



Leixlip Water Treatment Plant Upgrade

Preliminary Archaeological & Built Heritage Assessment



CONSULTING ENGINEERS

1 Galway Business Park, Dangan, Galway

173 Ivy Exchange, Granby Place, Parnell Square West, Dublin 1

Innovation House, Moneen Road, Castlebar

Unit 1203, Building 1000, Gateway Business Park, New Mallow Road, Cork

CLIENT	Glan Agua
PROJECT NO.	4041
PROJECT TITLE	LEIXLIP WATER TREATMENT PLANT UPGRADE
REPORT TITLE	PRELIMINARY ARCHAEOLOGICAL ASSESSMENT

REV.	STATUS	AUTHOR	REVIEWED BY	APPROVED BY	ISSUE DATE
0	Draft	John Olney	John O'Connor	John Bourke	03/03/2021
1.0	Preliminary	John Olney	John O'Connor	John Bourke	23/03/2021
2.0	Post-Review Issue	John Olney	John O'Connor	John Bourke	15/04/2021
2.1	Post Comment Revision	John Olney	John O'Connor	John Bourke	03/09/2021
3.0	Post Planner Review	John Olney	Maebh Grace	John Bourke	10/09/2021
3.1	Updated Pipeline Route	John Olney	Maebh Grace	John Bourke	22/09/2021
3.2	Post Clarification	John Olney	Maebh Grace	John Bourke	30/09/2021

Table of Contents

NON-TECHNICAL SUMMARY	1
1. INTRODUCTION & BACKGROUND TO PROJECT	1
1.1 BACKGROUND	1
1.2 DESCRIPTION OF DEVELOPMENT	1
1.3 METHODOLOGY	3
2 ARCHAEOLOGY	5
2.1 HISTORICAL BACKGROUND	5
2.2 ARCHAEOLOGICAL BACKGROUND	6
2.3 STATUTORY PROTECTIONS	5
2.4 ARCHAEOLOGICAL ARTEFACTS	7
2.5 ARCHAEOLOGICAL INVENTORY	8
2.6 PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS	8
3 ARCHITECTURAL HERITAGE	16
3.1 STATUTORY PROTECTIONS	16
3.2 PROTECTED STRUCTURES AND/OR NIAH LISTED STRUCTURES	17
4 ASSESSMENT OF IMPACTS	20
4.1 'OLD' WTP SITE (NORTHERN SITE)	20
4.2 'NEW' WTP SITE (SOUTHERN SITE)	21
4.3 PIPELINE	21
5 MITIGATION.....	22
5.1 ARCHAEOLOGY.....	22
5.2 BUILT HERITAGE	22
6 SITE INVESTIGATIONS.....	23
7 CONCLUSIONS & RECOMMENDATIONS.....	24
7.1 ARCHAEOLOGY	24

7.2 ARCHITECTURAL HERITAGE	25
8 FIGURES.....	27
9 PHOTOGRAPHIC RECORD.....	35
10 ADDITIONAL REFERENCES	38
11 APPENDIX I SOUTH COUNTY DUBLIN DEVELOPMENT PLAN 2016 - 2022.....	39

List of Figures

Figure 1: Overview of Leixlip WTP site with proposed works indicated (See Planning Application Drawing Pack - 11118-RHL-LP2-XX-DR-PL-002)	27
Figure 2: Aerial overview of the existing Leixlip WTP sites with proposed developments and relevant archaeological area indicated (Source: Bing Maps)	28
Figure 3: Aerial overview from 2011-2013 indicating extents of previous groundworks at 'New' WTP site	29
Figure 4: Proposed new infrastructure at the 'Old' Leixlip WTP site	30
Figure 5: Annotated extract from Ryan Hanley Drawing 11118-RHL-LP2-XX-DR-PL-002 showing pipeline location and Zone of Notification (Scale 1:1000)	31
Figure 6: Excerpt from 1 st edition OS survey (1837-43) indicating WTP sites within Cooldrinagh Demesne.	32
Figure 7: Excerpt from 2 nd edition OS survey (1870-75) indicating WTP sites within Cooldrinagh Demesne.	33
Figure 8: Architectural Heritage within and adjacent to the Leixlip WTP site boundary	34

List of Plates

Plate 1: Location of proposed dosing facility at 'New' WTP site. Facing E.	35
Plate 2: Existing road between WTP sites – dosing line is proposed to left of frame behind fenceline/treeline. Facing S.	35
Plate 3: Greenfield area to east of fenceline – dosing pipeline proposed to run north within this area.	36
Plate 4: Looking S along proposed dosing pipeline route	36
Plate 5: Salmon Leap Public Inn (RPS: 009) with existing WTP infrastructure to rear.	37

ABBREVIATIONS

NMS	National Monuments Service
RMP	Record of Monuments & Places
ZoN	Zone of Notification
RPS	Record of Protected Structures
SDCC	South Dublin County Council
RH	Ryan Hanley
IW	Irish Water
GA	Glan Agua
ITM	Irish Transverse Mercator
SI	Site Investigations
WTP	Water Treatment Plant

NON-TECHNICAL SUMMARY

The following report details the results of a desk-based study and site inspection in advance of proposed upgrade works at Leixlip Water Treatment Plant (WTP), Cooldrinagh, Co. Dublin. The existing WTP infrastructure is located in a recorded area of high archaeological sensitivity as attested by the archaeological features and material encountered over several previous investigations.

- Any groundworks, including site investigations, proposed in previously undisturbed greenfield areas will require archaeological mitigation as detailed in **Sections 5 & 7** of this report.
- A proposed dosing line passes through the Zone of Notification (ZoN) established for two recorded sites/monuments, as indicated in **Figure 1 & Figure 2** of this report.
- Statutory notification to the National Monuments Service under Section 12(3) of the National Monuments (Amendment) Act 1994 will be required for this element of the proposed works.

1. INTRODUCTION & BACKGROUND TO PROJECT

1.1 Background

Ryan Hanley has been commissioned by Glan Agua, on behalf of Irish Water, to undertake a Site-Specific Archaeological Impact Assessment (AIA) for the proposed upgrades at the Leixlip Water Treatment Plant (WTP), Co. Dublin operated by Fingal County Council under the Service Level Agreement.

The proposed development as described below will provide the necessary infrastructure to upgrade the treatment processes of Old and New Leixlip WTPs to safeguard the drinking water supply to enable Irish Water to meet the demands of its customers in the Greater Dublin Region, including Fingal, South Dublin, Dublin City and areas of Counties Meath and Kildare, whilst maintaining the required treated water quality at all times.

1.2 Description of Development

Permission for development at the existing Leixlip Water Treatment Plant site, Cooldrinagh & Backwestonpark Townlands, Leixlip, Co. Dublin. The proposed development consists of:

- 1) Demolition of existing Workshop and (defunct) Activated Carbon Building adjacent the 'old' / northern Treatment Plant Building;
- 2) Construction of a Sulphuric Acid Storage and Dosing Facility Building (single storey up to approximately 8.7 metres in height) adjacent the 'new' / southern Treatment Plant Building;
- 3) Construction of a Lime Storage & Dosing Facility Building (single storey up to approximately 11 metres in height) adjoining the 'old' / northern Treatment Plant Building, associated external storage silos (2 no.) with external staircase (up to approximately 12.3 metres in height) partially enveloped with a perforated metal architectural screen, and ancillary plant and equipment;

- 4) Reconfiguration and repurposing for use as a De-Alkalisation Plant of existing (disused) High-Lift Pump Hall within the 'old' / northern Treatment Plant Building;
- 5) The construction of a new ancillary Workshop Building (single storey up to approximately 4.5 metres in height) to the rear / south of the 'old' / northern Treatment Plant Building;
- 6) Temporary and enabling works to facilitate construction and continued / uninterrupted operation of the Treatment Plant site;
- 7) Associated network of underground pipelines / connections, and redirection of existing where necessary, throughout the site; and,
- 8) Provision of additional car parking (to the rear / south of the 'old' / northern Treatment Plant Building), modification and extension of existing drainage, utility and services infrastructure and connections to serve and facilitate new and reconfigured buildings, and all other associated and ancillary development and works above and below ground level.

