

15. CULTURAL HERITAGE

15.1 INTRODUCTION

This chapter considers and assesses the potential impact of the proposed M28 Road Project as described in **Chapter 3: Description of Proposed Road Development** on the receiving archaeological, architectural and cultural heritage environment and to propose mitigation measures to ameliorate any potential negative impacts on historical landscapes, monuments, finds or features of archaeological, architectural heritage or cultural heritage significance.

Sites and features identified during the course of this assessment have been given a unique reference number. The sites are designated as AH (Archaeological Heritage), BH (Architecture - Built Heritage) or CH (Cultural Heritage) and then numbered sequentially (e.g. AH1, AH2, BH1, BH2, CH1, CH2, etc.). These sites are detailed in the inventories for Archaeology, Architecture - Built Heritage and Cultural Heritage Sites contained in **Appendices 15A-15C** respectively and are shown on the accompanying mapping (**Figures 15.1a-h in Volume 5**). Plates and all other figures are contained in **Appendix 15I**.

Cultural heritage is a broad term that includes a wide range of tangible and intangible cultural considerations. It encompasses aspects of archaeology and architecture and is expressed in the physical landscape as well as in non-physical ways. Cultural heritage can relate to settlements, former designed landscapes, building and structures, as well as folklore, townland and place names, historical events and traditions. Tangible cultural heritage assets within the study area are represented by townland boundaries and a mid-20th century grotto. Potential buried foundations associated with features / structures shown the 1st edition Ordnance Survey six-inch mapping (1841-2) are also included in this evaluation where they fall within the CPO of the proposed road project, as these may often be of interest and valued from an archaeological perspective.

Detailed drawings containing the proposed CPO line are provided in **Volume 5** of this EIS (Ref. GA Series).

15.2 METHODOLOGY

15.2.1 Study Area

The area examined for the study includes the full extent of the proposed M28 Road Project, including the proposed Service Area at Ringaskiddy (Cf. **Chapter 3: Description of Proposed Road Development** for full description).

Initially a 500m wide corridor (250m on either side of the centreline) was assessed in order to identify the known and recorded archaeological, architectural and cultural heritage assets and thus to provide an understanding of the archaeological and historic development of the wider landscape (which is described in the archaeological and historical background for the receiving environment). This was later redefined in width once the final route design had been decided so that a detailed and focussed assessment could take place of the likely impacts on archaeological, architectural and cultural heritage arising from the construction and operation of the new road project. This refined corridor for the purpose of the impact assessment is 50m on either side of the centreline of the

proposed road project, in accordance with the 2006 NRA Guidelines. Professional judgement has been used to determine where the assessment corridor should be extended to take into account archaeological sites/monuments or structures, demesnes and the settings of architectural heritage that lie beyond the proposed impact assessment corridor. As required and where appropriate, the relationship of structures, sites, monuments and complexes that fall outside this corridor were considered and evaluated.

The significance and type of impacts experienced by architectural sites, archaeological monuments and complexes and other cultural heritage features located within the assessment corridor were then evaluated for the construction and operation phases of the project.

15.2.2 Evaluation Process

The assessment is based on a desk study of published and unpublished documentary and cartographic sources, supported by a field survey.

15.2.2.1 Desk Study

The appraisal availed of the following sources:-

- The National Monuments, Preservation Orders, Register of Historic Monuments list for County Cork was sourced directly from the Department for Arts, Heritage, Regional, Rural and Gaeltacht Affairs (DAHRRGA);
- Record of Monuments and Places (RMP) and Sites and Monuments Record (SMR). The SMR, as revised in the light of fieldwork, formed the basis for the establishment of the statutory Record of Monuments and Places in 1994 (RMP; pursuant to Section 12 of the National Monuments (Amendment) Act, 1994). The RMP records known upstanding archaeological monuments, their original location (in cases of destroyed monuments) and the position of possible sites identified as cropmarks on vertical aerial photographs. The information held in the RMP files is read in conjunction with published constraint maps. Archaeological sites identified since 1994 have been added to the non-statutory SMR database of the Archaeological Survey of Ireland (National Monuments Service, DAHRRGA), which is available online at www.archaeology.ie and includes both RMP and SMR sites. Those sites designated as SMR sites have not yet been added to the statutory record, but are scheduled for inclusion in the next revision of the RMP;
- Record of Protected Structures (RPS) and Architectural Conservation Areas (ACAs);
- The topographical files of the National Museum of Ireland;
- Cartographical sources: OSi Historic Mapping Archive, including early editions of the Ordnance Survey, historical mapping (such as Down Survey 1656 Map) and Griffith's Valuation, 1853;
- Excavations Bulletins and Excavations Database (1970-2015);
- Cork County Development Plan (CDP) 2014–2020;
- The National Monuments Service online Survey Database (www.archaeology.ie)
- National Inventory of Architectural Heritage (NIAH), Building Survey and Garden Survey;
- Archaeological Inventories of County Cork, Vol. II – East and South Cork (1994) and Vol. V (2009);
- Aerial imagery (Google Earth 2001–2013, Bing 2013; OSi 1995, 2000, 2006);
- Ordnance Survey of Ireland LiDAR data (ranging from 1–2m resolution) (Hanley 2017); and
- Other documentary sources (as listed in the references, Section 15.9).

The desk study was also informed by data contained in previous cultural heritage reports:-

- Architectural Assessment of sub-route options for the N28 in the vicinity of Castle Warren, Barnahely (John Cronin & Associates, 2004);
- Archaeology, Architectural and Cultural Heritage, N28 Bloomfield to Ringaskiddy Road Improvement Scheme, Unpublished Report by CRDS Ltd;
- Archaeological Assessment of the N28 at Barnahely, Geophysical Survey Report, Licence No. 04R065 (ArchaeoPhysica Ltd, 2004);
- A report on the Archaeological Testing carried out at Castle Warren, Barnahely, Licence No. 04E0774 (Hanley, 2005);
- Environmental Impact Statement, JAW Raffeen Quarry (Tobin & Co. Ltd, August 2006);
- N28 Geophysical Survey, Shannonpark & Hilltown townlands (ArchaeoPhysica Ltd 2005 & 2008);
- Archaeological, Architectural and Cultural Heritage Assessment of Route Options for the N28 Bloomfield to Ringaskiddy Road Improvement Scheme (Courtney Deery Heritage Consultancy, 2014);
- Geophysical Survey Report, Barnahely, Ringaskiddy, Co. Cork. Licence No. 15R017 (Leigh 2015); and
- A report on archaeological testing of enclosures (RMP CO087-155) at Barnahely townland, Licence Ref. 15E0049 (Hanley 2015).

The desk study also incorporates the results of LiDAR analysis carried out by Ken Hanley, TII Project Archaeologist. A list of legislation, standards and guidelines that were consulted to inform the assessment are contained in **Appendix 15F** along with excerpts from the relevant legislation.

15.2.2.2 Field Survey

A field survey was carried out from the 23rd to 26th February 2015. Weather conditions were variable, with heavy snow showers and rain at the beginning of the week, becoming generally dry and favourable thereafter. The purpose of the field survey was to identify potential archaeological sites/areas/features and structures/features of architectural, industrial and cultural heritage merit that may be subject to direct or indirect impacts as a result of the proposed road project. Site work was carried out on a field by field basis and all lands that are traversed were visited in the field. Field work was also assisted by a review of detailed aerial photography and of historic map sources. All anomalies detected by using these techniques were visited in the field and assessed. The type of terrain and ground visibility was noted.

A historic landscape approach was used in order to characterise the receiving cultural heritage environment and to this end, an account of the field work is detailed in **Section 15.3.4** under the following headings: physical environment, cultural landscape and archaeological potential. Each section of the proposed M28 Road Project is discussed sequentially and identified by townland in the field survey reports. Geo-referenced photographs were taken along the route and are held as KMZ files in the project archive; relevant images are included as plates to accompany the field survey reports.

15.2.2.3 Assessing Significance Criteria

Cultural heritage sites/landscapes are considered to be a non-renewable resource and cultural heritage material assets are generally considered to be location sensitive. In this context, any change to their environment, such as construction activity and ground disturbance works, could adversely affect these sites. The likely significance of all impacts is determined in consideration of the magnitude of the impact and the baseline rating upon which the impact has an effect (i.e. the sensitivity or value of the cultural heritage asset). Having assessed the magnitude of impact with respect to the sensitivity/value of the asset, the overall significance of the impact is then classified as imperceptible, slight, moderate, significant, or profound. A glossary of impact assessment terms, including the criteria for the assessment of impact significance, is contained in **Appendix 15G**.

Archaeological and Cultural Heritage

In accordance with the NRA *'Guidelines for the Assessment of Archaeological Heritage Impact of National Road Schemes'* (2006) the significance (i.e. value) criteria used to evaluate an archaeological site, monument or complex are as follows: existing status (level of protection), condition or preservation, documentation or historical significance, group value, rarity, visibility in the landscape, fragility or vulnerability, and amenity value. The archaeological and cultural heritage environment is assigned a baseline rating, taking into account the importance, value and/or sensitivity of the receiving environment (Cf. **Table 15.7, Appendix 15G**).

Architectural Heritage

Architectural heritage sites include structures listed in the Record of Protected Structures (RPS), which have statutory protection. Architectural heritage sites also include structures listed in the National Inventory of Architectural Heritage (NIAH) Building Survey, demesne landscapes and historic gardens listed in the NIAH Garden Survey, and undesignated, newly identified sites such as examples of vernacular architecture (e.g. a dry-stone wall or upstanding structure depicted on the first edition OS six-inch map). In this assessment each building or structure that is considered is assigned a rating in accordance with the NIAH system, or is stated to be not of special architectural interest (Cf. **Appendix 15G**).

15.2.2.4 Assessment of Impacts

Potential impacts on the cultural heritage environment can be described in three categories: direct physical impacts; indirect physical impacts; and impacts on setting.

Direct Physical Impacts

Direct physical impacts describe those development activities that directly cause damage to the fabric of a heritage asset. Typically, these activities are related to construction works; e.g. they could include excavation of foundations, earthmoving/site preparation creation of access roads and the excavation of service trenches. Further direct physical impacts are unlikely to be experienced during the operational life of the proposed road project.

Indirect Physical Impacts

Indirect physical impacts describe those processes, triggered by development activity, that lead to the degradation of heritage assets.

Impacts on Setting

Impacts on setting of heritage assets describes how the presence of a development changes the surroundings of a heritage asset (archaeological, architectural or cultural heritage sites) in such a way that it affects (positively or negatively) the heritage significance of that asset. Visual impacts are most commonly encountered but other environmental factors such as noise, light or air quality can be relevant in some cases. Impacts may be encountered at all stages in the life cycle of a development from construction to decommissioning but they are only likely to be considered significant during the prolonged operational life of the development.

15.3 RECEIVING ENVIRONMENT

15.3.1 Archaeological and Historical Background

Introduction

The landscape through which the proposed road project travels is largely one of undulating arable and pasture land, with many of the fields still given over to farming. Although undulating, the eastern half of the proposed road project (roughly from Ringaskiddy to Shannonpark) is lower-lying than the northern half; several of the natural rises have been exploited in the past, such as the locations of the Martello Tower in Ringaskiddy and the tower house (Barnahely Castle) in Barnahely. North of the Shannonpark roundabout, the steep hills in Hilltown, Ballinrea and Moneygourney (Carr's Hill) offer spectacular views of the surrounding landscape, the River Lee and Cork Harbour. The Glounatouig Stream flows in a deep, steep-sided valley on the eastern boundary between Ballinrea and Hilltown townlands, with the present N28 running alongside it. An east-west ridge of higher ground (50m OD) runs through the eastern half of the proposed road project, to the east of Shannonpark roundabout. The land slopes from this ridge down to the valleys of the Glounatouig Stream to the north and the Owenboy River to the south, with a number of ringforts and enclosures recorded along this contour.

Despite the large tracts of agricultural land, this is also an industrialised landscape, with wind turbines, factories, business or industrial parks and large pylons dominating the skyline, especially at the eastern end of the proposed road project in the Ringaskiddy / Loughbeg / Barnahely area. Further north, the proposed M28 runs parallel with and very close to the existing, N28 National Road, before reaching the urban and suburban development encroaching from Rochestown and Douglas. Settlement is mostly dispersed, with the exception of the village of Ringaskiddy to the east and the small village of Shanbally at the proposed Shanbally Interchange.

Prehistoric Period

The coastline of the Ringaskiddy peninsula, at the eastern end of the proposed road project, has long attracted human settlement and may have been exploited from as early as the Mesolithic period (8000–4000 BC). Its distinctive promontories are separated by shallow creeks which are attractive waters for fishing and for the anchorage of small boats. A shell midden was uncovered during archaeological monitoring to the south of Castle Warren in Barnahely townland, c. 45m south of the proposed M28 Road Project (CO087-120; AH27). Shell middens are the remains of shellfish that were collected as a food source along the foreshore that have been discarded by humans, they are composed of marine faunal shell remains, predominantly edible molluscs. Shell middens can be dated from the Later Mesolithic period (c. 7000-4000 BC) to up to the 16th and 17th century.

The presence of the midden at Barnahely may indicate that the estuarine waters once reached further inland than they do at present. Sea-level changes are attested in this area, with palaeo-environmental studies carried out (mainly by the Dept. of Geography, UCC) within the harbour indicating significant sea-level change since the prehistoric period (The Discovery Programme, Cf. www.risiknat.org, Summary Sheet No. P20). A number of other shell middens are recorded along the coastline in this area, with two in Ringaskiddy townland at the eastern end of the Ringaskiddy peninsula (CO087-054 & -161) and three further south in Curraghbinny townland, strung out along the shore line at Lough Beg (CO087-055) and on the northern shore of Curraghbinny Hill (CO087-056, CO087-057). These sites further attest to the early coastal activity in this area.

By c. 4000 BC, the earlier hunter-gatherer economy of the Mesolithic period was replaced by one dominated by farming, which led to more settled communities in permanent locations. Although there are no recorded sites or monuments of Neolithic date (c. 4000-2500 BC) within the proposed M28 Road Project or its vicinity, there is some evidence for activity during this period, with two stone axe-heads found in Carrigaline townland (NMI IA/9/74 & 1931:321; **Appendix 15D**).

The Bronze Age in Ireland (c. 2500-500 BC) is distinguished by the introduction of metalworking, probably first brought about through trading and cultural contacts. During this period, copper was mined intensively to produce copper and bronze tools and weapons and some of the evidence for Bronze Age activity in the vicinity of the proposed M28 Road Project comes in the form of stray finds of copper, bronze and gold artefacts: among these were a gold disc found at Castletreasure (*Rynne 1993*), a flat copper axehead found at Carrigaline (NMI 1931:330), two amber beads (NMI 1948:46-47) and a unique amber ball (NMI 1931:328) (*Monk 2005a*); other finds include a bronze palstave (1933:936), four bronze axeheads (1933:937-940), three stone spindle whorls (1933:942-944) and a bronze spearhead (1933:941) found in Carrigaline West townland (*CRDS 2009*; **Appendix 15D**).

The sites of two standing stones are recorded in the townland of Ballyhemiken (CO087-113 & CO087-114, within the CPO and c. 20m south of the CPO respectively). Local folklore records the sites of the stones, one of which appears to have been removed during the construction of the present N28 Road (CO087-113, AH10; *CRDS 2009*), while the other was removed in the 1960s during reclamation works (CO087-114, AH11; *RMP file*). The majority of Irish examples are thought to date to the Bronze Age, but without additional associations such as pottery or bronze implements it is difficult to precisely date individual monuments (*CRDS 2009*). Their function is similarly unclear and the stones may have functioned as burial markers, commemorative monuments or indicators of routes or boundaries (*Ibid.*).

Further evidence of Bronze Age activity within and in the landscape surrounding the proposed M28 Road Project comes in the form of *fulachtaí fia* or burnt mounds. *Fulachtaí fia*, although still somewhat ambiguous, are generally accepted to be ancient cooking places, consisting of a water-filled trough into which fire-heated stones were placed to heat the water for cooking (*CRDS 2009*). The used, and often burnt and fragmented, stones were removed and accumulated in a low kidney or horseshoe-shaped mound around the sides of the trough (*Ibid.*). They are usually located close to a water source (marshy areas, streams or springs) and their presence is often indicative of Bronze Age seasonal communal activity in river valleys and boggy ground (*Ibid.*). They often appear in groups and are represented by small grass-covered mounds of burnt stone or spreads of burnt stone ('burnt spreads') where the field has been ploughed and the mound levelled. There is one recorded *fulacht fia* located within the proposed M28 Road Project CPO in Shannonpark townland (CO086-115, AH9) and another in Ballinrea townland immediately adjacent the CPO (CO086-029, AH5). The latter (AH5) is located on the west bank of a stream that forms the Ballinrea/Moneygourney townland boundary; a second *fulacht fia* is recorded on the east side of the stream in Moneygourney

townland, c. 85m northeast of the CPO (CO086-133). These two sites are located in relative proximity, c. 140m apart. The prevalence of *fulachtaí fia* in this area was confirmed during a programme of archaeological testing that was undertaken in 2009 in advance of a proposed golf course development within Ballinrea and Ballinimlagh townlands. The expansive site included the recorded *fulacht fia* (burnt spread) in Ballinrea townland (CO086-029, AH5) and a second recorded *fulacht fia* c. 570m southwest (CO087-030), with the testing identifying a further three levelled *fulachtaí fia* within the proposed site (Online Excavations Bulletin Ref. 2009:123; Licence Ref. 09E0429).

Early Medieval

The early medieval period saw the development of a mixed-farming economy managed by kings, nobles and free farmers. There is a strong continuity between modern and medieval territorial units and often the baronial boundaries can be used to create a picture of early medieval kingdoms. The proposed M28 Road Project falls within the ancient territory of the Ciarraighe-Cuirche, which gives its name to the modern barony of Kerrycurrihy. The Ciarraighe-Cuirche are mentioned in the Annals of Innisfallen in 828 AD when they were involved in a campaign in Múscraige Mittaine. The *Annals of the Four Masters* record the death of Fogartach the Wise, son of Suibhne, lord of Ciarraighe-Cuirche at the battle of Bealach-Mughna in 903AD. After 915AD the Norse from Cork settled Ciarraighe-Cuirche, which became known as the cantred of the Ostmen (*Bradley & Halpin 1993*).

The principal settlement type during this period was the ringfort or rath, the most common monument type in Ireland, with at least 30,000 examples recorded. Ringforts are circular enclosures, essentially habitation sites or farmsteads, which vary in both size and morphology; from simple univallate enclosures measuring 30m diameter to larger bivallate or trivallate sites in strategic locations. They were not simple isolated homesteads, however, and should be considered within their contemporary settlement landscape, which would have consisted of unenclosed settlements, farms and fields, routeways and natural resources (*Stout 2000*). Typically, they are sited on good, well-drained soils, usually over the 100m contour, close to a water source, and often located in proximity to routeways (ridges, eskers, morraines).

The proposed M28 Road Project is situated in an area of median ringfort density which covers most of south Munster (*Stout 2000; CRDS 2009*) and ringforts are recorded in the townlands of Barnahely (CO087-048, AH37) Carrigaline (CO087-035), Ballinrea (CO086-028) and Shanbally (CO087-039, AH14), with the site of a possible ringfort in the townland of Hilltown (CO087-116, AH7). In addition to the presence of the ringfort in Carrigaline, a number of artefacts have been found in the Carrigaline area that are thought to date to the early medieval period, including three bronze pins (NMI 1931:322-324) and three ornamented bone pins (NMI 1931:325:327), which would have been used as dress fasteners (*CRDS 2009, Appendix 15D*). Monuments recorded as enclosures in the archaeological record, for example an enclosure in the townland of Shanbally (CO087-040, AH15) and a substantial bivallate enclosure site recorded Barnahely townland (AH26), may also represent the remains of ringforts. This may also be the case for the newly discovered enclosure site revealed by geophysical survey within the proposed M28 Road Project in Barnahely townland (AH48).

Ringforts are sometimes found associated with souterrains, which are underground structures consisting of one or more chambers connected by narrow passageways or creepways, usually constructed of drystone-walling with a lintelled roof over the passages and a corbelled roof over the chambers. Souterrains also occur independently and may represent the only surviving remains of former settlements of the early medieval period that may have been unenclosed (*Clinton 2001*). The recorded souterrain at Shanbally is located within a ringfort (CO087-119 & CO087-039, AH14) and

local folklore records indicate a cave, a term usually used to refer to a souterrain, in the townland of Shanbally (CRDS 2009). A ringfort and souterrain recorded c. 35m north of the proposed road project also point to the prevalence of both monument types in the study area and in the wider landscape; both sites lie within Raffeen Quarry and have been destroyed (CO087-034 & CO087-090, AH12).

Later Medieval Period (After CRDS 2009)

Recorded evidence for late medieval activity along the proposed road project is concentrated at Barnahely Castle tower house and bawn in Barnahely townland (CO087-052001 & 003, AH22; the sole exception is the stray find of a 15th century gold brooch that is recorded to Ballinrea townland. NMI Reg. No. 1956:7, **Appendix 15D**). Following the attack and capture of the city of Cork by the Normans in 1177, King Henry II retained the cantred of the Ostmen for the crown as the Royal Manor of Kerrycurrihy. The manor of Kerrycurrihy was based on Carrigaline which was known in the medieval period as Beavor. In 1207 Henry's son King John granted Kerrycurrihy and its manor of Carrigaline to Philip de Prendergast. The deCogans succeeded to the barony some time before 1279 when John de Cogan married the de Prendergast heiress Juliana (*O'Mahony 1993*).

It is not clear when the deCogans came into possession of Barnahely, though the land in which the castle is situated was known as '*Longa-Gowgan*' (the '*Ship of Gowgan or deCogan*') by the early 13th century (*O'Mahony 1993*) suggesting that the family's connections with the locality date back at least this far. It is known that the deCogans constructed a number of fortifications to protect their landholdings (*O'Mahony 1993*). The earliest documented record of Barnahely as a placename dates to 1301, when it appears in the Calendar of Plea Rolls as '*Bermehele*' (www.logainm.ie). In 1317, the Barrys and Roches invaded the territory of deCogans, laying waste to their lands from Crookstown to Barnahely, which suggests that there may have been a castle in existence at Barnahely by this time (*O'Mahony 1993*).

The first known castle at Barnahely appears in 16th century records, with Richard deCogan as lord of the manor of '*Bernyhyleye*' in Kerrycurrihy in 1536 (*Coleman 1915; Healy 1988*). This ties in with the surviving structural remains on the site; architecturally, the present castle ruins suggest a 15th or 16th century date, with the surviving barrel-vaulted structure being the earliest feature (*RMP file*). The strategic location of the castle is further highlighted in the later 16th century, when it is depicted on Candell's 1587 map of Cork Harbour as one of two castles on the Ringaskiddy peninsula (**Figure 15.2 in Appendix 15I**).

A later medieval graveyard and site of a possible later medieval church are located to the north of the castle (CO087-05101 & 02, AH20). Both are recorded in Bishop Downes visitation to the diocese in the early 18th century. The church, which was constructed of lime and clay, was '28 feet long and 17 broad'. It appears to have been in poor condition by this time with the walls 'above half down', and it is already noted as 'much out of reparaire' in the mid-17th century Civil Survey (see below).

In the late 12th century Milo deCogan and Robert FitzStephen made a grant of land to the priory of St Nicholas of Exeter. The grant included lands at '*Babilannocan*' (Hilltown) and '*Murivethimelan*' (Marmullane, Passage) (*O'Mahony 1993*). It is not clear whether the members of the priory took possession of the grant and constructed buildings on the site. The lands reverted back to the deCogan family and one Phillip Goggin was dispossessed of 84 acres at '*Ballynocane*' in 1660 (*O'Mahony 1993*).

The deCogan family occupied the tower house at Barnahely until 1642 when the castle garrison surrendered to Lord Inchiquin, the castle having been used as a magazine and store by the rebels of the barony. William and Edmond Cogan of Barnahely were subsequently indicted for high treason in the Earl of Cork's court in Youghal and the deCogans were driven from their lands (*O'Mahony 1993*). According to the Down Survey Parish Terrier c. 1656, 'William Goggin' (Cogan) an Irish papist forfeited the lands at 'Bernehely', which consisted of 235 acres of profitable land. It describes that there is 'a Castle and some Houses enclosed with a Baune neere which is a Church much out of repaire.' The estate was granted to John Cooke, one of the Cromwellian judges for Munster, but changed hands again in 1660 when Cooke was hung, drawn and quartered on the 16th of October. His lands were distributed among various individuals, notably from the company of a Captain Markams (*Coleman 1915*).

The extent of the estate associated with Barnahely Castle was given in the mid-17th century as 235 acres (in comparison, the present townland of Barnahely is 519 acres and the 19th century Castle Warren demesne on the first edition OS map measures 46 acres). Thus the size of the landholding is known, but its boundaries are not (though it presumably includes the later Castle Warren estate, though not necessarily centred physically on it). Given the importance of the coastal location for trade, resources and defence, it is probable that the lands owned by the deCogan family included the entire Ringaskiddy peninsula. It is not known whether the land immediately surrounding the castle was landscaped during the 17th (or earlier 18th) century.

Post-Medieval Period (After CRDS 2009)

Following a period of rebellion and unrest in the 17th century, the 18th century heralded a period of relative peace linked to dramatic changes in the landscape. A system of estate landholding was imposed that involved the construction of classical houses with demesne landscapes and associated large farms, with the landscaping and house design strongly influenced by social and architectural ideas from Britain and mainland Europe. The presence of rich agricultural land and the proximity of Cork City at the northern end of the proposed road project meant that many large houses were constructed in this area (*Power 1994*), such as Bloomfield, Maryborough and Mounthovel (BH14, BH15 & BH16; Cf. **Appendix 15B** for further detail). There were also several smaller estates at the eastern end of the project, such as Castle Warren (BH11), Prospect Villa (BH6) and Ballybricken (BH13; Cf. **Appendix 15B** for further detail). In recent years, the expansion of residential development into the outer suburbs of Cork City, and industrial development in the vicinity of Ringaskiddy have put pressure on many of the former demesnes, with few surviving intact.

