

HERBATA DATA CENTRE, NAAS-RESPONSE TO REQUEST FOR FURTHER INFORMATION ("RESPONSE TO RFI") FROM KILDARE COUNTY COUNCIL

ADDENDUM TO CHAPTER 10 CULTURAL HERITAGE



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ADDENDUM TO CHAPTER 10 CULTURAL HERITAGE

10.1 Introduction

This Addendum to Chapter 10 Cultural Heritage of the EIAR (dated June 2024), submitted to Kildare County Council as part of the planning application for the Project on 13th August 2024, updates the cultural heritage assessment of the Project, in response to the Kildare County Council RFI.

UNESCO define the term 'Cultural Heritage' as encompassing several aspects of tangible assets (*immovable*: archaeological sites and monuments, architectural heritage buildings; *movable*: artefacts; and *underwater*: shipwrecks and ruins) and intangible assets (e.g. folklore, oral tradition and language).

This chapter should be read in conjunction with, Chapter 10 Cultural Heritage of the submitted EIAR and its associated figures and appendices.

This Addendum is provided in response to the RFI from Kildare County Council (as explained in the Addendum to Chapter 1 of the EIAR) and specifically, this Addendum to Chapter 10 of the EIAR is provided in relation to the response to Item 25 of the RFI which states the following:

25. Given the scale and location of the development site, it is possible that previously unrecorded sub-surface archaeological remains could be disturbed during the course of groundworks required for the development. The extensive area of archaeological significance identified through geophysical survey within Field No. 8 is considered to represent a new archaeological monument and preservation in situ should be the first and preferred first option. In accordance with Section 3.4 of Framework and Principles for the Protection of the Archaeological Heritage (1999), the Applicant is requested to conduct a comprehensive interrogation of design options to determine the feasibility of facilitating preservation in situ of this monument and submit a detailed report detailing the results of an assessment of all design options.

This chapter considers the proposed design amendments as set out in the Addendum to Chapter 4 of the EIAR, as relative to cultural heritage matters.

10.2 Methodology

The assessment in this Addendum to Chapter 10 has followed the methodology set out in the submitted EIAR. The assessment is based on a programme of desktop research combined with a field survey of the Project site, in addition to two geophysical surveys (as detailed within Chapter 10 of the submitted EIAR).

The recorded and potential cultural heritage resource within a study area encompassing the lands comprising the Project site, and surrounding lands extending for 1km in all directions, was assessed in order to compile a comprehensive cultural heritage context for the area, as detailed within Chapter 10 of the submitted EIAR.

10.2.1 Geophysical Survey

As set out within Chapter 10 of the submitted EIAR, a detailed gradiometry survey of a field (Field 10) in the south of the Project lands which contains recorded fulacht fia (sometimes spelled 'fulacht fiadh') site (KD019-028) was undertaken on 18th and 27th April 2023 (Leigh 2023a - Licence no 23R0105). The following summary details the findings of the survey:

The geophysical survey has successfully identified the location (E686460 N719360) and extent of the fulacht fia site (KD019-028) The results suggest the fulacht fia is roughly circular in form, measuring c. 15m in diameter, with an associated spread of burnt material extending c. 18m to the east. A further possible spread of burnt material has been identified to the east of the fulacht. This measures c. 8m in diameter and is of archaeological potential. In the west of the field, amorphous responses and a linear trend have also been recorded. The archaeological potential of these responses is unclear. The ground was completely waterlogged here, and the remnants of a former field drain are evident. These responses may be more recent in origin as no clear archaeological pattern is evident. A drainage ditch traverses the field east to west and clear parallel trends to the north of this are indicative of ploughing activity. This may represent ridge and furrow cultivation. However, the ploughing clearly respects the drainage ditch, suggesting more recent agricultural activity.

