

# Archaeological Impact Assessment

Proposed Amenity Improvement Works in the Existing Mallow Town Park

In the Townlands of Mallow, Castlepark, and Killetra in County Cork

Prepared in Support of a Part XAB, Section 177AE Application to *An Bord Pleanála*

**Developer:** Kanturk-Mallow Municipal District Office

**Cork County Council**

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## APPENDIX A – ARCHAEO-GEOPHYSICAL SURVEY REPORT

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## 1. Introduction

Daniel Noonan Archaeological Consultancy (DNAC) has prepared this Archaeological Impact Assessment (AIA) of the proposed amenity improvement works in the existing Mallow Town Park, in the townlands of Mallow, Castlepark, and Killetra, in County Cork, to accompany an application on behalf of Cork County Council, to *An Bord Pleanála*, for approval under Part XAB, Section 177AE of the Planning and Development Act, 2000.

The proposed works are within the Zone of Archaeological Notification of a National Monument – Mallow Castle Monument No. 281/Recorded Monument Reference CO033-009001-, and those of a number of Recorded Monuments, CO033-093----, CO033-094----, CO033-009—6-, and CO033-009004-, as entered in the Record of Monuments and Places (RMP) for County Cork.

This non-intrusive assessment was prepared to evaluate the potential for impacts on the archaeological resource, so as to inform the planning process for the proposed development.

The improvement works were developed by a multidisciplinary design team, led by Brady Shipman Martin Landscape Architects (BSM); within the context of an evolving framework plan commissioned by Cork County Council for the development of the historic landscape at the Spa House, Mallow Castle, and the main Mallow Town Park. The objective of the plan is to provide high quality public amenities and year-round visitor destinations, to:

- Strengthen their connectivity with Mallow town, and;
- Maximise the use of the parks for the people of Mallow and visitors to the town of all ages in a sensitive, safe, sustainable, attractive, and inclusive manner.

Located in the heart of the town, on the banks of the River Blackwater, the Town Park has a number of existing pitches (soccer, rugby, GAA), and riverside walkway. The Park is connected to the grounds of Mallow Castle and Demesne grounds (RMP CO033-093----), a public amenity owned by Cork County Council.

The Town Park is located centrally in Mallow Town adjoined by Park Road (N72) to the north, Blackwater River from the south, and linearly along the bank of the river to Hospital Stream to the west and Lover's Leap to the east. Mallow Bridge (RMP CO033-094----) crosses the Blackwater River with the park's riverside walk passing under the northern side of the bridge.

## 2. Assessment Methodology

This non-intrusive assessment of the Mallow Town Park improvement works was carried out through background research into the location, known archaeological monuments in the locality, historical resources, and all available historical mapping. The research was supported by an archaeo-geophysical survey by specialist geophysical surveyors of over 8.6

hectares of the main park area, and a site walkover study; to garner an understanding of the archaeological potential of the site.

The sources consulted include the listings of National Monuments, Preservation Orders, Register of Historic Monuments, the Record of Monuments and Places (RMP), and Sites and Monuments Record (SMR) for County Cork. The Record of Protected Structures (RPS) and Architectural Conservation Areas (ACAs). Historical and Ordnance Survey mapping, and aerial imagery was sourced. The online databases of the National Monuments Service (NMS), the National Inventory of Architectural Heritage (NIAH), and the Placename Database of Ireland (logainm.ie) were consulted, along with the published Archaeological Inventory of County Cork (Power et al. 2000). Documentary sources such as local histories and antiquarian journals were also consulted.

The appraisal incorporates the results of the background research and site inspection, and in conjunction with an analysis of the results of the archaeo-geophysical survey, forms the basis of the impact assessment, and guidance for the recommended mitigation measures.

### **3. Proposed Improvement Works**

In brief, the description below of the proposed improvement works is provided by BSM in their Landscape Planning/Design Report (BSM 2021) for the improvement works. A large suite of drawings showing the landscape design, engineering, mechanical and electrical works have been prepared for submission as part of the overall application. The drawings extracted from the suite that show ground disturbance works and form the primary basis of this assessment are as follows:

#### Landscape

- BSM Landscape Architects Dwg. 6615\_371 General Arrangement Plan;
- BSM Landscape Architects Dwg. 6615\_372 Masterplan Sheet 1/3;
- BSM Landscape Architects Dwg. 6615\_373 Masterplan Sheet 2/3;
- BSM Landscape Architects Dwg. 6615\_374 Masterplan Sheet 3/3;
- BSM Landscape Architects Dwg. 6615\_388 Detention Basin Sketch;
- BSM Landscape Architects Dwg. 6615\_389 Angling Stands.

#### Engineering/Mechanical & Electrical

- Horganlynch Consulting Engineers Dwg. CQ15-020 Proposed Site Civil Works Layout Plan;
- Horganlynch Dwg. CQ15-024 Proposed Pedestrian Bridge Widening Works;
- Varming Consulting Engineers Dwg. 17766-VCE-ZZ-ZZ-DR-E-1001 Mallow Town Park Proposed Car Park Public Light Layout;
- Varming Consulting Engineers Dwg. 17766-VCE-ZZ-ZZ-DR-E-1002 Mallow Town Park Upgrade Works.



In summary (source BSM 2021), the proposed improvements include:-

#### *Entrances and Circulation*

- Enhancement/ refurbishment of existing 3 no. pedestrian and 2 no. vehicular entrances to the Park from Park Road.
- Construction of 2 no. pedestrian entrances from Park Road (N72) and 1no. new entrance to the existing footpath on the N20 to the west, providing better connectivity and accessibility to Mallow Town.
- Widening of existing concrete riverside footpath from 2m to 3m along a length of 1,540m.
- Construction of new 3m wide concrete footpaths at a total length of 1,230m as part of circulation and access network improvements. This includes the construction of a new path from the west end of Town Park up to the existing footpath on the N20 to the west.
- Construction of a 425m long 2m wide reinforced grass path along the northern edge of Town Park.
- Widening of the existing pedestrian bridge (c.1.2m wide) within the Town Park over the Caherduggan/Spa Glen Stream to 3m in width.

#### *Play*

- Refurbishment of an existing play ground on the northside of the N72 to include new play equipment and a skate park.
- Construction of a public pump track (for non-powered bikes, skateboards, rollerblades, scooters).

#### *Active Sports*

- Relocation of the existing GAA pitch (145mx90m) c.15m north, including the removal of the existing mounding, including demolition of former entrance gates to GAA pitch. Entrance plaque to be relocated and incorporated in to new park entrance (opposite St James Avenue). Perimeter post and rail spectator fencing to pitch and ball catch posts/netting.
- Retention and improvement of existing soccer and rugby pitches.
- Provision of a grass training area (155mx35m).
- Provision of permanent orienteering course within the park.

#### *Other Amenities*

- Construction of reinforced grass multi-use events area at a surface area (c.147mx73m).
- Construction of angling stands to Inland Fisheries Ireland Standards along the banks of the Blackwater River with due consideration of the SAC designation, to include:-
- 1 no. concrete accessible stand under the Railway Viaduct/Road Bridge (N20) (measuring 5.2x2.5m), and
- 4 no. fishing stands constructed of recycled plastic measuring 2.4x1.8m, located downstream of the Caherduggan/Spa Glen stream and Lover's Leap with Castlepark to the east of the town park.

- Construction of landscaped and permeable car park at a total surface area 2,590m<sup>2</sup> for Town Park with capacity for 100 car parking spaces, including disabled and parent and toddler spaces.
- Construction of a reinforced grass parking area (only for use only in association with authorised seasonal/summer events when the flood risk is very low). Total surface area 4,720m<sup>2</sup> with capacity for car parking 114 spaces, including 3no. setdown spaces, and include vehicular entrance to the car park.

#### *Landscape Improvement Works*

- Supporting locational and wayfinding signage, seating and services, including wayfinding signage to nearby existing car parking.
- Undergrounding of existing overhead power line in the Town Park to the west of Mallow Bridge.
- Provision of surface water detention basin.
- All associated site development, fencing, park furniture, planting, landscape and biodiversity improvement works.

The proposed development will connect to existing public utilities.

## **4. Context, Setting & Archaeological Environment**

### Archaeological Protections & Designations

The proposed works are within the Zone of Archaeological Notification/Potential (ZAP) of a National Monument – Mallow Castle Monument No. 281/Recorded Monument Reference CO033-009001-, and those of a number of Recorded Monuments, CO033-093----, CO033-094---, CO033-009—6-, and CO033-009004-, as entered in the Record of Monuments and Places (RMP) for County Cork.

The creation of the Record of Monuments and Places forms part of Section 12 of the National Monuments Act, as amended in 1994; and inclusion in it is the primary mechanism for protection of archaeological sites and monument in the State. Any works to, or close by (i.e. within the ZAP), a site or monument entered in the RMP requires notification to the National Monuments Service (NMS) at least two months in advance.

Site or monuments that are determined to be National Monuments are those that under Section 2 of the National Monuments Act 1930 are a monument '*the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto*'. Any works to, or close by (i.e. within the ZAP), of a National Monument requires the written consent of the relevant Minister, currently the Minister for Housing, Local Government and Heritage.

Guidance on current State policy for archaeology can be found in the *Frameworks and Principles for the Protection of the Archaeological Heritage* (1999) document.

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## Development Policies

Cork County Council's development policies' regarding archaeological heritage, upstanding, subsurface and the underwater zone, are contained in the current overarching Cork County *Development Plan 2014*. Current policies regarding archaeology are:

### **HE 3-1: Protection of Archaeological Sites**

a) Safeguard sites and settings, features and objects of archaeological interest generally.

b) Secure the preservation (i.e. preservation in situ or in exceptional cases preservation by record) of all archaeological monuments including the Sites and Monuments Record (SMR) (see [www.archeology.ie](http://www.archeology.ie)) and the Record or Monuments and Places as established under Section 12 of the National Monuments (Amendment) Act, 1994, as amended and of sites, features and objects of archaeological and historical interest generally.