Barnahely Castle and its estate came into the hands of the Warren family in 1796. The family was responsible for the construction of a late 18th century house known as 'Castle Warren' directly onto the foundations of the earlier castle, using stone from the curtain wall. The Warren family were reputedly the descendants of Robert Warren of Kinneigh in East Carberry, Co. Cork (*Coleman, 1915*). Warren was a captain in Cromwell's army, who first came to Ireland in 1649, and at the end of the war he received a grant of lands (Barnahely) for arrears of pay, for past services.

Castle Warren House (CO087-05201/RPS No. 01260; AH22 / BH11) survives as a ruinous five-bay, two-storey building with a shallow breakfront to the centre of the façade, with the remains of the tower house incorporated into the 18th century house. The façade, like many of the large houses in the area, appears to have been covered in weather slating. The east wall of the walled garden survives in farmland to the west of the castle, though the rest was demolished some time ago. The Warrens occupied the house until it was sold by General Burke of Prospect Villa to the Sullivans in 1851. The Sullivans were also most likely responsible for the building of a turret to the southwest of

the complex (as a belvedere or viewing tower), believed to have been built to cover a former well (CO087-05202; AH22). There is no trace of the turret left in the field as noted during field survey in February 2015 and the site lies outside of the proposed CPO.

Prospect Villa (BH6), located to the northwest of Castle Warren was constructed in the late 18th century. The house consisted of a six-bay, two-storey building with a classical entrance. Thomas Burke was leasing Prospect Villa from Mary and Catherine Rogers at the time of Griffith's Valuation (1853), when it was valued at £60, while Lewis refers to it as the seat of Lt. Col. Burke in 1837. The Burkes were a wealthy Cork family; Edmund Burke of Lota Park, Cork, owned over 2000 acres in the county, while Edmund Burke, of Prospect Villa, Parish of Barnahely, owned over 300 acres in the 1870s. The house was included in the sale of the Rogers estate in the Landed Estates Court in February 1862. At the time of Griffith's Valuation, Thomas Burke was among the principal lessors in the parish of Carrigaline, barony of Kerrycurrihy. In 1943 the Irish Tourist Association Survey noted Prospect Villa as the residence of G. Hosford and outlined Burke's association with the house mentioning that he kept a racing stable there (*Landed Estates Database*). The house was demolished in the 1970s to make way for industrial development and all of the features associated with the estate, with the exception of parts of the demesne boundary wall (BH10), have also been lost.

Farming continued to determine the general appearance of the built environment into the 19th century. A hierarchical society had developed comprising landlords, tenants and labourers which was reflected in the diverse nature of the built heritage in this area. The few surviving built heritage sites along or in the vicinity of the proposed road project consist of vernacular cottages, farmhouses and their outbuildings or examples of dry-stone boundary walls of later 19th and 20th century date (e.g. BH8, BH9, BH19). The houses of the area were characterised by single or two-storey houses constructed of locally available materials, including stone and timber. Houses were typically rectangular in plan, the width dictated by the length of available roofing materials. The majority of houses would originally have been thatched or roofed in slate which was locally available. Outbuildings to house animals and store feed were generally constructed around a farmyard to the rear or side of the farmhouse.

The relatively late date of the surviving structures is a pattern that is clearly illustrated in the cartographic sources. Many of the earlier structures built some time prior to the 19th century that are depicted on the first edition OS map had disappeared by the time of the revised editions in the later 19th century. There is a marked change between the first edition OS maps, surveyed in the 1830s, and the revised editions of the later 19th century. The early 19th century landscape was more densely populated, with a patchwork of small fields and network of roads and laneways lined with small houses or cottages. The impact of the Great Famine (1845-52) in the intervening years is clear from the later historic maps, where former roadways have disappeared or survive only in part, the myriad small dwellings are mostly gone and many of the field boundaries have been removed to create larger fields. All of these are the result of a sharp decline in population, caused by either death or emigration during the famine years. Tangible evidence of the Great Famine survives in the wider landscape, with a recorded Famine Graveyard located in Moneygourney townland, sited on Carr's Hill, on the east side of the present N28 road (CO086-103). The burial ground bears witness to the devastating effect the Famine had in this area; this large sub-rectangular area had to be donated by the Carr family during the Famine to alleviate St Joseph's cemetery, which could not cope with the numbers of people dying.

Larger farmhouses also appeared in the 19th century. Broadale (BH18) was constructed in the townland of Moneygourney in the early 19th century and consisted of a three-bay, two-storey house. The house was roofless by the late 20th century and has since been completely demolished with the

land being developed for housing. A similar fate befell another large farmhouse, Belview (BH17), located to the south of Broadale which is also likely to date from the early 19th century. An extensive complex of stone outbuildings associated with Belview survived up to 2009 (*CRDS, 2009*). They were located to the southeast of the site of Belview House, along with a number of high stone walls which may have been a walled garden or orchard. None of these 19th century structures are now upstanding and the lands are entirely occupied by modern housing development. In contrast, a similarly large farmhouse, Ring House (BH3), remains in situ at the eastern end of the project, on the outskirts of Ringaskiddy village.

Another example of domestic architecture along the proposed road project is situated at the northern end of the project, on Rochestown Road, referred to as Beechvale Lawn (BH12). Beechvale Lawn was built in 1933 and is an excellent example of an early 20th century villa, set in its own grounds. At the time the villa was built, this area offered proximity to Cork city whilst also being relatively rural.

The resumption of war between Britain and the French Republic in the early 19th century necessitated the strengthening of the cordon of fortifications around Cork Harbour and the construction of five new Martello towers. The Martello Tower at Ringaskiddy (RMP CO087-053/RPS No. 00575, AH35/BH1) was constructed in the early 1800s on the crest of a low hill with extensive views over Cork Harbour and Spike Island. It is surrounded by a rock-cut moat and may originally have been accessed by a drawbridge. The base of the tower is constructed of random rubble, while the upper parts are constructed of ashlar limestone. The tower construction was completed between 1813 and 1815 and, as with the other coastal defences of the period, its role as an active defensive structure was shortlived following the end of the Napoleonic Wars in 1815. The tower was inhabited for a period in the early decades of the 20th century but appears to have been abandoned by the 1940s. The structure and the surrounding lands became part of the extensive Industrial Development Authority (IDA) land bank within the hinterland of Ringaskiddy port (*Cronin 2016*).

The proposed road project runs through a predominantly limestone area and small-scale quarry activity is depicted in many of the townlands on the historic OS mapping, especially in Raffeen and Ballyhemiken on the site of the modern-day Raffeen Quarry. Limestone of ‘very superior quality’ was quarried at Shanbally and after being ‘hewn into columns, tombstones etc.’ was shipped to Cork and other places (*Lewis 1837*). Materials were exported by means of a creek running up to Shanbally (*Lewis 1837*). Limestone extracted from the quarries in the parish of Barnahely ‘were worked chiefly for burning’ (*Lewis 1837*) which included the manufacture of lime for building, agricultural and related purposes. Lime kilns are often found in close proximity to small quarries, though none were identified within the proposed road project. They were used in the manufacture of quick or burnt lime and were constructed predominantly of dressed or undressed stone, though the openings and funnels were sometimes lined with brick. The small-scale burning of lime became less widespread during the later 19th century and was replaced by large-scale manufacture of lime by quarries.

The earliest section of the Cork, Blackrock and Passage Railway was opened between Cork and Passage in 1850. After the opening of the Queenstown extension of the Cork-Youghal line in 1862 the company extended the route through Carrigaline to Crosshaven (*Rynne 1993*). The extension was constructed between 1897 and 1904 and was opened by the Lord Lieutenant of Ireland, the Earl of Dudley in May 1904. In 1925 the line became part of the Great Southern Railways and was subsequently closed in 1932. Features of industrial heritage interest within the study area include the line of the disused Carrigaline railway (BH5) in the townland of Ballyhemiken, which is crossed by the proposed road project, and the nearby Ballyhemiken Bridge (NIAH 20987009; BH5), which was constructed to carry the public road over the railway.

15.3.2 Archaeological Heritage

The National Monument Act, 1930 (as amended) provides the formal legal mechanism to protect monuments in Ireland (**Appendix 15F**). Protection of a monument is provided via: -

- Record of Monuments and Places (RMP);
- National Monument in the ownership or guardianship of the Minister for Arts, Heritage, Regional, Rural & Gaeltacht Affairs or a Local Authority;
- National Monument subject to a Preservation Order (or temporary Preservation Order);
- Register of Historic Monuments (RHM).

15.3.2.1 National Monuments

There are no National Monuments in the ownership or guardianship of the Minister for the Arts, Heritage, Regional, Rural & Gaeltacht Affairs (DAHRRGA), located within or in the vicinity of the proposed road project.

The tower house and bawn in Barnahely townland (Castle Warren, RMP CO087-052; AH22) is not in Local Authority ownership and is not recorded as a National Monument by the DAHRRGA. The church and graveyard in Barnahely townland (RMP CO087-051; AH20) are in Local Authority ownership but have not been designated a National Monument by the DAHRRGA.

15.3.2.2 Register of Historic Monuments, Preservation Orders, Temporary Preservation Orders

There are no sites or monuments under Preservation Order, Temporary Preservation Order or on the Register of Historic Monuments located within or in the vicinity of the proposed road project.

15.3.2.3 RMP & SMR Sites

Archaeological sites identified since 1994 are placed on the Sites and Monuments Record (SMR) and are scheduled for inclusion on the next revision of the RMP (Cf. **Section 15.2**, Methodology).

There is one RMP site and one SMR site located within the proposed M28 Road Project CPO:-

- A fulacht fia (RMP CO086-115, AH9; **Figure 15.1e in Volume 5**) in Shannonpark townland, which presents as a burnt spread in a recently ploughed field;
- An enclosure site (SMR CO087-155, AH33; **Figure in 15.1h in Volume 5**) in Barnahely townland.

The zone of archaeological potential (ZAP) associated with five RMP sites is partly located within the proposed road project:-

- A standing stone site in Ballyhemiken townland (RMP CO087-113, AH10; **Figure 15.1e in Volume 5**);
- A ringfort site in Hilltown townland (RMP CO087-116, AH7; **Figure 15.1e in Volume 5**);
- A gate lodge site in Barnahely townland (RMP CO087-050002, AH19; **Figure 15.1f in Volume 5**);

- A tower house and bawn in Barnahely townland (Barnahely Castle; CO087-052001 & -052003, AH22, **Figure 15.1h** in **Volume 5**); and
- A church site and graveyard in Barnahely townland (Barnahely Church; CO087-05101 & 02, AH20, **Figure 15.1h** in **Volume 5**).

One RMP site (*a fulacht fia*) is located immediately outside the CPO in Ballinrea townland (CO086-029, AH5; **Figure 15.1d** in **Volume 5**).

A further 13 RMP sites are located within the assessment corridor (c. 50m either side of the centreline of the proposed road project), but outside the CPO.

Details of all of these sites are contained in the Inventory of Archaeological Heritage Sites in **Appendix 15A**, along with sites of archaeological potential identified from the cartographic sources, archaeological investigations, aerial photographs and field survey.

15.3.2.4 Topographical Files of the National Museum of Ireland (Stray Finds)

The stray finds recorded within the townlands along the proposed M28 Road Project are referenced in the context of the archaeological and historical background (**Section 15.3.1**) and listed in **Appendix 15D**.

15.3.2.5 Archaeological Investigations in Proximity to Castle Warren, Barnahely Townland

A programme of archaeological investigation was carried out as part of the route options study in 2004 in order to ascertain the full potential of the lands in the vicinity of the tower house and bawn (Castle Warren, CO087-052; AH22) and church site and graveyard (CO087-051; AH20). These investigations included archaeological testing and geophysical, topographical and architectural heritage surveys, the results of which have provided a greater understanding of the below-ground archaeological potential.

An aerial reconnaissance survey was also undertaken within the townland on the 12th of July 2004, which produced good views of the castle structures and surrounding setting. The survey did not reveal any other visible features of archaeological potential around, or extending from, the extant remains and there was no visible evidence of related earthworks or enclosing elements. The survey did, however, clearly reveal the foundations of the late 18th/early 19th century garden walls to the east of the castle and the alignment of the old laneway leading east from the castle, both visible on the 1841-2 first edition OS six-inch map (*CRDS 2009*; **Figure 15.14** in **Appendix 15I**).

Results of Geophysical Survey (2004) in Barnahely Townland, in proximity to Castle Warren

The 2004 geophysical survey at Barnahely was carried out to assess the lands immediately adjacent to Castle Warren, in order to ascertain what buried archaeological remains might exist in the environs of the tower house and graveyard (ArchaeoPhysica Ltd; Licence No. 04R065). A detailed gradiometer survey was undertaken over 6.2 hectares, producing mixed results. Broad areas to the north and west of the tower house contained frequent modern metal debris and other magnetic background 'noise' such that no meaningful geophysical results were possible (*Roseveare, 2004*). Good geophysical results were produced in the large arable field to the east of the tower house, however, where a complex of ditch features defining a set of interlocking enclosures was identified

c. 260m to the northeast of the tower house. According to Roseveare (2004), the complex of features was ‘typical of Bronze or Iron Age unenclosed settlement’, though the recent archaeological testing undertaken for this assessment suggests a later date (see below). This enclosure site was subsequently placed on the Sites and Monuments Record and registered as CO087-155 (AH33; **Figures 15.1g in Volume 5 & 15.20 in Appendix 15I**).

Results of Archaeological Testing (2004) in Barnahely Townland, in proximity to Castle Warren

Although the results of the geophysical survey to the immediate north and west of the castle were poor, a programme of test excavations was carried out under licence from late July to mid-August 2004 in the general area surrounding Castle Warren (Hanley 2005; Licence Ref. 04E0774). The testing did not include the area containing the enclosure complex revealed by geophysical survey (following a design modification to the proposed M28 Road Project alignment, this latter area was investigated in February/March 2015 and the results are described below). Testing in 2004 involved the insertion of a 1.6m-wide centreline trench with regular offshoots averaging every 10m on alternate sides and a total of 63 test trenches inserted across the target area. Some limited areas could not be tested due to access difficulties and local terrain, while other constraints included particularly wet weather conditions that made visibility and testing conditions difficult.

Archaeological testing in Area E – the area between Castle Warren tower house and bawn (CO087-052, AH22) and the church site / graveyard to the north (RMP CO087-051, AH20) – identified a ditch (AH69) running on a WSW/ENE orientation. It was provisionally interpreted as an early modern field drain, but an earlier date (and / or different function) has not been ruled out (Hanley 2005). The ditch was exposed in two trenches, one of which was located immediately south of the proposed CPO. The orientation of the ditch (AH69, **Figure 15.1g in Volume 5**) suggests that it continues within the proposed CPO. Virtually all of the features identified in Area E were considered to be agricultural in nature and testing did not reveal any evidence of domestic or settlement activity and no burials. If the large ditch running through the area is a field drain, this would suggest that the ground may have been poorly drained for prolonged periods (Hanley 2005). There was no trace of the footpath linking the castle and church, which is depicted on the historic OS mapping (Hanley, *pers. comm.* 2015).

Overall, testing suggested that, apart from the large ditch in Area E, the whole area was otherwise largely devoid of notable archaeological remains, other than those represented by the walled garden, on the southwest side of the castle complex.

Archaeological Investigations Relating to Enclosure Complex CO087-155, February & March 2015

Following a redesign of the proposed M28 Road Project alignment, additional geophysical survey and subsequent archaeological testing were undertaken in February/March 2015, in order to identify and clarify the possible nature and extent of the recorded enclosure site SMR CO087-115 (AH33).

J. M. Leigh Surveys undertook the second geophysical survey Licence No. 15R0017; **Figure 15.19 in Appendix 15I**, to the immediate east of the 2004 survey area, and identified recorded further archaeological enclosures (AH48) to the east and south-east of the enclosure site (SMR CO087-115, AH33). The detailed gradiometer survey area was located on a plateau at the northern end of a single pasture field, overlooking a steep south-facing slope. The survey area totalled 1.8 ha, encompassing land within the CPO, as well as land to the north, south and southeast of it.

The survey identified three new sites, comprising two large enclosures and a smaller ring-ditch, as well as a number of discrete archaeological features (all designated AH48 for the purposes of this assessment). The proximity of the newly identified site clearly suggests that the recorded enclosure site to the west (C087-115, AH33) represents part of an archaeological complex extending across the two fields (**Figures 15.1g in Volume 5 & 15.20 in Appendix 15I**). The results of the survey also indicated signs of habitation activity within the two large enclosures (possible internal ditch and pit-type features), with possible associated agricultural activity on their north side. The eastern extent of the site appears to be defined by two linear responses, perhaps representing an entranceway into the site. To the east of the large enclosures there is a small circular ditched feature measuring c. 5m in diameter, with a possible pit in its interior. The results are also suggestive of an associated outer enclosure around this feature, measuring c. 12m in diameter and while function of this feature is unclear it is possible that the remains of a burial feature such as a barrow site have been identified (*Leigh 2015*).

Further archaeological testing was undertaken in late February/early March 2015 to establish the veracity of the geophysical survey results (*Hanley 2015a*, Licence Ref. 15E0049; **Figure 15.21 in Appendix 15I**). This testing was undertaken to investigate both the recorded enclosure site (SMR CO087-115, AH33) and the newly identified features (AH48) revealed by the most recent geophysical survey to the east. The testing traversed the northern part of the area covered by the geophysical surveys.

The findings of the archaeological testing correlated well with those features identified by the geophysical survey. In the area of the recorded site (SMR CO087-115, AH33) it confirmed the presence of two sub-circular enclosures, which appear to be broadly contemporary in date (*Hanley 2015a*):-

- A sub-circular enclosure was formed by a steep-sided ditch measuring 12m in diameter, which appeared to be linked with a linear ditch.
- A sub-rectangular enclosure, measuring c. 18.5m by c. 15m, formed by a series of apparently segmented ditches. A small piece of iron slag (a surface find), with possible furnace lining attached, was found to the immediate east of this enclosure.
- The association of iron slag indicates a likely *terminus post quem* date of c. 300 BC, this being the earliest date for the widespread use of iron-working in the Cork region. However, given their apparent association with the suspected ringfort to the east (see below), these sub-circular enclosures are more likely to be early medieval in date. The absence of any later medieval pottery from the areas tested is consistent with the enclosures being of likely early medieval origin (*Hanley 2015*). (A typographical error in the testing report refers to a date of AD 300, but should read 300 BC; *Hanley, Pers. Comm. 16/11/2016*).

The area east of the recorded site (SMR CO087-115, AH33) has been designated AH48 for the purposes of this assessment. The archaeological testing found the following at site AH48 (*Hanley 2015a*):-

- Testing confirmed the presence of the most northerly of the two large enclosures revealed by the 2015 survey and it has been interpreted as an early medieval ringfort, measuring c. 45m in diameter. Both geophysical survey and testing indicate the presence of outer and inner concentric curvilinear ditches, suggesting that this was a bivallate ringfort, as well as internal features indicative of settlement activity (testing found charcoal-rich pits containing visible evidence of animal bone and a number of linear features).

- A series of arcing trend anomalies identified outside the enclosure by the geophysical survey were found to be shallow ditches, possibly relating to a period of field plot division that predates the early modern field systems that exist at present. It could not be confirmed whether or not these are contemporary with the ringfort.
- Possible prehistoric activity was indicated in the area of pit clusters revealed by the geophysical survey at the eastern end of the test area. Testing uncovered a series of pits, with occasional post-holes and stake-holes, one of which contained what looked like heat-shattered sand-stone.
- Given these results, it is likely that the possible ring-ditch and second large enclosure that were identified by geophysical survey within AH48 are also archaeological in nature.

The testing also identified a stone cluster in Trench 14, Area B, which may correlate with a removed field boundary (AH65, **Figure 15.1h** in **Volume 5**). The first edition OS map (1841-2 & revised edition OS historic maps up to 1926-37) shows a kink in the eastern boundary wall associated with Castle Warren demesne (BH23), where the proposed M28 Road Project crosses it; the wall was straightened some time after 1926-37, removing the kink. It is possible that the kink in the boundary respected an archaeological site or feature that is no longer in place. In this context it is interesting to note that another possible interpretation is that the stone cluster is related to a localised NW–SE-aligned geophysical anomaly recorded near the south-western end of the trench. If so, the feature may, in fact, represent a continuation of ditches uncovered in the adjacent Area A, to form a sub-rectangular enclosure—although this is unproven (Hanley 2015a).

15.3.2.6 Archaeological Investigations in Shannonpark & Hilltown Townlands

In 2005, a geophysical survey in Hilltown townland was undertaken to assess a recorded ringfort site (RMP CO087-116, AH7; the site had no visible surface trace); the site and its environs lay within the proposed land-take for a major road junction on the then proposed N28 Road Project. The results of the survey identified several probable archaeological features, including two concentric arcing ditches at the ringfort site (*Roseveare 2005*). A programme of archaeological testing was undertaken in 2006 in order to provide additional assessment of the area and to investigate some of the anomalies identified in the geophysical survey (Licence Ref. 06E983). The testing revealed eight features of archaeological significance, including a cluster of pits of Neolithic date, a possible *fulacht fia* close to the Glounatouig Stream, as well as pits and possible field boundaries of unknown date (*Noonan & Hallinan 2006*). The ringfort site itself was not subjected to archaeological testing and the proposed interchange design was subsequently changed to avoid the recorded site, with the proposed Shannonpark Interchange for the current project now being confined to the opposite side of the existing N28 road.

In 2008, geophysical survey was undertaken within Shannonpark townland on the west side of the existing N28 road, to inform the design for the proposed new interchange at Shannonpark (Licence No. 08R0111). The survey revealed a landscape seemingly devoid of modern influences apart from the existing field boundaries, which predate construction of the present N28 but seem to bound fields opened up from smaller ones (internal divisions being found during survey). These smaller fields seem to have been cultivated (some relict furrows were identified by the survey) and enclosed a band of open wet ground which was planted with willows (the central wet area is known to have been a commercial source of willows; it is marked as an osiery on the first edition OS map; AH45, **Appendix 15A**). Whether as a result of this cultivation or through a genuine absence, no structures of obvious archaeological interest were found (*Roseveare & Lafuente 2008*).

15.3.2.7 Archaeological Investigations in Proximity to the Martello Tower, Ringaskiddy Townland

A programme of archaeological investigations was undertaken in late 2015/early 2016 within a proposed materials extraction site c. 30m south of the Martello Tower (RMP CO087-053), as part of an Environmental Impact Assessment for Materials Extractions and Land Re-Profiling at Ringaskiddy (Cronin 2016). Geophysical survey across the entire landholding (Licence No. 15R0146) was followed by archaeological testing and metal-detecting (Licence Nos 16E0103 & 16R0029). The geophysical survey identified widespread ploughing activity and only a small number of potential archaeological features. Consultation with the farmer leasing the fields confirmed that, while the majority of the fields are now under pasture, they had been subjected to intensive cultivation in recent decades. The testing results confirmed those of the geophysical survey, with no definitive evidence for archaeological remains identified and only localised clusters small features present, such as pits and stake-and-postholes (c. 90m south / southeast of the proposed road project). Given the absence of any identified archaeological artefacts (either by testing or metal-detecting) and the extensive modern agricultural activities within the site, it was considered possible that at least some of these features are of recent origin (Cronin 2016).

15.3.2.8 LiDAR Survey

LiDAR (Light Detection and Ranging) is a non-invasive investigative tool that can be used to obtain a better understanding and interpretation of the physical, topographical and cultural heritage landscape. LiDAR is a laser-based remote-sensing system used to collect elevation data, using a sensor-equipped plane or helicopter. It provides a cost-effective and fast method of recording topographic data over large areas, generating detailed contour models that can be investigated for surface archaeological features. The primary benefit of using LiDAR is that it has the ability to map features obscured by vegetation and / or which may be indistinguishable on the ground.

The LiDAR data for the northern half of the proposed road project area - from the Bloomfield Interchange to the Shannonpark roundabout— were commissioned by the National Roads Authority. The LiDAR data received from this section of road included Digital Terrain Model (DTM) data, at 2 m spacing. The coverage spanned c. 450 m on either side of the existing N28 road. The LiDAR data for the eastern half of the project - from the Shannonpark roundabout to Ringaskiddy - was not available at the time of this assessment. The LiDAR data was analysed by Ken Hanley, TII Archaeologist (Hanley 2015b) for the purpose of identifying anomalies of archaeological potential. ArcMap 10.1 was used to convert the LAS height datasets into digital terrain models and corresponding raster (GeoTiff) files. A range of raster dataset visualization techniques were then applied (following Zakšek *et al.* 2011) using the Relief Visualisation Toolbox, v.1.1, (©ZRC SAZU, 2014) in order to highlight topographical anomalies of archaeological potential.

A total of five sites of archaeological potential (AH6, AH18, AH29, AH61, AH62) were identified within the assessment corridor (Cf. **Appendix 15A** for descriptions of each anomaly). Of these, four are located partly within the proposed CPO (AH6, AH18, AH61 and AH62). The locations of these sites are depicted on **Figures 15-1b to 15-1d** in **Volume 5**.

15.3.2.9 Cartographic Sources

This section provides an overview of the lands through which the proposed M28 road project passes, as presented on the various historic maps that are available for this area. More detailed analysis is contained in **Section 15.3.4**, which describes the results of the field survey on a townland-by-townland basis, providing an account of the existing physical landscape and the historic character and archaeological potential of the proposed road project. Relevant extracts of the historic Ordnance Survey maps used to illustrate features of interest within the proposed road project are referenced in **Section 15.3.4**.