A detailed gradiometry survey of the remaining fields, except Field 6 and the southern half of Field 10 which were unsuitable for survey due to waterlogged and uneven ground, was undertaken on 2nd -16th June 2023

and 21st August 2023 (Leigh 2023b - Licence no 23R0225). The following summary details the findings of the survey:

In the east of the Project area, within Field 8, there are responses indicative of an archaeological enclosure (E686590 N719634). The enclosure comprises of a circular ditched feature (c.31m diam.) with multiple internal responses indicative of pits and spreads of burnt material. This is typical of habitation activity. The main enclosure appears to have two sub-rectilinear annexes, extending c.25m to the east of the main enclosure. Outside of these annexes are areas of increased responses, suggesting spreads of burnt material. At the eastern extent of Field 8 there is another curvilinear response evident. This would have most likely extended to the east, outside the survey area and where the M7 Motorway now runs. Although interpretation is difficult it is speculated that the curvilinear response represents the remains of a further archaeological ditched feature, which is now truncated by the motorway. Other magnetic signatures noted throughout the survey area may represent potential archaeological features, such as an isolated potential pit (1) in Field 1 and two potential pits (4) in Field 4 (Figure 10.1). However, it is noted that the data is littered with modern ferrous responses and that these potential features may represent more deeply buried ferrous debris. A cluster of responses (7) in Field 5, though not clear, may be the plough damaged remains of archaeological ditched features. In the south of Field 9 there are small areas of increased response (14). Although it is possible that these represent more recent activity it is possible that these represent small spreads of burnt material of archaeological interest. The geophysical survey report notes that 'no clear responses of archaeological potential were recorded in Fields 2 & 3' and that 'no responses of interest were detected in Field 10.' (Leigh 2023). An electricity pylon located in the field boundary between Fields 7 and 8 has created a spread of magnetic disturbance, which may mask any subtle responses of archaeological potential within that portion of the survey area.

10.3 Design Options

10.3.1 Submitted Design

The submitted design (Figure 10.1 below) consisted of the construction of 6 no. two storey Data Centre buildings each with loading bays, external plant area including electrical and mechanical plant rooms, fuel compound, sprinkler tanks and associated ancillary development, etc.