*In securing such preservation, the planning authority will have regard to the advice and recommendations of the Department of Arts, Heritage and Gaeltacht as outlined in the Frameworks and Principles for the Protection of the Archaeological Heritage.*

### **HE 3-2: Underwater Archaeology**

*Protect and preserve the archaeological value of underwater archaeological sites and associated features. In assessing proposals for development, the Council will take account of the potential underwater archaeology of rivers, lakes, intertidal and subtidal environments.*

### **HE 3-3: Zones of Archaeological Potential**

*Protect the Zones of Archaeological Potential (ZAPs) located within historic towns and other urban areas and around archaeological monuments generally. 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.*





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## Mallow Town – CO033-093----

Mallow is today a large sized market town located in the Barony of Fermoy, in the County of Cork. The town historically developed around a strategic crossing point over the Blackwater River, and straddles the north and south banks of the Blackwater, with the suburb of Ballydahin to the south of the bridge (see **Figures 3-4**). The town is sited just above the floodplain on the north bank of the river.

In terms of its placename toponymy, Mallow is an anglicisation of the Irish *Magh nAla*, the 'plain of the rock' ( <https://www.logainm.ie/1414050.aspx> - accessed 10/05/2021), suggesting the presence of a rock outcrop in the river used as a fording point.

The historic town of Mallow has its origins in the medieval settlement that it reputed to have developed around a castle built on the north side of the river (in the vicinity of the extant ruin 16<sup>th</sup> Century Mallow Castle), by the Anglo-Normans under the instruction of King John in 1185. The western extent of the settlement appears to have been defined by Short Castle, located mid-way along Shortcastle Street. The manor of Mallow was acquired by Desmond fitzGerald in 1282 and remained in the influence of the Earls of Desmond until it became forfeit in the late 16<sup>th</sup> Century, following the second Desmond Rebellion (1579-1583). It is not known absolutely whether the settlement was walled or not; a single murage grant was made for the town in 1286, but it is uncertain if it was acted-on (Thomas 1992, Vol. 231-232). Little is known of the medieval history of the town, despite its undoubted strategic value.

However, this changed in the 16<sup>th</sup> Century, when following its forfeiture by the Earls of Desmond, the town became a key part of the Munster Plantation. First through the Norreys' brothers Sir John, and Sir Thomas who received the Seigniorship of Mallow with an estate of 6,000 acres in 1596, and built the now ruined fortified house Mallow Castle. Through marriage of Thomas' daughter Elizabeth to Sir John Jephson family in 1615, the long association of the Jephson family with Mallow began. From there on the town established itself as a key mercantile and military centre in North Munster for the New English colony.

The Urban Archaeological Survey for County Cork (Zajac et al. 1995) says the following of Mallow:

*The strategic importance of the ford across the Blackwater at Mallow was recognised by the Anglo- Normans who are reputed to have built a castle here in the late 12th century. Desmond fitzGerald acquired the manor of Mallow in 1282 which was to remain in Desmond hands until the fall of the family in the late 16th century. In the aftermath of the Desmond rebellion the manor of Mallow was granted to Sir Thomas Norreys, transferring to the Jephsons through marriage. The town was planted with settlers in the early 17th century and became a borough in 1613 with the granting of a charter by James I. In the early 18th century the discovery of the curative powers of the mineral waters of spa wells in the area brought prosperity to the town and in 1828 the Jephsons built a Spa House to the east of the town.*

The *Archaeological Inventory of County Cork* (Power et al. 2000) gives a more detailed appraisal of the town:

*On N bank of Blackwater River (see 14793), on main Cork-Limerick road. Though Anglo-Normans probably had castle (14373) here in late 12th century, earliest references to town are murage grant of 1286 (Zajac et al. 1995, 73) and reference in 1298 to 'the burgagers of the vill of Mallow' (Berry 1894, 17). By this time Mallow manor was a possession of Fitzgeralds of Desmond (ibid.). Thomas (1992, vol. 2, 232) is doubtful if town was ever walled. Survey of 1584 found nine 'vills' within manor of Mallow, all 'now lying waste' (Berry 1893, 22); four of these appear to contain settlements, none of which is named Mallow though 'The Shorte Castell' contained 'a great town' (ibid.; see 14313). Town re-established as part of Munster Plantation and by 1611 twenty five settlers 'held houses and gardens in the towne of Mallow' (Berry 1906, 11); by 1641 town contained 'nearly 200 houses, thirty of which were of stone, strong and slated' (ibid., 14), but it suffered greatly in 1642 when the Irish 'set fire to the town in several places' (ibid., 15). However, town survived and in 1659 had a population of 463. It further developed in 18th and 19th centuries as market and spa town (Myers 1984; Crowley 1992, 1993, 1997). Principal buildings of present town of 18th- and 19th-century date though some may contain late 17th-century core; two recently demolished houses on Davis Street (see photograph Zajac et al. 1995, 72), part of terrace of four houses, contained 'central dividing wall composed of timber uprights, 0.01m apart, with mud infilling between them, and timber laths nailed across the uprights' (ibid., 73). Recent archaeological investigations at E end of town did not reveal any features earlier than late 17th century (pers. comm. S. Lane). Former parish church (14719) on S side of Main Street.*

#### Mallow Bridge – CO033-094----

Historical research has established six known phases of bridge building at Mallow (O'Sullivan 1985). The first bridge was potentially of 12<sup>th</sup> Century date and contemporary with the castle built on the north side of the river by King John, to control the crossing. Over the succeeding centuries five further bridges were built on the same spot, each having succumbed to severe flooding events. The Down Survey of 1651 records the bridge over the river at Mallow, with settlement on both sides (see **Figure 5** below).

The current Mallow Bridge is a composite of two building phases. The limestone built road bridge has eight arches, the northern four survive from the 1712 bridge and the remaining are the 1856 bridge. It is under the fabric of the 1712 bridge that the new paths will travel; to better connect both sides of it.

The surviving four segmental arches of the 1712 fifteen-arch bridge have cut limestone voussoirs and is built rubble limestone fabric. The breakwaters for the arches are rounded and topped with a semi-conical cap. The roadway is topped with a railing which replaces the original parapet wall that was possibly a simple rubble wall with a decorative soldier course. An inscribed stone was recycled into the riser of the last pier in the northernmost arch of the 1712 bridge. The script on the stone is of 16<sup>th</sup>/17<sup>th</sup> Century memorial style, and probably part of a grave marker (O'Reilly 1989). During a severe flooding event in 1853 the bridge was structurally weakened (Crowley 1994), and while it did not collapse it was no

longer thought strong enough to remain. The northern four arches were left in situ and the remaining eleven were removed.

In 1856 works were completed on the construction of the latest bridge building phase (O'Sullivan 1985; *ibid.*). The four ashlar cut limestone arches are substantially wider and flatter than those of the earlier bridge. The breakwaters are a combination of rounded and square, while the bridge has decorative string courses and the parapet wall, and its copings are dressed. The keystone of the voussoirs of the arches also project as decoration.

### Mallow Castle Complex

There has been a castle or some form of fortification on the Mallow Castle complex site since the 12<sup>th</sup> Century. That first castle built under the instructions of King John was followed by a large tower house castle and surrounding bawn (CO033-009004-); which remained until the late 16<sup>th</sup> Century. Sir Thomas Norreys is credited with building the ruined fortified house-type castle that stands today; on the site of the tower house. Tradition holds that it remained occupied until the 17<sup>th</sup> Century, when it was ruined during the Williamite Wars, and the household moved to the stables. The stables were located on the site of the current Mallow Castle House to the north.

The original grant of 6,000 acres of the manor and lands at Mallow to Sir Thomas Norreys by Queen Elizabeth I is recalled in an inquiry of James I of 1622, into the general state of Plantations in Ireland, and records the following for Mallow:

*The Seigniori of Mallo, containing 6,000 English acres, to Thomas Norris, afterwards Lord President of Munster: no abatement. This Seigniori after the death of Sir Thomas Norris descended to Elizabeth, his daughter and heir, married to Sir John Jephson, who in her right enjoyeth the same. The principal Undertaker holdeth in demesne about 800 acres, which he intends to plant with English, supposing that, albeit the Articles of Plantation require the chief to hold a large demesne which might make him build a house proportionable, that being now performed, it will not be offensive but rather acceptable to increase the number of English inhabitants. There was built at Mallow by Sir Thomas Norris a goodly, strong and sumptuous house, upon the ruins of the old castle, with a bawn to it, about 120 foot square and 18 foot in height and many convenient houses of office. Also two gardens and an orchard, containing about four acres of ground, one garden being walled with a stone wall, twelve foot in height. The other garden and orchard strongly fenced. In which in the time of the late war lay a garrison of 600 men (Dunlop & O'Brien 1924, cited in Noonan 2012).*

From the 17<sup>th</sup> Century onwards a large demesne or designed landscape was developed around the castle, and included the lands that now make up Mallow Town Park. The area to the east of Mallow Bridge, on the floodplain of the river, is located outside the demesne boundary wall that contained the deer park; and now forms the River Walkway area. To the west of the bridge the main body of the town park is contained in a single open field on the floodplain, historically known as the *Long Meadow*. Both of these areas were once part of a larger castle demesne of nearly 800 acres; and came into Cork County Council ownership over the past decade. In addition to these areas, extensive elements of the designed

landscape have survived, including the formal garden to the south of Mallow Castle House and much of the former Production Garden and Orchard located to the north. It is these elements that have become the focus of works in the emerging framework plan for improved access and amenity to the castle complex.

### Mallow Town Park

The riverside land that Mallow Town Park occupies was once part a larger demesne land holding of 800 acres that was part of the Mallow Castle estate. Known as the *Long Meadow*, its name suggests its original use was as a summertime meadow for grazing, when the river was not in flood. This large site, originally encompassing circa 11 hectares on the historic First Edition Ordnance Survey map (see **Figure 8** below), was often given over by the estate for use by the people of Mallow for sporting and other events. This set in motion an ad-hoc arrangement, which was put on a firmer footing in 1907 when 99 year lease, with a yearly rent of £70 on the site, was issued by the estate to the care of the Mallow Town Park Company Limited. The company's remit was to develop, promote and maintain the lands for sporting events, agricultural shows, and sources of revenue to promote such activity for the enhancement of the town. Through time, the lease came into the possession of the local authority, then Mallow Urban District Council, and subsequently Cork County Council, who bought the town park site from the Jephson family in recent years.