16th and 17th Century Maps

These early maps do not allow for a detailed analysis of discrete areas. Only a general picture of the overall study area and some features within it can be gleaned from these sources.

The earliest available map for the study area, *Candell's 1587 Map of Cork Harbour*, depicts the Ringaskiddy peninsula (**Figure 15.2 in Appendix 15I**). This map appears to have a military focus, denoting as it does the strategic locations of castles around the harbour. Although there is little in the way of detail, it depicts the tower house at Barnahely (named 'Berneyele' on the map, CO087-052001; AH22), along with another further south named 'Colmor' (close to the site of the later Coolmore House on Curraghbinnny peninsula).

The Down Survey baronial and parish maps and the accompanying parish terriers (c. 1656) provide some detail for the various townlands through which the proposed road passes. In Carrigaline parish (Liberties of Cork Barony), the land is described as generally arable and pasture with some woods. The terrier notes the 'improvement' of a castle in Castletreasure townland and the presence of a house in 'Monygormy' (Moneygourney townland), with both depicted on the accompanying parish map. The house in Moneygourney is located at the southern end of the townland (the shape of the modern townland boundary is almost identical to that shown on the 17th century map), close to the boundary with Ballinrea townland and the line of the present N28 road. Although it is impossible to accurately identify the exact location and there is no corresponding record of an historic house in the vicinity, the approximate location as depicted on the Down Survey map is at the opposite end of the townland to the proposed road project. As noted in the historical background above, the castle and church at Barnahely are also depicted on the parish map and mentioned in the terrier (**Figure 15.3 in Appendix 15I**). Nothing else of interest is either noted or depicted on the 17th century maps.

Taylor and Skinner's Maps of the Roads of Ireland (1777) (not shown)

Despite its relative proximity to Cork City, the rural and isolated nature of this area is highlighted by the absence of an 18th century toll road. Taylor and Skinner's road maps are schematic in presentation and focused on mapping the principal (toll) roads around the country. There is no road depicted in this area on Taylor and Skinner's map that could correspond to the existing N28 road and no representation of the network of smaller roads that would have existed.

Ordnance Survey (OS) Maps, Sheets 86 & 87 (First Edition 1841-2 & Revised Edition 1897-1904, 1927-34)

The mid-19th century first edition six-inch-scale OS maps are the earliest accurate and detailed cartographic representation of the landscape through which the proposed M28 road passes. For much of its length the proposed road follows directly or is closely aligned with the old roads travelling from Ringaskiddy to Cork, as depicted on the first edition OS map. In general, the mid-19th century first edition OS maps show the proposed road travelling through a largely rural landscape, with predominantly dispersed, single properties or farmsteads and only two real settlement clusters; one at Shanbally and the other at Ringaskiddy. There are a few medium-sized country estates, clustered for the most part at the northern (e.g., Bloomfield, Maryborough and Mount Hovel) and eastern (e.g., Prospect Villa and Castle Warren) ends. With the exception of Castle Warren, the demesnes are either only partially surviving (e.g. Bloomfield) or have been entirely subsumed into modern development. Within the rest of the study area, the historic OS mapping provides small glimpses of 19th century life in this area, with an osiery close to the site of the 16th or 17th century 'Old Court' in Shannonpark townland, some small quarry pits on the site of the modern Raffeen Quarry and a spa well close by.

There are hints on the first edition OS map of an older way of life that would soon be gone, such as the huddle of tiny cottages on the seafront to the east of Ringaskiddy village, with its associated patchwork of small fields. These have been cleared by later 19th century, to be replaced by a single large house and its grounds (Ring House, NIAH 20987046, BH3); this represents a clear example of the sharp population decline during and after the Famine years. This is echoed throughout the study area on the later historic OS maps, with small houses and cottages disappearing, roadways becoming defunct and large open fields replacing the earlier small ones. The late 19th century/early 20th century landscape depicted on the revised edition maps is otherwise little changed, retaining the same rural character and with few significant alterations or developments. In some instances, the pre-1840s roads have continued in use, forming part of the local road network; examples include the Rochestown Road, parts of the existing N28 road and Carrigaline Road, as well as local roads crossing Ballinimlagh, Ballyhemiken, Shanbally, Loughbeg, Barnahely and Ringaskiddy townlands.

The location of the proposed Service Area at Ringaskiddy is on reclaimed land. At the time of the first edition OS map of 1841-2 (**Figure 15.15 in Appendix 15I**), this area lay beyond the former shoreline, in the sands, mudflats and water of the River Douglas estuary, just north/northeast of the village of Ring (now Ringaskiddy). The village proper (as named) is located within Loughbeg townland, though there are two additional clusters of settlement depicted along the seafront to the east/northeast and west. Only one of the three NIAH sites recorded in the village is shown on this map, Rock Cottage (NIAH 20987045, BH4), which is located on the seafront and appears to be one of the more substantial properties in Ringaskiddy village. The Martello Tower (CO087-053; AH35 / BH1) occupies a dominant position inland (southeast) of the village, accessed via a wide lane or former roadway which runs from the rear of Rock Cottage; this may have been an existing road or path that was subsequently utilised by the Martello Tower (perhaps a drover's path to the higher pastures above the village) or could have been built at the same time as the tower in order to provide access to the village (c. 1813–15). A second, very straight, roadway is more definitely associated with the Martello Tower, linking it with the shoreline on the eastern side of the peninsula.

By the time of the revised edition OS maps in the late 19th/early 20th century, the location of the proposed Service Area is unchanged, remaining within the mud-flats of the foreshore. In contrast, there has been quite a significant change along the seafront. The majority of the jumble of small dwellings depicted on the 1841-2 OS map, to the east/northeast of the village have been removed and the land cleared for Ring House (depicted but not named; NIAH 20987046, BH3). The large farm

house is set well back from the coast road in a long narrow plot that is situated centrally within a much larger field, with a straight entrance avenue running from the road to the house. There has been further development in and around Ringaskiddy village (now named as such), with new properties infilling former open fields. Although there is a structure shown on the site of the Ringaskiddy Oratory (NIAH 20987044), the present chapel was not built until 1923. According to the NIAH, the single-storey single-cell RC church incorporates fabric of an earlier building (www.buildingsofireland.ie). None of the structures mentioned above lie within the proposed Service Area.

Detailed cartographic analysis of each townland along the proposed M28 Road Project is provided in the context of the field inspection and aerial photographic analysis described in the field reports (**Section 15.3.4**).

15.3.2.10 Townland Boundaries and Townland Names

The proposed M28 Road Project travels from Bloomfield at the northern end of the project to Ringaskiddy at the south-eastern end through the following townlands (**Figures 15.1a-h in Volume 5**): Monfieldstown, Mounthovel, Maryborough, Moneygourney, Castletreasure, Ballinimlagh and Ballinrea in the parish of Carrigaline and the barony of Cork (formerly the Liberties of Cork); through Shannonpark, Carrigaline Middle and Shanbally in the parish of Carrigaline and the barony of Kerricurrihy; through Ballyhemiken and Raffeen in the parish of Liscleary and the barony of Kerricurrihy; and through Barnahely, Loughbeg and Ringaskiddy in the parish of Barnahely and the barony of Kerricurrihy. The proposed Service Area is located within the townland of Ringaskiddy, in the parish of Barnahely and the barony of Kerricurrihy.

Townland Boundaries

The boundaries were first described and recorded in the surveys that following the land confiscations of the mid-17th century, being further standardised in the mid-19th century with the work of the Ordnance Survey. Townland boundaries were often laid out along natural features including rivers, streams and high ground or manmade features such as roads and walls (*Nolan 1982*). Townlands and other landholdings were further subdivided into individual fields generally by means of earthen banks, which over time were colonised by hedgerow and trees. The typology of the boundaries can vary in different parts of the country, with some areas favouring distinctive high, wide earthen banks or just stone walling; sometimes there is a combination of earth and stone, with a stone-revetment or a facing on an earthen bank. The field and townland boundaries within the proposed M28 Road Project were, for the most part, formed by earthen banks, with some streams. The intensification and mechanisation of agricultural production in the second half of the 20th century has led to the removal of internal field boundaries to create larger fields. The remains of removed field boundaries can survive in the landscape as linear earthworks or ditches, sometimes evident on aerial photographs. The individual townland boundaries crossed by the proposed M28 Road Project are described in the context of the field survey (**Section 15.3.4**) and listed in the table below (**Table 15.1**).

Table 15.1: Townland Boundaries Crossed by the Proposed M28 Road Project

ID. No.	Townlands	Type of Physical Boundary Crossed by Proposed Road Development	Other Admin. Boundary	Fig. No.
TB1 (AH36)	Monfieldstown / Mounthovel	Stream, tributary of Donnybrook Stream, culverted beneath the existing N28	N/A	15.1a
TB2 (AH36)	Maryborough / Mounthovel	Stream, tributary of Donnybrook Stream (Cf. AH36)	N/A	15.1a
TB3 (AH70)	Mounthovel / Moneygourney	Stream (Cf. AH70)	N/A	15.1a
TB4 (AH36)	Maryborough / Moneygourney	Stream, tributary of Donnybrook Stream, & field boundary (Cf. AH36)	N/A	15.1a / b
TB5 (AH39)	Castletreasure / Moneygourney	Stream, tributary of Donnybrook Stream (Cf. AH 39)	N/A	15.1b
TB6	Castletreasure / Ballinimlagh	Earthen bank & mature hedgerow	N/A	15.1b
TB7 (AH39)	Ballinimlagh / Moneygourney	Stream, tributary of Donnybrook Stream (Cf. AH 39)	N/A	15.1c
TB8	Ballinimlagh / Ballinrea	Earthen bank & mature hedgerow	N/A	15.1c
TB9 (BH22)	Ballinrea / Shannonpark	Earthen bank & mature hedgerow. Small section of drystone walling & possible culvert visible in the boundary (Cf. BH22).	Cork / Kerricurrihy Barony	15.1e
TB10	Shannonpark / Hilltown	Road	N/A	15.1e
TB11	Shannonpark / Carrigaline Middle	Earthen bank & mature hedgerow	N/A	15.1e
TB12	Carrigaline Middle / Ballyhemiken	Road	Carrigaline / Liscleary Parish	15.1e
TB13	Ballyhemiken / Raffeen	No longer present. Destroyed by past quarrying activities (Raffeen)	N/A	15.1e
TB14	Raffeen / Shanbally	Earthen bank & mature hedgerow	Liscleary / Carrigaline Parish	15.1f
TB15	Shanbally / Barnahely	Earthen bank & mature hedgerow (runs partly along the scarp of a quarry)	Liscleary / Barnahely Parish	15.1g
TB16	Barnahely / Loughbeg	Road	N/A	15.1h
TB17	Loughbeg / Ringaskiddy	Earthen bank & mature hedgerow	N/A	15.1h
TB18 (AH39)	Maryborough / Castletreasure	Stream, tributary of Donnybrook Stream (Cf. AH 39)	N/A	15.1b
TB19 (AH39)	Ballinrea / Moneygourney	Stream, tributary of Donnybrook Stream (Cf. AH 39)	N/A	15.1c

Placename Evidence

Townland names are a rich source of information, not only on the topography, land ownership and land use within the landscape, but also on its history, archaeological monuments and folklore (See also **Appendix 15E**). Where a monument has been forgotten or destroyed, a place name may still refer to it and may indicate the possibility that the remains of certain sites survive below the ground surface.

Several of the townlands along the proposed road project derive from the names of English landowners or their country houses, which is unsurprising given the relative proximity of Cork City and of Cork Harbour, an important English naval base. Monfieldstown appears as ‘Monshyallytowne’ in documentary records of 1571 and subsequently as ‘Monfieldstowne’ (or a variation thereof), and is possibly derived from the personal name ‘Mansfield’. Mounthovel, which is written as ‘Mount Hovel’ in 1811, is the name of a country house within the townland. The first reference to Maryborough is in 1709 (again a country house within this townland) and O’Donovan in 1841 names it as a ‘modern title’. The house is described in 1750 as ‘Mary-borough... an handsome house... of Mr Richard Newenham merchant in Cork’.

Documentary evidence suggests that the townland name Shannon Park (also written as Shannonpark) was newly created for a portion of land carved out of the once larger Ballinrea townland; the placename appears as ‘Bakyn rea’ in 1574 and ‘Ballinrea’ in the census of 1659, which also notes that the land was at that time the property of Francis Viscount Shannon (www.logainm.ie). The first reference to Shannonpark is in 1741 and in 1750 the records that ‘Shannonpark alias Ballinrea was formerly the seat of Francis L. Viscount Shannon, who had a neat house and fine park, both intirely gone to ruin’. Ballinrea itself is of Irish origin, *Baile an Réithigh*, meaning ‘town of the mountain side’ (O’Donovan has *Baile an réidh*). It appears in 1588 as ‘Ballyrea alias Rethestown’, with a reference to ‘Adam Ryth, *bailitheóir cánach* [tax collector] in *Ciarraí Cuirche*’ (www.logainm.ie).

Ringaskiddy represents a combination of Irish origin placename with an English family name. The first element ‘Ring’ derives from *rinn*, meaning point or headland. The placename is first recorded as ‘Rinskiddy’ in 1632, associated with a Thomas Skiddy and according to O’Donovan in 1841, Skiddy was a ‘Cromwellian family now in Cork’. The two placename elements appear to have maintained a relative separateness in the local community, with the village on the seafront named using the Irish element ‘Ring’ on its own on the first edition OS map of 1841-2.

There are other placenames with English forms, or apparent forms, in the surrounding area. Hilltown, immediately north of the proposed road project, is an example of a direct translation of an earlier Irish form, *Baile an Chnocáin*, meaning the ‘town of the hill’. The earliest documentary reference is to ‘Ballyknockane’ in 1587, with the anglicised form ‘Hilltown’ appearing in 1811. In the case of Castletreasure, while the ‘castle’ element is likely to derive from the English word ‘castle’, the second element remains obscure. It is clear from the historical evidence (e.g., ‘C.Trestrige’, Inq.) that it is not the English word ‘treasure’. It appears in 1586 as Castell Trestrige, becoming Castletreasure in the Down Survey c.1655, and ‘Castle-treasure alias Frisell’s Castle’ in 1669 (www.logainm.ie).

Some of the townland names are Irish in origin and relate to topographical or archaeological features or to their place in the landscape. These include Ballinimlagh (*baile an imligh*, the town or land on the verge of a lake), Loughbeg (*an loch beag*, small lake or inlet), Shanbally (*sean bhaile*, old town).

Both Raffeen and Raheens have their origins in the Irish word for ringfort (*rath*) and both townlands contain recorded ringforts or the sites thereof. The earliest record of the name Raffeen is in 1301 and gives 'Rathemyn', with 16th century records providing similar spelling. This changes from the early 17th century onwards, with variations of 'Raphene' (1655) appearing and 'Rathmeene alias Rapheene' occurring in 1666. O'Donovan in 1841 has '*Ráth Finn*', meaning Finn's fort, but it could also derive from '*ráth mín*', with *mín* meaning smooth or mountain pasture. Raheens, a townland immediately south of the proposed road project, is more straightforward, simply meaning 'little forts' (*rathinidhe*; O'Donovan, 1841, www.logainm.ie).

Other Irish-origin placenames are a combination of a topographical or other feature and a personal name, such as Carrigaline (*charraig Uí Leighin*, the rock of O'Lehane) and Barnahely (*bearn na hÉille*, probably Éille's gap; as noted in the archaeological and historical background above, the placename is first documented in c. 1301). In the case of Ballyhemiken, it is referenced in the Calendar of Carew (1526), as 'the town of Thomikine in Kerry-Currihye' and as 'Ballyhonickine' in 1618, while O'Donovan refers to '*Baile Sheimicín*' meaning 'Little James' town' (www.logainm.ie).

Moneygourney is of probable Irish origin but its second element defies easy translation. The first part of the placename comes from *muine* meaning thicket. The earliest and subsequent references to the name mostly spell the second part of the placename '-gurney' with an 'm' rather than an 'n' (e.g. 'Munygormey' in 1608). The OS field notes of 1841 suggest '*muin na goirme*', but O'Donovan concludes that the meaning is uncertain (www.logainm.ie).

The names given to the fields – where they survive - can also provide important topographical information on archaeological sites and features, now long forgotten. One such example is located in Carrigaline Middle townland, where a field is annotated 'Glebe' on the first edition OS map of 1841-2, indicating that it was church land. Another is recorded on the north side of the existing N28 road in the neighbouring townland of Hilltown, c. 40m north of the proposed road project. A field containing the site of a possible ringfort (CO087-116, AH7) is known locally as 'the Lios field' or the field of the ringfort. No other field names were identified during the course of this assessment.

15.3.3 Architectural and Cultural Heritage

There are very few recorded structures or features of architectural heritage interest/significance within or close to the proposed M28 Road Project and these are concentrated at its eastern end, in Barnahely and Ringaskiddy townlands, with only one at the northern end of the proposed road project.

15.3.3.1 Area of Architectural Conservation (ACA)

There are no ACAs along or in close proximity to the proposed road project.

15.3.3.2 Record of Protected Structures (RPS)

There is one RPS site located in close proximity to the proposed road project, 'Castle Warren Stronghouse' (RPS 01260; BH11), which incorporates the remains of the late 18th century country house, Castle Warren, as well as those of the medieval tower house and bawn (RMP CO087-052; AH35). The protected structure lies c. 43m south of the proposed CPO (the proposed road is single-

carriageway at this point), enclosed within a boundary of security mesh fencing erected by the IDA in 1999.

As referred to above, a detailed architectural assessment of the Castle Warren House complex was undertaken in 2004 (*Cronin, 2005*). In addition, a visual structural inspection of the building took place in March 2017 (Cf. **Section 15.3.5** below and **Appendix 15H**).

The protected structure is avoided by the proposed M28 Road Project, which is c. 15m to the north. The proposed road traverses the former demesne associated with the house (see **Figure 15.1h** in **Volume 15I**). The present setting of the protected structure is discussed in the field survey report for Barnahely townland below (**Section 15.3.4.11**), with the former demesne landscape also discussed in **Section 15.3.3.5**.

Ringaskiddy Martello Tower is also a protected structure (RPS 00575; RMP CO087-053; BH1). It is situated c. 100m south/southeast of the proposed CPO. A former roadway possibly constructed to provide direct access from the coast to the Martello Tower (although, potentially an older driveway) is crossed by the proposed M28 Road Project (AH54).

At the northern end of the proposed road project, the existing N28 road passes c. 40m west of the grounds associated with Bloomfield House, a protected structure (RPS No. 00476; BH14).

15.3.3.3 National Inventory of Architectural Heritage (NIAH) Building Survey

The proposed M28 Road Project traverses the grounds of one structure listed in the NIAH, Ring House (NIAH 20987046, BH3) and the former grounds associated with another, Rock Cottage (NIAH 20987045, BH4). The two structures form part of a small cluster of architectural heritage structures listed in the NIAH that are located in Ringaskiddy village. These include Rock Cottage (NIAH 20987045, BH4), Ringaskiddy Oratory (NIAH 20987044, which lies beyond the impact assessment corridor) and the Martello Tower (protected structure, BH1).

Ring House (BH3), which was built c.1880, first appears on the 25-inch revised edition OS map (1897-1904, **Figure 15.16**) and was constructed some time after the first edition OS map of 1841-2; the NIAH Building Survey dates it to between 1860 to 1900 (NIAH Ref. 20987046). The large farmhouse is depicted in a long narrow plot, with the house originally set well back from the road and the property plot centrally placed within a larger field. Although the plot and entrance avenue were subsequently shortened by as much as half with the construction of the Ringaskiddy port road, the house and surviving plot boundaries are intact. The larger field surrounding the plot and clearly associated with it is also intact. An entire cluster of small dwellings depicted along this section of sea-front on the 1841-2 map were demolished and cleared to create this large field and to construct the property within it. The larger field is undoubtedly farm land once associated with Ring House; the proposed road crosses the southeastern corner of the field to the rear (c. 50m southeast) of the house. Ring House fronts onto the busy port road (L2545), and so faces away from the proposed road project, but despite some mature trees and shrubs around the boundary, it is not well screened along its eastern and southern sides.

The former grounds of Rock Cottage (NIAH Ref. 20987045; BH4, **Figure 15.15**) have been greatly affected by modern housing development, particularly in the western half. Although some of the agricultural fields to the rear survive, the front of the property has been largely infilled by modern development, effectively separating Rock Cottage from its former grounds. The house itself is located c. 70m north of the proposed CPO.

At the northern end of the proposed road project, Beechvale Lawn (NIAH 20872014, BH12) is located immediately south of the proposed Rochestown Road realignment. The 1930s property sits within its original boundaries on the south side of the existing Rochestown Road, at the east side of its junction with Clarke's Hill. The house is well screened behind its boundary walls with mature planting.

In addition, the proposed road project crosses the line of the disused railway embankment (now in use as a field boundary), associated with, and c. 200m northeast of, a former railway bridge in Ballyhemiken (NIAH 20987009; BH5); the bridge itself lies c. 135m south of the proposed CPO. The railway line dates to the beginning of the 20th century, with the railway bridge constructed in 1903 and service commencing in 1904. The survival of the railway line or features associated with it could not be verified during the field inspection due to overgrowth of vegetation.

15.3.3.4 Undesignated Sites

There were relatively few undesignated sites of built or cultural heritage interest identified during the course of the field survey within the assessment corridor, with some of them representing discrete and / or partial remains.

In addition to the former railway line noted above (BH5), these include two examples of dry-stone walling (BH19 & BH22, in Ballinrea and Loughbeg respectively; the former is a boundary wall associated with Rose Lodge, BH2, and the latter forms part of the Ballinrea / Shannonpark townland boundary, TB9) and three sections of demesne walling in Barnahely townland (BH10 & BH21, a boundary and internal wall respectively, in the former Prospect Villa demesne; and BH23, a boundary wall of the former Castle Warren demesne).

A structure depicted on the first edition OS map in Maryborough townland (BH20) survives as a two-storey house that has been extensively modernised. The house is located within the proposed CPO.

There are two farm complexes in proximity to the proposed M28 Road Project (BH7 & BH8, in Ballinrea and Carrigaline Middle respectively), both of which retain structures depicted on the first edition OS map.

A ruined single-storey vernacular structure (BH9) that is depicted on the first edition OS map was identified in Loughbeg townland, c. 20m outside of the proposed CPO.

A grotto located in Shanbally townland (CH1) is the sole site of cultural heritage interest that was identified within the assessment corridor. The Marian Shrine is located c. 5m outside of the proposed CPO.

A detailed description of each site is provided in the Inventory of Built Heritage Sites (**Appendix 15B**) and Cultural Heritage Sites (**Appendix 15C**) and their locations marked on **Figures 15.1a-15.1h** in **Volume 5**.

15.3.3.5 Demesne Landscapes and Historic Gardens

The proposed road passes through former demesne lands and historic gardens depicted on the first edition OS mapping (1841-2), though in almost all cases, the houses have been demolished and the landscape has been greatly altered, leaving little or no trace of the 18th and 19th century estates and gardens. Many of the demesnes and gardens are referenced in the National Inventory of Architectural Heritage Survey of Historic Gardens and Designed Landscapes (NIAH Garden Survey; Cf. **Appendix 15B**). The NIAH Garden Survey is currently a paper survey only, using the first edition OS maps and current aerial photography to identify the sites (www.buildingsofireland.ie/Surveys/Gardens).

The construction of the northern end of the present N28 road carved a path through the substantial former country estates of Maryborough (BH16) and Mount Hovel (BH15) and through the smaller estate of Belview (BH17) (**Figure 15.6, Appendix 15B**). Mount Hovel House has since been demolished and Maryborough House is now in use as a hotel; their associated lands are now entirely occupied by modern housing development. Maryborough House is a protected structure and a recorded archaeological monument (RPS No. 00479; RMP CO074-089). It is located c. 550m west of the proposed CPO and c. 530m west of the existing N28 road, separated from both by modern housing development and woodland planting.

In the case of Belview, an extensive complex of stone outbuildings stood to the southeast of the original house site until relatively recently, along with a number of high stone walls which may have been a walled garden or orchard (*CRDS 2009*). These have since been demolished and the site is currently in use as a compound for the construction of the adjacent housing complex. Another small estate impacted by the existing N28 road (at the Bloomfield Interchange) is Bloomfield House (BH14; **Figure 15.4** in **Appendix 15I, Appendix 15B**); while the house and its immediate setting have remained intact, there is wide-scale development to the surrounding area, including modern housing in the north-western and southern sections of the demesne, as well as the existing N28 curving through the southwestern side of the former demesne.

Similarly, a 19th century country house or large farmhouse and its associated grounds immediately adjacent to these estates has been completely destroyed (BH18; **Figure 15.6** in **Figure 15I, Appendix 15B**). Named Broadale on the first edition OS map and located in Moneygourney townland, it is a recorded archaeological site (Country House RMP CO086-101). The RMP file describes it in 1992 as an 'abandoned three-bay, two-story house, and originally hipped roof. Chimneys were on east walls. One story addition onto right and left wall. Farm buildings to rear collapsed in ruins. Early 19th Century'. Nothing is now left of the structures and a modern housing development has been constructed on the site.