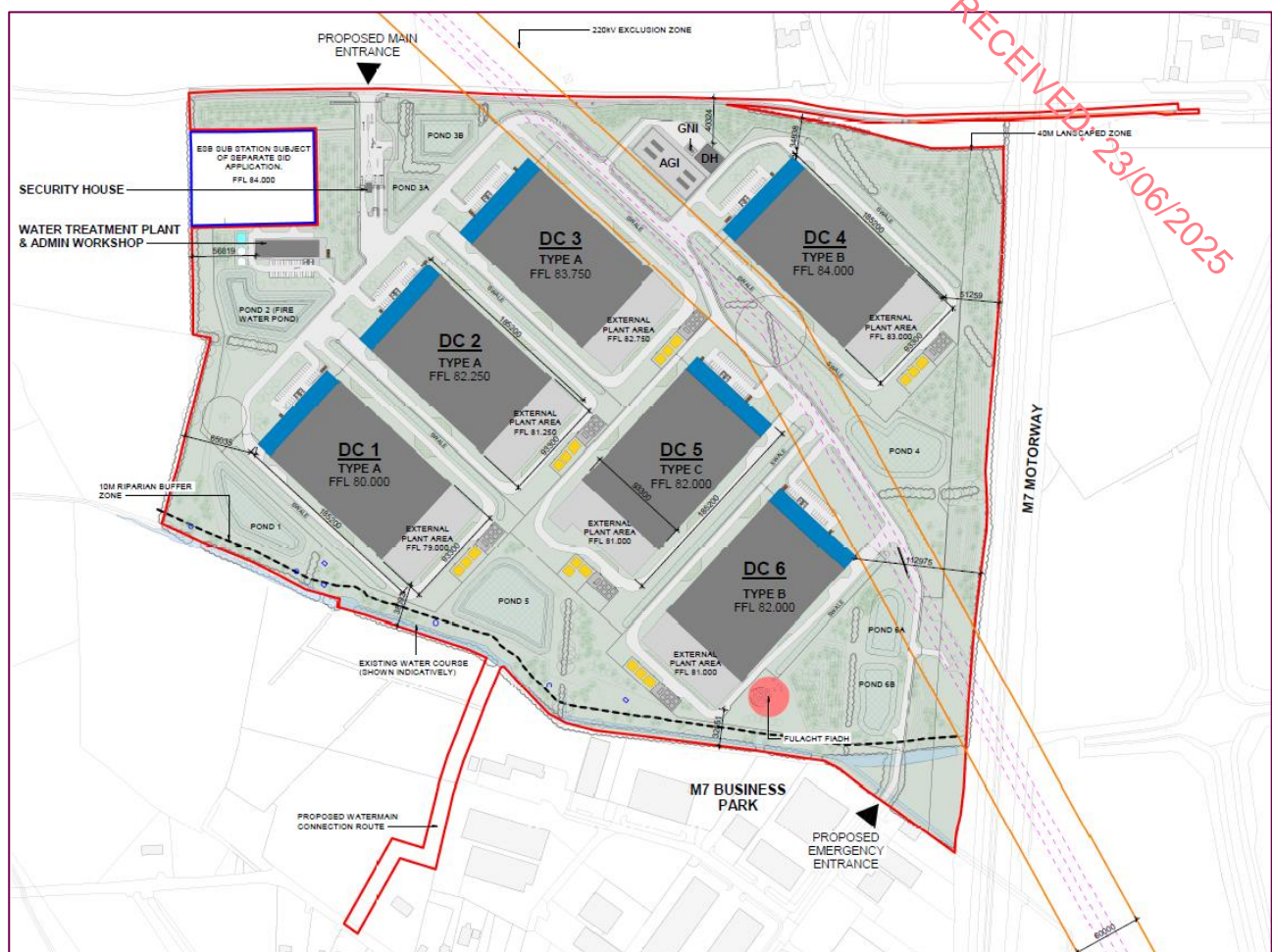


Figure 10.1: Previously Submitted Overall Proposed Site Plan (extract of submitted drawing 22217-RKD-ZZ-ZZ-DR-A-1010-OVERALL PROPOSED SITE PLAN)

The submitted design involved encroachment of the southern portion of Date Centre 4 and its external ancillary elements, such as a swale and access road, into the area containing the enclosure feature identified during geophysical survey (referred to as 'new archaeological monument' in the RFI from Kildare County Council).