The following temporary works are envisaged in order to develop the outlined permanent works:

- Sheet piling and bracing at the Lime Building area may be required – the silos are to be placed in a depressed bund, approximately 1m below existing ground level, in order to reduce the visual impact of the height of the structures; this will be investigated through the detailed design of the project;
- Works Compound – there shall be 1 No. compound to be located at the location of the existing compound for the UV works. This shall be utilised for the future works including parking arrangements and pedestrian access;
- Temporary heras type security fencing shall be erected on all works zones and public interfaces;
- A Temporary Traffic Management Plan (TTMP) will be developed at construction stage to manage construction traffic access & egress from the site;
- Trench boxes may be required for ducting runs and pipelines. Localised dewatering of trenches may be required at construction stage. All dewatering arising from the excavations will be passed through siltation boxes and silt bags with the filtered water outlet discharging to the local sewer network;
- Spoil will be stored in managed spoil heaps on the Land Made Available (LMA) of the New WTP site and surrounded in a silt curtain to prevent runoff before being disposed of off-site as required.

Full details of the proposed works are provided in the Planning Report (Ryan Hanley, 2021). Annotated scheme drawings are provided in **Section 8** of this report.

Leixlip Water Treatment Plant is located along the banks of the River Liffey within the functional area of South Dublin County Council. The southern site boundary is beside the M4 and the northern site boundary is running adjacent to R148 Leixlip Road. An ESB station is located adjacent to the development to the north of the site. The ESB Hydroelectric Dam is located to the south west of the site on the River Liffey. Adjacent to the eastern side of the site is Cooldrinagh Lane and Beckett's

Country House Hotel. Leixlip Water Treatment Plant is the second biggest water treatment plant in Ireland. It extracts raw water from the reservoir behind the ESB controlled dam on the River Liffey at Leixlip. Information is being gathered on engineering, socio-economic, environmental, archaeological and geotechnical constraints to the proposed project.

This report identifies the recorded archaeological and built heritage resources in the vicinity of the proposed development and assesses the impacts that the development as proposed may have on the heritage resources of the area. Recorded archaeological sites/monuments, protected structures and previous relevant archaeological investigations are discussed in this report. Locations of relevance are indicated in **Figure 1**.

1.3 Methodology

The report is based on two elements:

- A comprehensive desk-based study.
- A site walkover and inspection of areas based on the proposed works design.

The desk-based study comprised online documentary, cartographic and aerial photographic research, the principal sources of which are as follows:

- Record of Monuments and Places (RMP) for Counties Dublin & Kildare.
- Sites and Monuments Records (SMR).
- Topographical files of the National Museum of Ireland.
- Cartographic & Aerial Photographic Archive of the Ordnance Survey of Ireland – www.osi.ie
- National Inventory of Architectural Heritage – Survey of the Architectural Heritage of Counties Dublin & Kildare (NIAH).
- Annual Archaeological Excavations Bulletin.
- TII Digital Heritage Collections.
- National Monuments Acts 1930-2014 as amended.
- Planning & Development Act 2000 (as amended).
- Fingal Development Plan 2017-2023.
- Kildare County Development Plan 2017-2023.
- South County Dublin Development Plan 2016-2022

A comprehensive contextual review of the recorded archaeological assets and previous archaeological investigations in the area was conducted to identify the potential for impacts on the heritage resources as a result of the proposed scheme. This element of the study incorporates the proposed development areas and discusses the wider local landscape within which the development is proposed.

Built Heritage, including buildings, structures and features listed in the statutory Record of Protected Structures (RPS) of the South County Dublin Development Plan and in the non-statutory National Inventory of Architectural Heritage (NIAH) is addressed in this report to provide a comprehensive heritage background to the area. Where visual impacts are identified, these are addressed in detail in

the Landscape & Visual Impact Statement produced for the project by Cunnane Stratton Reynolds (2021) and the Design Statement prepared by Taylor McCarney Architects (2021).

A site inspection was carried out on 10/02/2021 in dry, bright conditions and included a walkover of the areas in which development is proposed, taking cognisance of previous groundworks and archaeological investigations within the WTP site.

The statutory requirements relating to the protection of the archaeological resource are detailed in Section 2.2 of this report. In summary, any proposed works that fall within an established Zone of Notification for a recorded site or monument require statutory notification to the National Monuments Service (NMS) of the Dept. of Housing, Local Government & Heritage under the provisions of Section 12(3) of the National Monuments (Amendment) Act, 1994.

In keeping with best practice, any works located outside the established zones but which are considered to be a risk to archaeological sites/monuments or where situated in an area of high site density/high potential for sub-surface archaeology (as assessed on a case by case basis), may also require assessment and notification to NMS.

Any proposed works in the vicinity of a designated National Monument requires consultation with NMS, notification and Ministerial Consent (under Section 14 of the National Monuments Act, 1930).

2 ARCHAEOLOGY

Archaeology is the study of past societies through their material remains and the landscapes they lived in. “The archaeological heritage consists of such material remains (whether in the form of sites and monuments or artefacts in the sense of moveable objects) and environmental evidence.”¹ Archaeology is “not restricted solely to ancient periods; it includes the study of relatively recent societies through, for example, industrial and military uses.”²

2.1 Historical Background

The following is a description of the development of Leixlip (RMP: KD011-004001-) as provided by the Archaeological Survey of Ireland³:

“Located at the confluence of the E-flowing River Liffey and its tributary, the S-flowing Rye Water. According to Bradley et al. (1986 vol. 3, 304-305), the existence of a Scandinavian placename 'Lexhlaup' / 'salmon leap', suggests a Viking settlement. In the late-12th/early-13th century, Leixlip was also known by the name 'Ernia' or 'Hernie', possibly derived from An Urnaidhe, meaning oratory, which may also indicate the presence of a pre-Norman ecclesiastical site. The earliest definite evidence for settlement occurs in the late-12th century when Adam De Hereford established a castle and borough and granted the church and burgage to St Thomas' Abbey. Subsequently another burgage was given to St. Mary's Abbey in Dublin. The borough was looted and burnt by Edward Bruce's army in 1317, but otherwise seems to have remained relatively undisturbed. A population of 100 was recorded in the census of 1659. The town was confined to a narrow strip of land between the Liffey on the S, a high ridge on the N, and the Rye Water on the W, with the main street running roughly E-W along the centre of this strip of ground. A burgage plot pattern survives on the N and S of Main Street. The settlement included an early castle (KD011-004002-), a church (KD011-004003-) and graveyard (KD011-004004-), and a tower house (KD011-004005-), while archaeological excavation has uncovered medieval deposits to the N of Main Street (KD011-004007-).”

The landscape within which the existing water treatment plant infrastructure is situated lies on the east bank of the River Liffey just south of its confluence with the Rye Water. The immediate area contains evidence of human activity and settlement from the Early Mesolithic (c.7500-6500BC) as attested by several previous archaeological investigations across the site (See **Sections 2.2 & 2.6**). A detailed historical background to the development of Leixlip & environs has been covered over several previous assessments and is not repeated here⁴.