The survival rate is similar at the southern end of the proposed road project. The Castle Warren estate (BH11) represents a very degraded former demesne landscape within a surrounding industrial landscape (described in **Section 15.3.4.11**; the NIAH Garden Survey, Ref. CO-W-774637, concluded that the demesne had virtually no recognisable features surviving). The late 18th century country house partially survives, incorporating earlier medieval structures, as do a courtyard and outbuildings (*Cronin 2005*). Large agricultural fields to the east and northeast of the house complex

occupy the former demesne lands, which are largely free from modern development. However, the industrial nature of this landscape (particularly to the northwest and west / southwest), in addition to the modern housing to the northeast and modern cemetery to the north, detracts from the setting of the house. There are some traces of the former walled garden that is depicted on the first edition OS map of 1841-2, to the west of the house complex (**Figure 15.14** in **Appendix 15I**); these are visible on aerial photography, along with the upstanding remains of the eastern wall (**Figure 15.22** in **Appendix 15I**). There is a record of a designed landscape feature (a belvedere) situated on the southwest side of the castle/house complex, though nothing survives above ground (CO087-052002, AH22). Belvederes were typically sited to take advantage of a fine or scenic view and can take the form of any architectural structure. In this instance it is a turret, which is marked on the late 19th century 25-inch OS map, situated on the high ground close to the castle, overlooking Cork Harbour and Loughbeg to the south. The proposed M28 Road Project traverses the former demesne lands associated with the house (BH11). Only one upstanding feature associated with the former demesne is crossed by the proposed M28 Road Project, the western boundary wall to the demesne (BH23). The wall is in a ruinous state, having fallen down in places, and is largely obscured by vegetation (BH23; **Appendix 15B**; see also **Section 15.3.4**).

Industrial development in Barnahely townland, on the west side of the R163 road has removed the former 18th century country house, Prospect Villa. It has also obliterated almost all trace of its demesne, as well as that of the neighbouring Ballybricken House and demesne (BH6 & BH13; **Figure 15.14** in **Appendix 15I**, **Appendix 15B**). Only two upstanding features associated with Prospect Villa survive, both of which are demesne walls; part of the demesne boundary wall is extant c. 20m south of the proposed road project, while an internal demesne wall is crossed by the proposed M28 Road Project (BH10 & BH21, **Figure 15.17** in **Appendix 15I**, **Appendix 15B**). Modern development has also impacted the grounds associated with two smaller properties in Ringaskiddy, Ring House and villa Rock Cottage (BH3 & BH4; **Figures 15.15 & 15.16** in **Appendix 15I**, **Appendix 15B**). In contrast, the former grounds associated with another smaller property in Ringaskiddy village, Rose Lodge (BH2), are intact; the proposed M28 Road Project will traverse the paddocks or agricultural fields at the rear of the property.

15.3.4 Field Survey & Historic Landscape

A historic landscape approach has been used to characterise the receiving cultural heritage environment and to this end, an account of the field survey is described below under the following headings: physical environment, cultural landscape and archaeological potential. The proposed M28 Road Project is discussed sequentially on a townland basis (or townlands, where appropriate), beginning at the northern end. Townland boundaries are described in the context of the field survey results below and listed in **Table 15.1** (Cf. **Section 15.3.2.10** for further discussion on townland boundaries and names). This section should be read in conjunction with **Figures 15.1a-15.1h** in **Volume 5**, which show the locations of archaeological, architectural and cultural heritage sites and of the townland boundaries crossed by the proposed road project.

15.3.4.1 Monfieldstown / Maryborough / Mounthovel Townlands (Figures 15.1a)

Physical Environment

The townlands of Maryborough and Mounthovel are located in the parish of Carrigaline and the Barony of Cork. At this northernmost end of the proposed road, the mainline motorway will be constructed primarily by on-line widening of the existing N28 carriageway (between the Bloomfield Interchange and Carr's Hill). The land to the east and west has been subject to a significant amount

of residential development and Douglas Golf Club is located on the west side of the current road. A tributary of the Donnybrook Stream flows in a northerly direction along the western side of the road and for much of its length forms the townland boundary between Maryborough and Mounthovel (AH36, TB2). This stream also forms the Monfieldstown / Mounthovel townland boundary (TB1); the stream is culverted beneath the existing N28 road. Dense woodland borders the river and the existing N28 road (**Plate 15.1 in Appendix 15I**).

Cultural Landscape

At the northern end of the proposed road project, where the proposed motorway is aligned precisely with the present N28 road, the now heavily-developed area is unrecognisable on the historic mapping. The existing road curves through an area previously dominated by Maryborough House, Mount Hovel House, Bloomfield House and their landscaped demesnes; of these, only Bloomfield House retains its immediate setting, with wide-scale development now infilling the former demesnes (BH14 to BH16; **Appendix 15B**). Three features within the former demesne landscapes, as shown on the first edition OS map, are located within areas that appear not to have been disturbed by the extensive development (**Figure 15.4 in Appendix 15I**): a possible mill-pond in the north-eastern corner of the Maryborough estate (AH2); a small structure in woodland on the western side of the Mount Hovel estate (AH55); and a gate lodge associated with Bloomfield House (AH63). Although no trace of the features survives above ground, all three lie within the proposed CPO.

A brickfield (AH1) is shown on the first edition OS map (**Figure 15.4 in Appendix 15I**), covering an area c. 100m E-W by c. 60m N-S. It is located on the shore of the River Douglas, west of Bloomfield House estate (Cf. BH14). A laneway leads north from the Douglas to Rochestown road to access the brickfield. By the time of the later 19th century 25-inch OS map, the brickfield is no longer depicted. The site lies within an area now covered in dense scrub and will be traversed by a proposed outfall pipe that forms part of the proposed CPO.

There was no north-south road through this area in the 19th century; the present N28 road eventually joins the old road shown on the first and subsequent edition OS maps further south in Moneygourney townland. The present Rochestown Road follows a road already laid out by the time of the first edition OS map; no house is shown at the location of Beechvale Lawn (BH12) on the south side of the Rochestown Road until the revised edition OS map of 1926-37 (**Figure 15.18 in Appendix 15I**). A two-storey house survives at the site of a structure depicted on the first edition OS map in Maryborough townland (BH20), within the proposed CPO (**Plate 15.52, Figure 15.6 in Appendix 15I**).

Archaeological Potential

The extent of development in this area has greatly reduced its archaeological potential, while the limited works proposed along this stretch result in relatively few potential impacts. The proposed road project will involve widening the road into the verge and along the banks of the stream (AH36 / TB2) for approximately 110m to the point where it has been culverted beneath the existing road. All riverine environs are considered to have an inherent archaeological potential and the presence of *fulachtaí fia* are noted along stream banks elsewhere (e.g. AH5 & AH9). In this instance the potential is lessened by the dense woodland along the stream banks, which is depicted on the first edition OS map and thus has been in-situ since at least the mid-19th century. Although the vegetation growth may have disturbed any previously unknown archaeological sites or features along the banks of the stream, there remains a possibility, albeit slight, that some remains survive sub-surface. In addition,

the remains of a brickfield (AH1), mill-pond (AH2), gate lodge (AH63) and a pre-1840s structure in Mount Hovel (AH55), may survive subsurface.

15.3.4.2 Moneygourney Townland (Figures 15.1b & 14.4)

Physical Environment

The townland of Moneygourney is located in the parish of Carrigaline and the Barony of Cork. The land is predominantly in pasture, with some large arable fields. The northern section of the townland, through which the proposed road passes, is dominated by residential land use, parts of which are still under construction. The land in the townland slopes down to the west from a highpoint of 127m OD, to the valley of a tributary of the Donnybrook Stream, which forms the boundary between Moneygourney townland and Castletreasure, Ballinimlagh, Mounthovel and Ballinrea townlands (AH36, AH70 & AH39; TB3, TB4, TB5 & TB7). The existing N28 road travels along the base of this valley to the east of the stream, which forms the Castletreasure / Moneygourney townland boundary (AH39 / TB5). The proposed road will diverge from the existing road in the north-western corner of the townland at the proposed Carr's Hill Interchange. From there it will run through the low-lying sections of featureless pasture fields on the west side of the road, following the course of the stream and townland boundary for c. 235m before crossing into Castletreasure townland.

Woodland and shrub verges rise steeply from the east side of the existing road and drop away from the west side of the road. The proposed Carr's Hill Interchange slip roads and roundabouts occupy the densely covered verges to either side of the existing N28 road and extend only partly into the good pasture fields beyond.

Cultural Landscape

The landscape becomes noticeably more agricultural and open on the first edition OS map, where the present N28 crosses into Moneygourney townland, passing the grounds of Belview and Broadale houses (BH17 & BH18) before joining the 19th century Cork/Carrigaline road (the course of the present N28) running along the southwest side of the townland. The two 19th century estates are divided by a public road (L6477 road) that runs northwest to southeast, roughly bisecting the townland, with Belview to the east and Broadale to the west.

Nothing survives of Belview house (BH17) or its demesne. At the time of inspection, the site of the former outbuildings and walled garden were in use as a compound for the construction of the adjacent Maryborough Ridge housing estate (**Plate 15.2 in Appendix 15I**). Broadale, another country house or large farmhouse depicted on the first edition OS map, has also been completely destroyed (BH18). Two houses are depicted on the first edition OS map to the northwest of the Belview demesne, on the west side of the road, each in its own small plot (**Figure 15.6 in Appendix 15I**). Both lie within the proposed CPO. The slightly smaller structure (AH64) is no longer upstanding. The larger house (BH20, built c. 1800) survives as a three-bay, two-storey house with a garage to east end (**Plate 15.46 in Appendix 15I**).

Archaeological Potential

While an examination of the first edition OS map reveals a landscape generally devoid of upstanding archaeological sites or features (only one, now levelled, ringfort is depicted in the eastern half of the

townland, CO086-015, well outside of the assessment corridor); this may be the result of tillage farming in the past. A small dwelling shown on the first edition OS map (AH64) is no longer upstanding. The fields within the townland, although almost all under pasture now (where not already occupied by modern housing development), have a level surface typical of former arable fields and inspection of aerial photographs from 1995 to 2005 show traces of plough furrows as crop marks in many of the fields (www.maps.osi.ie). This tallies with an account by Lewis in the mid-19th century, who noted of the land within Carrigaline parish that ‘the surface is pleasingly undulated, and the soil is fertile; a considerable part is under an improved system of tillage, and the remainder is in demesne, meadow, or pasture land’. It is possible, therefore, that previously unknown archaeological sites, features or deposits may survive subsurface in the area of greenfield and scrub around the proposed Carr’s Hill Interchange.

The proposed road mainline will potentially impact on the stream that flows along the Moneygourney / Castletreasure and Moneygourney / Ballinimlagh townland boundaries (AH39 & AH70; TB3, TB5 & TB7). All riverine environs are considered to have an inherent archaeological potential and this potential is borne out where *fulachtaí fia* have been identified along stream banks elsewhere (e.g. AH9, **Figure 15.9** in **Appendix 15I**).

15.3.4.3 Castletreasure Townland (Figure 15.1b)

Physical Environment

The townland of Castletreasure is located in the parish of Carrigaline and the barony of Cork. The land is predominantly in pasture with some arable fields and some residential land use at the northern end of the townland. The land in the townland slopes to the east to the valley of a small stream, a tributary of the Donnybrook Stream (AH39), which also forms the Castletreasure / Moneygourney townland boundary (TB5). The proposed road project travels only briefly through the southeast corner of this large townland, at the Carr’s Hill Interchange, crossing the stream (encompassing both watercourse and banks) and passing through several fields lining the west side of the present N28 road. At this point in its course, the stream is shallow (c. 0.1-0.2m deep), c. 1.5m wide, with dense woodland and scrub growing along its banks (**Plate 15.6** in **Appendix 15I**). The fields to either side of the river slope steeply down to it, with low-lying rough pasture along the banks and reed clumps and waterlogging evident in places. The three fields along the west bank of the river were previously arable (now lying fallow or recently turned to pasture), with the lower-lying rough grazing fenced off. Field boundaries and the Castletreasure / Ballinimlagh townland boundary (TB6) consist of earthen banks and mature hedgerow.

Cultural Landscape

There is little of note on the historic OS maps in this section of the townland, with the ‘Site of Castle Treasure’ (CO086-013) at a farmstead c. 350m west of the proposed M28 Road Project being the closest feature of interest. The first edition OS map shows a small tributary of the stream that flows along the Castletreasure, Ballinimlagh and Moneygourney townland boundaries (AH39; TB5 & TB7). This small stream (AH8) flows for roughly 300m before joining the larger stream at the junction of the three townlands; it is not depicted by the later 19th century maps. The former watercourse is traversed by the proposed road development. The revised 25-inch edition OS map (1897-1904) depicts a number of areas of bog or marsh along the western banks of the river, at the point where the proposed M28 Road Project crosses from Moneygourney to Castletreasure townland (AH39).

Archaeological Potential

Cartographic sources depict a number of areas of bog or marsh along the western banks of the stream (AH39). Field survey also noted waterlogged and low-lying areas along both banks of the stream, while cartographic analysis identified land along the western bank as the course of a former small tributary of the stream (AH8). All riverine environs are considered to have an inherent archaeological potential and the presence of *fulachtaí fia* are noted along stream banks elsewhere in the project (e.g., AH5, AH9, **Figure 15.9** in **Appendix 15I**).

A LiDAR anomaly (AH18) was identified in Castletreasure townland; it comprises a low c. 25 m-diameter rise in a low (c. 100 m-diameter) depression in a north-east-facing slope, lying partially within the proposed CPO. A second LiDAR anomaly (AH6) was identified where the proposed M28 road project crosses from Castletreasure townland into Ballinimlagh townland. It comprises a concentration of undulating topographic (archaeological/geological) features, leading west from the proposed CPO and continuing south into the townland of Ballinimlagh; one of these features lies partly within the proposed CPO.

15.3.4.4 Ballinimlagh Townland (Figures 15.1b & 14.5)

Physical Environment

Ballinimlagh is located in the parish of Carrigaline and the barony of Cork. The land in the townland slopes generally from a highpoint of 149m OD to between 90 and 100m in the valley of the stream that forms the Ballinimlagh / Moneygourney townland boundary (AH39 / TB7). It is a small townland, with the northeast/southwest oriented Ballinrea Road running through it. The area is dominated by pasture with field and townland boundaries comprising earthen banks covered in mature hedgerow (Ballinimlagh / Castletreasure to the north and Ballinimlagh / Ballinrea to the south; TB6 & TB8). The proposed M28 Road Project runs south-eastwards through several fields of good, undulating pastureland situated along the east/northeast edge of the townland and on the west/southwest side of the stream (AH39). The majority of the original field boundaries north of the Ballinrea Road have been removed, creating one very large land parcel, with subdivision provided by wire-and-post fences. The proposed M28 Road Project crosses the lower slopes of the pasture fields and encroaches into the low-lying, waterlogged level ground along the banks of the stream (**Plate 15.7** in **Appendix 15I**); the proposed road project is in fill at this point.

Cultural Landscape

Mount Imla, a small country house in the north-western corner of the townland, is one of only two properties depicted on the historic OS maps within the townland (the other is a small cottage or farmhouse further southwest on the opposite side of the local road. Neither structure is located within the assessment corridor. Cartographic analysis and field survey revealed no structures or features of interest within or close to the proposed road project. An examination of aerial photography, however, indicated an area of possible burnt spread material extending across the field on the south side of the Ballinrea Road AH40; **Figure 15.5** in **Appendix 15I**). Although the field is now under pasture, aerial photography supplied by RPS Ltd (unknown date) shows the former arable field under plough and the possible burnt spread extending along the west/southwest bank of the stream (AH39). This area of burnt spread lies partially within the proposed road project.

Archaeological Potential

The proposed M28 Road Project runs partly through the low-lying, waterlogged ground along the west/southwest bank of a stream (AH39) and partly encroaches upon an area of possible burnt spread material identified through aerial photographic analysis on the river bank (AH40). All riverine environs are considered to have an inherent archaeological potential and the presence of *fulachtaí fia* in the form of burnt spreads are noted along stream banks elsewhere (e.g. AH9, **Figure 15.9** in **Appendix 15I**).

A LiDAR anomaly (AH6) was identified where the proposed M28 Road Project crosses from Castletreasure townland into Ballinimlagh townland. It comprises a concentration of undulating topographic (archaeological/geological) features, leading west from the proposed CPO and continuing south into the townland of Ballinimlagh; one of these features lies partly within the proposed CPO. A second anomaly (AH61) was also identified comprising a complex of geometric earthwork-like topographical anomalies that cover an area of c. 140m by 70m; approximately 50% of this 'site' lies within the proposed CPO.

15.3.4.5 Ballinrea Townland (Figures 15.1c & 15.1d, 15.6 to 15.8)

Physical Environment

The townland of Ballinrea is located in the parish of Carrigaline and the barony of Cork. The townland is dominated by pasture land with some large arable fields. The land is steeply undulating and slopes generally to the south and east from a highpoint of 110m OD (**Plates 15.10 & 15.11** in **Appendix 15I**). A small tributary of the Glounatouig Stream (AH41) runs northwest to southeast through the townland and is crossed by the proposed road project, with the Glounatouig Stream itself flowing in a deep, steep-sided valley on the eastern boundary between Ballinrea and Hilltown, parallel with the present N28 road. The northern boundary with Ballinimlagh (TB8) and the southern boundary with Shannonpark (TB9) are both defined by earthen banks and mature hedgerow. The proposed route stays roughly parallel with the present N28, running through a mixture of pasture and large arable fields along its southwest side, crossing the tributary stream (AH41). The fields were found to be devoid of features, with the exception of a previously recorded large burnt spread (*fulacht fia* CO086-029, AH5, the RMP ZAP lies immediately outside the proposed CPO; **Figure 15.6; Plate 15.8** in **Appendix 15I**) in a recently ploughed arable field on the southwest side of the Glounatouig Stream and present N28 road. Many of the original field boundaries, particularly north of the tributary stream, have been removed to create expansive tracts of pasture. Where the proposed road crosses the tributary stream (AH41) the land slopes steeply down to the wide valley bottom, with low-lying, waterlogged land visible in places along the stream banks (**Plate 15.9** in **Appendix 15I**). With the exception of an open area to the west, the stream banks are generally obscured by dense woodland and scrub.

Cultural Landscape

The landscape on the mid-19th century OS map is generally featureless and rural along the north and east sides of the townland, with the proposed M28 Road Project crossing south-eastwards through small fields, roughly parallel with the road and the Glounatouig stream. In addition to the recorded burnt spread noted above (AH5), another *fulacht fia* (CO086-133) is recorded on the opposite side of the stream and present N28 road, c. 85m northeast of the proposed road project. Recorded ringfort CO086-028, of which there is now no surface trace, is shown as a hachured enclosure on the first edition OS map, respected by the road and surrounding field fences. Although the ringfort was

levelled in the past, archaeological testing in 2009 confirmed that remains of the monument survive below ground (Online Excavations Bulletin Ref. 2009:123; Licence Ref. 09E0429). The RMP site is c. 110m southwest of the proposed CPO. A tributary of the Glounatouig Stream also flows through Ballinrea townland and is crossed by the proposed M28 project (AH41; **Figures 15.1 & 14.7 in Appendix 15I**).

A narrow roadway (AH42) meanders through Ballinrea townland from northwest to southeast, with occasional cottages and small houses depicted along its length; none of which are upstanding or lie within the proposed CPO (**Figures 15.7 & 14.8 in Appendix 15I**). The roadway (AH42) becomes considerably wider after it crosses the stream (AH41 **Figure 15.7 in Appendix 15I**) and maintains this form until it reaches a substantial cluster of buildings to the south, named 'Wills Ville' (BH7; the site is not recorded by the RMP, RPS or NIAH; **Figure 15.7 in Appendix 15I**). 'Wills Ville', which lies outside of the proposed road, appears to be a large farm manor, with a series of outbuildings and other small structures arrayed in an unusual formation. They are laid out in rectilinear form, along either side of the wide roadway and with two small structures set across the roadway to close the rectangle and form a courtyard. The complex of buildings lies within a property comprising several paddocks to the west and south and an orchard to the east. The line of the old road continues beyond the complex, by a footpath across a paddock to the south of the house and then as a wide roadway once more, winding its way to the site of 'Old Court', a 16th/17th century house in Shannonpark (CO086-062; **Figure 15.8**) c. 600m to the southwest, and onwards to Carrigaline. To the north of Wills Ville farm complex, a stream appears to have been diverted from the main tributary to run through the fields, before being routed along the edge of the roadway to terminate in a field to the northeast of the farm, just shy of a small triangular pool or marshy area (no surface trace of any of these features survives). The straight lines of the stream and unusual course may suggest an old mill-race (AH43; **Figure 15.7 in Appendix 15I**), no longer in use as its course is broken in places, though there is no other evidence for a mill in this area. The broad routeway, stream and unusual layout of Wills Ville may indicate a settlement at the site of the present Wills Ville property (BH7; outside of the proposed project), perhaps with a mill that was associated with the 16th/17th century Old Court. The proposed M28 Road Project traverses the line of the former roadway (AH42) and possible mill-race (AH43).

Wills Ville is indicated as 'in ruins' on the late 19th century 25-inch OS map, with only one structure extant, two others in a state of ruin, and the remainder gone. The surviving structure is rectilinear in shape and, given its position and orientation, it represents either part of the old house that was retained or a completely new, smaller structure on the site of the house. The old roadway has become defunct and is shown overgrown with rough pasture and furze, with many of the small cottages in the area no longer depicted. The roadway continues to be depicted on the historic OS maps as a distinct, narrow strip of rough pasture running along the various field boundaries. The feature has little or no surface expression today, with the fields ploughed as close to the edge of the field boundaries as possible, though a small section survives as a farm access track that runs north from Wills Ville to allotments.

By the time of the six-inch revised edition of 1926-37, the single structure has been incorporated into a new farm complex, with a more typical small, almost square farmyard. The site of Wills Ville now lies within a modern farmstead, well screened from the surrounding fields and the present road. An examination of aerial photography indicates that there is still a building on the site of the old house (as depicted on the later OS maps editions); the house is not visible from either the existing N28 road or from the adjacent fields to the north and west. The proposed M28 Road Project passes through several large arable fields (shown as a network of small fields on the historic OS mapping) to the rear of Wills Ville, outside of the boundary of the northwest paddock and c. 130m

west of the modern farm complex. The farm lies downslope of the proposed road project, which runs along an area of high ground; the road is in cut where it passes to the rear of the farm complex.

A small area of cleared hedgerow revealed a section of drystone walling in the Ballinrea / Shannonpark townland boundary, within the line of the proposed M28 Road Project (BH22 / TB9); it is situated to the west of Wills Ville, although not along the line of the former roadway (AH42). The section hinted at the curve of a possible arch, perhaps a culvert in the wall (BH22; **Figure 15.1; Plate 15.12 in Appendix 15I**). The dense hedgerow and earthen-bank field boundaries may contain similar features along the line of the former roadway (AH42).

Archaeological Potential

Field survey confirmed that the extensive burnt spread associated with the recorded *fulacht fia* is still visible in the plough soil (CO086-029, AH5). The presence of a recorded *fulacht fia* in the townland (AH5), a second c. 140m northwest on the banks of the same stream, and the proximity of two watercourses (the Glounatouig Stream and its tributary) greatly increases the likelihood that further such sites may survive below ground. Such potential was confirmed during archaeological testing elsewhere in the townland, where three levelled *fulachtaí fia* were identified (Online Excavations Bulletin Ref. 2009:123; Licence Ref. 09E0429). The archaeological potential is heightened where the proposed M28 Road Project crosses the tributary stream (AH41) and the low-lying, waterlogged land along its banks. As has been noted elsewhere along the proposed road project, many of the pasture fields were found to be devoid of features and exhibited a level ground surface typical of former arable fields. Evidence of former ploughing can be seen in aerial photographs of the proposed M28 Road Project and its environs (www.maps.osi.ie). Intensive cultivation over centuries would have removed the surface presence of any previously unrecorded archaeological sites or features that may have been situated in these fields. This is evident in the lack of surface expression of the former roadway (AH42) depicted on the historic OS maps, which ran along the lines of the present field boundaries and which is crossed by the proposed M28 Road Project to the northwest of Wills Ville (BH7) and again to the south in Shannonpark townland (see below).

A section of drystone walling (BH22) visible in a small area of cleared hedgerow in the Ballinrea / Shannonpark townland boundary lies within the proposed road project, to the southwest of Wills Ville and the line of the former roadway (AH42). The section hinted at the curve of a possible arch, perhaps a culvert in the wall. The proposed M28 Road Project will also traverse a section of the former roadway (AH42) and possible mill-race (AH43).

A LiDAR anomaly (AH62) was identified as a linear feature crossed twice by the proposed road project, in Ballinimlagh and Hilltown townlands. It comprises a long linear topographic anomaly that crosses through the townland of Ballinrea in a NW–SE direction; it is evident again crossing the townland of Hilltown in a similar direction. The nature of this anomaly, which will be traversed by the proposed CPO, suggests that it is a backfilled modern, large-scale service trench, servicing Ringaskiddy, and as such, it is unlikely to be of archaeological origin. A second LiDAR Anomaly (AH29) was identified in Ballinrea townland, which comprises a rectilinear enclosure-like anomaly, encompassing an area of c. 64m by 56m. This feature lies c. 30 to the west of the proposed CPO.

15.3.4.6 Shannonpark & Hilltown Townlands (Figures 15.1d, 14.8, 14.9a & b)

Physical Environment

The townland of Shannonpark formed part of the demesne of the Earl of Shannon and is located in the parish of Carrigaline and the barony of Kerrycurrihy. Prior to the 16th or 17th century, Shannonpark appears to have formed part of a much larger townland of Ballinrea and its topography is similarly undulating, with areas of low-lying waterlogged pasture (**Plate 15.11** in **Appendix 15I**). The townland is a mixture of pasture and arable fields, with the land sloping generally to the north and east and several heights of 100m OD. The field and townland boundaries generally comprise earthen banks with mature hedgerow but there are also a number of wet ditches. The site of a *fulacht fia* (CO086-115, AH9; **Figures 15.1 d (Volume 5) & 15.9** (in **Appendix 15I**)) is recorded along one of the ditches (described in the RMP file as a stream) with a large expanse of burnt spread material extending north and northwest from it (the RMP site lies within the proposed M28 Road Project. The proposed road crosses the Ballinrea / Shannonpark townland boundary (this is also a Barony boundary between Cork and Kerrycurrihy; TB9) and continues southwards through a mixture of pasture and arable fields in Shannonpark, crossing the R611 road to the west of the Shannonpark roundabout.