The Park Road that defines the northern extent of the park was constructed in 1968/69, as a new relief road westward from the bridge towards the train station and the roads north towards Limerick, bypassing the town centre (see **Figures 11-12** below). There is no known record of the discovery of any features or finds of archaeological interest during the construction of the road. It is noted that, from an aerial photograph of the town by Daphne Pochin Mould in 1969 it would appear that the area of the park immediately west of the bridge was used as a construction compound, indicated by regular shaped parch marks on the surface (**Figure 11**). Creation of the compound would have involved topsoil stripping, which would have caused impacts on any subsurface archaeology here, and its probable removal. The area was similarly used as a construction compound during the 2008-2010 Mallow North Flood Defence Works.

Regarding the specific history of the town park, according to Bolster (1971, 31) the Town Park, i.e. the Long Meadow, was the site of a battlefield in 1690, between the Jacobites in Cork under MacDonough, who were moving to burn Mallow following the defeat at the Battle of the Boyne, but was intercepted and brought to battle on the Long Meadow and around Mallow Bridge.

## Known Archaeological Monuments

In addition to the historic tower, castle and bridge, there are a number of other known archaeological sites and monuments in proximity to the town park works; and have been tabulated in **Table A**. See **Figure 4** for location information.

SMR/RMP No.	Class	Comment
CO033-006001-	Graveyard	St. Anne's graveyard.
CO033-006002-	Church	17 <sup>th</sup> Century St. Anne's church – located north of the town park.
CO033-009001-	House - fortified house	Mallow Castle - in ruin.
CO033-009002-	Country house	Mallow Castle House.
CO033-009003-	Icehouse	Removed during housing development.
CO033-009004-	Castle - tower house	Pre-fortified house castle on the Mallow Castle site.
CO033-009006-	Bawn	Wall enclosed area associated with the tower house.
CO033-010----	Ringfort - rath	Upstanding monument, preserved in housing estate.
CO033-011001-	Ringfort - rath	Upstanding monument, preserved in housing estate.
CO033-088----	Kiln - lime	Upstanding monument, which provided lime to the Mallow Castle estate, preserved in the Maple Wood east of the Deer Park.
CO033-092----	Designed landscape feature	Earthworks that may pre-date the Deer Park.
CO033-094----	Bridge	Mallow Bridge.

**Table A:** Recorded Monuments in immediate proximity to the town park improvement works.

## Archaeological Excavations

There have been several archaeological investigations and excavations in the ZAP for Mallow Town, and outside on peripheral housing and other developments in recent years. Within the ZAP eleven investigations are currently plotted on the online excavations database map source (<https://excavations.ie/mapsnew/> - accessed 10/05/2021); none of these have produced archaeological evidence earlier than limited 17<sup>th</sup> Century findings. None of the investigations were in, or within 50m of, the town park improvement works area. Monitoring of ground disturbance associated with the development of the large Castlelands estate, which now occupies much of what was the demesne of Mallow Castle, uncovered a single pre-historic pit (Excavations Bulletin 2002:0336 - Castlelands, Mallow, Cork - <https://excavations.ie/report/2002/Cork/0007650/> - accessed 10/05/2021).

More recently, archaeological excavation works commissioned by Cork County Council to support enhancement works in Mallow Castle grounds, previous and as part of the current emerging framework, were carried out by Daniel Noonan Archaeological Consultancy, under Ministerial Consent C676.

Works in 2016 to upgrade footpaths in the formal terraced garden that sits between the Mallow Castle ruin and Mallow Castle House uncovered ephemeral evidence beneath the late Georgian garden for 17<sup>th</sup> Century activity associated with the fortified house (Noonan 2015). In 2020, as part of enabling works for better access to the castle complex from the north, excavation works for a new car park in the castle gardens uncovered extensive

remains of 19<sup>th</sup> Century horticulture, including an elaborate hot house, which was layered above earlier earthworks of potential prehistoric origin (Noonan and Elder forthcoming).

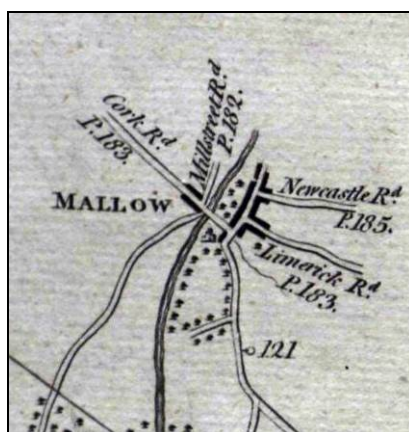
### Historic Mapping Sources

As part of this evaluation, the available historic mapping for the Mallow was consulted. The earliest mapping of use was created for the Down survey (1654-1659), following the 1641 Rebellion, the subsequent Cromwellian Settlement and the redistribution of forfeited lands that came with it. The map for the Barony of Fermoy shows the town of Mallow, centred on the bridge, with housing to the north and south, and the fortified house castle (labelled *Coll Jepson House*) all shown (**Figure 5**). No other features of interest are illustrated.



**Figure 5:** Extract from Down Survey barony map of Fermoy, c. 1656.

The Mallow Castle Archive is housed in the Special Collections of the Boole Library, University College Cork. The collection is awaiting formal archiving, and the full contents require description; although a preliminary listing was drawn-up by Julian Walton (2017). As part of research to support the emerging framework plan, access to the archive was provided by UCC. A wealth of information on the castle complex from the 18<sup>th</sup> Century is contained, including various lease maps and surveys for the castle grounds and areas of Mallow, and other holdings of the Jephson estate. Unfortunately, in the unarchived material, there appears to be little mapping material for the town park emerging so far.



**Figure 6:** Extract from Taylor and Skinner's Road Atlas of Ireland 1777, p.123.



**Figure 7:** Extract from the Grand Jury map of Cork, by Neville Bath 1811.

The large scale Taylor and Skinner's road atlas (1777) and Neville Bath's *Grand Jury* map of Cork (1811) both show Mallow (see **Figures 6-7**), with the castle to the east of the bridge, and have tree plantations indicating the designed landscape. However, at their scale, they contain little specific detail of any other features of archaeological or architectural interest in the environs of the town park works area.

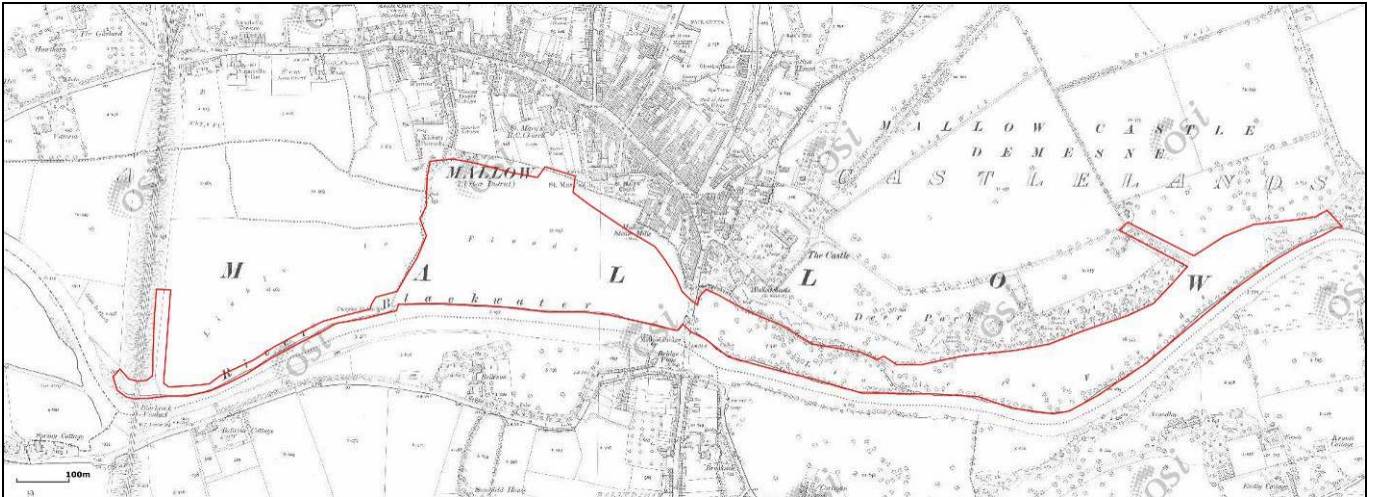
The historic Ordnance Survey First Edition of the 6-inch to 1 mile (1:10,560) of 1844 (**Figure 8**) shows the area to the east of the bridge laid out in a similar fashion to that of today, with the designed landscape demesne to the castle complex well-illustrated; the River Walkway area in particular. To the west of the bridge, the layout and form of the town is similar to today's, less the expansion and developments since then. The Blackrock Viaduct (and the later N20 roadway and road bridge) are not present; nor is the Park Road that forms the northern boundary of the town park. The main body of the town park, the large open field (approximately 11 hectares) labelled the *Long Meadow* is shown; no features of archaeological or architectural interest are illustrated. Indeed, the mapping for the entire works area for the town park improvements does not contain any new information or features of interest.

The 1:2,500 mapping of 1905 shows a similar layout to the town park area (**Figure 9**), with the Long Meadow with the same extents; and the demesne lands of the River Walkway showing little significant change. The Blackrock Viaduct and its embankment is shown, having been constructed in the late 1840's to carry the Great Southern and Western Railway to Mallow. The structure was first built in stone (see **Figure 11** below), but replaced around 1925 with the current box-girder structure. There are no other significant features shown on this map relevant to the assessment of the town park improvement works.



**Figure 8:** Extract from the historic Ordnance Survey 1:10,560, Sheet 033, 1844, overlaid with the present park extents.