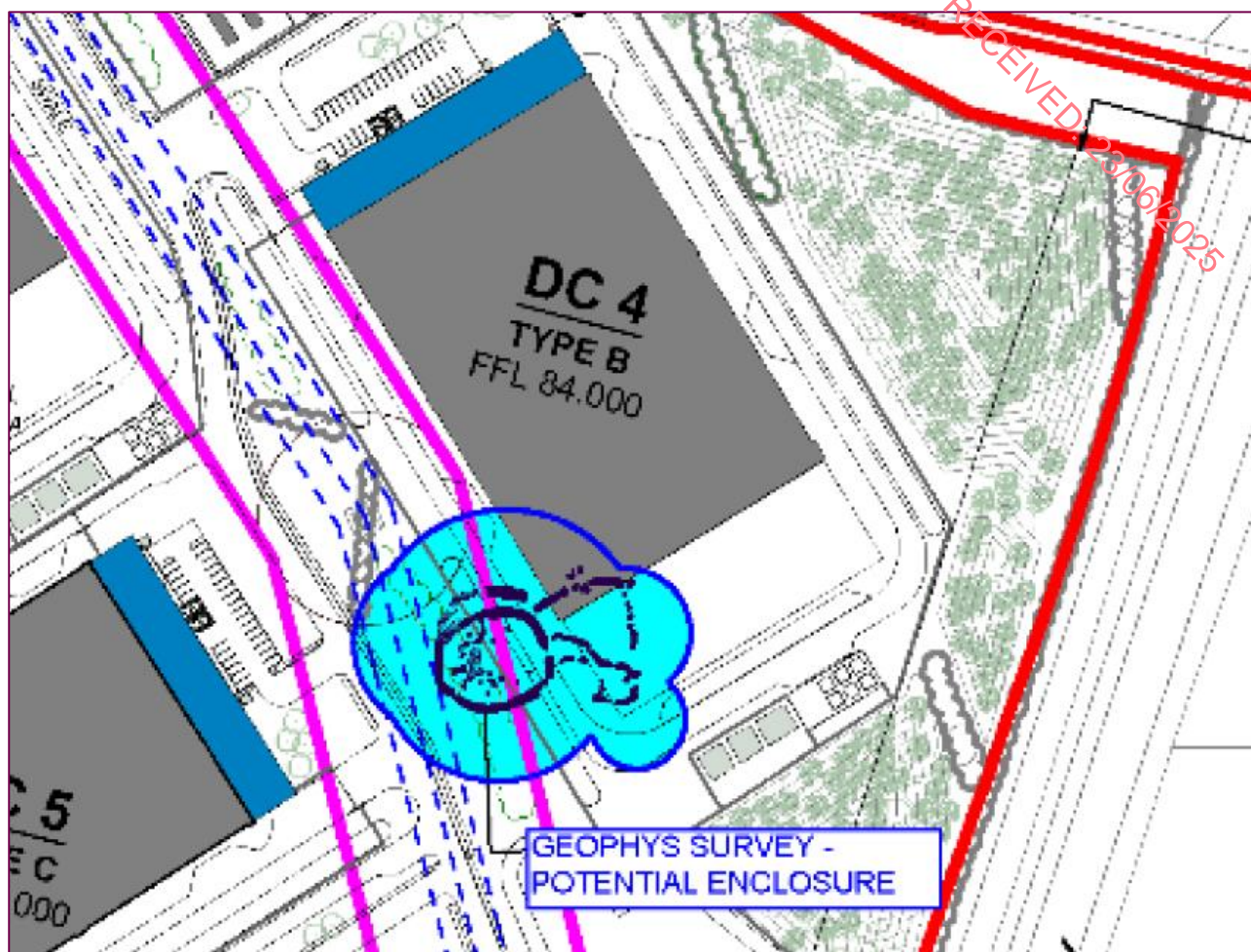


Figure 10.2: Previously Submitted Layout Illustrating DC4 Layout with Geophys Data Overlay (previously included in Volume III, Figure 10.16, of the submitted EIAR)

Archaeological mitigation in the form of preservation by record (archaeological excavation and recording) of the enclosure feature in advance of construction was proposed in the submitted EIAR in consideration of the design of Data Centre 4 and the associated encroachment.

10.3.2 Data Centre 4 – Amended Design

The Kildare County Council RFI (Item 25) requested a *comprehensive interrogation of design options to determine the feasibility of facilitating preservation in situ of this monument and submit a detailed report detailing the results of an assessment of all design options.*

In consideration of the request, the Project design team reviewed the design options in order to determine the feasibility of facilitating preservation in situ of the enclosure feature.

In order to retain the overall feasibility of the Project and the delivery of six Data Centres, design options were considered which would seek to ensure Data Centre 4 could be retained as part of the proposal whilst simultaneously ensuring the preservation in situ of the enclosure feature in Field 8, in line with the preference for the same as set out in the Kildare County Council RFI.

Relocation, reconfiguration and amendments to the orientation of Data Centre 4 were considered with due consideration being given to the *knock on* implications of any such changes to adjacent Data Centre buildings, roads and drainage infrastructure, earthworks and landscaping.

The amended layout of Data Centre 4 will allow for the preservation of the enclosure feature which comprises of a circular ditched feature (c.31m diam.) with multiple internal features and two sub-rectilinear annexes, extending c.25m to the east of the main enclosure *in situ*. The proposed amendment to Data Centre 4

represent the optimal layout to retain the operational viability of the Project whilst retaining facilitating preservation in situ of the enclosure feature.

The area preserved in situ is surrounded by a 10m exclusion zone extending from the outer edge of the identified enclosure feature. This exclusion zone shall be fenced-off and remain an exclusion zone throughout both the construction phase and operational phase of the project (a cross section illustrating the exclusion zone is provided in drawing 2232-DOB-ZZ-ZZ-DR-C-0600, Proposed Site Sections, Vol III).