Although the proposed M28 Road Project passes briefly into Hilltown townland, where the proposed interchange links into the existing N28 road, it does not extend beyond the existing N28 road. This small section of land between the Hilltown / Shannonpark townland boundary (TB10) and the N28 road is covered in dense trees and scrub at the base of the Glounatouig Stream valley, with the boundary itself mostly formed by the stream (AH30; where it is intersected by the proposed road project, the townland boundary diverts from the stream to follow the old N28 road). This townland also formed part of the demesne of the Earl of Shannon. It is generally dominated by pasture land with some rough ground and former osieries along the banks of the Glounatouig Stream in the south (where the proposed M28 Road Project enters the townland). The land in the townland slopes generally to the south and west to the valley of the Glounatouig Stream.

Cultural Landscape

There are several features of interest in Shannonpark depicted on the first edition OS map, principally the cluster of buildings c. 80m to the east/southeast of the proposed road project, marked 'Site of Old Court' (CO086-062; **Figure 15.8** in **Appendix 15I**) and the continuation of an old roadway noted in Ballinrea townland (AH42; **Figure 15.8** in **Appendix 15I**). The cluster of 19th century structures are shown on the south side of a public road that runs southeast from a staggered crossroads; this is the recorded location for a 16th/17th century house, the 'Old Court' noted on the map (the RMP site CO086-062 is c. 70m west of the proposed M28 Road Project). According to the RMP file, 'Old Court' refers to Shannon Court, a house built by the Earl of Shannon in the 17th century, which was described in the middle of the 18th century as 'a neat house, and fine park, both entirely gone to ruin' (Smith 1750; Cf. RMP File). This house probably stood on the site of the Cogan Castle of Ballinrea. Cartographic analysis indicates that the associated 'fine park' described in 1750 was more likely to have been located west of the old Carrigaline road and outside of the proposed CPO.

By the time of the 25-inch edition OS map, the site of Old Court is no longer marked. There is no visible indication, either cartographic or in the field of the 'fine park' described in 1750, though it was perhaps more likely to have occupied the western half of the townland. The area is now completely obscured by 19th and 20th century properties and farm buildings, dense field boundaries

and vegetation. A section of the old roadway that links Wills Ville in Ballinrea to Old Court in Shannonpark (AH42), was identified during the field survey (**Figure 15.8** in **Appendix 15I**). It survives as a narrow, tarmacadam road, c. 3m wide, with hedgerow boundaries along either side (**Plate 15.13** in **Appendix 15I**); it is now in use for farm access only.

The original line of the old Carrigaline road was also identified (now bypassed by the R611 link road from Shannonpark roundabout). This old road (AH44) survives as a narrow laneway, measuring c. 1.5m wide, with a metalled surface visible in places. It is largely overgrown at its southwest end, with vegetation along its sides, though it opens where it runs alongside a farm to join the present N28 to the northeast (**Plates 15.14 & 15.15** in **Appendix 15I**).

The proposed M28 Road Project runs south-eastwards through the small fields along the north-eastern edge of Shannonpark townland, roughly parallel with the principal Cork/Ringaskiddy road (N28), to the east of 'Old Court'. Features of note on the first edition OS map include an osiery situated on the west bank of a small stream (AH45 & AH32; **Figure 15.8** in **Appendix 15I**). It is indicated in a field just south and east of the public roads and lies partly within the proposed road project. An osiery is an area used for growing willows; basic craft items were often woven from osiers, such as baskets, fish traps, wattle-and-daub house walls, wattle fences. Osiers are rod-like willow shoots that are often grown in coppices, as appears to be the case here. The stream (AH32) has been canalised along the side of the Carrigaline road and south along the side of the osiery and flows south and southeast along field boundaries; the stream is crossed several times by the proposed road project. There is also an area indicated as marshy or boggy to the west/southwest of the proposed road project, further along the banks of the stream. A footpath runs east/west across the fields, linking the two public roads (the Carrigaline road and the present N28), with a footbridge providing a crossing at the stream to the south of this pathway (beyond the proposed CPO). None of these features, excepting the stream, are depicted on any of the revised edition OS maps. The present Shannonpark roundabout and R611 road cut through the historic landscape, with the R611 road tying into the old Carrigaline road shown on the historic OS maps. The site of the osiery is contained within several fields of very rough pasture, with a gentle rise at the north/northwest end, bounded by the roundabout and R611 road along the east/southeast. All of the field boundaries have been removed and the vegetation dumped in the centre and along the roadside (**Plates 15.11 & 15.16** in **Appendix 15I**). There are distinct low-lying, slightly boggy areas, particularly in the centre, south and west. The canalised stream is not evident where the field boundary has been removed.

An osiery is also shown just north of the Hilltown / Shannonpark townland boundary (TB10), where it lies partly within the proposed M28 Road Project (AH31).

The site of a *fulacht fia* (CO086-115, AH9) is recorded in the low-lying, southwestern corner of a steeply sloping arable field, and is located within the proposed CPO. The site is recorded on the east side of the wet ditch that forms the eastern field boundary and the Ballinrea / Shannonpark townland boundary (TB9). The RMP file describes a stream flowing along this boundary, but it could not be confirmed during field inspection due to dense vegetation (**Plate 15.17** in **Appendix 15I**). There are, however, two small watercourses branching out from the southwestern corner of the field on the revised edition OS map of 1926-37, which might suggest that there is a natural spring in this area, giving rise to streamlets or wet ditches. A very large area of blackened soil was identified at the southern end of the field during the recent field survey, indicating an extensive burnt spread associated with the recorded *fulacht fia* site (**Plate 15.18**; **Figure 15.9** in **Appendix 15I**). The *fulacht fia* site is described in the RMP file as 'a large spread of burnt material in a ploughed field. Levelled spread of *Fulacht fia* material measuring 18m E-W, 30m N-S.' This corresponds roughly with the site as identified during field survey, though subsequent ploughing over the years appears to have

spread the material further (it now measures c. 25m E-W by c. 40m N-S, occupying the entire southernmost corner of the field). The dense vegetation overgrowth and trees along the townland boundary (TB9) to the east of the site obscured the ground surface.

Archaeological Potential

The recorded *fulacht fia* site, and the associated burnt spread surrounding it, lie within the proposed CPO (CO086-115, AH9). Given the tendency for *fulachtaí fia* to occur in groups, there is a strong possibility that further sites or features may survive within the inaccessible area of ground that survives unploughed along the townland boundary (at proposed access road), close to the recorded site. The presence of the recorded site and the topography of the landscape through which the proposed M28 Road Project travels further south in the townland (low-lying and waterlogged in places, with small streams, e.g. around the osieries, AH45 & AH31), indicates that there is a strong possibility that further such sites will be revealed. The proposed M28 Road Project will also cross the remains of two former (pre-1840) roadways depicted on the first edition OS map: an old route southwards towards Carrigaline and the castle there and an east/west routeway that crosses it in Shannonpark (AH42 & AH44).

15.3.4.7 Carrigaline Middle Townland (Figures 15.1d & 14.10)

Physical Environment

The townland of Carrigaline Middle is located in the parish of Carrigaline and the barony of Kerrycurrihy. The land is predominantly low-lying and in pasture, becoming gently undulating at its northern end where it meets the present N28 road. The townland and field boundaries are predominantly earthen banks covered in mature hedgerow, with a public road forming the Carrigaline Middle / Ballyhemiken townland boundary (TB12; this public road also forms the boundary between the parishes of Carrigaline and Liscleary). The proposed road project runs through the northern tip of the townland, crossing a narrow arable field that rises to the west and a small, relatively level pasture field. Both fields were devoid of features.

Cultural Landscape

The proposed M28 Road Project passes only partly through the northern narrow spur of Carrigaline Middle townland, sandwiched between Shannonpark on the west and Ballyhemiken on the east. It passes immediately south of a field marked 'Glebe' on the first edition OS map of 1841-2, before continuing eastwards into Ballyhemiken townland. Generally, glebe refers to land either belonging to the church or yielding revenue to it, through farming. A small L-shaped structure is depicted on the first edition OS map in the southeast corner of the Glebe field (**Figure 15.8 Appendix 15I**); the structure has gone by the time of the revised 25-inch OS edition of 1897-1904 and its site lies just within the CPO for the proposed M28 Road Project (AH68). It is possible that the glebe land was once more extensive; dashed lines along the boundaries of the glebe field (and one to the south) indicate that new field boundaries were under construction at the time of the Ordnance Survey in the 1840s, subdividing the land.

Also in Carrigaline Middle townland, a small house (BH8) is depicted on the first edition OS map in the field to the south of the proposed road project, situated on the west side of the public road; by the time of the 25-inch OS edition in the later 19th century, a new complex of structures had been erected on the site of the earlier building. Part of this 19th century farm complex survives, namely the farmhouse and an adjacent outbuilding (BH8; **Figure 15.10; Plates 15.19 & 15.20 in Appendix**

15I). They stand alongside modern barns and sheds, with the survival of the older buildings providing an attractive example of the vernacular architecture in this area. The 19th century farmhouse comprises a two-storey, four-bay structure, with rendered walls and a pitched slated roof; it appears to have been extended from an originally three-bay house, with the fourth bay added to the north end. The rendered outbuilding is a one-and-a-half storey structure, with a pitched, slated roof and access to the mezzanine or loft level provided via external stone staircase to a doorway in the east gable. There are two small windows just below the eaves on the north façade and three on the south façade. Access at ground level is via a single doorway in the north façade and a double barn door in the south façade.

By the time of the revised six-inch edition OS map (1926-37), the Carrigaline Railway line is depicted to the south and east of the farm complex (in Ballyhemiken townland), having been constructed at the start of the 20th century (c. 1903; **Figure 15.10** in **Appendix 15I**). The railway line approaches from Carrigaline in the southwest, crosses the road into Ballyhemiken on the Ballyhemiken Bridge (BH5, described below in **Section 14.3.4.8**). The farm complex is located c. 25m south of the proposed M28 Road Project and is not well screened by existing field boundaries; the proposed M28 Road Project is in fill at this point, with an underbridge providing access for the existing Ballyhemiken Road (Rock Road). The farm complex is not recorded by the RPS or NIAH and is located outside of the proposed CPO.

Archaeological Potential

The site of a pre-1840s house (AH68) located in a former Glebe field lies within the proposed road project CPO. In the areas of greenfield traversed by the proposed M28 Road Project in this townland, there remains the potential that previously unknown sites or features may survive below the present surface.

15.3.4.8 Ballyhemiken Townland (Figures 15.1d & 14.10)

Physical Environment

The townland of Ballyhemiken is located in the parish of Liscleary and the barony of Kerrycurrihy. It is generally low-lying rising to a maximum height of only 41m OD. The landscape is dominated by pasture, with a large quarry and a golf course (Fernhill Golf and Country Club) located along its eastern boundary. The western boundary to Carrigaline Middle consists of a local public road, with the former Ballyhemiken / Raffeen townland boundary (TB13) removed by the quarry works. The proposed M28 Road Project traverses two large fields, before crossing into the quarry. The boundary between the two fields is formed by the line of the disused Carrigaline Railway (BH5). The generally level northern field is currently under pasture, but has been ploughed in the past; it contains the recorded sites of two standing stones (CO087-113 & CO087-114; AH10 & AH11; **Figure 15.1** in **Volume 5**). The southern field rises to the south and has recently been ploughed, with a row of modern housing constructed along its southern boundary.

Cultural Landscape

Ballyhemiken is separated from Carrigaline Middle townland by a north/south public road, which forms the townland boundary (TB12). Although now dominated by two large arable fields, at the time of the first edition OS map, Ballyhemiken townland was divided into a number of much smaller fields. Few features are depicted on the first edition OS map in this location. A small quarry pit is shown to the east (within the area of the present Raffeen Quarry) and a natural pond in the

southwest corner. A small farm complex straddles the Ballyhemiken / Carrigaline townland boundary to the south of the pond, beyond the proposed CPO (BH8, described above in **Section 15.3.4.7**). Two small structures are depicted in the north-western part of the townland, one of which lies within the proposed CPO (AH3; **Figure 15.8** in **Appendix 15I**). The sites of two possible standing stones are recorded in the townland, though neither monument is depicted on the historic OS maps (CO087-113 & CO087-114; AH10 & 11). The RMP files record that both stones have been removed, with the original site of the northern stone (AH10) lying beneath the present N28 road and within the proposed CPO. The second standing stone site is located c. 30m south of the proposed M28 Road Project (CO087-114; AH11), in a low-lying, waterlogged corner of the pasture field (**Plate 15.21** in **Appendix 15I**); this field has previously been under the plough and there are no visible surface features. According to the RMP file, the stone was removed during reclamation works, which suggests that this part of the land has always been waterlogged; the proposed M28 Road Project travels along the slightly higher, dry ground to the north.

The line of the former Carrigaline Railway (BH5; **Figure 15.10** in **Appendix 15I**) separates the two fields, running southwest to northeast and is crossed by the proposed road project. It survives as a broad field boundary, displaying the same width and tapering shape in modern aerial photographs as appears on the historic maps (www.maps.osi.ie). Apart from the distinctive width, there is no other indication of the former railway line, with the dense vegetation along the field boundary obscuring almost all of its length (**Plates 15.22 & 15.23** in **Appendix 15I**). A small section has been cleared to provide access between the two fields, but there was no visible trace on the ground of the former line at this point. Further southwest along the field boundary it was possible to see a wide, flat linear feature with trees along either side (**Plate 15.22** in **Appendix 15I**). Although the disused line is not recorded by the RPS or NIAH, it is associated with Ballyhemiken Bridge, the former railway bridge located to the southwest, which is ascribed a regional rating (NIAH 20987009). The railway line and bridge were built c. 1903, with the triple-span red-brick bridge constructed to carry the road over the railway line. The line only operated for a brief time; after its official opening on 31st May 1904 by the Earl of Dudley, the Lord Lieutenant of Ireland, the line lasted less than 30 years, closing in 1932 (www.buildingsofireland.ie). While the line of the railway is preserved in length and width by the present field boundary, given the extent of vegetation overgrowth it was not possible to confirm the presence of any physical remains (e.g. tracks or rails) where it is crossed by the proposed road project. Both the disused line and the bridge are examples of early 20th century industrial heritage in this area and act as a reminder of the scale of the railway network which once criss-crossed the country.

Archaeological Potential

Given the proximity of two recorded standing stone sites and the waterlogged ground evident during field survey to immediately south of the proposed M28 Road Project (close to a former pond marked on the first edition OS map), this area is considered to have a high archaeological potential. It represents a wetland/dryland interface, between the site of the standing stone to the north (CO087-114; AH11), on the banks of the Glounatouig Stream, and the site of the standing stone to the south (CO087-114; AH11), close to a former pond and a waterlogged, low-lying area; the proposed M28 Road Project traverses the dryland between the two (AH53). There is also the possibility that features associated with the former railway line (BH5) survive within the field boundary crossed by the proposed road project.

15.3.4.9 Raffeen Townland (Figures 15.1e)

Physical Environment

The townland of Raffeen is located in the parish of Liscleary and the barony of Kerrycurrihy. The proposed road project crosses through the southern part of the large townland, where the natural topography has been disrupted by the presence of an extensive quarry located to the south of the existing N28 road. The proposed M28 Road Project crosses through the quarry, c. 35m to the south of the recorded sites of a destroyed ringfort and souterrain (CO087-034 & -090, AH12; **Figure 15.1f (Volume 5), Plate 15.24 in Appendix 15I**). The Raffeen / Ballyhemiken townland boundary (TB13) once ran through the area now occupied by the quarry; no trace of the boundary survives within the quarry. The Raffeen / Shanbally townland boundary (TB14) survives as an earthen bank with mature hedgerow, which also forms the boundary between Liscleary and Carrigaline parishes.

The proposed M28 Road Project crosses two surviving arable fields within Raffeen townland on the east side of the quarry, separated by a north/south local public road. The irregular-shaped arable field on the west side of the road had, as evident at the time of field survey, been recently ploughed, sloping down to the Glounatouig stream along its northern boundary with the N28 road (**Plate 15.25 in Appendix 15I**). Several modern houses occupy its north-eastern corner. A substantial rock outcrop, heavily covered in vegetation is located at its western boundary with the quarry and the field is crossed by a number of power lines. These power lines emanate from the electricity sub-station located a short distance southeast. The expansive arable field to the east of the road rises from the north/northeast, becoming relatively level in the southern half. It was formerly two fields, with traces of the east/west boundary evident in aerial photography and a stone gate-post surviving in the field c. 50m north of the proposed road project. No other features were noted in this area.

Cultural Landscape

Raffeen Quarry extends across an area shown on the first edition six-inch OS mapping as large fields to the east and west of the townland boundary between Ballyhemiken and Raffeen. There are few features of interest depicted on the 1841-2 OS map in the vicinity of the proposed road project in Raffeen townland. One of these is a lightly hachured circular enclosure depicting the now-destroyed ringfort (AH12). The ringfort is bisected east-west by a field fence and is located adjacent and west of the Ballyhemiken/Raffeen townland boundary. A small house is also depicted on the first edition OS map on the east side of the local road running north/south through the townland lies within the proposed CPO (AH34; no surface trace survives of this structure or associated garden plot; **Figure 15.11 in Appendix 15I**).

Archaeological Potential

The proposed M28 Road Project traverses the earthen-bank and hedgerow boundary between Raffeen and Shanbally townlands and Liscleary and Carrigaline parishes (TB14); this townland boundary bisects a specific area of archaeological potential (AH46) that was identified during the course of this assessment and is described below under Shanbally Townland, **Section 15.3.4.10**. In addition, the site of a pre-1840s structure (AH34) lies within the proposed CPO on the opposite (east) side of the local public road. As with all areas of greenfield, there remains the potential that previously unknown sites or features may survive below the present surface in the two surviving fields on the east side of the quarry (Chainage 7750-8250).

15.3.4.10 Shanbally Townland (Figures 15.1e & 15.11)

Physical Environment

The townland of Shanbally is located in the parish of Carrigaline and the barony of Kerrycurrihy, with the land generally sloping gently down to the Owenboy River to the south, from a height of 100m OD in the centre of the townland; the proposed road project crosses this ridge of higher ground. The land is predominantly in pasture and the townland and field boundaries are mostly earthen banks covered in mature hedgerow. The proposed road project crosses the southern half of Shanbally townland, from east to west, roughly following the lines of the 110kv cables stretching from the substation in Raffeen to a second substation in Barnahely townland, just east of the Shanbally/Barnahely townland boundary. The route runs through relatively flat fields of good, level pasture and one arable field, located on the ridge of higher ground, with extensive views south over the Owenboy River valley; such conditions tend to be attractive for settlement in all periods (**Plates 15.26 & 15.27 in Appendix 15I**). One of the fields is in use as a football pitch by Hibernian Football Club. The route passes between two recorded archaeological monuments; a ringfort and souterrain (CO087-039 & -119, AH14) to the north in a recently ploughed arable field and an enclosure to the south in a large pasture field (CO087-040, AH15). The proposed CPO is c. 25m north of the RMP zone of archaeological potential (ZAP) for the enclosure site and c. 55m from the outer bank of the monument (which is preserved in a field boundary); the CPO is c. 50m south of the RMP ZAP for the ringfort and c. 90m from the outer bank of the monument (which is preserved in a field boundary). The level ground surface of the pasture fields suggests that most if not all of these fields have been ploughed in the past; there is evidence for plough furrows as crop marks in some of the fields on aerial photography (www.maps.osi.ie).

Cultural Landscape

The proposed M28 Road Project runs roughly eastwards through the centre of Shanbally townland, to the south of the principal Cork/Ringaskiddy road (N28), and north of Shanbally village proper. There is a marked difference in the landscape north and south of the N28 road on the first edition map, with a patchwork of small fields and roads to the south, through which the proposed road project travels, and larger fields – some wooded – and a quarry to the north. The quarry, which is marked on all of the historic OS maps produced good quality stone in the mid-19th century, which was exported by boat to Cork and other locations (*CRDS, 2009*).

There are two distinct clusters of settlement to the south, beginning at the junction of the principal Cork/Ringaskiddy road (named Shanbally Cross Roads), where there is a R. C. Chapel, School House and several houses. More houses and cottages are depicted along the public road leading south from the crossroads to Shanbally village (so-named on the first edition OS map; **Figure 15.11 in Appendix 15I**). The village is laid out along a broad stretch of road, with additional houses to the east and west. By the time of the 25-inch edition OS map in the later 19th century, the two settlement clusters were distinguished by name: Lower Shanbally at the crossroads and Upper Shanbally to the south, the latter being greatly reduced in size by this time. The greater map scale provides additional detail, indicating a Dispensary in Upper Shanbally and a Smithy as one of the structures situated along the road between the two settlements. In contrast, the settlement at the crossroads is relatively unchanged, perhaps a result of its location at the crossroads on a principal road. This is reflected in the almost total absence of vernacular architecture in the area closest to the proposed road project: one small derelict cottage, obscured by vegetation, survives on the south side of Upper Shanbally; another, now in use as a metal workshop, is extant on the road north to the crossroads. Although there is a small grouping of 20th century housing on the south side of the proposed road project, on the site of old Upper Shanbally, most of the modern and surviving 19th

century architecture is centred on the crossroads to the north. None of the upstanding pre-1840s structures are located within the proposed CPO. The sites of four small structures depicted on the first edition OS mapping in Upper Shanbally lie within the proposed CPO (AH38, AH4, AH52 and AH66).

A considerably later, mid-20th century grotto was noted during the field survey in Upper Shanbally. The Marian Shrine (CH1) stands just south of (c. 5m) the proposed CPO.

The first edition OS map also depicts the recorded ringfort and enclosure that lie north and south of the proposed road project (**Figure 15.11; Plates 15.28 and 15.29 in Appendix 15I**). The ringfort to the north (CO087-039, AH14) is shown as a circular earthwork with a substantial gravel pit on its north side, accessed by a laneway from the main road to the north. By the time of the revised edition OS maps, the northwest quadrant is depicted as removed, presumably as a result of quarrying the adjacent pit. A souterrain is recorded in the southeast quadrant of the ringfort (CO087-119, AH14). According to local information, an earth-cut souterrain with an opening (W 0.88m; H 0.65m) in the southeast quadrant of the ringfort was accessible in the 1960s. It consisted of passages and some possible chambers. Also according to local information, in the early 1990s a part of the sports field to the northeast of the monument collapsed but it was filled in (*RMP file*). The ringfort was found to be inaccessible due to overgrowth, both during the Archaeological Survey of Ireland surveys of 1985 and 2004 and during the present field survey, rendering a thorough examination impossible (**Plate 15.28 in Appendix 15I**).

The RMP file also noted two swallow holes c. 100m south of the ringfort (within the proposed CPO; AH16), which may indicate that the souterrain extends southwards rather than, or perhaps in addition to, north eastwards. Neither of the swallow holes was evident in the field, with both lying in an area that was recently ploughed at the time of inspection (nor is there any indication on the first or subsequent edition OS maps). The recorded ringfort (CO087-040, AH15) to the south of the proposed M28 Road Project is depicted as a D-shaped enclosure and was probably originally bivallate (*RMP file*). The revised edition OS maps show that it was greatly disturbed sometime in the later 19th century, with only the northern half depicted. It now survives only as a curve in a field boundary. A significant earthen bank covered in mature hedgerow runs in a north-south direction for approximately 75m (passing through the proposed road), connecting the ringfort and souterrain (AH14) with the D-shaped enclosure (AH15). The area within the proposed CPO containing both field boundary and swallow holes is designated as a specific area of archaeological potential (AH16).

A third swallow hole is depicted on the first edition OS map, c. 300m southwest of the ringfort, on the south side of an unusual kink or curve in the field boundary at the juncture of three fields (within the proposed road; AH46). As above, the swallow hole was not evident in the field, which had been recently ploughed at the time of survey.

Archaeological Potential

Both the recorded ringfort and enclosure (CO087-039 & -040, AH14 & 15) occupy the higher ground in the townland, as does a second recorded enclosure site (CO087-041) c. 270m to the south. The swallow hole and curving field boundary (AH46) depicted on the first edition OS map also occur on this elevated contour, on the south-facing slope overlooking the Owenboy river valley. Two swallow holes (AH16) were noted by the Archaeological Survey of Ireland as indicating the possible continuation of a recorded souterrain (CO087-119, AH14; associated with the ringfort located c. 300m northeast, CO087-039). In addition, a significant earthen bank covered in mature hedgerow runs in a north-south direction for approximately 75m (passing through the proposed road project),

connecting the ringfort and souterrain (AH14) with the D-shaped enclosure (AH15). While the swallow hole depicted on the historic map may represent a natural geological feature, it is also possible that it marks the location of a souterrain, with a possible enclosure site fossilised in the curve of the field boundary (AH46). Given the intensive cultivation of the fields in this area in the past, it is possible that there were further ringforts and souterrains situated along this south-facing ridge, of which there is now no surface trace. In addition, the sites of four pre-1840s structures lie within the proposed M28 Road Project (AH38, AH4, AH52 & AH66). The proposed M28 Road Project also traverses the earthen-bank and hedgerow boundary between Shanbally and Barnahely townlands and Liscleary and Barnahely parishes (TB15).

15.3.4.11 Barnahely Townland (Figures 15.1f, 15.1g, 15.1h, 15.2, 15.3, 15.12 to 15.14)

Physical Environment

The large townland of Barnahely, is located in the parish of Barnahely and the barony of Kerrycurrihy. The townland, which is located between Monkstown Creek in the north and the Owenboy River in the south, is dominated by pasture with some tillage fields. In the past, however, the land has been largely arable; Lewis describes the parish of Barnahely in 1837 as being ‘almost entirely under tillage... [with] no waste land [and] a tract of marshy land on the estate of Castle Warren [that] has lately been reclaimed and is now applied to grazing’. This tallies with the findings of the field survey, where the majority of pasture fields encountered were found to have a level ground surface typical of previously ploughed fields. The topography is gently undulating, with a ridge of higher ground that runs through the townland and highpoints of 50m OD, such as the rocky outcrop occupied by Castle Warren.