**Figure 9:** Extract from the Ordnance Survey 1:2,500, multiple sheets, c.1905, overlaid with the present park extents.

### Aerial Imagery & Other Photographic Sources



**Figure 10:** Google Earth view March 2012. Red line demarks areas of flood defence works impact.

Aerial imagery and other photographic sources were consulted:

- Ordnance Survey (<http://map.geohive.ie/mapviewer.html>);
- Google Earth;
- National Library of Ireland digital catalogue (<http://catalogue.nli.ie/>);
- Daphne Pochin Mould Aerial Archive;
- Cork Examiner Archive.

The inspection of aerial imagery did not reveal new evidence for archaeological remains, surface or subsurface, in the works area for the town park improvements. However, parch marks on a Google Earth view of March 2012 show the impact from the construction

compound and riverbank reshaping works carried out as part of the Mallow North Flood Defence Scheme; an event similar to the 1969 construction works for Park Road (**Figure 10**).

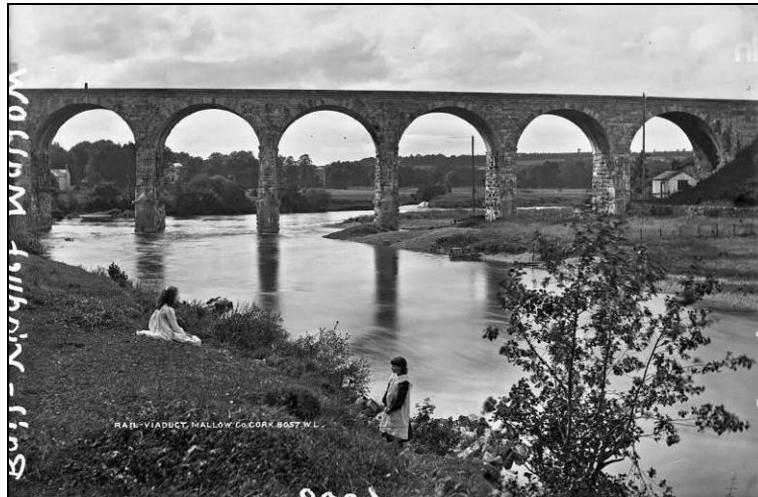


**Figure 11:** Extract from an aerial photograph by Daphne Pochin Mould in 1969 of Mallow. Beyond the bridge, the castle and layout of the designed landscape can be seen. To the west of the bridge, the newly completed Park Road defines the new northern edge of the town park. Note the lighter colour patch marks indicating the road works compound.



**Figure 12:** Extract from an aerial photograph from the Cork Examiner Archive, circa. 1970 reference unknown. It shows the Park Road, and the start of the spectator embankment around the GAA pitch.

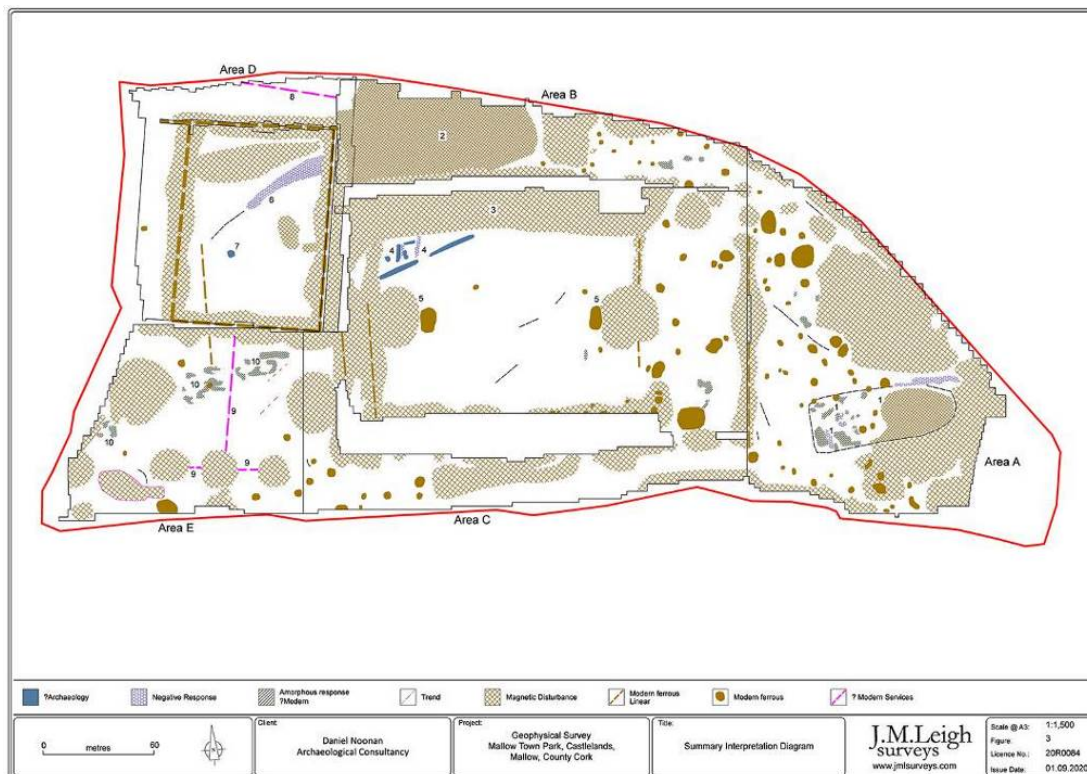
A late 19<sup>th</sup> Century Lawrence Collection photograph (**Figure 13**) of the Blackrock Viaduct, reference L\_CAB\_08057, illustrates the structure from the south bank downstream, and shows extensive alluvial gravel deposits around the toe of the northern viaduct embankment. This area was significantly impacted by the later construction of the N20 road bridge; potentially removing any archaeological material that may be present. The viaduct is built with robust, rusticated limestone blocks, and the cutwaters are flat-faced, punch-dressed blocks. The large punch-dressed limestone blocks noted during the site walkover below (see **Section 5 Site Inspection & Works Appraisal**) are probably from the demolition rubble of the original viaduct.



**Figure 13:** Lawrence Collection photograph of the Blackrock Viaduct.

## 5. Geophysical Survey of the Town Park

As part of the execution of this assessment, a non-invasive archaeo-geophysical survey of the available area of the town park, totalling 8.6 hectares, was carried out by J.M Leigh Surveys Ltd.; the full report is appended as **Appendix A**.



**Figure 14:** Summary interpretation diagram of town park archaeo-geophysical survey by J. M. Leigh Surveys.

The following is the summary of results:

*The data is dominated by magnetic disturbance resulting from modern landscaping and activity within the park. In the east of the park (Area A) there is a spread of disturbance and amorphous responses that form vague rectilinear pattern measuring*

*c.77m x 30m. This may represent the possible damaged remains of a structure. This is speculative as the modern magnetic disturbance is significant and obscures the data.*

*At the north-west of the GAA pitch there are short linear responses. These do not appear to be associated with the sports pitch and may be of interest. The responses have a magnetic signature and form indicative of ditch type-features. Although a pattern of the responses is difficult to discern due to the surrounding modern disturbance, these responses are of archaeological potential.*

It should be noted that the aerial imagery (**Figures 10-11**) was not available at the time of survey, and those sources strongly suggest that the rectilinear pattern of responses in Area A are as a result of the disturbance caused by the use of the eastern end of the town park for a substantial construction compounds in 1968-69 and 2008-10; and are probably not archaeological in nature.

The linear responses beneath the GAA pitch are more interesting, and could be archaeological, or the result of historic pitch development works. A single possible pit-type anomaly was also recorded within the footprint of the soccer pitch.

## 6. Site Inspection & Works Appraisal

As part of this assessment, a walkover of the Town Park and all areas of proposed works was carried out; to assist in practically assessing the potential for impacts on the archaeological resource. The following record of the walkover moves from west to east, from the foot of the Blackrock Viaduct/N20 Overbridge, along the riverbank footpath in the *Killetra Inch* field, into the large expanse of the playing fields and amenities of the Town Park occupying the historic *Long Meadow*, past Mallow Bridge, and eastward along the lower grounds of the Mallow Castle Demesne outside the demesne wall that form the River Walkway, to the termination of the park close to *Lover's Walk*.



**Photograph 1:** Proposed grass meadow, and fishing stand location – “Ten Bridge Arch”, looking west.



**Photograph 2:** Punch-dressed limestone block from earlier viaduct recycled locally as a bench.

The westernmost part of the improvement works involve the creation of a small, grassed wildflower meadow on the riverbank beneath the viaduct and road overbridge (**Photograph 1**); in an area to be known as the “Ten Arch Bridge”. A concrete angling stand is proposed for the water’s edge, and will be connected to a new 2m wide concrete path; which in turn will be connected to the west to east running path to the main body of the park. A line of random large limestone blocks have been placed along the riverbank in this area; acting as de-facto fishing benches. Two of these appear to have punch-dressed faces (**Photograph 2**), suggesting that they may have come from the demolition rubble of the original stone

viaduct structure. From a new entrance on the N20 embankment, a new ramped path through the tree cover will run north to south for approximately 230m to access to the park.

Apart from the architectural fragments from the original viaduct, no features or finds of archaeological or architectural interest were noted in the area around the riverside base of the Blackrock Viaduct and N20 embankment. The historic mapping and photographic evidence suggests that this point in the river was a dynamic area subject to change due to water action. This, coupled with the impact of the historic construction activities, suggests that the likelihood of extensive subsurface archaeological material to be present is low. Notwithstanding this, the installation of the angling stand will be on the river's edge will involve ground disturbance and requires archaeological monitoring.