¹ Framework & Principles for the Protection of the Archaeological Heritage (DoAHGI, 1999)

² Archaeology in the Planning Process (Office of the Planning Regulator, Leaflet 13, 2021)

³ <https://maps.archaeology.ie/HistoricEnvironment/>

⁴ <http://www.sdublincoco.ie/Planning/Details?regref=SD10A%2F0130>

2.2 Archaeological Background

The existing WTP sites are located within an area of recorded archaeological sensitivity and the development and expansion of the WTP infrastructure over the last 20 years has involved several significant archaeological investigations across the wider site area.

These are detailed in previous reports associated with the following planning application references:

- S00A/0230
- SD06A/0500
- SD04A/0981
- SD10A/0130

A summary of report and planning history is provided in **Table 1** and synopses of relevant excavations are provided in **Section 2.6, Table 4** of this report.

Table 1: Archaeological Assessment/Investigation history at Leixlip WTP

REPORT TITLE & DATE	PLANNING DETAILS
An Assessment of the Site & Former Golf Course at Cooldrinagh, Leixlip, Co. Dublin September 2003	Archaeological Assessment submitted as part of Planning Application SD04A/0981
Leixlip Water Treatment Plant at Cooldrinagh, Co. Dublin Archaeological Geophysical Survey Prerequisite for licence for testing. May 2005	Submitted as part of Planning Application SD04A/0981, covering entire site.
An Archaeological Assessment of a Proposed Extension to Leixlip Water Treatment Plant at Cooldrinagh, Co. Dublin Included field walking survey with plough zone analysis and test-trenching (NW part of site) August 2005	Response to RFI from SDCC (24/02/2005)
An Archaeological Assessment of a Proposed Extension to Leixlip Water Treatment Plant at Cooldrinagh, Co. Dublin Amendment to previously submitted report of 2005. June 2006	As above
Archaeological Testing at Leixlip Water Treatment Plant, Cooldrinagh, Leixlip, Co. Dublin. Main Archaeological Report covering revised works location at SW corner of site. May 2006	Revised Assessment for Planning Application SD06A/0500 Phase I testing
Archaeological Desktop Report for the Leixlip Water Treatment Scheme, Cooldrinagh, Co. Dublin June 2006	Desktop Assessment to accompany above testing report for Planning Application SD06A/0500

REPORT TITLE & DATE	PLANNING DETAILS
Stratigraphic Report on Phase II Archaeological Testing at Cooldrinagh, Leixlip, Co. Dublin April 2007	Phase II additional testing conducted to follow-up findings made in Phase I
Report on Archaeological Test Trenching at Cooldrinagh, Dublin Supplemental testing of area to E of proposed site as proposed to be used by the contractor for grading of excavated topsoil and testing of the proposed 'clearwater' pipeline route. December 2007	Phase II supplemental testing

Early Mesolithic material (c.7500-6000BC) was first identified at Cooldrinagh during the excavation of a mound (RMP: DU017-075001-) in 1995. This material was thought to represent residual and secondary deposition of lithics during the construction of the mound (possibly itself an 18th-century folly). Subsequent monitoring or groundworks associated with a WTP development in 1998 produced a substantial quantity of Mesolithic lithics and a discrete area of the site was listed in the RMP for future protection (RMP: DU017-079----). The Mesolithic Period (c. 7500-4500BC) provides the earliest physical evidence of human colonisation in Ireland. The majority of Mesolithic sites known in Ireland, albeit rare, are found in coastal, lacustrine and riverine environments such as that at Coolrinagh.

The Neolithic Period (c.4500-2500BC) is represented at Cooldrinagh by the discovery of a probable megalithic tomb and remains of a passage tomb in 2006 (Turrell, ADS, Consent No. C014/E2034) during archaeological testing and subsequent excavation for a proposed extension of the WTP (Planning ref. SD06A/0500).

Later periods are represented at Cooldrinagh by artefacts retrieved and cultural material encountered during previous excavations at the WTP sites including an a spiral-ringed pin of Viking type and a pseudo-pennanular ring-brooch – both dating to the Early Medieval Period (c. 5th – 10th centuries AD).

2.3 Statutory Protections

The statutory and administrative framework of development control within zones of archaeological notification or in proximity to recorded monuments has two main elements:

- (a) Archaeological preservation and licensing under the National Monuments Acts.
- (b) Development plans and planning applications under the Planning Acts.

Currently an archaeological monument is assigned statutory protection in one of four ways:

- It is recorded in the Record of Monuments and Places (RMP).
- It is registered in the Register of Historic Monuments (RHM).
- It is a national monument subject to a preservation order (or temporary preservation order).
- It is a national monument in the ownership or guardianship of the Minister for Housing, Local Government & Heritage or a Local Authority.

National Monuments Act

Section 12 (1) of the National Monuments (Amendment) Act, 1994 provides that the Minister for Housing, Local Government & Heritage shall establish and maintain a record of monuments and places where the Minister believes there are monuments; such record to be comprised of a list of monuments and relevant places and a map or maps showing each monument and relevant place in respect to each county of the State. This is referred to as the ‘Record of Monuments and Places’ (RMP), and monuments entered into it are referred to as ‘Recorded Monuments’.

Section 12(3) of the National Monuments (Amendment) Act 1994 provides for the protection of monuments and places in the record, stating that:

“When the owner or occupier (not being the Minister) of a monument or place which has been recorded under subsection (1) of this section or any person proposes to carry out, or to cause or permit the carrying out of, any work at or in relation to such monument or place, he shall give notice in writing of his proposal to carry out the work to the Minister and shall not, except in the case of urgent necessity and with the consent of the Minister, commence work for a period of two months after giving the notice.”

RMP designation is the most widely applied provision of the National Monuments Act.

National Monuments & Ministerial Consent

Section 14(1) of the National Monuments (Amendment) Act, 2004 states that in respect of a national monument of which the Minister or a Local Authority are the owners or the guardians or in respect of which a preservation order is in force, it shall not be lawful for any person to do any of the following things in relation to such national monument: ‘...*(b) to excavate, dig, plough or otherwise disturb the ground around, or in proximity to it...without the consent referred to in subsection (2) of this section or otherwise than in accordance with such consent*’.

Section 14(2) refers to the granting, or otherwise, of consent and includes for a period of not more than 14 days consultation with the Director of the National Museum of Ireland following submission of a written consultation document. In addition, it should be noted that this subsection is not restricted to archaeological considerations.

South County Dublin Development Plan 2016 – 2022

The relevant policies, action and development management standards pertaining to the protection of the archaeological resource are provided in **Appendix I** of this report.

The Record of Monuments and Places was compiled for County Dublin in 1998 and includes all sites, monuments and known areas of archaeological potential in the county.

- These sites/monuments are protected under the provisions of the National Monuments Acts 1930-2014.
- Each site is assigned an individual identifying number and each has an associated Zone of Notification where applicable.

- Any proposed development within a Zone of Notification requires written notification to the National Monuments Service of the Department of Housing, Local Government & Heritage under section 12(3) of the National Monuments Act.
- A statutory two-month consultation period follows receipt of this notification.
- All sites or monuments discovered since 1998 may not be listed on the RMP but are, nonetheless, subject to protection under the provisions of the National Monuments Acts and policies of the South County Dublin Development Plan 2010 (as extended).
- Where a development may be considered to be an ‘exempted development’ under the Planning & Developments Acts & Amendments, such an exemption may not apply where works are proposed within an established Zone of Notification of a site/monument listed on the RMP⁵.