The landscape is noticeably impacted by the level of industrialisation in the area, which is influenced by proximity to Cork Harbour and Ringaskiddy Port. Pylons carrying 110kV cables cross the townland from the substation at the Shanbally/Barnahely townland boundary (TB15), roughly along the line of the proposed M28 Road Project (**Plate 15.31** in **Appendix 15I**). The Barnahely Substation is located just southeast of the proposed Shanbally Interchange, which occupies much of a large arable field. To the east of the R613 road, a large wind turbine has been erected to the rear (west) of the expansive site occupied by Janssen Biologics Ireland, both of which are located immediately north of the proposed road project. Another very large site immediately south of the proposed M28 Road Project is occupied by Novartis, a pharmaceutical company. Further south, on the west side of the R613, are modern farm buildings and a manufacturing plant (Carbon Group Ltd).

The townland includes the highest number of recorded archaeological sites / monuments in the study area (**Figures 15.1f & 15.1g** in **Volume 5**), including the site of a gate lodge (CO087-05002, AH19), a recorded enclosure site (CO087-106, AH26), a graveyard and church site (CO087-05101 & 02; AH20), a tower house and bawn and the site of an ornamental tower (RMP CO087-05201 & 03, -052002, RPS 01260; AH 22 / BH11). The townland also contains the former demesnes of three large 18th century houses, Prospect Villa (BH6; no trace of the house surviving), Ballybricken (BH13; no trace of the house surviving) and Castle Warren (RPS 01260, RMP CO087-05201; BH11 & AH22).

Cultural Landscape

Barnahely Townland (West of Castle Warren)

The proposed M28 Road Project crosses east from Shanbally into the very large townland of Barnahely, the name of which dates to as early as c. 1301 (www.logainm.ie). The proposed Shanbally

Interchange extends north and south across the Shanbally/Barnahely townland boundary (TB15, which also forms the boundary between the parishes of Carrigaline and Barnahely).

The proposed Shanbally Interchange traverses an area depicted as a cluster of properties on the first edition OS map, named 'The Kennel' (AH50). The irregular grouping of structures and yards access the fields to the south and east via by two laneways or tracks (**Figure 15.12** in **Appendix 15I**). Some of the buildings have disappeared by the time of the revised edition OS maps, while the associated laneways / tracks have been truncated. The settlement cluster lies immediately south of demesne lands that form part of the Ballybricken estate to the north (BH13). Bearing in mind the name (The Kennel) associated with the remaining structures, it is possible that some of these structures were once operated as kennels by the Ballybricken estate. Certainly at the time of Griffith's Valuation in the 1850s, the houses and land were being leased from Daniel Connor Esq. of Ballyhemiken House (www.askaboutireland.ie/griffith-valuation). A broad thoroughfare, c. 20m wide and c. 700m long, with trees lining each side is depicted on the first edition OS map (1841-2), immediately north of The Kennel (AH50). This is an unusual feature, as it does not form part of the pleasure walks associated with Ballybricken estate (no footpath indicated), nor is it a carriageway or entranceway (no associated entrance to the estate is shown here). While it is possible that it fossilises a former entrance avenue (entrance since removed), it is also possible that it formed an exercise area or racing area associated with The Kennel. The entire area now comprises one large arable field crossed by pylons, with crop stubble obscuring the ground surface, and a new road accessing the Janssen plant forming the northern field boundary (**Plate 15.30** in **Appendix 15I**). There was no visible surface trace of any of the features depicted on the historic OS mapping.

The southern boundary of this field forms the Barnahely/Shanbally townland boundary as well as the Carrigaline / Barnahely parish boundary (TB15); the area around the boundary is very overgrown and the land immediately south has been quarried out (within Shanbally townland, in the location of the proposed Shanbally South roundabout). A small structure in a rectangular garden plot is depicted on the first edition OS map just west of the Prospect Villa demesne; there is no surface trace of the structure; the plot lies within the proposed CPO (AH21, **Figure 15.14** in **Appendix 15I**; **Appendix 15B**).

From here the proposed M28 Road Project crosses into the former demesne of Prospect Villa (BH6), a substantial country manor depicted on the first edition OS map, along with associated gate lodge and entrance avenue off the Shanbally road and a walled garden in its south-eastern corner (a small structure, possibly a gardener's cottage, is attached to the north-western side of the garden; neither is upstanding and the site of the walled garden, AH60, lies partly within the proposed CPO). The RMP files record another gate lodge associated with Prospect Villa (CO087-050002, AH19), which is depicted on the later 19th century revised edition OS map (having replaced the earlier lodge to the northwest); the site lies partially within the proposed CPO. The lodge is depicted on the late 19th century 25-inch edition OS map as a pair of small structures situated either side of an entrance way, at the demesne boundary (**Figure 15.13** in **Appendix 15I**). The structures were described in 2009 as a pair of hexagonal gate lodges (*CRDS 2009*); the site is now occupied by material mounded up along the dense field boundary, completely covered in vegetation. There was no visible trace of the recorded structures, though it is possible that above-ground foundation remains may survive that are obscured by vegetation and, if not, it is likely that remains of the structures survive subsurface.

Prospect Villa house and most of the associated features depicted on the historic OS maps have been removed, with a large part of the former demesne now occupied by the Janssen plant and a smaller factory on its east side. The only extant upstanding demesne features are boundary walls: the external stone boundary wall that survives in part along the north side of the Barnahely Road

and also along the southwestern demesne boundary where it is mostly obscured by furze (BH10, now a field boundary; the proposed CPO is c. 20m north of the surviving stretch of walling); and an internal stone demesne wall (BH22, now a field boundary) which is traversed by the proposed M28 Road Project (**Plates 15.32, 15.33 & 15.2 in Appendix 15I**).

A recorded enclosure site (CO087-106, AH26) is located c. 30m northeast of the proposed CPO (measured from the edge of the ZAP for the RMP site; measurement to edge of visible outer bank is c. 40m). The site was first identified as a cropmark on Cambridge University Aerial Photograph No. AIE 62, from which it was described as a bivallate circular enclosure (int. diam. c. 54m; ext. diam. c. 75m; *RMP file*). The site is not visible on most of the available aerial imagery, but an aerial photograph provided by TII Project Archaeologist Ken Hanley clearly shows the monument (**Figure 15.23**), suggesting a bi-vallate ringfort-like enclosure that is substantial in size, with external measurements of c. 70 m by 64 m. Given that the visible outer ditch of the bivallate enclosure is just c. 33m to the northeast of the CPO, there is the possibility that associated field enclosures or other features relating to the monument may extend within the proposed CPO.

A recorded ringfort is depicted on the historic OS mapping, appearing as a sub-circular enclosure (CO087-048; AH37. RMP ZAP c. 85m south of the proposed CPO & c. 115m from outer bank of ringfort to CPO). The monument stands within a large pasture field and is well-screened by its setting and the mature field boundaries. It occupies the same ridge of high ground as the ringforts noted to the west in Shanbally townland, with the sites of another three ringforts and souterrains recorded in Raheen townland (in the grounds of the Novartis pharmaceutical company) to the southwest (CO087-046 to -048 & CO087-102 to -104). The ringfort (CO087-048, AH37) was subject to archaeological testing in 2012 (Licence Ref. 12E0109), carried out to inform a potential research project, with additional investigations including geophysical survey (Licence Ref. 11R0115), topographical survey and metal-detecting (Licence Ref. 12R0040) of the entire ringfort site. In spite of modern disturbance in the interior, the testing confirmed the presence of structures within the north-east quadrant and also revealed a pit, two quern stones, possible hearth or kiln and two dry-stone lined linear features that were cut into the subsoil. The full extent of the linear features could not be ascertained but they have been tentatively interpreted as the possible remains of at least one souterrain (*Online Excavations Bulletin Ref. 2012:096*). This is significant in terms of the surrounding archaeological landscape of the study area, as it confirms the pattern of ringfort and associated souterrain seen, for example, in Shanbally townland. It also highlights the possibility that other previously unknown souterrains may survive below ground elsewhere in the townland and along the proposed road project. In addition to the recorded ringfort (RMP CO087-048) with possible souterrain, archaeological testing to the west and northwest of the monument in 2004 (in advance of a proposed factory development) identified two corn-drying kilns and a burnt spread (now designated as SMR sites CO087-145, CO087-146, CO087-156; AH37). The proximity of the kilns to the ringfort (c. 10m west) suggests an early medieval date but archaeological excavation would be necessary to confirm this (Cummins 2007, cited in SMR file CO087-156 & -146).

Barnahely Townland (Castle Warren)

The proposed M28 Road Project traverses the former demesne lands associated with Castle Warren (BH11, RPS 01260), c. 43m north of the protected structure and clips the northern boundary of the RMP zone of archaeological potential for the tower house and bawn, c. 43m north of the upstanding remains (AH22, RMP CO087-052). The proposed road runs east/northeast as a single-carriageway between Castle Warren and the recorded church and graveyard (AH20) and continues through an expansive arable field within the former demesne (formerly two separate fields on the first edition OS map; Chainage 11000-11250; **Figure 15.14 in Appendix 15I**).

The substantial 18th century country house (Castle Warren, BH11), which incorporates the remains of the late medieval castle, is depicted on the first edition OS map on the eastern side of the Shanbally / Ringaskiddy road junction, along with a gate lodge (AH13), a series of outbuildings, courtyard (bawn), orchard and walled garden (AH22). Although the demesne associated with Castle Warren is delineated on the first edition OS map by the Ringaskiddy/Carrigaline road along the west and a smaller, public road along the southwest and south, it is likely to have once extended across these roads to incorporate the fields containing the gate lodge (AH13) and walled garden that are also depicted on the first edition OS map (**Figure 15.14** in **Appendix 15I**).

The tower house and church site / graveyard at Barnahely were once linked historically, with the church presumably serving the occupants of the castle. This association had been lost by the beginning of the 18th century, if not before (see below & **Appendix 15A**), and the immediate setting of both sites has greatly altered over the ensuing centuries.

The first edition OS map shows a carriageway curving around from the east side of the house before branching to the west and north. The western carriageway leads to the gate lodge and curved entrance at the western corner of the estate. The second carriageway branches northwards, passing east of the graveyard and site of Barnahely Church (CO087-05101 & 02, AH20) and continuing to a secondary entrance to the estate at its north-eastern corner (thus accessing Ringaskiddy village). Given the antiquity of the castle and church site and their important temporal and spiritual connection, it is possible that the line of the northern-branching carriageway partially preserves the line of an original route linking the two sites. By the time of the first edition OS map, that direct connection appears to have been already lost, though it is possible that this occurred some time previously; the church is noted as being in much need of repair in the 1640s (and may have already fallen out of use) and was in ruin by 1700. There is no surface trace of this carriageway / pathway in the field of rough pasture on the northwest side of the castle (**Plates 15.35** and **15.36** in **Appendix 15I**), though a faint line can be seen in aerial photography from 2000 (www.maps.osi.ie). Archaeological testing undertaken in the field between between Castle Warren tower house and bawn (CO087-052, AH22) and the church site / graveyard to the north (RMP CO087-051, AH20) did not identify the path nor did it reveal any features that could be directly associated with either the castle or the church site (Hanley, Licence Ref. 04E0774 & *Pers. Comm.* February 2015; Cf. **Section 15.3.2.5** for discussion of a ditch uncovered in this area).

Views of Castle Warren from the east are marred by the presence of large factories, manufacturing plants and pylons (**Plate 15.37** in **Appendix 15I**). The line of pylons also dominates the views to the north/northeast, with modern housing also visible in this direction. The best views from the castle are away from the proposed road development, over the undulating fields sweeping down to Loughbeg to the southwest and extending to the south (**Plate 15.38** in **Appendix 15I**). The architectural assessment undertaken in 2005 noted that the retention of this visual connection between Castle Warren and Lough Beg was important, both in terms of visual amenity and also the historical relationship between the two (the castle would appear to have been originally constructed to protect this inlet of Cork Harbour; *Cronin 2005*). The setting of the medieval tower house on a height was undoubtedly a strategic decision, but there is no doubt that the creation of a formal demesne in the 18th century took full advantage of the extensive views and sweeping landscape. One example of this is the former belvedere tower (of which no surface trace survives) constructed a short distance south of the house (CO087-052002; AH22); such structures were architectural features of demesne landscaping, designed to take advantage of fine or scenic views within the grounds of an estate ('Belvedere' derives from Italian, meaning 'fair view'). The tower appears on the first edition OS map as a small square structure and is indicated as 'Turret' on the late 19th century 25-inch edition (**Figures 15.13** and **15.14** in **Appendix 15I**).

The setting of the former demesne (BH11) has been almost completely degraded – with the only original feature being the ruinous remains of the country house itself – though the surviving views to the south/southwest and the large undulating fields give a glimpse of its former character. The partly industrial and residential surrounds detract from the setting of the protected structure and RMP site. Small sections of stone walling (BH23, **Plate 15.4** in **Appendix 15I**) were visible along the former eastern demesne boundary, which is traversed by the proposed road project. These were mostly low in height and of dry-stone wall construction, more typical of a simple field boundary than a formal demesne boundary wall. Although one section was considerably higher and of mortared random-rubble construction, it appears to have been rebuilt at some stage in the past; this section lies outside of the proposed road project. An unusual kink in the boundary wall is depicted on the first edition OS map and the subsequent editions up to c. 1926-37 (AH65; Chainage 11250). The wall was straightened out some time in the 20th century and there is no visible surface trace of the earlier line of the boundary (Cf. AH65, **Appendix 15A** for results of archaeological testing in this area).

A modern breeze-block wall surrounds the later extensions to the original graveyard site (visible behind the pylons in **Plate 15.37** in **Appendix 15I**). There is no sense of the antiquity of the site from the exterior or indeed the presence of a former church site, when within the former demesne (the presence of an old graveyard at least is evident from the R613 road). It has the appearance of a later 20th century cemetery, rather than a medieval church site and burial ground. The first edition OS map shows a small rectangular graveyard with the possible outline of the ruined church drawn in the northeast corner (**Figure 15.14** in **Appendix 15I**). By the time of the 25-inch OS edition in the later 19th century, the graveyard had been extended to the northeast (**Figure 15.14** in **Appendix 15I**). During the 20th century, the graveyard was again extended, with an additional burial area created to the northeast along the roadside. Two further extensions between 2000 and 2005 to the east mean that the present cemetery is more than three times the length and width of the original small graveyard, which serves to dwarf and obscure the medieval site. In addition, a small yard enclosed by hedgerow now sits on the south side of the old graveyard, with sheds built up against the graveyard boundary.

From the interior of the original medieval graveyard, in the southeast corner of the modern cemetery, the antiquity of the site is evident in the higher ground level, old headstones and the mature yew trees growing close to a raised rectangular platform, possibly the site of the old church (**Plate 15.40** in **Appendix 15I**). There are some restricted views of Barnahely Castle / Castle Warren from the church site, with mature trees both inside and outside of the graveyard (**Plate 15.40** in **Appendix 15I**). It is not clear, however, that a visual link between the two sites would ever have been of primary concern; churches and graveyards commonly have an enclosed aspect and insular focus, rarely being designed to take in views of the surrounding landscape. The first edition OS six-inch map (1841-2) and subsequent revised editions show the Barnahely to Ringaskiddy Road (R613) running along the western graveyard boundary; this road was widened in the later 20th century and the proposed road project CPO is aligned with the new road. The recorded church site and earlier graveyard are now enclosed within a larger, modern cemetery.

It is not known whether the land immediately surrounding the castle was landscaped during the 17th (or earlier 18th) century. Unlike the expansive naturalised parkland of later demesnes (from the 1740s onwards), 17th century landscape design tended to be formal and symmetrical, in the immediate vicinity of the house, with a focus on geometrical shapes (common elements included tree- or shrub-lined avenues and allées, parterres, knot gardens and bowling greens). No such elements are fossilised in the 19th century Castle Warren demesne (as represented on the first edition OS map) and none were identified during archaeological testing along the proposed route in

this area. While this may indicate that there was never any formal landscaping design pre-1700, it is possible that all surface trace of such features has simply been removed.

Barnahely Townland (East of Castle Warren)

The proposed M28 Road Project leaves Castle Warren demesne and continues east through two long narrow pasture fields (Chainage 11250-11500) (**Plate 15.41** in **Appendix 15I**). The fields are depicted almost in their present form on the first edition OS map, with the exception of an additional field boundary subdividing the eastern field, creating a smaller field at its north end. A lane or pathway (AH47) is shown running roughly along the line of the present dividing north/south field boundary before crossing east/west through the eastern field, where a small structure is depicted on its north side (AH23; within the proposed road project), then turning north along the Barnahely/Loughbeg townland boundary (**Figure 15.14** in **Appendix 15I**). At its south end, the footpath terminates at a small L-shaped building in a large plot. This is most likely a school house (it has been enlarged and named 'Ringaskiddy School' on the 25-inch edition OS map) with the footpath providing access from the village of Ring (Ringaskiddy) depicted to the north. By the time of the revised edition OS maps, the slightly meandering footpath has been replaced by a simple field fence, with a new pathway created along the opposite (eastern) field boundary to provide access to the school, and the small structure to the north has disappeared. There was no visible surface trace of either feature in the field.

There is no indication on the historic mapping of the enclosures and other features revealed through geophysical survey and archaeological testing in the two fields either side of the Castle Warren demesne boundary (CO087-155, AH33 & AH48; described in **Section 15.3.2.4**). A faint crop mark is visible in the aerial photograph of the probable ringfort and it is identifiable in the field as a curved, slightly raised plateau on the highest point in the field (www.maps.osi.ie; **Plates 15.39** and **15.41** in **Appendix 15I**).

Archaeological Potential

The archaeological potential within the proposed CPO in Barnahely townland is high. It includes two areas of known archaeological significance identified through geophysical survey and confirmed by archaeological testing to the northeast of Castle Warren: the recorded enclosure site SMR CO087-115 (AH33) and the newly identified possible bi-vallate ringfort, a possible ring-ditch, parts of a second large enclosure and early field system, and a cluster of pits in the adjacent field (AH48).

The recorded site of the former Prospect Villa gate lodge lies partially within the proposed CPO (RMP CO087-050002, AH19). In addition, a specific area of archaeological potential (AH17) has been identified within the proposed CPO in the former Prospect Villa demesne where the proposed M28 Road Project is in proximity to a recorded ringfort, souterrain, kilns and burnt spread (AH37, c. 85m south). Archaeological potential is also high at the western end of the townland where the proposed road project is in proximity to a recorded enclosure site (AH26).

A number of structures or features depicted on the first edition OS map (within the proposed CPO) are no longer upstanding and there is the potential that remains associated with them may survive subsurface: the settlement cluster named 'The Kennel' (AH50); a small structure (AH21) just west of the former Prospect Villa demesne; the site of the walled garden (AH60) within the former Prospect Villa demesne; a kink in the demesne boundary wall (AH65); and a small dwelling and lane or pathway (AH23 & AH47) to the east of Castle Warren demesne. The site of the former Castle Warren

gate lodge (AH13) lies c. 6m west of the CPO; the associated curved entrance way opposite the lodge lies partly within the CPO.

15.3.4.12 Loughbeg Townland (Figures 15.1g, 15.15 to 15.17)

Physical Environment

The townland of Loughbeg is located in the parish of Barnahely and the barony of Kerrycurrihy. The land is generally low-lying, sloping up towards a highpoint of 43m OD in the neighbouring townland of Ringaskiddy. The townland is bounded to the south by a small inlet, 'Lough Beg' or small lake, which gives the townland its name, and is roughly bisected by the north / south line of Old Post Office Road. The field boundaries consist predominantly of earthen banks covered in mature hedgerow, as does the Barnahely / Loughbeg townland boundary (TB16). The one exception to this was a boundary wall of dry-stone construction (BH19) dividing two of the small pasture fields on the west side of Old Post Office Road, which once formed part of the property associated with Rose Lodge in Ringaskiddy village (BH2). The boundary between Loughbeg and Ringaskiddy townlands has been replaced with a new road leading south from the coast road, providing access to new housing developments and two large industrial plants further southeast. The proposed M28 project crosses a number of relatively flat, level pasture fields, generally devoid of features, and through the grounds of an unoccupied industrial / business park.

Cultural Landscape

The proposed M28 Road Project continues eastwards from Barnahely townland into the narrow townland of Loughbeg. The first edition OS map shows the area subdivided into a network of small fields, through which the proposed M28 Road Project travels before crossing the public road running south from Ringaskiddy (named Post Office Lane on the 25-inch OS edition). One of the fields (Chainage 11750) appears to be associated with Rose Lodge, a property to the rear of 'Ring' village (Ringaskiddy), comprising a house, outbuildings, walled garden and entranceway (BH2; **Figure 15.15** in **Appendix 15I**). The small rectangular field or paddock is separated from the principal property plot, however, and no features are depicted within it on the historic maps. Field survey identified a boundary wall of dry-stone construction dividing two of the small pasture fields on the west side of Old Post Office Road (BH19); the wall aligns with the boundary along the west side of the paddock associated with Rose Lodge and is probably the remains of an original property boundary associated with the house (**Plate 15.42** in **Appendix 15I**). Rose Lodge survives into the early 20th century, but is depicted as a much smaller structure on the revised edition OS map of the 1930s and is now in ruins. This small stretch of wall represents a rare survival in this area of vernacular features associated with the rural landscape, such as boundary walls, gates, gate posts etc. It is an attractive feature of the built heritage in this area and is of local heritage interest.

Several small structures are grouped together on Post Office Lane on the first edition OS map (**Figure 15.15** in **Appendix 15I**), one of which lies within the proposed CPO (AH25; this structure is no longer upstanding). The structures have been greatly altered by the time of the 25-inch OS map (1897-1904; **Figure 15.16** in **Appendix 15I**); either enlarged or entirely replaced by larger structures. The ruins of one of these structures (BH9) survives within the plot boundaries, although it is entirely obscured by vegetation (**Plate 15.43** in **Appendix 15I**); the structure lies outside of the proposed CPO, c. 20m south. The first edition OS map also depicts scattered housing strung out along the east/west local road to the south; six of these structures, none of which are upstanding, are located within the proposed CPO (AH24, AH55 to AH59; **Figure 15.15** in **Appendix 15I**).

Continuing further eastwards, the proposed M28 Road Project passes through a series of neat fields arranged to the rear (south) of Rock Cottage (BH4; **Figure 15.15; Plate 15.44** in **Appendix 15I**). The fields slope steadily down to north, towards the sea, with new housing along the north boundary, within the former grounds of Rock Cottage. A house is shown on the site of Rock Cottage on the first edition OS map and later 19th century revised edition, with a similar footprint (and also named Rock Cottage on the later map); it is located on the seafront within Loughbeg townland and appears to be one of the more substantial properties in Ringaskiddy at the time (BH4). According to the NIAH Building Survey much of the building's fabric appears to date from the first decades of the 20th century, at which time it may have been rebuilt or renovated (NIAH Ref. 20987045). The now-derelict cottage is not visible from the proposed road project, being set well downslope and clustered within both 19th century and modern housing development, and screened by existing field boundaries. The proposed M28 Road Project crosses a lane depicted on the first edition OS map (AH51; **Figure 15.15** in **Appendix 15I**) accessing a small structure to the south of Rock Cottage; the structure does not lie within the proposed road. Although the structure and access lane are depicted on all of the historic OS maps, there is no surface trace of either; the arable fields to either side of the laneway are under crop stubble, with a wide access gap in the hedgerow field boundary that separates them (**Plate 15.45** in **Appendix 15I**). Large mounds of soil and vegetation have been dumped at either end of the western field.

A second structure listed in the NIAH is located in Loughbeg townland, within Ringaskiddy village. Ringaskiddy Oratory (NIAH 20987044) was not constructed until 1923 and appears on the revised edition OS six-inch map (1927-36); as with Rock Cottage, the structure fronts onto the coast road and is not visible from the proposed road project.

Archaeological Potential

The sites of seven pre-1840s structures lie within the proposed CPO in Loughbeg townland (AH24, AH25, AH55 to AH59). Although none of the structures is upstanding, it is possible that features relating to them may survive subsurface. The proposed M28 Road Project will also traverse the earthen-bank boundary between the townlands of Barnahely and Loughbeg (TB16). In addition, the proposed M28 Road Project travels through previously undeveloped greenfield, towards the east end of the ridge of higher ground that extends from Shanbally to the west, with good views over Cork Harbour and the estuary. The inherent archaeological potential of greenfield areas is increased by the topography, with a prevalence of ringforts, enclosures and souterrains recorded elsewhere along this elevated contour in Shanbally and Barnahely townlands. The area has been intensively cultivated in the past and continuous ploughing would have destroyed any upstanding archaeological sites or features that may once have been present. There remains the possibility that previously unknown archaeological sites or features may survive below ground.

15.3.4.13 Ringaskiddy Townland (Figures 15.1g, 14.15 & 14.17)

Physical Environment

The townland of Ringaskiddy is located in the parish of Barnahely and the barony of Kerrycurrihy, at the eastern limit of the proposed road, where it connects to Ringaskiddy Port and to the proposed Service Area. The landscape is dominated by an east-west trending ridge of land, which rises to a maximum height of 43m OD. The land is predominantly in pasture, with some rough ground on the northern slopes of the ridge; the proposed road crosses from the level fields along the port road, through these slopes (**Plates 15.47** and **15.48** in **Appendix 15I**). It passes close to the Martello Tower, which is located on the crest of the ridge and takes strategic advantage of the extensive

views over Cork Harbour and Spike Island (**Plates 15.49 and 15.50 in Appendix 15I**). The Martello Tower is the only protected structure recorded in the vicinity of the proposed M28 Road Project in Ringaskiddy townland and is also a recorded archaeological monument (RMP CO087-053 / RPS 00575, AH35 / BH1).