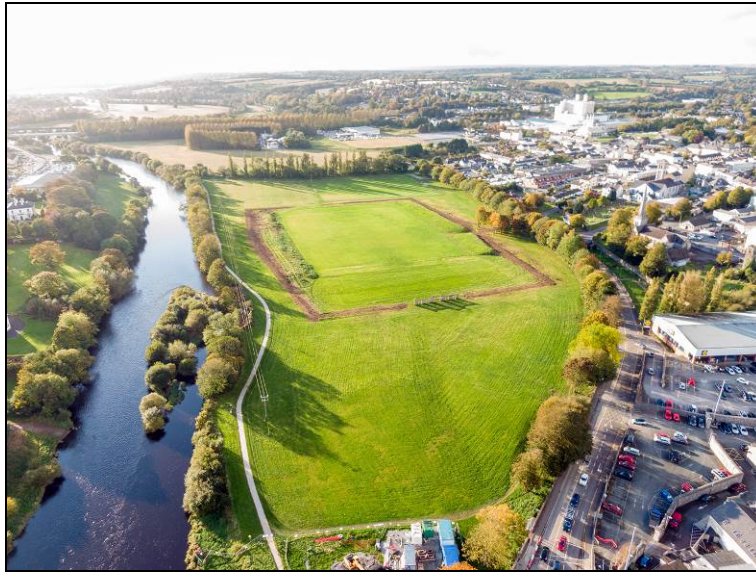
**Photograph 3:** Existing 2m wide concrete path along the riverbank between the viaduct and the main park area, looking west.

The existing 2m wide concrete footpath (**Photograph 3**) that runs for approximately 480m eastward from the viaduct, following the riverbank to the main park area, will be widened to 3m.

The main body of the park encompasses an area of approximately 10 hectares of open grass (**Photograph 4**). The River Blackwater forms the southern boundary, Park Road defines the northern extents, and the eastern edge terminates at Mallow Bridge. This large, open, and generally flat expanse of the river's floodplain broadly corresponds with the extents of the *Long Meadow* as shown in the historic mapping. A narrow strip, approximately 1.5 hectares, along the north side of the park is within the Zone of Notification/Potential (ZAP) for the historic town of Mallow CO033-093----; and the south-eastern end is within the ZAP for Mallow Bridge CO033-094---- (see **Figure 4**).

The eastern end of the park is currently given over to a construction compound for the ongoing works associated with the addition of a pedestrian boardwalk to the bridge. This area was historically the location of construction compounds and riverside works, for the 1968/69 building of the Park Road, and the Mallow North Flood Defence Scheme of 2008-2010 (see **Figures 10-11** for aerial evidence). In this general area, the east of the park, a new surface water detention feature or swale is proposed; while next to it will be a reinforced

grass overflow car park and a multi-purpose events area. These works are designed to be low impact; and in the main appear to be planned for areas of previous impact.



**Photograph 4:** Drone view of Mallow Town Park, west of Mallow Bridge, looking west. Image courtesy of BSM.

A hard landscaping asphalt paved car park, with associated drainage and lighting, is proposed for the northwest corner, wrapping around the soccer pitch. To the east of this a bicycle pump track will be installed.

Regarding pathways, a new, flood resistant, 3m wide concrete path will be installed on the south side of the park, and continue under Mallow bridge to the lands to the east. Three generally north to south running concrete paths, and two east to west running paths will be installed, to frame the GAA, rugby and soccer pitches, and a new grassed training area; and will link with the new riverside path to the south. A visually less invasive reinforced grass path will run on the north side, parallel to Park Road, and will give access from the entrances to the reinforced grass events area and overflow car park.

Surface inspection of the 10 hectare park area did not encounter any surface indicators of any upstanding or subsurface archaeological features (see **Photographs 4-7**); nor were any of the anomalies detected by the archaeo-geophysical survey indicated on the surface. While parts of the area of the park have been impacted on previously, such as at the east side in the vicinity of the bridge, the potential for impact on previously unknown archaeological features during construction cannot be ruled out. The archaeo-geophysical survey did uncover potential features, but no definitive site types were encountered. However, geophysical survey is a relative prospection technique, and more subtle archaeological features are not always readily apparent using such approaches. Therefore, the ground disturbance works, including topsoil stripping and preparations, drainage and services work requires archaeological monitoring attendance during construction.



**Photograph 5:** View of west end of the park, site of the car park, looking northeast.



**Photograph 6:** View of site of the car park, now a temporary construction compound, for the upcoming Mallow Sewerage Scheme, looking east.



**Photograph 7:** View of east end of the park, from Park Road looking southwest. Site of the overflow car park and events area.



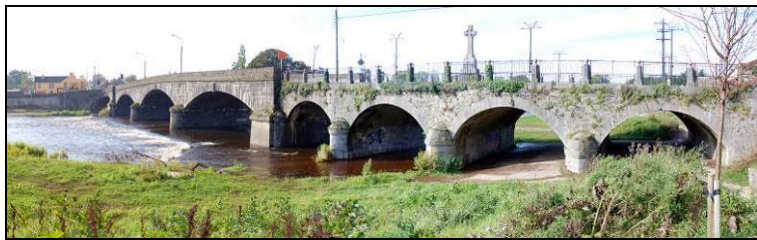
**Photograph 8:** View of east end of the park, from Park Road looking southwest.



To the north of the park, the existing playground on the opposite side of Park Road (**Photograph 8**) will be upgraded with a new play area and skatepark. These works will occur within the historic town ZAP. However, the extensive ground disturbance from the existing playground lessens the potential for survival of archaeological material.



**Photograph 9:** View of St. Anne's Church & Graveyard, the 17<sup>th</sup> Century Church of Ireland parish church – RMP CO033-006002-, viewed looking north from the park.



**Photograph 10:** Mallow Bridge, viewed from east, downstream side, from the north bank.



**Photograph 11:** Drone view of Mallow Town Park, west of Mallow Bridge, looking west. Image courtesy of BSM.

The concrete paths will continue, through newbuild to 3m and widening of existing, under the arch of Mallow Bridge (**Photograph 10**), improving access to the lower castle grounds that are on the floodplain outside the demesne wall of the Mallow Castle complex (**Photograph 11**). The upgrade works in this area, the River Walkway, will extend east as far as *Lover's Leap*; and consist of widening the existing paths to 3m (**Photograph 12**), upgrade of

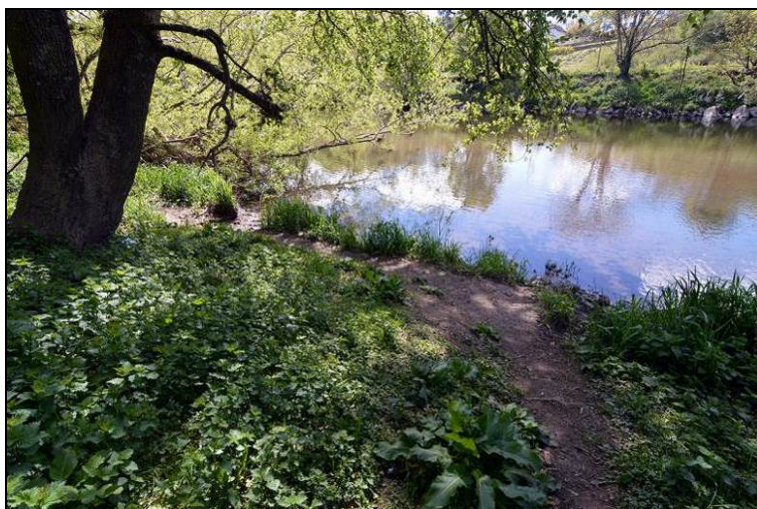
the pedestrian bridge (**Photograph 13**) over the Caherduggan stream, and the addition of four angling stands (**Photographs 14-15**) on the riverbank.



**Photograph 12:** Existing 2m wide concrete path on the River Walkway, looking east.



**Photograph 13:** Pedestrian bridge over the Caherduggan stream, to be upgraded with a wider deck, looking east.



**Photograph 14:** Proposed location of the angling stand to the immediate east of the Caherduggan pedestrian bridge.



**Photograph 15:** Proposed location of the angling stand at the end of the works area, close to *Lover's Leap*.

To summaries, during the walkover of all areas of Mallow Town Park, no surface features or indicators of potential subsurface archaeological sites or material were noted.

## 7. Impact Assessment

### Physical Impact

A comprehensive, non-intrusive archaeological evaluation of the proposed improvement works to Mallow Town Park was carried out. The background research confirms the historic context and development of a site that appears to have been largely undeveloped, and used as summer pasture, due to its location on the flood plain of the River Blackwater. It is part of the wider demesne landscape associated with the Mallow Castle complex, but the main public park to the west of the bridge is located away from aspect orientation of the estate that looks to the east. This area of the historic estate is of lesser importance to the palette of the historic landscape design for the castle.

A comprehensive walkover study of the site found no surface features or indicators of potential subsurface archaeological sites or material. And, while substantial settlement or permanent human activity would not be expected on a flood plain such as at Mallow, where there have been many significant flooding events in written history, the results of the archaeo-geophysical survey, while ruling out any large or recognisable archaeological site types, did indicate the potential for smaller, or more incidental or ephemeral archaeology. Therefore, ground disturbance works associated with the park improvement works, and given that it is essentially a green field site, can be assessed as having a low to moderate potential for impact on any unknown archaeology that is present. This requires mitigation.

Regarding the potential archaeology beneath the GAA and soccer pitches, the development works here may involve drainage or ground conditioning; which can have potential to impact on it. This requires mitigation.

Works to upgrade and widen the existing footpaths, while their footprint will have disturbed that location, has potential to encountered archaeological material; particularly when they may not have been archaeologically monitored previously.

The site of the proposed grass meadow on the riverbank at the toe of the Blackrock Viaduct and N20 road bridge embankment has been significantly altered over time, through alluvial deposits and the construction work associated with the construction of three phases of viaduct/bridge building. Ground disturbance works here, can be assessed as having a low potential for impact on any unknown archaeology that is present.

Riverine environments are known areas with potential for underwater archaeology, such as smaller features such as fish traps, or to structural elements such as timber bridge supports. They can also contain artefacts, either lost or ritually deposited as votive offerings. Therefore, any riverbank/bed disturbance to install the angling stands requires mitigation.