2.4 Archaeological Artefacts

Records of the locations and frequency of stray archaeological finds uncovered through farming practices and antiquarian pursuits over the past 200 years can give an indication as to the archaeological potential within a geographic area. The National Museum of Ireland maintains paper records and a database of all stray archaeological finds in its possession. Those relating to burials are collated in two published volumes⁶. This review does not include finds recorded in the NMI topographical paper files and database after 2006.

A review of available sources produced four results for townlands within or adjacent to the study area. Details are provided in **Table 3**.

Table 3: Stray Archaeological Finds recorded within the study area

NMI ref.	Find Description	Townland/Location
1960:575	Bronze latchet brooch In bed of River Liffey	Lucan Demesne
1976:548	Core exehead , flat, chipped Found in surface soil of garden	Backwestonpark
1942:738	Stone Ball Specific find-spot unknown	Lucan
E92:264	Bronze ring pin or brooch Specific find-spot unknown	Lucan

Additionally, numerous finds have been made within the WTP site area in the context of previous archaeological investigations – See **Section 2.6**.

⁵ See ‘Restrictions on Exemption’ in S.I. No. 600/2001 - Planning and Development Regulations, 2001: Part 2, Section 9 (1) (a) (vii). <http://www.irishstatutebook.ie/eli/2001/si/600/made/en/print#part2>

⁶ ‘Breaking Ground, Finding Graves – reports on the excavations of burials by the National Museum of Ireland, 1927 – 2006’, ed. by Cahill, M. & Sikora, M.

2.5 Archaeological Inventory

A review of the Archaeological Inventory produced 2 results within the Study Area. Published inventory and locational details are listed in **Table 2** and illustrated in **Section 8, Figures 1 & 2**.

Table 2: Published Archaeological Inventory Details

RMP/RPS No(s)	Townland/s	Centred on ITM Easting	Centred on ITM Northing
DU017-075001-	Cooldrinagh	700595	735491
Classification & Description			
Barrow – ring-barrow (added reference to ‘Metal-working site’ in the SDCC Development Plan)			
Excavations in 1995 of a circular mound revealed an enclosing fosse (Wth 0.7m; D 0.25) which produced flint flakes and modern pottery. A copper-alloy brooch pin was found at the edge of the mound. The removal of the mound exposed an earlier ditch that produced cremated bone and a funnel-shaped pit complex which produced iron slag and an unidentified iron object (Mullins 1996, 13).			
RMP	Townland/s	Centred on ITM Easting	Centred on ITM Northing
DU017-079----	Cooldrinagh	700595	735497
Classification & Description			
Prehistoric site – lithic scatter			
Pre-development testing in low -lying fields on the south bank of the Liffey produced substantial collections of Early Mesolithic flint assemblages (Mullins 1996, 12-3).			
RMP	Townland/s	Centred on ITM Easting	Centred on ITM Northing

2.6 Previous Archaeological Investigations

The Excavations database contains summary accounts of all archaeological investigations conducted between 1969 and 2018 on the island of Ireland. A review of the relevant database entries and publications for townlands within and adjacent to the study area produced 7 results. Additionally, results of archaeological investigations conducted as part of previous planning applications and developments relating to the Leixlip Water Treatment Plant were reviewed to inform this study. Relevant synopses are provided in **Table 4**.

Table 4: Previous Relevant Archaeological Investigations

1.	Excavations Ref.	2005:410
	Licence/Consent No.	CO14
	Location & Description	Cooldrinagh, Co. Dublin
	Testing was conducted at the site of a proposed extension to the water treatment plant at Cooldrinagh, Leixlip, Co. Dublin. The proposed development site was located in the northern part of the site of a former golf course. Previous work in the general area had shown evidence of Early Mesolithic activity at a number of locations, as well as archaeological features and artefacts of early medieval date. The site lies in the bow of the River Liffey which borders Cooldrinagh on its west and northern sides. The	

original riverbank in the vicinity of Cooldrinagh was submerged during the creation of a dam in the 1950s, as were the set of rapids known as the 'Salmon Leap', which originally lay some 400–500m upstream. A Mesolithic core axe was found several years ago in a garden in the townland to the immediate north of Cooldrinagh, which is also the townland in which the Salmon Leap was located. The Cooldrinagh landscape is dominated by two large ridges located at its northern end; the more prominent of these ridges is orientated east–west, with its western end situated close to the river edge, and the other, a short distance to the east of the former, is orientated north–south. While deceptive at first glance, all of the higher land at Cooldrinagh is approximately the same height above sea level and its undulating topography results from the action of post-glacial meltwater, which eroded a series of river channels through the land.

Because of the known sensitivity of the area with respect to the Early Mesolithic period, a ploughsoil walkover survey was carried out in addition to conventional hand-dug test-trenching. The plough-soil survey necessitated the ploughing of the land some months in advance of the planned work to permit weathering of the turned topsoil. The test-trenches were designed with reference to a number of vague anomalies which had been revealed during a geophysical survey, while the two large ridges also received particular focus in the test-trenching plan.

The results of the assessment have further confirmed Cooldrinagh as a significant area with respect to the very early prehistoric period (lithics analysis by Professor Peter Woodman). Combined ploughsoil survey and test-trenching produced an assemblage of 330 knapped flint pieces, distributed across the site in a non-random pattern. A significant proportion of these have been identified as Early Mesolithic. The quantity of lithics identified during the ploughsoil survey was considerably outweighed by that retrieved from test-trenching, although test-trenching covered a relatively small surface area in comparison to ploughed area. Although the ploughsoil survey was designed merely as an indication of flint distribution, part of this discrepancy in quantity may be attributable to the ineffective break-up of the ploughsoil, which was in turn caused by the depth and density of sod cover. The lithics analysis identified concentrations within the lower ground on the east of the eastern ridge and on the flat summit of the western ridge as Early Mesolithic sites and in addition identified other concentrations as locations of possible Early Mesolithic activity. The identification of an Early Mesolithic site on the summit of the western ridge is especially interesting given the apparent relationship between high riverside ground and Early Mesolithic settlement. A significant Bronze Age component was also identified within the lithic assemblage and a number of Neolithic pieces were also present.

In addition, a large cairn was discovered on the eastern side of the east–west ridge. This cairn had been buried beneath a layer of modern material that appears to have been deposited in very recent times, possibly during the construction of the golf course in the early 1990s. This modern material covered the cairn to a depth of almost 1m in places but appeared to have done minimal damage to the actual structure of the cairn. The cairn was constructed of angular stones within a soil matrix and appeared to reach a maximum depth of c. 1m in its centre. Additional trenches were opened along the line of the periphery of the cairn and a number of possible kerbstones were also revealed. A conspicuous amount of burned bone was evident in the soil to the immediate west of the cairn and occasional fragments were also found within the actual fabric of the cairn itself. Included amongst this bone were a number of very worn human teeth. The location of a burial cairn in such a prominent visual setting is not surprising, while the location of the ridge at Cooldrinagh within a bend of the river may also have some significance in this respect.