Extensive tracts of land within the townland are given over to industrial development, such as the car lot within which the proposed service area is partly sited. There has been a significant amount of land reclamation along the coastline, with the original shoreline some 340m inland of its current location.

Cultural Landscape

The proposed M28 Road Project crosses the Loughbeg/Ringaskiddy townland boundary (TB17) and runs eastwards through the townland. The most prominent feature on the first edition OS map is the Martello Tower, set in its wide circular fosse. The Martello Tower (AH35 / BH1) has extensive views over the estuary to the north and is relatively well screened by the topography of the surrounding fields and the field boundaries and the proposed M28 Road Project will be in fill where it crosses to the north of the tower. There are extensive views over the estuary from the tower.

A former road or track (AH54; crossed by the proposed road project) leads south from the coast to the Martello Tower, cutting through a patchwork of small fields to provide direct and easy access from the seafront at the village to the tower (**Figure 15.15 in Appendix 15I**). It is possible that the road / track was constructed to access the Martello Tower in the early 19th century. Alternatively, it may be that this was an existing route that led from Ringaskiddy, pre-dating the construction of the Martello Tower (e.g. a drover's road to the pastures above the village). The line of the road / track is still partially visible as a cropmark in aerial photographs to the east / southeast of the proposed road (www.maps.osi.ie), but there was no surface trace visible during the field survey. Where the proposed M28 Road Project crosses it (Chainage 12250), the line of the former road runs along the southern edge of an area of dense woodland.

The location of the proposed Service Area is on reclaimed land, shown as an area of sands, mud-flats and estuarine water on the first edition OS map (**Figure 15.15 in Appendix 15I**), just north/northeast of the village of Ring (now Ringaskiddy). The village proper (as named) is located within Loughbeg townland, though there are two additional clusters of settlement along the seafront to the east/northeast and west. By the time of the revised edition OS maps in the late 19th/early 20th century, the location of the proposed Service Area is little changed, remaining within the mud-flats of the foreshore. In contrast, there has been quite a significant change along the seafront. The majority of the jumble of small dwellings depicted on the earlier map to the east/northeast of the village have been removed and the land cleared for Ring House (depicted but not named; NIAH 20987046, BH3; **Figure 15.17; Plate 15.52 in Appendix 15I**). The large farmhouse is set well back from the coast road in a long narrow plot that is situated centrally within a much larger field, with a straight entrance avenue running from the road to the house. The proposed M28 Road Project passes through the low-lying level field in which the house and its plot are situated (c.45m southeast) and continues along the ridge of high ground. It runs to the rear (south/southwest) of the house, which is not very well screened by its existing boundaries. There has been further development in and around Ringaskiddy Village (now named as such), with new properties infilling former open fields.

Archaeological Potential

The proposed road crosses the low-lying level fields of rough pasture along the south side of the coast road that are depicted on the first edition OS map as open field along the sea-front, with no change on subsequent historic OS maps. Given the topography and the reclamation of the mud flats along the foreshore in the 20th century, it is possible that this low-lying area at the base of the high ridge to the south also formed part of the foreshore in the past. This land has an inherent archaeological potential, given its position at a wetland / dryland interface (AH49). The proposed road project also crosses the line of a road depicted on the first edition OS map (AH54; **Plate 15.51** in **Appendix 15I**), possibly an access road associated with the Martello Tower, though it may also be an earlier routeway.

The archaeological potential of the wetland / dryland interface (AH49) is also relevant to the proposed Service Area of c. 1.77Ha, which is located in the Port of Cork lands to the east of Ringaskiddy village. It occupies part of the vast tarmac-surfaced car lot of National Vehicle Distribution Ltd, as well as a greenfield site to the east. As is evident from the cartographic analysis, the land on which it sits has been reclaimed; from at least the early 19th century, this area lay north of the former shoreline, within the sands, mudflats and water of the River Douglas estuary. The topography depicted on the first edition OS map (1841-2) remains unchanged on subsequent revised editions until 1927-34, with the land reclaimed sometime after this (AH49). Aerial photography from 1995 shows the land to be undeveloped, rough pasture, with the car lots expanding into part of the proposed Service Area site between 2000 and 2005 (www.maps.osi.ie). As there has been no major structural development within the brownfield part of the site, any modern disturbance to this area may not extend far beneath the current surface. Given that this land was reclaimed, it is also possible that there is a considerable depth of reclamation material, which may overlie any archaeological deposits that may be present. The archaeological potential of wetland/dryland interface is particularly high, with preservation levels in former mudflats being potentially good for organic material. The number of middens recorded elsewhere around the Ringaskiddy and Curraghbinny peninsula suggests a high level of coastal activity in this area from (possibly) as early as the prehistoric period onwards. This further increases the archaeological potential of the proposed Service Area site.

There are no other specific areas of archaeological potential within the proposed M28 Road Project in Ringaskiddy townland, however, the proposed road travels through previously undeveloped greenfield, at the east end of the ridge of higher ground that extends west from Ballyhemiken, with good views over Cork Harbour and the estuary (Chainage 12020-12300). The inherent archaeological potential of the greenfield areas is increased by the topography, with a prevalence of ringforts, enclosures and souterrains recorded elsewhere along this elevated contour in Shanbally and Barnahely townlands.

15.3.5 Results of Visual Structural Inspection, Castle Warren

A visual structural inspection of the Castle Warren ruins was carried out in March 2017 by a Chartered Structural Engineer in order to assess if the proposed roadworks might have an adverse effect on the structural integrity of the remaining ruins (See **Appendix 15H** for full report and photographs).

The ruins that currently exist (ruins to the west were apparently demolished in the 1980s) measure approximately 32m x 32m on plan, and enclose a central courtyard approximately 20m x 16m. No floors remain, but evidence of intermediate floors exist, with corbels and spaces for floor joists

visible in many areas. The ruins appear to have been used for farming purposes in the recent past, with mass concrete walls dividing some rooms, and a significant concrete wall at the northern end of the ruin. A portion of the courtyard also appears to have a mass concrete slab bearing on the ground.

The majority of the visible / accessible structure appears to be in relatively good condition, given its age, and the fact that the ruin has not been maintained to any degree. The majority of areas of deterioration are to be expected, such as where timber lintels have rotted away, resulting in the masonry overhead beginning to collapse. These collapses will continue until they are addressed.

Vegetation growth is also a significant issue throughout the ruin. Creeping vegetation such as ivy etc. makes its way into the joints, breaking mortar, resulting in masonry units becoming unbonded, and susceptible to failure. It is likely that the vegetation growth is aiding holding the structure together at this stage. Any plans to remove vegetation should involve immediate repointing of all masonry joints with a suitable mortar (likely lime mortar mix).

There are areas that are cause for concern; these more vulnerable areas are generally associated with the higher parts of the ruin to the east and south. The primary area of concern is the wall between areas 4 and 5 (Cf. **Appendix 15H**). This is a significant ope, with considerable load overhead. There is no lintel apparent (it is not clear if there was ever an original ope here). Also, there is significant masonry loss to the walls below the bartizan. Again, it is not clear as to why there is so much loss in such a local area.

In terms of the proposed roadworks, it is proposed to import fill to raise the levels 2 - 3.5m over the existing levels. The closest the proposed roadworks (bottom of the embankment) will be to the ruin is approximately 50m. Given that there is no excessive excavation required, and there will be no rock-breaking in the area etc., it is likely that vibrations from the works will be solely from normal plant movement and compaction machinery. Given the distance between the works and the ruin (c. 50m), it is unlikely that any significant vibrations will travel as far as the ruin. However, there are likely to be collapses at the ruin in the future (similar to the collapses that have happened in the past). These collapses may occur with or without the proposed M28 Road Project.

15.4 POTENTIAL IMPACTS

The determination of the impacts is assessed with reference to the Glossary of Impacts provided in *the Advice Notes on Current Practices in the preparation of Environmental Impact Statements, EPA, 2003, Guidelines for the Assessment of Architectural Heritage Impact of National Road Schemes, NRA, 2006 and Guidelines for the Assessment of Archaeological Heritage Impact of National Road Schemes, NRA, 2006*. The overall level of impact is calculated by assessing the sensitivity/significance of the asset (i.e. baseline rating) against the magnitude of the impact producing an overall significance rating (**Appendix 15D**).

Details of each asset is contained in the inventories of archaeological, architectural and cultural heritage in **Appendices 15A-15C**, which also provide the locations of the assets, distance from CPO, impact magnitude, baseline rating, type and quality of impact, and mitigation measures.

Summary tables outlining impact assessment and mitigation measures are provided at the end of this chapter (**Tables 15.2 & 15.3**).

15.4.1 Archaeological and Cultural Heritage

15.4.1.1 Impacts on RMP & SMR Sites

Direct Impacts on RMP & SMR Sites

There will be a direct profound negative impact on a *fulacht fia* in Shannonpark townland (AH9, RMP CO086-115) and an enclosure site in Barnahely townland (AH33, SMR CO087-155; two sub-circular enclosures, possible early medieval metal-working sites, identified through geophysical survey and confirmed by archaeological testing).

There will also be a direct significant negative impact on two RMP sites: a standing stone site in Ballyhemiken townland (AH10, RMP CO087-113); and the site of a gate lodge associated with Prospect Villa in Barnahely townland (AH19, RMP CO087-05002).

Indirect Impacts on RMP & SMR Sites

There will be an indirect significant negative impact on Castle Warren tower house and bawn (RMP CO087-052001 and -052003, AH22) and the nearby church site and graveyard (RMP CO087-051001 and -051002, AH20) in Barnahely townland. The proposed road will run between the two RMP sites which were once historically linked (Cf. **Section 15.3.4.11**):-

- The proposed CPO clips the northern boundary of the RMP zone of archaeological potential (ZAP) for the tower house and bawn. The upstanding remains of the tower house and bawn are located within the ruined Castle Warren country house, c. 43m south of the CPO and will not be directly impacted.
- The proposed CPO also traverses the zone of archaeological potential (ZAP) for the church site and graveyard, to the west and south of the historic graveyard boundaries as represented on the early 19th century Ordnance Survey mapping. The proposed mainline CPO is c. 20m south of the southern graveyard boundary wall and avoids the church site and associated graveyard. The proposed works along the existing Barnahely to Ringaskiddy R613 road (on the west side of the graveyard) will take place within the roadtake of the existing road and therefore will avoid the boundaries to the graveyard. The proposed road project avoids the known and visible extents of the church site and graveyard, and as such, there will be no direct impact on the RMP site.
- It is possible that features associated with the RMP sites may survive subsurface within the proposed CPO. Archaeological investigation of the area in between the graveyard and tower house has, to date, yielded very little of interest, with no evidence for domestic / settlement activity, no burials, and no features directly associated with either the tower house or the church identified (Cf. Section 15.3.2.5). There is the potential that discrete features may survive within the areas outside of the test-trenches (these may include features associated with pre-1700 demesne landscape, if any were present) or that burials may extend outside of the known graveyard boundaries to the west, beneath the R613 road.
- The proposed road project will also negatively impact upon the visual amenity of the two sites, though the partially industrial nature of the surroundings already detracts from the immediate setting of both sites, as does the large modern cemetery extension to the original graveyard. The proposed M28 Road Project will serve to augment the industrial feel of the area surrounding the sites, by cutting through the surviving agricultural fields within the former

Castle Warren demesne; one of the few remaining rural aspects left in the vicinity. The castle will retain a reasonably sound connection with the rural landscape towards the south, southeast and southwest, where there are still some good rural vistas and where shallow boats most likely once ferried goods to and from the castle. This visual connection between Castle Warren and Lough Beg was significant, both in terms of visual amenity and of the historical relationship between the two (the castle would appear to have been originally constructed to protect this inlet of Cork Harbour).

- In general, the proposed M28 Road Project will open up views to Castle Warren, which is, at present, somewhat hidden in the landscape. The original medieval tower house was constructed on a prominent site, both to capture significant views for strategic purposes and also to be seen, thus allowing it to dominate the local landscape (in much the same way as the later Martello Tower in Ringaskiddy). With the proposed road increasing its visibility once more, the Castle Warren complex has the potential to become a landmark site. This should be considered beneficial in an area where the landscape has been largely stripped of its historic character.

There will be an indirect significant negative impact on three other RMP sites, a *fulacht fia* in Ballinrea townland (AH5, RMP CO087-029), a ringfort site in Hilltown (AH7, RMP CO087-116), and an enclosure site in Barnahely townland (AH26, RMP CO087-106).

There will be an indirect moderate negative impact on six RMP / SMR sites, a standing stone site in Ballyhemiken townland (AH11, RMP CO087-114), a ringfort and souterrain (AH14, RMP CO087-034 and -090) and an enclosure site in Shanbally townland (AH15, RMP CO087-040), a pit in Barnahely townland (AH28, SMR CO087-148) and a Martello Tower in Ringaskiddy (AH35, CO087-053).

There will also be an indirect slight negative impact on a cluster of four RMP / SMR sites in Barnahely townland, a ringfort and souterrain, two kilns and a burnt spread (AH37, RMP CO087-048 and SMR CO087-145, CO087-146, CO087-156).

15.4.1.2 Impacts on Newly Identified Archaeological Sites

One newly identified archaeological site is partly located within the proposed M28 Road Project, AH48 in Barnahely townland, an enclosure complex (including two possible ringforts, as well as an earlier possible ring-ditch), revealed by geophysical survey and partly investigated by archaeological testing. The testing confirmed the presence of a probable bivallate ringfort, field system, and possible prehistoric activity to the east (to the east of SMR CO087-155, AH33). Newly identified archaeological sites are ascribed a medium baseline rating. The proposed M28 Road Project will directly impact upon the probable bivallate ringfort, part of the early field system, a possible ring-ditch, and the northern half of the second large enclosure to the south. It will also directly impact upon the cluster of pits, post-holes and stake-holes.

15.4.1.3 Impacts on Specific Sites / Areas of Archaeological Potential

The assessment of the terrain potential, historic mapping, and aerial photography, along with the examination of the type, density and distribution of archaeological sites within that landscape, give rise to the identification of areas or sites of heightened archaeological potential (baseline rating as yet unknown).

The proposed M28 Road Project will have a direct, negative and potentially moderate / significant impact on any subsurface features which may survive within eight specific areas of archaeological potential that were identified within the proposed CPO:-

- AH16 in Shanbally townland. Presence of two swallow holes (possible location of a souterrain) and proximity to a recorded ringfort and souterrain c. 90m north and recorded enclosure c. 55m south (these two monuments are also connected by a field boundary that runs through the proposed CPO in this area);
- AH17 in Barnahely townland. Proximity to cluster of recorded archaeological sites c.85m south, comprising a ringfort and souterrain, two kilns and a burnt spread. In addition, this land forms part of ridge of higher ground overlooking the Owenboy River to the south, with enclosures and souterrains elsewhere along this elevated contour in Shanbally townland to the west.
- AH40 in Ballinimlagh. A possible burnt spread identified during field survey, which lies partly within the proposed CPO;
- AH46 in Shanbally townland. Swallow hole depicted on the first edition OS map in Shanbally townland, on the south side of an unusual kink or curve in the field boundary at the juncture of three fields. The feature occurs on a ridge of higher ground overlooking the Owenboy River valley, an elevated contour on which three ringforts and a souterrain are also recorded. While the swallow hole may represent a natural geological feature, it is also possible that it marks the location of a souterrain, with a possible enclosure site fossilised in the curve of the field boundary;
- AH49 in Ringaskiddy townland. Former wetland / dryland interface and possible former foreshore and mudflats in Ringaskiddy townland. Wetland provides unusually good preservation conditions for organic materials, such as wood, leather, textiles and human remains. In addition, middens have been recorded elsewhere along this coastline;
- AH53 in Ballyhemiken townland. Former wetland / dryland interface between two recorded standing stone sites;
- AH65 in Barnahely townland. A kink in the otherwise notably straight eastern boundary wall associated with Castle Warren demesne depicted on the first edition OS map. It is possible that the kink in the boundary respected an archaeological site or feature that is no longer in place. A stone cluster identified in archaeological testing may correlate with the removed boundary or may form part of a sub-rectangular enclosure that is suggested by geophysical survey and archaeological testing; and
- AH69 in Barnahely townland. A ditch identified during archaeological testing in the area between Castle Warren tower house and bawn and the church site / graveyard to the north. Provisionally interpreted as an early modern field drain but an earlier date and / or different function has not been ruled out. The orientation of the ditch (AH69) suggests that it continues within the proposed CPO and, if so, it will be directly impacted by the proposed road development.

15.4.1.4 Impacts on Possible Sites identified by LiDAR

Five LiDAR anomalies of archaeological potential were identified within the assessment corridor along the northern half of the proposed road project, one of which (AH29) will not be impacted by the proposed road project. The remaining four (AH6, AH18, AH61, AH62) lie partially within the proposed CPO. Should these anomalies prove to be archaeological in nature, there will be a direct, negative and potentially moderate / significant impact on any subsurface features which may be present.

15.4.1.5 Impacts on Structures / Features Depicted on 1st Edition OS Map ('sites of')

The sites of structures or features depicted on the first edition OS map are ascribed a low baseline rating. Where these sites are directly impacted, it will result in a moderate negative impact.

The proposed M28 Road Project will have a direct moderate negative impact on the sites of 18 pre-1840s structures in the following townlands: Maryborough (AH64), Mounthovel (AH67), Ballyhemiken (AH3), Carrigaline Middle (AH68), Shanbally (AH4, AH38, AH52, AH66), Barnahely (AH21 & AH23), and Loughbeg (AH24, AH25 & AH55 to AH59).

It will also have a direct moderate negative impact on the sites of the following features: a brickfield (AH1) and a gate lodge (AH63) in Monfieldstown townland; a possible millpond in Maryborough townland (AH2); possible mill-race in Ballinrea townland (AH43); the sites of two osieries (AH31 in Hilltown townland & AH45 in Shannonpark townland); and a walled garden (AH60), a former settlement cluster (AH50), and the entrance associated with a gate lodge (AH13) in Barnahely townland.

The proposed road project will traverse five pre-1840s roads or lanes, resulting in a direct moderate negative impact: AH42 in Ballinrea townland, AH44 in Shannonpark townland, AH47 in Barnahely townland, AH51 in Loughbeg townland, and AH54 in Ringaskiddy townland.

A former watercourse in Castletreasure townland (AH8) is also depicted on the first edition OS map. The baseline rating of this site is as yet unknown. There will be a direct, negative and potentially moderate / significant impact on any archaeological features which may be present subsurface.

15.4.1.6 Impacts on Riverine Environs

All riverine environs are considered to have an inherent archaeological potential, having attracted human activity since prehistoric times. A number of streams flow through the study area; this topography and the proximity of streams as a water source is typical of the locations in which *fulachtaí fia* (or burnt mounds) are found, and there are numerous examples of such sites along the banks of the streams in the study area (as well as one within the proposed road). The presence of burnt mounds or *fulachtaí fia* is often indicative of Bronze Age seasonal communal activity in river valleys and boggy ground.

The baseline rating for the watercourses crossed by the proposed road project is as yet unknown. Where sections are impacted, there will be a direct, negative and potentially moderate / significant impact on any archaeological features which may be present subsurface.

The proposed road project crosses six watercourses, two of which are also townland boundaries. Some of the watercourses are crossed more than once (noted below). All of the watercourses are shallow, averaging 0.1m-0.2m in depth:-

- AH30: Glounatouig Stream. Crossed in Hilltown townland;
- AH32: Stream in Shannonpark townland, a small tributary of the Glounatouig Stream, crossed three times.

- AH36: Stream tributary of the Donnybrook Stream, forming the townland boundaries between Maryborough, Monfieldstown, Mounthovel and Moneygourney (Cf. TB1, 2 & 4, Table 15.1). Crossed three times in Maryborough townland;
- AH39: Stream tributary of the Donnybrook Stream, forming the Moneygourney / Castletreasure and Ballinimlagh / Moneygourney townland boundaries (Cf. TB5 & TB7, Table 15.1). Crossed twice, in Castletreasure and Ballinimlagh townlands;
- AH41: Stream in Ballinrea townland, a small tributary of the Glounatouig Stream, crossed once; and
- AH70: Stream tributary of the Donnybrook Stream, forming the townland boundary between Mounthovel and Moneygourney, crossed once.

15.4.1.7 Impacts on Townland Boundaries

The proposed M28 Road Project will directly impact upon 19 townland boundaries. These boundaries are listed in **Appendix 15.E**, which details their physical form and locational information. It also notes where the townland boundaries coincide with barony or parish boundaries (e.g., TB9, TB12, TB14 and TB15). The boundaries take various forms, including streams, roads, and earthen bank with mature tree / hedgerow. The proposed road will remove sections of these boundaries resulting in a moderate impact on cultural heritage features of medium/low baseline rating, causing an overall negative, direct and moderate impact.

15.4.1.8 Impacts on Greenfield Areas

The proposed road travels predominantly through undeveloped agricultural land that is presently a mixture of pasture and arable. The majority of the pasture fields inspected had a level ground surface typical of former ploughed fields, which was confirmed by analysis of aerial photography from the 1990s onwards. This past focus on arable cultivation is also echoed in the documentary sources, with references to large tracts of arable land in the study area contained in the mid-17th century Down Survey and also in Lewis' Topographical Dictionary of 1837. Such agricultural practices tend to obscure any surviving surface archaeology but it is important to note that even if the landscape does not retain surface traces of archaeological remains, it does not mean that it is devoid of archaeological value. This potential is supported by the recorded archaeological sites, stray finds and archaeological investigations along and in the vicinity of the proposed road project, which attest to the importance of the area for settlement since the prehistoric period. There is a potential that previously unknown subsurface archaeological features and finds will be uncovered in greenfield areas along the proposed road project.

15.4.1.9 Impacts on Cultural Heritage – Undesignated Sites

One undesignated site of local cultural heritage interest was identified c. 5m south of the proposed CPO. The mid-20th century grotto (a Marian shrine, CH1) will not be directly impacted by the proposed road. There will be a slight indirect negative impact due to the proximity of the proposed road, which presents a visual intrusion on the site.

15.4.2 Architectural Heritage

15.4.2.1 Impacts on Structures of Architectural Heritage Merit (RPS Sites)

The proposed M28 Road Project will have no direct impacts on any protected structures.

Indirect impacts were identified in relation to two protected structures, 'Castle Warren Stronghouse' in Barnahely townland (RPS 01260; BH11) and the Martello Tower in Ringaskiddy (RPS 00575, BH1), both of which are also recorded archaeological monuments (Cf. AH22 and AH35).

Castle Warren, BH11

The proposed road project will have an indirect significant negative impact upon the protected structure 'Castle Warren Stronghouse' (RPS 01260; BH11). The recorded complex incorporates the remains of the late 18th century country house, Castle Warren, as well as those of the medieval tower house and bawn (Cf. AH22). The protected structure lies c. 43m south of the proposed CPO and will not be directly impacted by the proposed road project.

The proposed M28 Road Project traverses the former demesne associated with Castle Warren. There is only one partially surviving demesne element, the boundary wall, and this will be partly impacted by the proposed road project on the eastern side of the former demesne (see BH23 below). The Castle Warren estate represents a much degraded former demesne landscape, recognised by the NIAH Garden Survey as having virtually no recognisable features. Large agricultural fields to the east and northeast of the house complex occupy the former demesne lands, which are largely free from modern development. Views of Castle Warren from the east are marred by the presence of large factories, manufacturing plants and pylons. The line of pylons also dominates the views to the north/northeast, with the modern breeze-block graveyard wall and modern housing also visible in this direction. These elements of the modern landscape detract from the immediate setting of the protected structure. The best views from the castle are away from the proposed road project, over the undulating fields sweeping down to Loughbeg to the southwest and extending to the south. The retention of this visual connection between Castle Warren and Lough Beg is important, both in terms of visual amenity and also the historical relationship between the two (the castle would appear to have been originally constructed to protect this inlet of Cork Harbour). The setting of the medieval tower house on a height was undoubtedly a strategic decision, but there is no doubt that the creation of a formal demesne in the 18th century took full advantage of the extensive views and sweeping landscape (one example of this is the former belvedere tower constructed a short distance south of the house; Cf. AH20).

While the relative proximity of the proposed road project will have a significant negative visual impact on the protected structure and its setting, it also presents a positive opportunity to open up good quality views into the site from the eastern approach, presenting the principal façade of the 18th century house to large numbers of motorists and tourists.

Martello Tower, BH1

Although the extensive views over the estuary from the Martello Tower in Ringaskiddy will not be significantly affected by the proposed road, an indirect moderate negative visual impact was identified in relation to the site.

15.4.2.2 Impacts on Structures of Architectural Heritage Merit (NIAH Building Survey)

An indirect moderate negative visual impact was identified for Ring House (BH3) in Ringaskiddy village. The proposed M28 Road Project passes through the low-lying level field in which the house and its plot are situated and continues along the ridge of high ground. It runs to the rear (south / southwest) of the house, which is not very well screened by its existing boundaries.

15.4.2.3 Impacts on Demesne Landscapes & Historic Gardens

The proposed road traverses eight former demesnes depicted on the first edition OS mapping: Ballybricken (BH13), Bloomfield (BH14), Mount Hovel (BH15), Maryborough (BH16), Belview (BH17), Broadale (BH18), Prospect Villa (BH6) and Castle Warren (BH11).

Castle Warren (BH11) is discussed above in the context of the protected structure (RPS Site).

The proposed road will have only an indirect imperceptible negative impact on the former demesnes of Ballybricken (BH13), Mount Hovel (BH15), Maryborough (BH16), Belview (BH17), Broadale (BH18), Prospect Villa (BH6). All have been significantly impacted already by modern development and have been given a low baseline rating because of poor preservation and poor survival of contextual associations.