Similarly, the works proposed for the Caherduggan pedestrian bridge involves ground disturbance in the vicinity of a watercourse, and requires mitigation to avoid impact on any potential archaeology.

### Visual Impact

Overall, the proposed works to the Mallow Town Park, when carried out to the designs and specifications contained in the application, and taking cognisance of the mitigation measures put forward below, will be a positive impact on the amenity and public realm of this importance part of the townscape of Mallow. The works will enhance the setting of the old town with a new and modern palette of landscaping treatments; support the ongoing treatment of Mallow Bridge and the addition of a boardwalk; and will not visually intrude on the amenity of the Mallow Castle complex.

## **8. Mitigation Recommendations<sup>1</sup>**

It is recommended that the proposed improvement works for Mallow Town Park proceed as proposed, with the following mitigation measures.

### Archaeological Consent

Given that the proposed works will occur in several Zones of Archaeological Notification for monuments in local authority ownership, and they can be regarded as de-facto National Monuments, it is recommended that an application for the Consent of the Minister for Housing, Local Government and Heritage, under Section 14 of the National Monuments Act 1930 to 2004 (As Amended) for works, be prepared after a successful grant of permission for the proposed works by *An Bord Pleanála*. Archaeological monitoring of ground disturbance works is the probable mitigation that will be required by the Minister; working through the agency of the National Monuments Service (NMS).

### Archaeo-geophysical Survey Results

The linear responses beneath the GAA pitch, and the possible pit-like feature beneath the soccer pitch are of archaeological interest, and ideally they should be avoided, to prevent impact of works such as drainage or soil/ground conditioning to depth. Any detailed construction design on such possible works should look to design-out this area. If this is not possible, it is recommended that a brief programme of test trenching be carried to evaluate the archaeological nature of these features. The results of test trenching will determine the

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### **<sup>1</sup> Note on Recommendations**

All mitigation measures are recommendations only and the decision on implementation, amendments, etc. rests ultimately with the *An Bord Pleanála*, in association with the Planning Authority – Cork County Council, and the Development Applications Unit of the Department of Housing, Local Government and Heritage.

true nature of the anomalies, and allow for any resolution measures, be that preservation in situ or preservation by record through excavation.

#### Archaeological Monitoring of Ground Disturbance Works

It is recommended that, given the proposed works will occur in several Zones of Archaeological Notification, and the scale and expanse of the works area, all ground disturbances should be archaeologically monitored, by a suitably experienced archaeologist. The level of monitoring required, be that fulltime or intermittent, can be determined by the attending experienced archaeologist, in consultation with the NMS and Cork County Council's Archaeologist, once the construction level details of the works are designed.

The monitoring attendance will be provided in accordance with archaeological best practice and taking cognisance of the *Policy and Guidelines on Archaeological Excavation* document (Dept. Arts, Heritage and the Gaeltacht 1999) and the *IAI Code of Conduct for Archaeological Monitoring* (Institute of Archaeologist of Ireland 2006).

Written, photographic and drawn records, as required, will be made of the attendance, so as to create an archive of the monitoring activity.

Full cognisance will be taken of the requirements of the National Monuments Service with regard to the monitoring requirements and conditions of the Consent issued under Section 14.

Should archaeological material be encountered during monitoring, works will cease at that location, pending hand investigation to assess its nature and extent; and for notification to the Client, Cork County Council's Archaeologist, the National Monuments Service (NMS), and the National Museum of Ireland (NMI), for instruction.

Drawn, photographic and written records of all features will be created, and reported on as per below.

#### Pathways

The widening of the existing pathways is ground disturbance and warrants archaeological monitoring. The level of monitoring required, be that fulltime or intermittent, can be determined by the attending experienced archaeologist, in consultation with the NMS and Cork County Council's Archaeologist.

#### Meadow Beneath Blackrock Viaduct

The site of the proposed grass meadow on the riverbank at the toe of the Blackrock Viaduct and N20 road bridge embankment is regarded as having low potential for the survival of subsurface archaeology. However, given this potential, monitoring is recommended; and

can be the attending experienced archaeologist, in consultation with the NMS and Cork County Council's Archaeologist.

#### Angling Stands

Riverbank disturbance for the angling stands requires archaeological monitoring.

#### Caherduggan Stream Pedestrian Bridge

Similar to the angling stands, the works proposed for the Caherduggan pedestrian bridge involves ground disturbance to a watercourse, and warrants archaeological monitoring.

## 9. Sources & References Consulted

- *Record of Monuments & Places for County Cork* 1997;
- *Urban Archaeological Survey of County Cork*, 1995;
- National Monuments Service (NMS) *Historic Environment Viewer* - [www.archaeology.ie](http://www.archaeology.ie);
- Excavations Database - [www.excavations.ie](http://www.excavations.ie);
- *Framework and Principles for the Protection of the Archaeological Heritage*. Department of Arts, Heritage, Gaeltacht and the Islands 1999;
- *Code of Conduct for Archaeological Assessment*. Institute of Archaeologist of Ireland 2006.
- *Guidelines on The Information to Be Contained in Environmental Impact Assessment Reports Draft*. Environmental Protection Agency, 2017;
- Ordnance Survey & Other Historic Mapping – Geohive - <https://geohive.ie/index.html>;
- Down Survey Mapping – [www.downsurvey.tcd.ie](http://www.downsurvey.tcd.ie);
- Placenames database - <https://www.logainm.ie>;
- National Inventory of Architectural Heritage (NIAH) [www.buildingsofireland.com](http://www.buildingsofireland.com)
- Cork County Development Plan 2014 <http://corkcocoplans.ie/cobh/>.

Bolster, E. 1971 *A History of Mallow*. Cork Historic Guides Committee, Cork.

BSM 2021 *Proposed Improvement Works at Mallow Town Park, Mallow, Co. Cork Landscape/Planning Design Report*. Report prepared by BSM for submission with the Part XAB, Section 177AE application.

Crowley, S. 1997. The Development of Mallow Town. *Mallow Field Club Journal*. **15**, 105- 113.

Lewis, S. 1837 *Topographical Dictionary of Ireland*. Samuel Lewis & Co. Guildford.

MacCotter, p. 2008 *Medieval Ireland Territorial, Political and Economic Divisions*. Four Courts Press, Dublin.

Noonan, D. 2015 *Archaeological Test Excavation Report Mallow Castle and Demesne Development Works, Mallow, Co. Cork*. Unpublished report prepared by Daniel Noonan Archaeological Consultancy for Cork County Council.

Noonan, D. and Elder, S. forthcoming *Archaeological Excavation Works at the New Car Park for Mallow Castle*. Unpublished report prepared by Daniel Noonan Archaeological Consultancy for Cork County Council.

O'Reilly, S. 1989 Inscribed Stones on Mallow Bridge. *Mallow Field Club Journal*. **7**, 19-25.

O'Sullivan, M. 1983. Mallow Railway. *Mallow Field Club Journal*. **1**, 63-77.

O'Sullivan, M. 1985 The River Crossing at Mallow. *Mallow Field Club Journal*. **3**, 5-11.

O'Sullivan, M. 1988 The Floods of Mallow. *Mallow Field Club Journal*. **6**, 27-.

Power, D. et al. 2000 *Archaeological Inventory of County Cork Volume 4: North Cork*. Archaeological Survey of Ireland, Dublin.

Smith, C. 1750 *The Ancient and Present State of the County and City of Cork*. 2 Volumes. John Connor, Cork.

Taylor, G. and Skinner, A. 1778 *Maps of the Roads of Ireland, Surveyed 1777*. G. Terry, London.

Thomas, A. 1992 *The Walled Towns of Ireland* 2 Volumes. Irish Academic Press, Dublin.

Walton, J. 2017 *Catalogue of The Jephson Papers, Mallow Castle*. Privately prepared document.



## APPENDIX A – ARCHAEO-GEOPHYSICAL SURVEY REPORT

# GEOPHYSICAL SURVEY

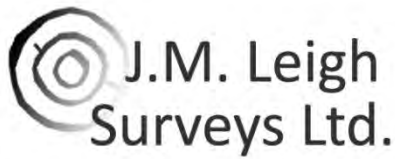
## REPORT

Mallow Town Park,  
Castlelands, Mallow,  
County Cork

Date:  
01/09/2020

Licence: 20R0084

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Leixlip  
County Kildare  
[www.jmlsurveys.com](http://www.jmlsurveys.com)  
01 615 4647



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**GEOPHYSICAL SURVEY SUMMARY SHEET**  
**MALLOW TOWN PARK, CASTLELANDS, MALLOW, CO. CORK**

<b>Site Name</b>	Mallow Town Park	<b>Ref No.</b>	20016
<b>Townland</b>	Castlelands	<b>Licence No.</b>	20-R-0084
<b>County</b>	Cork	<b>Licence Holder</b>	Joanna Leigh
<b>ITM (centre)</b>	E555826, N598271	<b>Purpose</b>	Pre-planning
<b>Client</b>	Daniel Noonan Archaeological Consultancy	<b>Reference No.</b>	N/A

**Ground Conditions** Survey was conducted within the bounds of Mallow Town Park which comprised three sports pitches and areas of public amenity. Ground conditions were excellent and largely comprised short grass.

**Survey Type** Detailed gradiometer survey totalling c. 8.6 hectares.

**Summary of Results**

The data is dominated by magnetic disturbance resulting from modern landscaping and activity within the park. In the east of the park (Area A) there is a spread of disturbance and amorphous responses that form vague rectilinear pattern measuring c.77m x 30m. This may represent the possible damaged remains of a structure. This is speculative as the modern magnetic disturbance is significant and obscures the data.

At the north-west of the GAA pitch there are short linear responses. These do not appear to be associated with the sports pitch and may be of interest. The responses have a magnetic signature and form indicative of ditch type-features. Although a pattern of the responses is difficult to discern due to the surrounding modern disturbance, these responses are of archaeological potential.