The most notable amendment is to the overall building shape of Data Centre 4, however due consideration has been given to all built elements within the locale of the enclosure feature, in order to ensure that drainage and road infrastructure, external plant compounds, security fencing, landscaping and temporary construction compounds, remain outside the exclusion zone.

For the purpose of comparison (to Figure 10.2 above), Figure 10.3 illustrates the amended proposed layout detail for Data Centre 4 respectively, as relative to the enclosure feature.

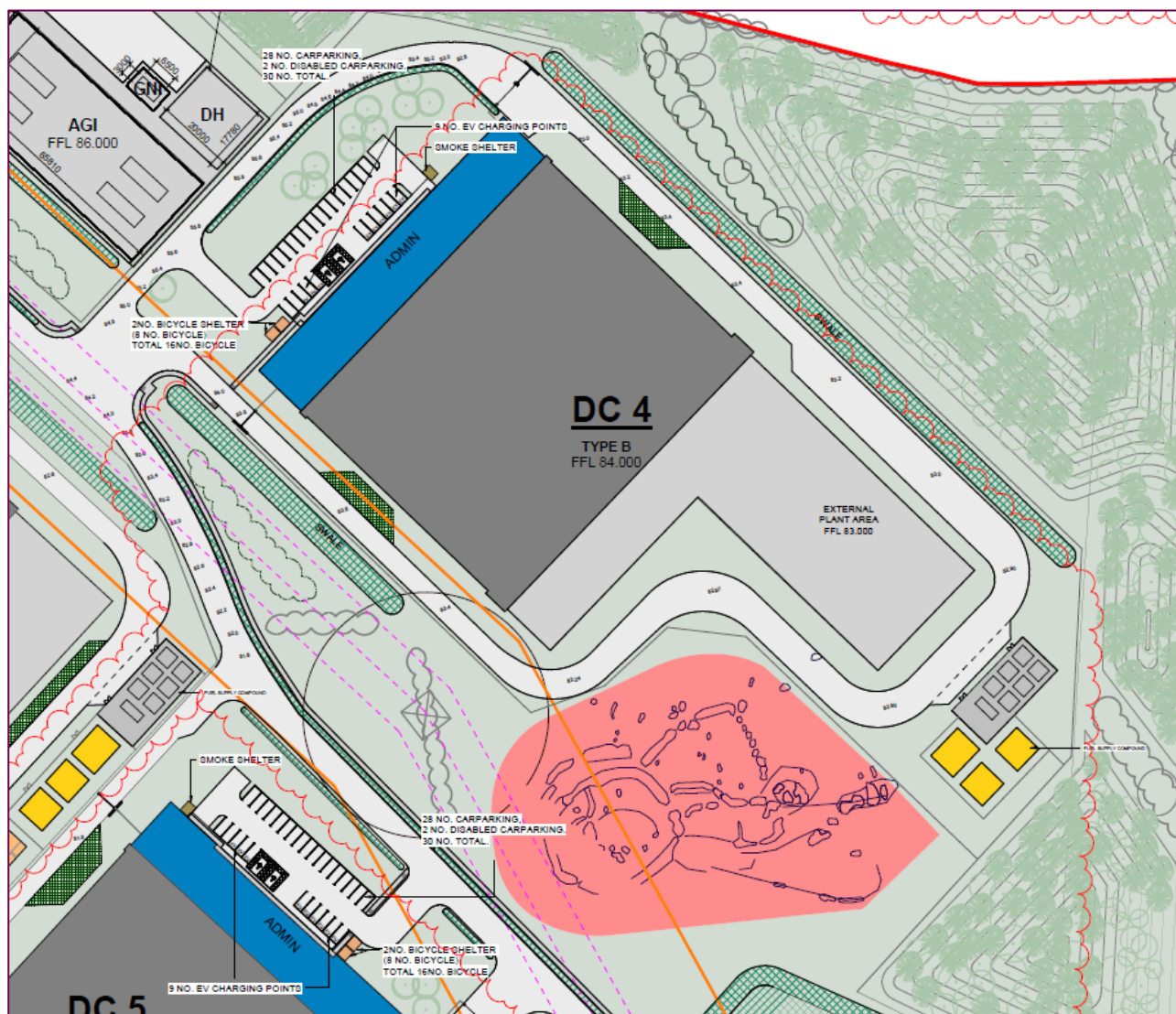


Figure 10.3: Amended Layout Illustrating DC4 Layout with Geophys Data Overlay (extract of now submitted drawing 22217-RKD-ZZ-ZZ-DR-A-1012-PROPOSED SITE PLAN B)

By way of a cross section, Figure 10.4 below illustrates the implementation of the exclusion zone relative to adjacent service roads.