	<p>What is tentatively identified as a polished stone ball, a typical passage tomb find, was found in the ploughsoil at another location within the proposed development area, although at some distance from the hilltop cairn.</p> <p>In addition to the cairn and the flint concentration, further evidence of activity in the form of a number of linear features, some of which may represent drainage channels, was identified on the western side of the western ridge. The only dating evidence which came from this cluster of features consisted of a sherd of modern ceramic and an iron nail from the stratigraphically latest of the group.</p> <p>Further evidence of early settlement associated activity was identified within another test-trench. This consisted of a number of cultivation ridges of uncertain date, two possible post-holes, some pits and a definite area of burning that also produced two fragments of worked flint. This area of burning also produced charcoal that gave a radiocarbon date of mid-fourth millennium BC. Charcoal from one of the pits produced two radiocarbon dates of early second millennium BC. These dates accord well with both the Bronze Age component within the lithics assemblage and with the probable date of the cairn.</p> <p>A possible archaeological feature was also identified at the eastern end of another trench. This consisted of a depression, containing three different fills, within the surface of the natural. However, given that the edges of this potential feature extended beyond the limits of the test-trench, the exact configuration of it was not defined and it is impossible to know whether it represents a cut feature or a mere undulation on the surface of the subsoil. The fills produced one blade fragment identified as of possible Early Mesolithic date and two flint flakes.</p> <p>A series of five or six stake-holes were identified in Test-Trench 4. These formed an arc which appeared to extend beneath the baulk on the southern side. Some of these stake-holes were inserted into the ground at an angle consistent with a circular structure with its centre to the south. A charcoal sample from one of these stake-holes produced a date of 16th–18th century AD.</p> <p>Most of the curvilinear anomalies identified during the geophysics survey proved to be the result of water pipes and electricity cables running through the site, although a linear area of high magnetic resistance was revealed to be a possible gravel trackway. This feature was associated with modern ceramics.</p> <p>Due to the increasing evidence of the archaeological significance of the proposed development site, plans to build the water treatment plant at this precise location were withdrawn.</p>					
2.	<table border="1"> <tr> <td>Excavations Ref.</td> <td>2006:585</td> </tr> <tr> <td>Licence/Consent No.</td> <td>CO14/E2034</td> </tr> </table>	Excavations Ref.	2006:585	Licence/Consent No.	CO14/E2034	
Excavations Ref.	2006:585					
Licence/Consent No.	CO14/E2034					
	<table border="1"> <tr> <td>Location & Description</td> <td>Cooldrinagh, Co. Dublin</td> </tr> </table> <p>Two phases of testing were carried out at Cooldrinagh, Co. Dublin, in advance of a proposed extension of the adjacent water treatment plant. The site was situated just south of Leixlip on a bend in the River Liffey where the Geological Survey of Ireland has identified several palaeochannels of immediately post-glacial date, before the river shifted to its present course. The site was crossed by two sunken fences, or ha-has, dating to the late 18th century, part of the landscaping associated with the adjacent Cooldrinagh House. A golf-course was constructed here in the 1990s, and overgrown bunkers, fairways and greens were still clearly visible.</p> <p>From the 1990s onwards, the site has been the subject of a series of archaeological investigations. In the early 1990s monitoring of groundworks associated with the golf-course construction took place.</p>	Location & Description	Cooldrinagh, Co. Dublin			
Location & Description	Cooldrinagh, Co. Dublin					

Particular attention was paid to the top of the ridges at the north end of the site, but nothing of archaeological significance was noted.

In 1995 archaeological excavation took place on a small mound to the west of the site, directed by Clare Mullins. Prior to excavation, the mound was thought to be a possible ring-barrow, and subsequently became RMP site DU017–075. Excavation revealed the mound to be an 18th- or 19th-century landscape folly, surrounded by a contemporary enclosing ditch. Beneath the mound were found a number of non-associated subsoil-cut features ranging from the late 7th to the early 13th centuries, as well as a large assemblage of Mesolithic worked flints. Other finds include a spiral-ringed pin and a pseudo-pennanular ring-brooch, together with a quantity of medieval and post-medieval debris (Excavations 1995, No. 52, 95E039).

In 1997, a programme of machine test-trenching was carried out under the direction of Martin Byrne, but, apart from some pottery sherds of medieval date and two medieval bronze stick-pins, nothing of archaeological interest was noted (Excavations 1997, No. 90, 97E0027). Following on from this, monitoring of groundworks in the western part of the site by Clare Mullins produced an assemblage of lithic material and some medieval pottery, but no other traces of human activity were noted (Excavations 1997, No. 91, 97E0027 ext.). As a result of these finds the area was added to the RMP files as DU017–79. In 2004, monitoring of a water pipe for the Lucan to Palmerstown water scheme took place. No archaeological material was identified during the course of this work.

A number of investigations were also carried out in 2005. A geophysical survey carried out by Earthsound Archaeological Geophysics identified a number of areas of archaeological potential, which were tested by the excavation of eleven trenches, under the current ministerial consent number and under the direction of Clare Mullins (Excavations 2005, No. 410). No archaeological features were noted, but a number of flints, considered to be evidence of Mesolithic activity, were found in several trenches. A programme of archaeological field-walking and a survey of the plough zone were also carried out.

In the 2006 campaign, the initial phase of this testing was concentrated on the three areas, A, B and C, which would be affected by the proposed development. The testing programme included the digging of 15 hand-excavated and 41 machine-excavated trenches, together with the excavation and sieving of 200 test-pits and the metal detection of all excavated spoil. Forty pieces of flint were recovered from the test-pits, with no particular concentrations noted. Nothing of archaeological interest was found in Areas A and C, to the south and east of the site, apart from some flint in the ploughsoil. In Area B, however, two of the test-trenches revealed what appeared to be the remains of a prehistoric tomb, located in an east–west palaeochannel, close to the southern limit of the site.

Following this discovery, Phase 2 testing was initiated, the objective of which was to clarify the nature of the tomb and find its limits, as well as to monitor groundworks along the line of a proposed water mains to Ballycoolen, to the east of the tomb. When the sod was removed from the area around the two former test-trenches, it was revealed that the remains here consisted, in fact, of two adjacent monuments. To the west was what appeared to be a passage tomb. It seemed to have been reduced to ground level at some stage, with only the deeper western side, where the tomb seemed to have been partly dismantled and filled in, surviving to any great depth. Immediately to the east of this was a circular kerb of large stones, within which were a small central cairn and two cists. This monument had also been severely disturbed.

Removal of the sod to the west exposed very stony topsoil, around 0.2m thick, containing a lot of modern material and representing ploughed-out cairn material. This was investigated by means of five 2m-wide, hand-excavated sondages, revealing the remnants of an oval cairn, measuring 19.3m by 16m. The greater part of the cairn consisted of a thin, patchy, disturbed layer of blue/grey limestone resting directly upon the bedrock, from which it was derived. There was a discontinuous yet distinct line of angular quartz fragments around the edge of the cairn material, seeming to represent the remains of a quartz facing. Towards the south-east edge of the cairn a large fragment of human skull was discovered, beneath which were a jaw fragment and some long bones. These bones, perhaps representing a secondary inhumation, lay in a loose, stony, loamy deposit with no discernable cut. As well as flint, a number of modern finds were noted amongst the stones of the cairn, further evidence of the degree of disturbance to which it had been subjected.

On the western side of the cairn the bedrock dipped sharply. Several large upright slabs, almost certainly orthostats, had been revealed here during the Phase 1 testing. There was a line of three of these running north–south, with a further two stones opposite and slumped towards them. Two further possible orthostats were also identified on the surface, one partially exposed at the southern end of the test-trench and another towards the north, both at right angles to the other slabs. The slabs measured up to 1m by 0.8m and 0.26m thick and together may have formed a structure some 4.8m by 0.8m, probably a passage or small chamber.