**Field Staff** Joanna Leigh & Susan Curran

**Report Date** 01/09/2020

**Report Author** Joanna Leigh

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3. Survey Methodology	2
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6. Conclusion	6
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## **Geophysical Survey Report**

### **Mallow Town Park, Castlelands, Mallow, County Cork**

#### **1 Introduction**

- 1.1 A geophysical survey has been conducted by J. M. Leigh Surveys Ltd. at a site in Mallow Town Park in the townland of Castlelands, County Cork. The survey was requested by Daniel Noonan Archaeological Consultancy on behalf of Cork County Council. The survey forms part of an archaeological assessment of proposed future works to be carried out under the auspices of an emerging Mallow Town Park, Castle and Spa masterplan and development guidance document.
- 1.2 The application area is contained to the west of Mallow Castle House, bounded by the River Blackwater to the south and the N72 (Park Road) to the north. It comprises three sports pitches (one GAA, one Rugby and one soccer) and public recreation spaces. Figure 1 presents the site and survey location at a scale of 1:2,500.
- 1.3 There are no recorded monuments within the application area, although part of the northern half lies within the Zone of Notification for the historic town of Mallow (CO033-093). There are several recorded monuments found within the grounds of Mallow Castle which are located c. 100m to the east. These include the castle itself which is classified as a 'Country House' (CO033-009002), a 'House-fortified house' (CO033-009001), 'Castle-tower house' (CO033-009004), 'Bawn' (CO033-009006) and 'Designed landscape feature' (CO033-092). A 'Bridge' (CO033-094) over the River Blackwater is located to the south-east of the application area. A 'Church' (CO033-006002) and 'Graveyard' (CO033-006001) are situated c. 65m to the north and a 'Market-house' (CO033-006003) is located c. 100m to the north.
- 1.4 The main aim of the survey was to identify any responses which may represent previously unknown archaeological remains within the application area.
- 1.5 The detailed gradiometer survey was conducted under licence 20R0084 issued by the Department of Culture, Heritage and the Gaeltacht.

#### **2 Survey ground conditions and further information**

- 2.1 The survey area was contained within the bounds of Mallow Town Park. A public footpath runs along the western and southern perimeters. The easternmost corner of the application area was not available for survey due to ongoing construction works. For ease of reference, the application area is divided into five (Areas A to E).

- 2.2 Area A lies immediately adjacent to the construction works and comprised short grass. The construction works contributed to magnetic disturbance along this eastern boundary.
- 2.3 Area B is located along the northern boundary, adjacent to the N72. It comprised short grass and several mature trees.
- 2.4 Area C comprised a GAA pitch and the ground cover consisted of short grass. Two large mounds of earth separated it from Area B to the north; a stone wall and former entrance to the pitch divides it from Area A to the east. An area of rough ground with overgrown vegetation and tree stumps prevented survey in parts of the southern half of this area.
- 2.5 Area D comprised a soccer pitch defined by metal fencing which contributed to considerable magnetic disturbance.
- 2.6 Area E comprised a rugby pitch with short grass. Lighting fixtures are also located around the pitch.
- 2.7 Magnetic disturbance resulting from the lighting fixtures, goal posts and fencing is evident in the results. Although this obscures some of the data, the overall interpretation of the results is not affected.

### **3 Survey Methodology**

- 3.1 A detailed gradiometer survey detects subtle variations in the local magnetic field and measurements are recorded in nano-Tesla (nT). Some archaeological features such as ditches, large pits and fired features have an enhanced magnetic signal and can be detected through recorded survey.
- 3.2 Data was collected with a Bartington Grad 601-2 instrument. This is a specifically designed gradiometer for use in archaeological prospection. The gradiometer operates with a dual sensor capacity making survey fast and effective.
- 3.3 The instrument is calibrated in the field to ensure a constant high quality of data. Extremely sensitive, these instruments can detect variations in soil magnetism to 0.01nT, affording diverse application throughout a variety of archaeological, soil morphological and geological conditions.
- 3.4 All data was collected in 'zigzag' traverses. Grid orientation was positioned to best facilitate site work and ground conditions.

- 3.5 Data was collected with a sample interval of 0.25m and a traverse interval of 1m, providing 6400 readings per 40m x 40m grid. The survey grid was set-out using a GPS VRS unit. Survey tie-in information is available upon request.
- 3.6 The survey methodology, data presentation and report content adheres to the European Archaeological Council (EAC) (2016) 'Guidelines for the use of Geophysics in Archaeology'.

#### **4 Data display**

- 4.1 A summary greyscale image and accompanying interpretation diagram are presented in Figures 2 and 3, at a scale of 1:1,500.
- 4.2 Numbers in parenthesis in the text refer to specific responses highlighted in the interpretation diagram (Figure 3).
- 4.3 Isolated ferrous responses highlighted in the interpretation diagram most likely represent modern ferrous litter and debris and are not of archaeological interest. These are not discussed in the text unless considered relevant.
- 4.4 The raw gradiometer data is presented in archive format in Appendix A1.01 and A1.02. The raw data is displayed as a greyscale image and xy-trace plot, both at a scale of 1:500. The archive plots are used to aid interpretation of the results and are used for reference only. The archive plots are available as PDF images upon request.
- 4.5 The display formats referred to above and the interpretation categories are discussed in the summary technical information section at the end of this report.

## 5 Survey Results

5.1 The data is largely dominated by modern disturbance which results from landscaping and modern features throughout the park. The magnetic disturbance may mask more subtle responses and it is possible that responses resulting from archaeological features remain undetected. However, the results of the survey have identified some areas of possible interest.

### Area A

5.2 Magnetic disturbance dominates Area A and is prominent along the western extent of survey. Although the disturbance masks the data here, a series of amorphous positive and negative responses (1) and associated disturbance form a vague rectilinear pattern measuring 77m x 30m. It is possible that this reflects further modern disturbance. However, it is equally possible that the rectilinear pattern represents the ephemeral remains of a rectilinear structure. This is speculative but must be considered.

### Area B

5.3 Area B is located adjacent to Park Road and the GAA pitch. This area is dominated by modern magnetic disturbance, most likely resulting from ground disturbance. This is noted in the west of Area B where the background magnetic variation (2) is particularly heightened. This is modern in origin and not of archaeological interest.

### Area C

5.4 Area C is contained within the GAA pitch. Disturbance (3) along the northern extent of the pitch correlates with a large earthen mound which runs east to west along the edge of the pitch.

5.5 To the south of the disturbance (3) there are some responses of potential interest. Linear responses (4) are vaguely rectilinear in form. The responses do not appear to be associated with the modern responses and they have a magnetic signature indicative of short ditch features. Although the shape and pattern of the responses is masked by the magnetic disturbance (3), these may represent the remains of archaeological ditched features.

5.6 Broad magnetic disturbance (5) result from the GAA goal posts.

### Area D

5.7 Area D comprises of the soccer pitch. Magnetic disturbance around the pitch results from a metal fence.



- 5.8 Although further magnetic disturbance is evident in Area D, there is a broad negative response (6). The possible origin of this is unclear. It could represent the filled in remains of a drainage ditch or represent the remains of a banked feature. Archaeological interpretation is cautious; however, it does appear to be roughly orientated with some of the responses (4) in Area C. This is speculative and the response may equally be modern in origin.
- 5.9 To the south of (6) there is an isolated response (7). It is possible that this represents an isolated pit-type feature. However, interpretation is again tentative. There are no further responses of clear interest and the response (7) may equally represent more deeply buried ferrous debris.
- 5.10 In the north of Area D, a linear sequence of ferrous responses (8) may represent modern services.

#### *Area E*

- 5.11 Area E contains a rugby pitch. Linear ferrous responses (9) run from the light fixtures surrounding the pitch and represent underground services.
- 5.12 A spread of amorphous responses (10) appears to extend north-east to south-west. The possible origin of these is unclear and they may represent modern ground disturbance. There is no clear archaeological pattern or form and an archaeological interpretation is tentative.

## **6 Conclusion**

- 6.1 The survey data is dominated by modern responses resulting from ground disturbance, modern fixtures including lighting and fences and underground services. However, some responses of interest were identified.
- 6.2 In the east of the survey, an area of amorphous responses and disturbance forms a vague rectilinear pattern. Although it is possible that this represents further modern disturbance, an archaeological interpretation must be considered. It is possible that the fragmented remains of a rectilinear structure are represented here.
- 6.3 Within the area of the GAA pitch, several short linear responses are evident. Although these are somewhat masked by modern disturbance; the shape and form of the responses is indicative of short ditch type features. The remains of archaeological ditches may be represented here.
- 6.4 Further responses in the area of the soccer and rugby pitches are evident. However, there is no clear archaeological pattern or form, and these most likely represent more recent activity.
- 6.5 Consultation with a licensed archaeologist and with the Department of Culture, Heritage and the Gaeltacht is recommended to establish if any additional archaeological works are required.

## 7 Technical Information Section

### Instrumentation & Methodology

#### *Detailed Gradiometer Survey*

Detailed gradiometer survey can either be targeted across a specific area of interest or conducted as a blanket survey across an entire application area, often as a standalone methodology.

Sampling methodologies can vary but a typical survey is conducted with a sample interval of 0.25m and a traverse interval of 1m. This allows detection of potential archaeological responses. Data is often collected in grids measuring 40m x 40m, with the data displayed accordingly. A more detailed survey methodology may be applied where archaeological remains are thought likely. This can sometimes produce results with a more detailed resolution. A survey with a grid size of 20m x 20m and a traverse interval of 0.5m will provide a data set with high resolution.



#### ***Bartington GRAD 601-2***

The Bartington Grad 601-2 instrument is a specifically designed gradiometer for use in archaeological prospection. The gradiometer operates with a dual sensor capacity making survey very fast and effective. The sensors have a separation of 1m allowing greater sensitivity.

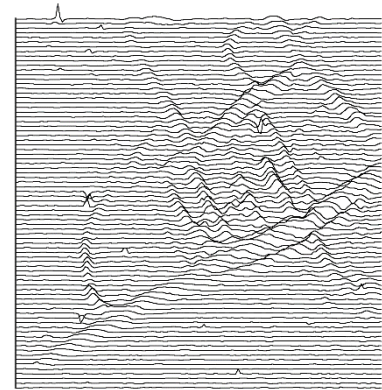


Frequent realignment of the instruments and zero drift correction ensure a constant high quality of data. Extremely sensitive, these instruments can detect variations in soil magnetism to 0.1nT, affording diverse application throughout a variety of archaeological, soil morphological and geological conditions.