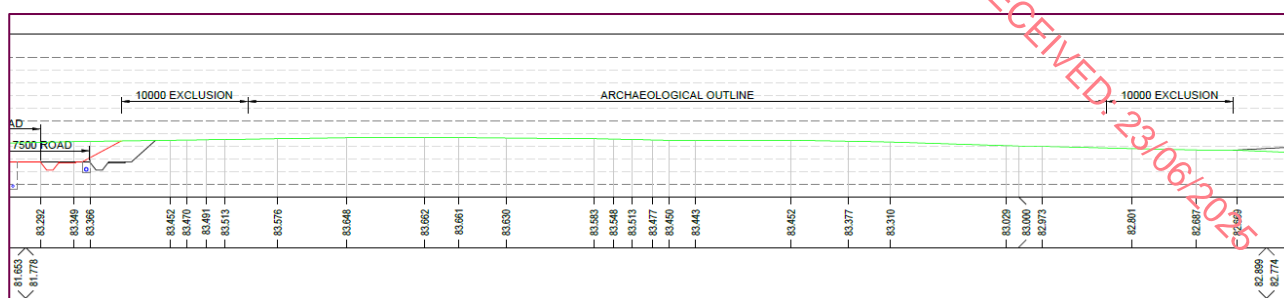


Figure 10.4: Cross Section Illustrating Archaeological Exclusion Zone (extract of now submitted Drawing 2232-DOB-ZZ-ZZ-DR-C-0600)

Drawings 22217-RKD-ZZ-ZZ-DR-A-1012-PROPOSED SITE PLAN B and Drawing 2232-DOB-ZZ-ZZ-DR-C-0600 are provided in Volume III Figures and Drawings and as part of the design drawing package submitted in response to the RFI from Kildare County Council.

10.4 Impact Assessment

10.4.1 Do Nothing Scenario

A 'Do Nothing Scenario' will see the continued preservation of recorded and potential cultural heritage features within the study area and will not result in any predicted significant effects on the cultural heritage resource.

10.4.2 Likely Significant Environmental Effects

As set out in Chapter 10 of the EIAR the proposed site works associated with the development of the Project will involve substantial ground reduction to facilitate the construction of 6 no. two storey data centre buildings, an administration / management building, car parking, landscaping, gas storage and gas turbines, energy storage and other associated works. These works will be in close proximity (c.5m) to recorded monument (KD019-028----), and the previously unrecorded enclosure identified in Field 8 from geophysical investigation. The works will necessitate the removal of a small number of previously unrecorded potential archaeological features identified from geophysical investigation.

Following consideration of the Kildare County Council RFI, the layout at this location of the site has been redesigned to allow for the preservation *in situ* of the enclosure identified in Field 8 within a c.10m buffer zone extending from its outer edge. However, there remains a predicted negative impact associated with the construction phase of works. A series of mitigation measures for the archaeological resource within the Project site are outlined in Section 10.5.

The recorded monument (KD019-028----) as identified by the geophysical survey will be preserved *in situ*, however development designs will encroach into the zone of notification associated with this monument and will be set in close proximity (c.5m) to the monument. Significance of Effect on this monument is adjudged to be slight. The existing recorded monument has no surface expression, as such there will be no predicted visual impact on its setting during the operational phase.

The Significance of Effect for the previously unrecorded enclosure identified by geophysical survey in Field 8 is adjudged to be slight. The project has been redesigned to allow for a c.10m buffer from the outer edge of the enclosure. The enclosure has no surface expression, as such there will be no predicted visual impact on its setting during the operational phase.