A very stony material, around 0.8m thick, filled the gap between the orthostats. The upper part of this consisted of a very stony, loose, loamy silt containing modern finds, animal bone and shell, but further down this became a more compact, silty clay and a quantity of burnt and unburnt fragments of human bone was encountered, together with more animal bone. A small sondage revealed that, near the base of the tomb sealed by a layer of charcoal, there was human bone, lying on several small, flat stones, perhaps indicating an in situ burial, resting on the floor of the tomb.

Around 2.4m to the east of the cairn were the partly ploughed-out remains of a circular stone kerb with an internal diameter of 14m. This was constructed from large, subrectangular blocks of the local blue/grey limestone, some of which were displaced. The circle was not complete, being best preserved on the western side. Two rounded granite stones were noted just outside the line of the kerb on the southern side, perhaps indicating that there was an entrance here. Outside the kerb to the west was a skirt of densely packed, medium-sized limestone, extending up to 1.2m from it. A small, box-like structure containing some animal bone was noted amongst this stone, suggesting that it may have been largely in situ, perhaps forming an external bank.

With three notable exceptions, the stone within the kerb was generally small and sparsely scattered. Some of the smaller stones were arranged in neat lines running north–south, probably as the result of ploughing. The eastern part of the monument was almost completely devoid of stones, with just a light scatter here. In the centre of the kerb circle was an L-shaped structure of closely packed small stones, with a dense scatter of similarly sized stones spread out to the north of it. This feature may have been a small cairn, with the scattered stones representing its ploughed-out remains. As well as a selection of modern finds, small fragments of burnt bone were found amongst this scattered stone.

Two rectangular cists were discovered in the south-west quadrant of the kerb circle, between the kerb and the central structure, and, on the advice of the DoEHLG, these were fully excavated. The larger of them, Cist 1, was orientated east–west, with two large limestone blocks forming the sides and two smaller end stones within them forming the ends. The two sides of this cist were actually exposed on

the ground surface, hidden only by the long grass here. The external dimensions of the cist were 1.2m by 1.2m and the internal dimensions were 0.87m by 0.6m, with a depth of 0.5m. No capstone was present, but the cist was surrounded by a concentration of large to medium-sized pieces of limestone, some of which may have been supports for the side stones.

The upper fill of Cist 1 had been disturbed in recent times, as evidenced by a metal beer can found within it. Below this was fairly loose, orange silty clay, 0.12m thick, which contained a few fragments of quartz and bone and appeared disturbed. The basal fill was a very loose clayey silt and within this layer, lying on the base of the cist, were the partial remains of a human skeleton. The skeleton consisted of a cranial fragment, a few pieces of vertebrae, two crushed pelvic fragments, femurs, tibiae, a fibula, a calcaneus and a talus, most of these lower limb bones being articulated. No ribs or upper limb bones were present. The skeleton was in a flexed position, facing south with the head towards the east, the unfused long bones indicating that the individual was a juvenile. The bones rested on the floor of the cist, which was constructed from slabs of limestone, although these appeared disturbed in the centre. It seems that the cist had been robbed at some stage, the culprit digging down straight through the skeleton and floor of the cist.

Cist 2, just east of Cist 1, was a smaller, slighter structure, of similar basic design, with external dimensions of 0.85m by 0.62m and internal dimensions of 0.56m by 0.44m, with a depth of 0.33m. It was also orientated east–west and lacked a capstone. The sides of the cist were supported externally by supplementary limestone blocks packed against them. Upon excavation, two sandy silt fills were noted, containing a few small fragments of charcoal and bone, but no skeletal remains were found. The base of this cist was formed from the natural bedrock.

A small sondage was excavated between Cist 1 and the central cairn. A layer of burnt, reddish-brown silty clay was noted running under the cairn, but no clear stratigraphical relationship could be established between the two features. There did not appear to be a cut associated with the cists, which were probably built at ground level and may have been covered with a small cairn of stones.

No new archaeology was discovered along the route of the pipeline, but a pit and adjacent hearth, discovered during Phase 1, were fully excavated. The hearth was rectangular in plan, measuring 1.1m by 2.2m, and had been cut into the bedrock and clay to a depth of 0.25m. The base of the hearth was formed from very compact, fire-reddened clay containing occasional charcoal flecks. A sondage through this clay showed that it was burnt to a depth of up to 0.04m. Above this was a deposit of grey/brown/orange silty clay containing large amounts of charcoal and ash. The upper fill consisted of loose stones derived from the bedrock, which seemed to have been deliberately placed over the hearth. Two burnt flints were found within these stones.

The pit, 2.4m to the south, was subcircular in plan, measured 1.44m by 1.26m and was up to 0.56m deep, the base sloping sharply from north-east to south-west, following the natural slope of the bedrock. It had been cut into the bedrock on three sides and into the natural clay at the southern end. The basal layer of the pit was a very clean, soft, grey clay up to 0.3m thick. This clay covered the base of the pit and the rock-cut sides but was less extensive where the pit had been cut through clay. Above this was a succession of charcoal-rich clay or clayey silt deposits, with evidence for a possible recut of the pit. A number of finds were recovered, including burnt and unburnt animal bone, antler, a disc-shaped granite hammerstone, flint flakes, blades and scrapers, a large, water-rolled granite pebble, as well as a quantity of burnt quartz and granite.

	<p>Weathering marks, evident in the central part of the limestone base of the pit, displayed characteristics of those formed from water percolating through subterranean rock and the fact that this weathering was absent from the rock at the margins of the base suggests that there was originally a natural damp hollow here that was enlarged by chipping away the rock from its sides. The rock was very porous and the basal clay layer was probably laid down in order to make the pit waterproof. This interpretation is strengthened by the fact that this clay layer covered the rock but was less in evidence where the side of the pit was cut through clay. The burnt fill of this pit and the great quantity of bone and antler recovered from it indicated that cooking was taking place here. The large amount of burnt quartz and granite found in this deposit, taken together with the waterproof clay lining, suggested that this cooking was by means of water heated with stones and that the stones had been fired in the nearby hearth. These two features, a hearth and waterproof cooking pit, are typical of fulachta fiadh, but no burnt material was found in the surrounding area and it may be that the pit was in use for only a short time.</p> <p>The presence of burnt quartz and granite in the pit is of interest, since these stones do not occur naturally in the vicinity of the site, although granite pebbles may have been available along the bed of the nearby River Liffey. The naturally occurring limestone would not be suited to this type of cooking process, especially since it readily absorbs water. It would not be a practical proposition to import quartz on site for this purpose and the obvious inference is that it has been robbed from the nearby cairn.</p> <p>The tombs, which were not further affected by the development, were covered by geotextile and two low mounds of earth were raised over them in order to mark their position and provide protection. At the time of writing, post-excavation analysis of bone and lithics is ongoing and samples have been sent for radiocarbon dating. It is hoped that this will allow a closer dating of the various elements of the site and allow the broad sequence of events to be reconstructed.</p>	
3.	Excavations Ref.	2007:448
	Licence/Consent No.	07E0983
	Location & Description	Leixlip wastewater Treatment Plant, Cooldrinagh, Co. Dublin
	<p>Monitoring of the groundworks associated with new ESB poles at Cooldrinagh, Leixlip, Co. Dublin, took place over two days in October 2007. The site was in the vicinity of a megalithic tomb. Six pits were excavated for poles and eight associated stay-holes were also excavated, as well as two associated cable trenches. The ground excavated consisted of made ground, and no archaeological features, deposits or artefacts were exposed during the course of the excavations.</p>	
4.	Excavations Ref.	2007:449
	Licence/Consent No.	E2034; C0135
	Location & Description	Leixlip Wastewater Treatment Plant, Cooldrinagh, Co. Dublin
	<p>Test-trenching of an area to be landscaped and of a proposed pipe track for the wastewater treatment plant at Cooldrinagh, Leixlip, Co. Dublin, took place over two days in November 2007. Five test-trenches were excavated: three in the area to be landscaped and two along the proposed pipe track. The site is in the vicinity of a megalithic tomb. No archaeological features, deposits or artefacts were exposed during the course of the test excavations.</p>	
5.	Excavations Ref.	2012:189
	Licence/Consent No.	E4414, C014, R297
	Location & Description	Cooldrinagh, Co. Dublin