No predicted impact was identified for the former Bloomfield demesne (BH14). Although Bloomfield House, a protected structure (RPS 00476), has retained its immediate setting, there is wide-scale development to the surrounding area, including modern housing in the north-western and southern sections of the demesne, as well as the existing N28 curving through the southwestern side of the former demesne. The proposed M28 road is on-line with the existing N28 road at this point. This part of the former demesne no longer forms part of the setting associated with the protected structure.

The proposed road also traverses the grounds of three pre-1840s houses, Rose Lodge (BH2), Ring House (BH3) and Rock Cottage (BH4), all of which are in Ringaskiddy village:-

- The grounds Rose Lodge (BH2) are largely intact, however, and the field boundaries depicted on the first edition OS map still in place. That being said, there is little sense of a direct association between the fields to the rear of the property and the house itself, which stands in ruin, in a copse of trees. The proposed road will have a direct moderate negative physical impact on a surviving boundary wall to the property (see BH19 below);
- An indirect moderate negative visual impact was identified for Ring House (see NIAH sites above, BH3). The road traverses agricultural fields to the rear of the house, which have no designed landscape or other features within them; and
- With regard to Rock Cottage (BH4), no predicted impact was identified. Although some of the agricultural fields to the rear survive, part of the grounds has been infilled by modern development. These fields no longer form part of the setting of the house.

15.4.2.4 Impacts on Undesignated Sites

Direct Impacts on Undesignated Sites

The proposed road will have a direct moderate negative physical impact on six undesignated sites of built heritage interest identified through field survey and cartographic analysis, all of which have a low baseline rating:-

- BH5: Disused railway line in Ballyhemiken townland constructed c. 1903, associated with a former railway bridge c. 220m south (NIAH site 20987009);
- BH19: A property boundary wall of dry-stone construction (BH19), associated with a pre-1840s house Rose Lodge, both of which are depicted on the first edition OS map (the house is in ruins and will not be impacted);
- BH20: Pre-1840s house now heavily modernised, in Maryborough townland;
- BH21: Demesne wall (internal, Prospect Villa);
- BH22: A section of dry-stone walling and possible culvert in the Ballinrea / Shannonpark townland boundary; and
- BH23: Demesne boundary wall (Castle Warren).

Indirect Impacts on Undesignated Sites

The proposed road will have an indirect slight negative visual impact on two farm complexes depicted on the first edition OS mapping, both of which are still in use: BH7 in Ballinrea and BH8 in Carrigaline Middle. Both sites have a low baseline rating.

15.4.3 Construction Phase

15.4.3.1 Archaeological and Cultural Heritage

Where possible, all archaeological and cultural heritage issues will be resolved at the pre-construction stage of the development. It is possible, however, that some areas will be resolved during construction phase.

The remains of the medieval structures at Castle Warren in Barnahely townland (tower house and bawn, AH22) are in relatively good condition, albeit with some more vulnerable areas (Cf. **Section 15.3.5**). It is unlikely that any significant vibrations during the construction works will travel as far as the ruin. According to the structural engineer's report, there are likely to be collapses at the ruin in the future (similar to the collapses that have happened in the past) with or without the proposed road, as the building has not been maintained to any degree. Vibration monitoring will be undertaken during the construction phase to monitor the risk of any collapses. In the event that vibration levels approach 3mm/s at frequencies below 10 Hz additional appropriate vibration control measures will be implemented to protect the structure.

15.4.3.2 Architectural Heritage

The remains of the 18th century Country House, Castle Warren, in Barnahely townland (BH11) are in relatively good condition, albeit with some more vulnerable areas (Cf. **Section 15.3.5**). It is unlikely

that any significant vibrations during the construction works will travel as far as the ruin. According to the structural engineer's report, there are likely to be collapses at the ruin in the future (similar to the collapses that have happened in the past) with or without the proposed road, as the building has not been maintained to any degree. In order to avoid those collapses occurring during the proposed roadworks, vibration monitoring will be undertaken to monitor the risk of any such collapses occurring. In the event that vibration levels approach 3mm/s at frequencies below 10 Hz additional appropriate vibration control measures will be implemented to protect the structure.

15.4.4 Operational Phase

15.4.4.1 Archaeological and Cultural Heritage

No impacts were identified for the operational phase.

15.4.4.2 Architectural Heritage

No impacts were identified for the operational phase.

15.5 MITIGATION MEASURES

The mitigation strategy outlined below details the procedures that will be adopted to ameliorate the impacts outlined above in **Section 15.4**.

15.5.1 Archaeological & Cultural Heritage

15.5.1.1 Geophysical Survey within the Proposed CPO

A geophysical survey will be undertaken to assess the greenfield lands within the proposed CPO (where not already undertaken), subject to approval by the appointed TII Project Archaeologist in consultation with the National Monuments Service. This work will be carried out by a suitably qualified and competent geophysical archaeologist, under ministerial directions. The survey will be carried out in areas where ground conditions are appropriate; the suitability of land for survey will be ultimately assessed by a geophysical archaeologist.

The survey will also seek to identify whether any archaeological features or deposits survive within the proposed CPO at the following locations (detailed in **Section 15.4** & located on **Figures 15.1a-h** in **Volume 5**):-

- within RMP zones of archaeological potential (AH9 & AH20);
- in close proximity to RMP zones of archaeological potential (AH5, AH7, AH15, AH28, AH26, AH35);
- at specific areas /sites of archaeological potential (AH16, AH46, AH17, AH48, AH65 & AH69, AH40, AH49, AH53); and
- at the locations of structures and features depicted on the first edition OS mapping that are no longer upstanding (AH1 to AH4, AH8, AH13, AH34, AH38, AH21, AH23 to AH25, AH31, AH42 to AH45, AH47, AH50 to AH52, AH54 to AH60, AH63, AH64, AH66 to AH68).

Given the nature of the brownfield site within part of the proposed Service Area (tarmacadam surface), geophysical survey may not be feasible in this location. It is recommended, however, that the use of Ground Penetrating Radar (GPR) will be explored as a means to assess this area. GPR uses pulses of energy to image the subsurface and can be applied on a variety of surfaces including rock, soil, ice, fresh water, pavements, and concrete structures.

15.5.1.2 Archaeological Testing within the Proposed CPO

A detailed programme of archaeological test excavation will be undertaken within the land acquisition area. This will involve the excavation of a centreline test-trench, with off-sets placed at regular intervals. The quantity of testing will, where conditions allow, typically represent a 12% sample coverage of the area being tested. Archaeological testing will be carried out by a team (or teams) of suitably qualified archaeologists, under ministerial directions.

The purpose of this blanket-testing strategy is to help determine the location, date, nature and extent of any previously unknown archaeological sites. The results of the geophysical survey can be used to inform the archaeological test excavation, by incorporating specific areas of archaeological potential that may have been identified by the survey.

Where sites of archaeological significance are identified, due regard will be given to the feasibility of preserving such remains *in-situ*. Where preservation *in-situ* is not deemed feasible, all features of agreed archaeological significance will, subject to ministerial directions, be preserved by record (by means of archaeological excavation, post-excavation analysis, reporting and dissemination).

Archaeological Excavation (Preservation by Record)

Any archaeological features revealed by the test-trenching, or by any other means, which will be directly impacted by the proposed works, will be preserved by record by means of archaeological excavation, recording and publication of results. This includes the recorded enclosure site (AH33, two sub-circular enclosures, possible metal-working sites) and part of the adjacent enclosure complex (AH48) in Barnahely townland.

Where deemed appropriate by the National Monuments Service (DAHRRGA) archaeological features or sites revealed by the test trenching, which will be directly impacted by the proposed works, may be preserved *in-situ* (by avoidance or design).

It is anticipated that where possible all archaeological excavation will be completed pre-construction, or if not, then during the early stages of construction phase. This is in accordance with the Code of Practice between the National Roads Authority (now TII) and the Minister for Arts, Heritage, Gaeltacht and Islands in 2000.

Wade Surveys

A wade survey will be undertaken at all of the (active) watercourses where they are traversed by the proposed road (AH30, AH32, AH36, AH39, AH41 and AH70). The survey will be carried out by a qualified underwater archaeologist under ministerial directions.

15.5.2 Architectural Heritage

A photographic record, using appropriate scaling, and written description will be undertaken of the dry-stone walling in Ballinrea and Loughbeg townlands (BH22 & BH19), and the demesne boundary walls in Barnahely townland (BH10 & BH23).

A photographic record, measured survey and written description will be undertaken of the pre-1840s house now heavily modernised (BH20) in Maryborough townland.

A section of the early 20th century railway line (BH5) in Ballyhemiken townland will be recorded by a suitably qualified archaeologist.

Appropriate screening will be put in place to mitigate the visual impacts identified at Castle Warren (BH11), the Martello Tower (BH1), Ring House (BH3), and the farm complexes in Ballinrea and Carrigaline Middle (BH7 & BH8) (refer to **Chapter 16: Landscape and Visual - Figure 16.5** in **Volume 5** which details the screening in the vicinity of these structures).

15.5.3 Construction Phase

Archaeological and cultural heritage issues will be resolved at the pre-construction and construction stages of the development. This will include any necessary archaeological monitoring and inspection work required along the proposed M28 Road Project during the site preparation/ advanced works phase of the project. This is in accordance with the Code of Practice between the National Roads Authority and the Minister for Arts, Heritage, Gaeltacht and Islands, 2000. During the construction phase, a mechanism for recording, protecting and (where necessary) resolving existing archaeological monuments and newly revealed sites within the landtake will have to be agreed with the TII Project Archaeologist and the National Monuments Service of the DAHRRGA.

If features are to be left *in-situ*, details plans will be required as to the layout and extent of these features/ sites as well as a geographical location. Before and after photographs will be required as well as a full report on the preservation of the site and how this was achieved, by the National Monuments Service.

Vibration Monitoring

Vibration monitors will be installed at the remains of the 18th century Country House and the earlier medieval structures at Castle Warren (AH22 / BH11) prior to commencement of works, with alerts to identify any undue level of vibration at the structure during construction of the road. (refer to **Chapter 14: Noise & Vibration** and in **Appendix 15H** for further detail).

15.6 RESIDUAL IMPACTS

There are no predicted residual impacts on archaeological, architectural or cultural heritage assets.

15.7 MONITORING MEASURES

No further monitoring measures required.

Table 15.2: Summary of Archaeological & Cultural Heritage Impacts

ID No.	Legal Status	Site Type	Townland	Baseline Rating	Magnitude of Impact	Type & Quality of Impact	Mitigation Measures	Residual Impact
AH1	None	Brickfield (site of)	Monfieldstown	Low	High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH2	None	Possible millpond (site of)	Maryborough	Low	High	Direct moderate negative	Archaeological testing	None
AH3	None	Pre-1840s structure (site of)	Ballyhemiken	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH4	None	Pre-1840s structure (site of)	Shanbally	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH5	RMP	<i>Fulacht fia</i> (burnt spread)	Ballinrea	High	High	Indirect significant negative	Geophysical survey and/or archaeological testing	None
AH6	None	LiDAR anomaly	Castletreasure / Ballinimlagh	Unknown	High	Potentially direct moderate / significant negative	Geophysical survey and/or archaeological testing	None
AH7	RMP	Ringfort	Hilltown	High	Medium	Indirect significant negative	Archaeological testing	None
AH8	None	Former watercourse	Castletreasure	Low	High	Potentially direct moderate / significant negative	Geophysical survey and/or archaeological testing	None
AH9	RMP	<i>Fulacht fia</i> (burnt spread)	Shannonpark	High	Very High	Direct profound negative	Geophysical survey and/or archaeological testing	None
AH10	RMP	Standing Stone	Ballyhemiken	High	High	Direct significant negative	Archaeological testing	None
AH11	RMP	Standing Stone	Ballyhemiken	High	Low	Indirect moderate negative	Geophysical survey and/or archaeological testing	None
AH12	RMP	Ringfort & Souterrain	Raffeen	n/a	n/a	No predicted impact – site already destroyed	No mitigation required	None

ID No.	Legal Status	Site Type	Townland	Baseline Rating	Magnitude of Impact	Type & Quality of Impact	Mitigation Measures	Residual Impact
AH13	None	Gate lodge (site of)	Barnahely	Low	High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH14	RMP	Ringfort & Souterrain	Shanbally	High	Low	Indirect moderate negative	See AH16	None
AH15	RMP	Enclosure	Shanbally	High	Low	Indirect moderate negative	See AH16	None
AH16	None	Specific Area of Archaeological Potential – possible souterrain	Shanbally	Unknown	Very High	Potentially direct moderate / significant negative	Geophysical survey and/or archaeological testing	None
AH17	None	Specific Area of Archaeological Potential – possible souterrain / enclosure	Shanbally	Unknown	Very High	Potentially direct moderate / significant negative	Geophysical survey and/or archaeological testing	None
AH18	None	LiDAR anomaly	Castletreasure	Unknown	High	Potentially direct moderate / significant negative	Geophysical survey and/or archaeological testing	None
AH19	RMP	Gate Lodge	Barnahely	High	High	Direct significant negative	Archaeological testing	None
AH20	RMP	Graveyard & church site	Barnahely	High	Medium	Indirect significant negative	Geophysical survey and/or archaeological testing along the Barnahely-Ringaskiddy road to determine if features associated with the church site and graveyard survive within the CPO. Additional archaeological testing to determine if features associated with the church site survive to the south within the CPO (See also AH69).	None

ID No.	Legal Status	Site Type	Townland	Baseline Rating	Magnitude of Impact	Type & Quality of Impact	Mitigation Measures	Residual Impact
AH21	None	Pre-1840s structure (site of)	Barnahely	Low	High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH22	RMP	Tower house & bawn	Barnahely	High	Medium	Indirect significant negative	Additional archaeological testing to determine if features associated with the medieval tower house survive within the CPO. Appropriate screening to reduce visual intrusion (Cf. Chapter 16: Landscape & Visual). Vibration monitoring (Cf. Chapter 14: Noise & Vibration & Appendix 15H).	None
AH23	None	Pre-1840s structure (site of)	Barnahely	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH24	None	Pre-1840s structure (site of)	Loughbeg	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH25	None	Pre-1840s structure (site of)	Loughbeg	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH26	RMP	Enclosure	Barnahely	High	Medium	Indirect significant negative	Geophysical survey and/or archaeological testing	None
AH27	RMP	Midden	Barnahely	High	-	No predicted impact	No mitigation required	None
AH28	SMR	Pit	Barnahely	High	Low	Indirect moderate negative	Archaeological testing	None
AH29	None	LiDAR anomaly	Ballinrea	Unknown	n/a	No predicted impact	No mitigation required	None
AH30	None	Stream (riverine environs)	Hilltown	Unknown	High	Potentially direct moderate / significant negative	Wade survey and archaeological testing	None
AH31	None	Osiery (site of)	Hilltown	Low	High	Direct moderate negative	Archaeological testing	None

ID No.	Legal Status	Site Type	Townland	Baseline Rating	Magnitude of Impact	Type & Quality of Impact	Mitigation Measures	Residual Impact
AH32	None	Stream (riverine environs)	Shannonpark	Unknown	High	Potentially direct moderate / significant negative	Wade survey and archaeological testing	None
AH33	SMR	Two sub-circular enclosures. Possible metal-working sites.	Barnahely	High	Very high	Direct profound negative	Preservation by record - archaeological excavation	None
AH34	None	Pre-1840s structure (site of)	Raffeen	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH35	RMP	Martello Tower	Ringaskiddy	High	Low	Indirect moderate negative	Geophysical survey and/or archaeological testing to determine if any features associated with the tower survive within the CPO (see also AH54. Appropriate screening to reduce visual intrusion (Cf. Chapter 16: Landscape & Visual).	None
AH36	None	Stream (riverine environs) & townland boundary	Maryborough / Mounthovel	Unknown	High	Potentially direct moderate / significant negative	Wade survey and archaeological testing	None
AH37	RMP / SMR	Ringfort, souterrain, kilns & burnt spread	Barnahely	High	Very low	Indirect slight negative	No mitigation measures required – see AH17	None
AH38	None	Pre-1840s structure (site of)	Shanbally	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH39	None	Stream (riverine environs) & townland boundary	Moneygourney/ Castletreasure	Unknown	High	Potentially direct moderate / significant negative	Wade survey and archaeological testing	None
AH40	None	Possible burnt spread	Ballinimlagh	Unknown	High	Potentially direct moderate / significant negative	Geophysical survey and/or archaeological testing	None
AH41	None	Stream (riverine environs)	Ballinrea	Unknown	High	Potentially direct moderate / significant negative	Wade survey and archaeological testing	None

ID No.	Legal Status	Site Type	Townland	Baseline Rating	Magnitude of Impact	Type & Quality of Impact	Mitigation Measures	Residual Impact
AH42	None	Former road	Ballinrea	Low	High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH43	None	Possible mill-race	Ballinrea	Low	High	Direct moderate negative	Archaeological testing	None
AH44	None	Former road	Shannonpark	Low	High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH45	None	Osiery	Shannonpark	Low	High	Direct moderate negative	Archaeological testing	None
AH46	None	Specific Area of Archaeological Potential - possible souterrain / enclosure site	Shanbally	Unknown	Very High	Potentially direct moderate / significant negative	Geophysical survey and/or archaeological testing	None
AH47	None	Former road	Barnahely	Low	High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH48	None	Enclosure complex – Direct impact on part of this complex: the probable ringfort; part of the earlier field system; northern half of the second large enclosure to the south; a possible ring-ditch; and the cluster of pits, post-holes and stake-holes. (Adjacent AH33 to the east)	Barnahely	Medium	High	Direct significant negative	Additional archaeological testing will be carried out to investigate the second large enclosure and possible ring-ditch identified by geophysical survey to south of main alignment, within the proposed CPO. Preservation by record – archaeological excavation – for all archaeological sites / features that will be directly impacted.	None

ID No.	Legal Status	Site Type	Townland	Baseline Rating	Magnitude of Impact	Type & Quality of Impact	Mitigation Measures	Residual Impact
AH49	None	Specific Area of Archaeological Potential - Former wetland / dryland interface & possible former foreshore	Ringaskiddy	Unknown	High	Potentially direct moderate / significant negative	Geophysical survey and/or archaeological testing	None
AH50	None	Pre-1840s settlement cluster (site of)	Barnahely	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH51	None	Former laneway	Loughbeg	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH52	None	Pre-1840s structure (site of)	Shanbally	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	
AH53	None	Specific Area of Archaeological Potential - Dryland / wetland interface between two standing stone sites	Ballyhemiken	Unknown	Very High	Potentially direct moderate / significant negative	Geophysical survey and/or archaeological testing	None
AH54	None	Former road / track	Ringaskiddy	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH55	None	Pre-1840s structure (site of)	Loughbeg	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH56	None	Pre-1840s structure (site of)	Loughbeg	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH57	None	Pre-1840s structure (site of)	Loughbeg	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH58	None	Pre-1840s structure (site of)	Loughbeg	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH59	None	Pre-1840s structure (site of)	Loughbeg	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None

ID No.	Legal Status	Site Type	Townland	Baseline Rating	Magnitude of Impact	Type & Quality of Impact	Mitigation Measures	Residual Impact
AH60	None	Walled garden (site of)	Barnahely	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH61	None	LiDAR anomaly	Ballinimlagh	Unknown	High	Potentially direct moderate / significant negative	Geophysical survey and/or archaeological testing	None
AH62	None	LiDAR anomaly	Ballinrea, Hilltown	Unknown	High	Potentially direct moderate / significant negative	Geophysical survey and/or archaeological testing	None
AH63	None	Gate Lodge (site of)	Monfieldstown	Low	Very High	Direct moderate negative	Archaeological testing	None
AH64	None	Pre-1840s structure (site of)	Maryborough	Low	High	Direct moderate negative	Archaeological testing	None
AH65	None	Specific Area of Archaeological Potential – kink in field boundary / possible enclosure	Barnahely	Unknown	High	Potentially direct moderate / significant negative	Further archaeological testing at this location to assess the extent, nature and date of this feature	None
AH66	None	Pre-1840s structure (site of)	Shanbally	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH67	None	Pre-1840s structure (site of)	Mounthovel	Low	Very High	Direct moderate negative	Archaeological testing	None
AH68	None	Pre-1840s structure (site of)	Carrigaline Middle	Low	Very High	Direct moderate negative	Geophysical survey and/or archaeological testing	None
AH69	None	Ditch	Barnahely	Unknown	High	Potentially direct moderate / significant negative	Further archaeological testing within the CPO to establish the extent, nature and date of this feature.	None
AH70	None	Stream (riverine environs)	Shannonpark	Unknown	High	Potentially direct moderate / significant negative	Wade survey and archaeological testing	None

ID No.	Legal Status	Site Type	Townland	Baseline Rating	Magnitude of Impact	Type & Quality of Impact	Mitigation Measures	Residual Impact
CH1	None	Grotto	Shanbally	Low	Low	Indirect slight negative	<p>A fence will be provided around the grotto to protect the site during construction.</p> <p>Appropriate screening will be put in place to reduce any visual intrusion on the site (Cf. Chapter 16: Landscape & Visual).</p>	None

Table 15.3: Summary of Architectural Heritage Impacts

ID No.	Legal Status	NIAH Survey	Site Type	Townland	Baseline Rating	Magnitude of Impact	Type & Quality of Impact	Mitigation Measures	Residual Impacts
BH1	RPS/RMP	NIAH Building Survey	Martello Tower	Ringaskiddy	High	Low	Indirect moderate negative visual impact	Appropriate screening will be put in place to reduce any visual intrusion on the structure (Cf. Chapter 16: Landscape & Visual).	None
BH2	None	No	Grounds of pre-1840s house (Rose Lodge)	Loughbeg (Ringaskiddy village)	Low	Medium	Direct moderate negative physical impact (see BH19)	See BH19	None
BH3	None	NIAH Building Survey	House (Ring House)	Ringaskiddy	Medium	Medium	Indirect moderate negative visual impact	Appropriate screening will be put in place to reduce any visual intrusion on the site (Cf. Chapter 16: Landscape & Visual).	None
BH4	None	NIAH Building Survey	House (Rock Cottage)	Loughbeg (Ringaskiddy village)	Medium	Medium	No predicted impact	No mitigation required	None
BH5	None	No	Former railway line	Ballyhemiken	Low	High	Direct moderate negative physical impact	Photographic record and written description	None
BH6	None	NIAH Garden Survey	Former Demesne (Prospect Villa)	Barnahely	Low	Very low	Indirect imperceptible negative impact	No mitigation required	None
BH7	None	No	Pre-1840s farm complex	Ballinrea	Low	Low	Indirect slight negative visual impact	Appropriate screening will be put in place to reduce any visual intrusion on the site (Cf. Chapter 16: Landscape & Visual).	None
BH8	None	No	Pre-1840s farm complex	Carrigaline Middle	Low	Low	Indirect slight negative visual impact	Appropriate screening will be put in place to reduce any visual intrusion on the site (Cf. Chapter 16: Landscape & Visual).	None

ID No.	Legal Status	NIAH Survey	Site Type	Townland	Baseline Rating	Magnitude of Impact	Type & Quality of Impact	Mitigation Measures	Residual Impacts
BH9	None	No	Pre-1840s Structure (upstanding)	Loughbeg	Low	Very low	Indirect imperceptible negative impact	No mitigation required	None
BH10	None	No	Demesne boundary wall (Prospect Villa)	Barnahely	Low	Very low	Indirect imperceptible negative impact	No mitigation required	None
BH11	RPS/RMP	Garden Survey	Castle Warren Country House & former demesne	Barnahely	High	Medium	Indirect significant negative visual impact.	Appropriate screening to reduce visual intrusion (Cf. Chapter 16: Landscape & Visual). Vibration monitoring (Cf. Chapter 14: Noise & Vibration & Appendix 15H).	None
BH12	None	Building Survey	House (Beechvale Lawn)	Monfieldstown	Medium	n/a	No predicted impact	No mitigation required	None
BH13	None	Garden Survey	Former Demesne (Ballybricken House)	Barnahely	Low	Very low	Indirect imperceptible negative impact	No mitigation required	None
BH14	None	Garden Survey	Former Demesne (Bloomfield House)	Monfieldstown	Low	n/a	No predicted impact	No mitigation required	None
BH15	None	Garden Survey	Former Demesne (Mount Hovel House)	Mounthovel	Low	Very low	Indirect imperceptible negative impact	No mitigation required	None
BH16	None	Garden Survey	Former Demesne (Maryborough House)	Maryborough	Low	Very low	Indirect imperceptible negative impact	No mitigation required	None

ID No.	Legal Status	NIAH Survey	Site Type	Townland	Baseline Rating	Magnitude of Impact	Type & Quality of Impact	Mitigation Measures	Residual Impacts
BH17	None	Garden Survey	Former Demesne (Belview)	Maryborough	Low	Very low	Indirect imperceptible negative impact	No mitigation required	None
BH18	None	Garden Survey	Former Demesne (Broadale)	Moneygourney	Low	Very low	Indirect imperceptible negative impact	No mitigation required	None
BH19	None	No	Boundary wall	Loughbeg	Low	High	Direct moderate negative physical impact	Photographic record and written description	None
BH20	None	No	Pre-1840s Structure (upstanding)	Maryborough	Low	High	Direct moderate negative physical impact	Photographic record, measured survey and written description	None
BH21	None	No	Demesne wall (internal, Prospect Villa)	Barnahely	Low	High	Direct moderate negative physical impact	Photographic record and written description	None
BH22	None	No	Drystone walling & possible culvert	Ballinrea	Low	High	Direct moderate negative physical impact	Photographic record and written description	None
BH23	None	No	Demesne boundary wall (Castle Warren)	Barnahely	Low	High	Direct moderate negative physical impact	Photographic record and written description	None