented developments may result in cumulative views from third points in the landscape, no instances were identified where cumulative indirect effects resulting from this upon any specific heritage asset increased the overall indirect effects anticipated upon them. As such, overall cumulative indirect effects upon the heritage resource are anticipated to be **Minor / Adverse** in the worst case during the operational phase, in line with the overall indirect effects previously assessed. Consented developments identified within the surrounding area and considered for cumulative impacts are contained within **Table 1** below.

APPLICATION NUMBER	TYPE OF DEVELOPMENT	DEVELOPMENT DESCRIPTION	STAGE OF APP.	DECISION TYPE	DECISION	DISTANCE	DIRECTION
Galway Council Planning Apps 2015 Onwards							
2360827	BESS	to include development of a 240MWh battery energy storage systems facility within a total site area of up to 3.02 hectares, the site will include 1no. 38KV substation compound including 1no. single storey electrical substation building	Finalised	Permission	Conditional	3.120km	North
2361049	Solar	for the development that will consist of a planning permission for a period of 10 years to construct & complete a Solar PV Energy development with a total site area of circa 81.9 hectares, to include, solar PV panels ground mounted on support structures,	Finalised	Permission	Conditional	0.000km	N/A
2461749	Solar	to construct and complete a Solar PV Energy development with a total site area of circa 56.2 hectares across four sections of land to include, solar PV panels ground mounted on metal support structures, electrical transformer and inverter substation	Finalised	Permission	Conditional	0.000km	South

2561903	Solar (amendment)	for several minor amendments to the previously consented development under Planning Reference 2361049. The amendments comprise the following; re alignment of the main entrance and access gate; re alignment and widening of internal access tracks; alteration of the boundary fence; removal of the consented 38kV substation in Field 22; combined central inverters and MV transformers are replaced by separate string inverters and central MV transformers; reduction in the size of related hardstanding areas; updated table layout including a reduction in PV table numbers from 3209 to 3120; reduction of the of new overhead line separation areas arising from the removal of a section of the 110 kV overhead line; inclusion of an additional badger sett buffer and amendment of condition 3a to extend the operational lifetime of the solar farm from 35 years to 40 years	Finalised	Permission	Conditional	0.000km	South
2660009	Solar (amendment)	several minor amendments to the previously consented	Finalised	Permission	Conditional	0.000km	N/A

		development under Planning Reference 2461749 (by Galway County Council). The amendments comprise the following; Combined central inverters and MV transformers are replaced by separate string inverters and central MV transformers which results in a reduction in the extent of associated hardstanding areas; alteration to Condition 3(a) to extend the operational lifetime of the solar farm from 35 years to 40 years; addition of tables in the former central inverter locations.					
Galway Council Planning Apps Before 2015							
74030	Substation	to build a 38kvline from existing Somerset 110kv Station to a point on the existing 38 kv line at Glenloughaun passing through or in the vicinity of the following townlands: somerset, Barnpark, Lakefield, Chapelpark, Glenaun, Gortnahorna (Clanricarde)	Finalised	Permission	Conditional	3.250km	North
932	Substation	for ESB Somerset 110KV station which consists of alterations to the existing 110 KV station comprising of one no. sealing	Finalised	Permission	Conditional	3.240km	North

		end structure, 4.59m high and associated site works					
151571	Wind	for a ten-year permission to construct a wind farm. The proposed underground cable connection to the national grid will run under the existing road network through the townlands of Coolcarta West, Caltragh, Fynagh, Moneenaheeltia, Killeevny, Ballyhoose	Finalised	Permission	Conditional	1.220km	North

MITIGATION MEASURES

Direct Effects upon Known Assets

- 3.139. There are no recorded sites within the RMP, RPS and NIAH that are within or near to the Application Site that could be physically impacted by the Proposed Development. In addition, no features of archaeological significance were identified during the site visit or analysis of aerial photographs. As such, **no direct impacts** upon known archaeological and heritage assets are anticipated and no mitigation is required.