	Monitoring of groundworks was undertaken in advance of the construction of the Leixlip Waste Water Treatment Works, Cooldrinagh Td, Co. Dublin. These works were undertaken between January–August 2012. All associated groundworks for the scheme were monitored. Additionally, metal detection of excavated spoil was undertaken (detection license R297). While some 19th-century coins were found through metal detection, no archaeological finds or features were recorded.	
6.	Excavations Ref.	1997:090
	Licence/Consent No.	97E0027
	Location & Description	Leixlip Waterworks, Cooldrinagh & Backweston Park, Co. Dublin
	<p>Leixlip Waterworks is located on the southern bank of the River Liffey, opposite the town of Leixlip. It is situated in County Dublin, the river acting as a county boundary in this general area. The site occupies a strip of land which generally runs from Leixlip Bridge to the M4 motorway. Most of the site is located in Cooldrinagh Td, with a portion of the western area located in the townland of Backweston Park. The general terrain of the site is a slope down towards the river, although a number of level terraces were created during previous construction works. Furthermore, the site is the location of the Leixlip hydroelectric station. The area to the west of this plant was dammed and flooded in the late 1940s and today serves as a reservoir for both the waterworks and the electricity station.</p> <p>The town of Leixlip has its origins in the early Anglo-Norman period, although there may have been settlement there in pre-Norman times. Furthermore, it is speculated that a small Viking settlement may have been situated in the general area of the waterworks site. It is widely accepted that the general region of Leixlip served as part of the western boundary of the Dublin Vikings' area of control, although, to date, no evidence of Viking settlement has been found there. However, a ringed pin and pin brooch of early medieval date were recovered from a barrow excavated by Clare Mullins in Cooldrinagh (Excavations 1995, 12, 95E039). The barrow was located within the confines of the waterworks site and the material suggests the possibility of early medieval activity in the general vicinity of the site, although previous monitoring work associated with Stage 1 of the construction project, undertaken by Breandán Ó Ríordáin, did not uncover any further evidence.</p> <p>An archaeological assessment associated with Stage 2 of the project recommended a programme of trial-trenching in three distinct 'greenfield' areas of the site, and that all topsoil-stripping be undertaken under the supervision of an archaeologist.</p> <p>Trial-trenching was undertaken at the site from 17 to 26 February. Three distinct areas, A1-3, were evaluated by means of mechanical excavator. No features or structures were uncovered in any of the tested areas and no finds were recovered from A1 or A3. However, a number of sherds of medieval pottery were recovered from A2, as well as a number of clay pipe fragments which appear to date from the early 18th century.</p> <p>All topsoil-stripping associated with construction works and the provision of services in the western part of the site were monitored during the period June-September. No features or structures were encountered during the course of this work. However, a number of sherds of medieval and post-medieval pottery, as well as two bronze stick-pins of medieval date, were recovered from a pipe trench (A4).</p> <p>Monitoring of Areas 1 and 2 was subsequently undertaken by Clare Mullins, the results of which are discussed below (No. 91), and further monitoring at the site will be undertaken during 1998.</p>	
7.	Excavations Ref.	1997:091

Licence/Consent No.	97E027ext.
Location & Description	Leixlip Waterworks, Cooldrinagh, Co. Dublin
<p>Archaeological monitoring of topsoil removal associated with the proposed Highlift Pumping Station (A3) and the proposed new Clearwater Tank (A2) was undertaken in November 1997. These areas had been tested by Martin Byrne in February 1997 (No. 90 above), when no features of archaeological interest had been identified. A number of sherds of medieval and post-medieval pottery were recovered from the area of the proposed Clearwater Tank during the archaeological testing.</p> <p>No features or artefacts of archaeological interest were uncovered during the monitoring of the area of the proposed Pumping Station.</p> <p>During monitoring of the area of the proposed Clearwater Tank, a dozen flint flakes as well as one sherd of unglazed medieval pottery were recovered from the topsoil. On the basis of these finds some further hand-testing of a limited section of the site was carried out. This produced 20 more flint flakes as well as several more sherds of medieval pottery, all from the topsoil. However, no features indicative of human activity were identified.</p>	

3 ARCHITECTURAL HERITAGE

The National Inventory of Architectural Heritage (NIAH) was established in 1990 to fulfil Ireland's obligations under the 1985 Convention for the Protection of the Architectural Heritage of Europe. Commonly referred to as the Granada Convention, Article 1 defines 'architectural heritage' under three broad categories of Monument, Groups of Buildings, and Sites.

- Monument: all buildings and structures of conspicuous historical, archaeological, artistic, scientific, social or technical interest, including their fixtures and fittings.
- Group of buildings: homogeneous groups of urban or rural buildings conspicuous for their historical, archaeological, artistic, scientific, social or technical interest, which are sufficiently coherent to form topographically definable units.
- Sites: the combined works of man and nature, being areas, which are partially built upon and sufficiently distinctive and homogenous to be topographically definable, and are of conspicuous historical, archaeological, artistic, scientific, social or technical interest.

3.1 Statutory Protections

The Planning and Development Act 2000 (as amended)

The Planning and Development Act affords protection to buildings and groups of buildings, including streetscapes and townscapes, of special architectural, historical, archaeological, artistic, scientific, social or technical interest. In relation to a protected structure or proposed protected structure, the term 'structure' includes the interior of the structure, the land lying within the curtilage of the structure, any other significant structures lying within that curtilage and their interior, and all fixtures and features which form part of the interior or exterior of that structure. The protection also extends to any features specified as being in the attendant grounds.

Protecting architectural heritage is a function of the planning authority through its Development Plan and the primary means of achieving this is to include a Record of Protected Structures (RPS) for the functional area within the plan. When considering proposals for works to a protected structure or proposed protected structure, local authorities have regard to the *Architectural Heritage Protection Guidelines for Planning Authorities, 2004* (DEHLG) and *A Guide to Architectural Heritage, 2021* (OPR/DoHLGH) which set out best practice conservation principles.

A planning authority is obliged to consider for inclusion in its Record of Protected Structures any buildings rated as being of Regional, National or International importance by the NIAH and give consideration to structures rated of local importance.

The inclusion of a building, feature or structure on the National Inventory of Architectural Heritage alone does not confer 'Protected' status.

South County Dublin Development Plan 2016-2022

The relevant policies and development management standards pertaining to the protection of built heritage are provided in **Appendix I** of this report.

3.2 Protected Structures and/or NIAH listed structures

A review of the Record of Protected Structures of the South County Dublin Development Plan produced six results. Each of these are additionally listed and described in the National Inventory of Architectural Heritage (NIAH) together with two additional listings which, although not Protected Structures, are considered to be of architectural merit. Descriptive details of each are provided in **Tables 5 & 6** and indicated in Error! Reference source not found..