## Gradiometer Data Display & Presentation

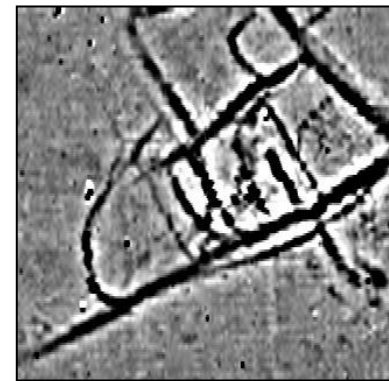
### **XY Trace**

The data are presented as a series of linear traces, enabling a semi-profile display of the respective anomalies along the X and Y-axes. This display option is essential for distinguishing between modern ferrous materials (buried metal debris) and potential archaeological responses. The XY trace plot provides a linear display of the magnitude of the response within a given data set.



### **Greyscale\***

As with dot density plots, the greyscale format assigns a cell to each datum according to its location on the grid. The display of each data point is conducted at very fine increments, allowing the full range of values to be displayed within the given data set. This display method also enables the identification of discrete responses that may be at the limits of instrument detection. In the summary diagrams processed, interpolated data is presented. Raw un-interpolated data is presented in the archive drawings along with the xy-trace plots.



### **Interpretation**

An interpretation of the data is made using many of the plots presented in the final report, in addition to examination of the raw and processed data. The project managers' knowledge and experience allows a detailed interpretation of the survey results with respect to archaeological potential.



*\*XY Trace and raw greyscale plots are presented in archive form for display of the raw survey data. Summary greyscale images of the interpolated data are included for presentation purposes and to assist interpretation. The archive plots are provided as PDF images upon request.*

## **Glossary of Interpretation Terms**

Categories of responses may vary for different data sets. The list below are the most commonly used categories for describing geophysical responses, as presented in the summary interpretation diagrams.

### ***Archaeology***

This category refers to responses which are interpreted as of clear archaeological potential and are supported by further archaeological evidence such as aerial photography or excavation. The term is generally associated with significant concentrations of former settlement, such as ditched enclosures, pits and associated features.

### ***?Archaeology***

This term corresponds to anomalies that display typical archaeological patterns where no record of comparative archaeological evidence is available. In some cases, it may prove difficult to distinguish between these and evidence of more recent activity also visible in the data.

### ***Area of Increased Magnetic Response***

These responses often lack any distinctive archaeological form, and it is therefore difficult to assign any specific interpretation. The resulting responses are site specific, possibly associated with concentrations of archaeological debris or more recent disturbance to underlying archaeological features.

### ***Trend***

This category refers to low-level magnetic responses barely visible above the magnetic background of the soil. Interpretation is tentative, as these anomalies are often at the limits of instrument detection.

### ***Ploughing/Ridge & Furrow***

Visible as a series of linear responses, these anomalies equate with recent or archaeological cultivation activity.

### ***?Natural***

A broad response resulting from localised natural variations in the magnetic background of the subsoil; presenting as broad amorphous responses most likely resulting from geological features.

### ***Ferrous Response***

These anomalies exhibit a typically strong magnetic response, often referred to as 'iron spikes,' and are the result of modern metal debris located within the topsoil.

### ***Area of Magnetic Disturbance***

This term refers to large-scale magnetic interference from existing services or structures. The extent of this interference may in some cases obscure anomalies of potential archaeological interest.

## **Bibliography**

European Archaeological Council (EAC) (2016) '*Guidelines for the use of Geophysics in Archaeology*' by Armin Schmidt, Paul Linford, Neil Linford, Andrew David, Chris Gaffney, Apostolos Sarris and Jörg Fassbinder.

English Heritage (2008) '*Geophysical guidelines: Geophysical Survey in Archaeological Field Evaluation.*' Second Edition.

Gaffney, C. Gater, J. & Ovenden, S. (2006) '*The use of Geophysical Techniques in Archaeological Evaluations.*' IFA Paper No. 6.

Gaffney, C & Gater, J (2003). '*Revealing the buried past: Geophysics for Archaeologists.*' Tempus Publishing Limited.

National Soil Survey of Ireland (1980) *General soil map second edition (1:575,000)*. An Foras Taluntais.

**List of Figures**

<b>Figure</b>	<b>Description</b>	<b>Paper Size</b>	<b>Scale</b>
Figure 1	Site & survey location diagram	A4	1:2,500
Figure 2	Summary greyscale image	A3	1:1,500
Figure 3	Summary interpretation diagram	A3	1:1,500

***Archive Data Supplied as a PDF Upon Request***

A1.01	Raw data XY-Trace plot	A0	1:500
A1.02	Raw data greyscale image	A0	1:500



- Application Area
- Gradiometer Survey
- Survey not Possible Vegetation
- Survey not Possible Construction



Client:  
Daniel Noonan Archaeological  
Consultancy

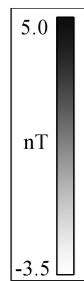
Project:  
Geophysical Survey  
Mallow Town Park, Castlelands,  
Mallow, County Cork

Title:  
Site & Survey Location

**J.M. Leigh**  
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Scale @ A4: 1:2,500  
Figure: 1  
Licence No.: 20R0084  
Issue Date: 01.09.2020





0 metres 60



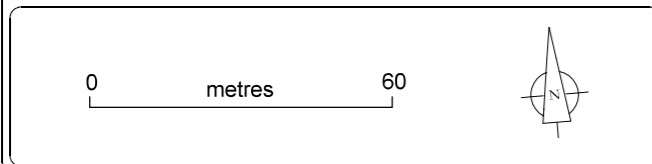
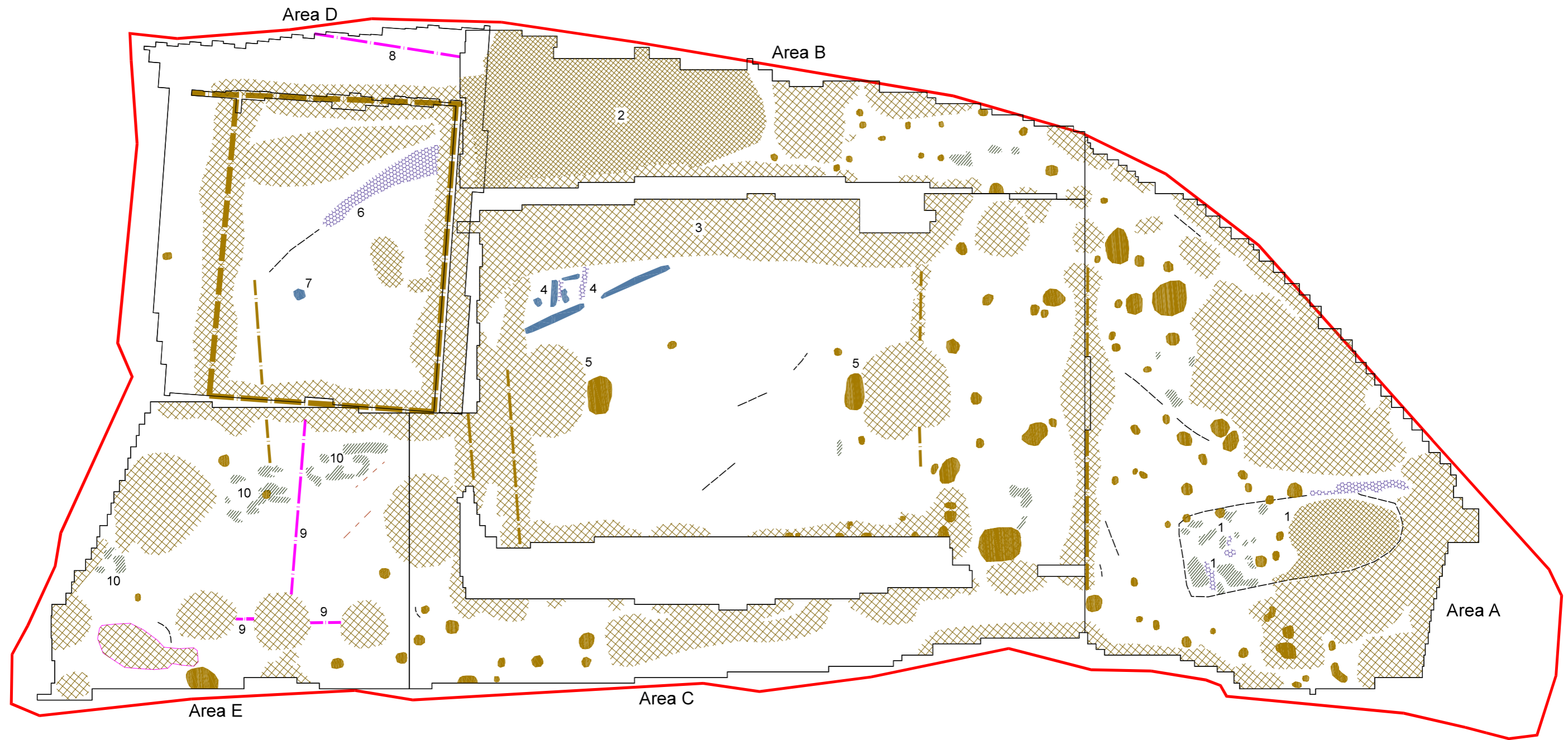
Client:  
Daniel Noonan  
Archaeological Consultancy

Project:  
Geophysical Survey  
Mallow Town Park, Castlelands,  
Mallow, County Cork

Title:  
Summary Greyscale Image

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Figure: 2  
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Title:  
Summary Interpretation Diagram

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Scale @ A3: 1:1,500  
Figure: 3  
Licence No.: 20R0084  
Issue Date: 01.09.2020