Archaeological Potential

- 3.140. Due to the absence of any recorded archaeological or architectural features within the Application Site, there are no confirmed internal indicators for archaeological potential. However, the surrounding archaeology within the SMR/RMP includes enclosures, ringforts, and some quarry's, indicating that the site lies within a landscape with known archaeological activity. Furthermore, the Geophysical Survey found a number of anomalies within fields 13, 16, 18 and 22. As such, the Application Sites archaeological potential is most likely **Moderate** for Prehistoric and Early Medieval remains throughout its extent.
- 3.141. A programme of test trenching, under licence numbers (24E0385 & 24R0280), was undertaken between the 4th and 14th of June 2024, the purpose of which was to target Geophysical anomalies within Fields 13, 16, 18 & 22 that were detected in order to ascertain if these anomalies pertained to hitherto unknown archaeological features (see **Appendix 3C– Test Trenching Report (Consented Solar Farm)**). A total of 36 trenches were excavated across the Application Site. All trenches were excavated in full, and metal detected with no archaeological objects recovered. The results of this programme showed that all trenches within the RLB were found to be sterile.
- 3.142. As such, the results of the Test Trenching, in conjunction with the Geophysical Survey, does not suggest any potential for further significant archaeological remains within the Proposed Development. Therefore, no further mitigation is considered to be necessary in relation to this.

Indirect Effects

- 3.143. Indirect effects upon the surrounding heritage assets have been assessed as overall **Minor**. Therefore, no specific mitigation is considered to be required for the reduction of any visual impacts.

SUMMARY

- 3.144. The desk-based assessment was conducted to ascertain all historical and archaeological information relevant to the Application Site and the local area. All types of heritage assets were identified within relevant 5km and 2km study zones around the Proposed Development, while additional baseline information was also obtained through a site walkover survey, map regression analysis, placenames analysis, aerial photography and consultation with relevant records and databases.
- 3.145. There are no recorded sites within the RMP, RPS and NIAH that are within or near to the Application Site that could be physically impacted by the Proposed Development. In addition, no confirmed features of archaeological significance were identified during the desk-based assessment of the Application Site. As such, no direct impacts upon known archaeological and heritage assets are anticipated and no mitigation measures are considered to be necessary in relation to this.
- 3.146. The surrounding archaeology within the SMR/RMP includes enclosures, ringforts, and some quarry's, indicating that the site lies within a landscape with known archaeological activity. As such, the Application Sites archaeological potential is most likely **Moderate** for Prehistoric and Early Medieval remains throughout its extent. The Geophysical Survey found a number of anomalies within Fields 13, 16, 18 & 22; and a programme of test trenching was undertaken between the 4th and 14th of June 2024 to target any Geophysical anomalies that were detected. All trenches were excavated and metal detected in full, with no archaeological objects recovered. As such, the results of this programme showed that all trenches within the RLB were found to be sterile.
- 3.147. Nonetheless, as well as pre-construction evaluation, it is proposed that an archaeological programme of monitoring be implemented, and that **any groundworks undertaken be monitored by a qualified archaeologist during the construction stage.**
- 3.148. Monitoring is already secured under Condition 5 (v) of Planning Reference 2361049, as amended under 2561903 (see condition 14(v) also), which requires archaeological supervision of all site clearance and ground disturbance works. This established requirement can be carried forward as part of any subsequent permission.
- 3.149. The implementation of archaeological monitoring will ensure that any previously unidentified remains are identified and appropriately managed in accordance with agreed procedures. The findings arising from this monitoring will inform whether any additional mitigation measures, including preservation in situ or excavation, are necessary.
- 3.150. Indirect effects upon the surrounding heritage assets have been assessed as overall **Minor**. Therefore, no specific mitigation is considered to be required for the reduction of any visual impacts.

LIST OF APPENDICES

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- Figure 3 – Field Numbers
- Figure 3.1 – Architectural Heritage Assets
- Figure 3.2 – Record of Monuments and Places
- Figure 3.3 – Historic 6" OSI Map (1829 – 1842)
- Figure 3.4 – Historic 25" OSI Map (1897 – 1913)
- Figure 3.5 – Test Trenching Plan (consented solar farm)

Appendix 3B – Table of Heritage Assets

Appendix 3C: Geophysical Survey (Consented Solar Farm)

Appendix 3D – Test Trenching Report (Consented Solar Farm)



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