The Significance of Effect for previously unrecorded potential archaeological features, except for the enclosure feature identified by geophysical survey in Field 8, is adjudged to be significant, however this will be ameliorated by the implementation of the proposed mitigation measures outlined in Section 10.5.

The Significance of Effect for undesignated cultural heritage features in the form of vernacular buildings and townland boundaries within the site is adjudged to be moderate, due to their proposed demolition/removal, however this will also be ameliorated by the implementation of the proposed mitigation measures outlined in Section 10.5.

There is no predicted impact on any other archaeological sites recorded in the RMP and other recorded cultural heritage sites within the 1km study area.

There is no intervisibility between the subject site and Jigginstown House (KD019-033001-), a National Monument in State Care (No.528) located c.1.3km to the southeast of the development boundary and its setting will remain unaffected. Therefore, there is no predicted impact on this receptor.

10.5 Mitigation

10.5.1 Mitigation by Avoidance / Design

The fulacht fia (KD019-028----) located within the development area will be preserved *in situ* as an undeveloped greenspace. The project design was altered prior to the original planning application to avoid a direct impact on this feature whose extent has been identified from the geophysical survey. A minimum 5m buffer from the outer edge of the archaeological site will be established prior to any construction works commencing within the site.

The previously unrecorded enclosure feature identified within the development area from geophysical survey will also be preserved *in situ* as an undeveloped greenspace. In response to the RFI, the project design has been amended to avoid a direct impact on this feature whose extent has been identified from the geophysical survey. A minimum 10m buffer from the outer edge of the archaeological site will be established prior to any construction works commencing within the site. This is in accordance with the National Policy as set out in Section 3.4 of *Framework and Principles for the Protection of the Archaeological Heritage (Government of Ireland, 1999)*.

10.5.2 Mitigation by Prevention

The c.5m buffer around fulacht fia (KD019-028----) and the c.10m buffer around the enclosure feature in Field 8 will be fenced-off prior to the commencement of construction in order to protect both sites during the course of works. These fences shall remain in place until all development works have been completed and will be clearly signed as 'No Entry Areas'. The fencing will be erected under archaeological supervision and no construction related activities, such as machine movements, dumping of spoil or storage of materials will occur within the fenced-off areas. The locations of the two archaeological buffer zones, and the associated restrictions in relation to construction activities at their locations, will be clearly identified to all on-site personnel during site inductions carried out as part of the construction phase. The locations of the archaeological buffer zones will be maintained as greenspaces during the operational phase of the development and no landscaping (including vegetation planting) or other works with the potential to result in ground disturbance will occur at their locations.

10.5.3 Mitigation by Reduction

Archaeological investigations have identified the existence of several previously unrecorded features of potential archaeological origin within the development area. With the exception of the recorded monument (fulacht fia KD019-028----) and the previously unrecorded enclosure in Field 8, preservation *in situ* of the identified features of archaeological potential is not a viable option within the Project site. Therefore, they will be preserved by record through a programme of archaeological excavation and recording under licence from the National Monuments Service (NMS), Department of Housing, Local Government and Heritage. This is in accordance with the National Policy as set out in Section 3.5 of *Framework and Principles for the Protection of the Archaeological Heritage (Government of Ireland, 1999)*.

The archaeological excavations will involve the stripping of topsoil from appropriate areas around the identified potential archaeological features within the development site and this will be carried out under the constant supervision of a suitably qualified archaeologist. The stripped area will include at least 10m of clearance from the edge of the potential archaeological feature to the edge of the excavation. The supervised topsoil stripping will be undertaken using a mechanical excavator fitted with a toothless bucket which will remove the topsoil down to the uppermost archaeological layer or the surface of natural subsoil in areas where no archaeological material is present. A systematic programme of manual archaeological excavation of all revealed features of archaeological potential will then be carried out in accordance with the method statement submitted to the NMS as part of the licence application process. This will include the manual excavation of all identified

archaeological features, the compilation of written, drawn and photographic records, the retrieval of archaeological objects and a programme of environmental sampling.

The archaeological excavations will be undertaken in advance of the main construction works in the relevant areas in order to allocate adequate time to appropriately excavate and record the potential archaeological deposits/features.

Following the completion of excavations, a post-excavation phase of works, involving analysis, reporting and dissemination to the relevant authorities will be undertaken off site. The level of the post-excavation analysis and reporting will be commensurate with the level of archaeology excavated on site.

There are a number of obligatory processes to be undertaken as part of applications to the National Monuments Service for licences to carry out archaeological excavations and these will allow for monitoring of the successful implementation of mitigation measures. A detailed method statement stating the proposed strategy for the pre-construction archaeological excavations will accompany the submitted licence application which will clearly detail the extent of the archaeological works and outline the processes to be enacted to excavate and record all identified archaeological materials. A preliminary report on the archaeological excavations will then be submitted to the National Monuments Service, the National Museum of Ireland and the Planning Authority which will clearly describe the results of all archaeological works in written, mapped and photographic formats. Following the completion of all required post-excavation analyses, including environmental, artefact studies and dating, a final report on the excavations will be submitted to the above bodies.

A photographic survey and written record of the vernacular buildings located at the centre of the site will be carried out prior to their demolition to allow for their preservation by record.

A photographic survey of the portions of townland boundary to be removed will be undertaken prior to their removal and other groundworks on site. Sections through the townland boundaries will be archaeologically recorded during the archaeological excavations outlined above.

10.6 Residual Impacts

10.6.1 Construction Phase

The mitigation measures presented above will result in the preservation *in situ* of recorded monument (KD019-028---) within a protective buffer zone. The project design was altered prior to the submission of the planning application so as to respect the extent of the related fulacht fia, as identified by the geophysical survey. The proposed buffer zone will be marked by a fence prior to any construction work taking place. The residual magnitude of impact on the recorded monument will be low.

The mitigation measures as presented above will also result in the preservation *in situ* of the previously unrecorded enclosure feature in Field 8 within a buffer zone. The proposed design (updated design) has been altered so as to respect the extent of the enclosure as identified by the geophysical survey. The proposed buffer zone will be delineated by a fence prior to any construction work taking place and will be clearly signed as a 'No Entry Area'. The residual magnitude of impact on the archaeological site will be low.

Within the remainder of the development area, the mitigation of previously unrecorded features of archaeological potential identified during geophysical investigations will be by full archaeological excavation (preservation by record). The high magnitude of impact on these potential archaeological features will be ameliorated by the creation of a full and detailed archaeological record, the results of which shall be disseminated. This shall result in a potential moderate range of significance of effect in the context of residual impacts on the unrecorded archaeological resource.

10.6.2 Operational Phase

All required onsite archaeological mitigation measures will be implemented prior to and during the construction phase and, therefore, no cultural heritage mitigation measures requiring monitoring are predicted during the operational phase of the Project site. There will be no direct residual impact on any archaeological or cultural heritage features. Recorded monument (KD019-028---) and the unrecorded enclosure feature will remain preserved *in situ* within greenfield portions of the development. These archaeological sites retain no surface expression and, therefore, no residual indirect impacts on their setting are predicted to arise as a result of the

operation phase of the development. Access to these greenspace areas for maintenance (grass cutting) shall be maintained throughout the operational phase.

10.6.3 Decommissioning Phase

Should decommissioning be required, there will be no additional impacts on cultural heritage within areas developed within the Project site. The fenced-off exclusion zones around recorded monument (KD019-028---) and the unrecorded enclosure feature will remain in place during any decommissioning works to ensure that these archaeological sites are preserved *in situ*.

10.7 References

J. M. Leigh Surveys Ltd. 2023a. Geophysical Survey Report - Jigginstown, Naas, County Kildare (Licence: 23R0105). Unpublished geophysical report.

J. M. Leigh Surveys Ltd. 2023b. Geophysical Survey Report - Jigginstown, Naas, County Kildare (Licence: 23R0225). Unpublished geophysical report.

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<https://heritagemaps.ie/WebApps/HeritageMaps/index.html>.

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<https://www.worldheritageireland.ie/news/news-single-view/article/ministers-announce-new-world-heritage-tentative-list-for-ireland/?cHash=376a52892e7c00bd7825a9d98fe89068>.