Table 5: Protected Structures within the proposed development site study area

RPS No.	NIAH Reg. No	Name	Townland
009	11201003	Salmon Leap Inn	Cooldrinagh
Description	<p>House Detached nine-bay two-storey public house, c. 1850, with eastern two bays a later extension. Smooth rendered walls with base course and parallel quoins to corners. Square-headed window openings with stone sills housing variety of timber sash windows. Projecting gabled entrance porch, timber panelled door. Pitched slate roof with three rendered chimney stacks. Glazed single-storey extension to front, single-storey extension to rear.</p> <p>Appraisal A simple, well-proportioned street-fronted public house, located on a prominent corner just outside Leixlip village.</p>		
RPS No.	NIAH Reg. No	Name	Townland
014	11201007	Milestone	Cooldrinagh
Description	<p>Milestone Monolithic granite milestone, c. 1775, with incised legends to top and three sides, now largely illegible. Set in footpath against rubble stone wall.</p> <p>Appraisal A valuable historic artefact on this former main road, with the added technical value of a benchmark.</p>		

RPS No.	NIAH Reg. No	Name	Townland
018	11201009	Former farm outbuilding	Cooldrinagh
Description	<p>Single storey former farm outbuilding Formerly detached farm outbuilding, c.1775, partly converted for domestic use and extended to south, c.1930. Coursed, rubble limestone walls, roughcast rendered to road, with three slit openings and later window opening having uPVC window. uPVC window and timber door to southern roughcast rendered extension. Pitched slate roofs, single chimney stack. Rubble stone outbuilding to north with blocked openings and lean-to slate roof. Coursed limestone rubble wall to north with limestone ashlar granite capped gate piers.</p> <p>Appraisal A significant group survival of farm estate vernacular architecture, including an almost intact eighteenth-century agricultural building, which adds greatly to the Cooldrinagh area.</p>		
RPS No.	NIAH Reg. No	Name	Townland
021	11201008	Cooldrinagh Demesne Entrance Pillars	Cooldrinagh
Description	<p>Ashlar Limestone Gate Piers Pair of ashlar limestone gate piers with capping stones, c.1765. Replacement tubular metal gate. Random rubble limestone wall to north.</p> <p>Appraisal Well-constructed gate piers which were probably originally a formal entrance to the former estate land to the west. Their presence has a positive effect on the Cooldrinagh Lane vicinity.</p>		
RPS No.	NIAH Reg. No	Name	Townland
026	11201010, 11201011, 11201012	1-3 Cooldrinagh lane	Cooldrinagh
Description	<p>Terrace of Houses – 3no.</p> <p>No. 1 Cooldrinagh Lane Formerly end-of-terrace three-bay two-storey house, c.1830. Smooth and roughcast rendered walls with uPVC windows in altered openings. Replacement timber door. Projecting cast-iron arched hood on slender cast-iron columns to entrance. Pitched slate roof with gable chimney stack. Original cast- and wrought-iron railings to street.</p> <p>Appraisal A handsome terraced house which retains many original decorative features. An important element of the Cooldrinagh Lane area.</p> <p>No. 2 Cooldrinagh Lane Terraced three-bay two-storey house, c.1830. Roughcast rendered walls with timber sash windows having architrave surrounds, and replacement timber panelled door. Projecting cast-iron arched hood on slender cast-iron columns to entrance. Pitched slate roof with chimney stack to rear. Original cast- and wrought-iron railings to street.</p> <p>Appraisal A handsome terraced house which retains its original appearance, including its windows and cast-iron decoration. An important element of the Cooldrinagh Lane area.</p> <p>No. 3 Cooldrinagh Lane End-of-terrace five-bay two-storey house, c.1830. Roughcast rendered walls with replacement timber windows in altered openings and a replacement timber panelled door. Projecting cast-iron arched hood on slender cast-iron columns to entrance. Depressed-arched carriageway with replacement timber doors in smooth rendered bay to east. Blind</p>		

	end bay. Pitched slate roof with gable chimney stack. Original cast- and wrought-iron railings to street. Modern extensions to rear.		
	<p>Appraisal</p> <p>A handsome terraced house, slightly more substantial than its neighbours, which retains many original decorative features. An important element of the Cooldrinagh Lane area.</p>		
RPS No.	NIAH Reg. No	Name	Townland
040	11201014	Cooldrinagh House/ 'Becket's Hotel'	Cooldrinagh
Description	<p>Former Country House</p> <p>Detached three-bay two-storey over raised basement former country house, c.1765, rebuilt in the twentieth century and now in use as a bar and restaurant. Projecting entrance porch with double flight entrance steps having cast-iron railings, full-height projection to rear. Rendered, ruled and lined walls with granite string course. uPVC windows with stone sills. Elaborate Ionic doorcase with timber panelled door. Replacement bracketed hipped slate roof with two rendered chimney stacks. Modern extension to south.</p> <p>Appraisal</p> <p>A handsome former country house which, despite being rebuilt, retains its original atmosphere and a noteworthy doorcase. It was the family home of the writer Samuel Beckett's mother. She named her home with her husband in Foxrock, Co. Dublin "Cooldrinagh".</p>		

Table 6: Buildings, Structures or Features listed on the National Inventory of Architectural Heritage within/adjacent to the proposed development site study area

RPS No.	NIAH Reg. No	Name	Townland
N/A	11201001	Leixlip Hydro-electric dam	Cooldrinagh
Description	<p>Dam/reservoir/basin</p> <p>Reinforced concrete hydro-electric dam, c.1950, with sluice gates and salmon leap.</p> <p>Appraisal</p> <p>This dam is not only an essential part of the water management in the area but shows the technical abilities achieved in the mid twentieth century.</p>		
RPS No.	NIAH Reg. No	Name	Townland
N/A	11201005	House, Leixlip Road	Cooldrinagh
Description	<p>House</p> <p>Detached eight-bay single-storey house, c.1860, currently unoccupied. Roughcast rendered walls with pronounced base batter to roadside. Square-headed window openings, boarded up to entrance front, retaining stone sills and timber sash and casement windows to road side. Projecting gabled entrance porch with round-headed doorway. Pitched slate roof with perforated cresting, carved barge boards and single chimney stack. Blocked entrance gate in the boundary wall to east.</p> <p>Appraisal</p> <p>A simple domestic building, unusual in its orientation away from the road, and a valuable element of the streetscape on the approach to Leixlip village.</p>		

4 ASSESSMENT OF IMPACTS

This section is based on criteria and best practice guidance contained in the ‘*Draft Guidelines on the information to be contained in Environmental Impact Assessment Reports (EIAR)*’⁷ and under EU legislation contained in EIA Directive (2014/52/EU) as adopted by Ireland in 2014. Whilst the proposed development does not meet the criteria for which an EIA is required, the best practice guidance contained in these documents can be used to assess the impact potential of the proposed development on the archaeological & built heritage resources.

Impacts can be assessed using the following criteria:

- Duration of Effect – ranging from Brief (<1day) to Permanent.
- Quality of Effect – Neutral/Negative/Positive.
- Type of Effect – Direct/Indirect.
- Value of Heritage Asset/Archaeological Resource – ranging from Negligible to High.

- All above contribute to an assessment of the Significance of Effect – ranging from Imperceptible to Profound.

The proposed WTP upgrade works can be separated into the following elements, each of which is assessed for archaeological impact potential:

4.1 ‘OLD’ WTP SITE (NORTHERN SITE)

Proposed Lime Storage Building, Workshop, Silos and associated lime dosing line.

Archaeology: This area is located within the existing ‘Old’ WTP site (northern site). Existing sub-surface infrastructure throughout this area together with existing building foundations indicate that previous ground works here, including archaeological investigations, have removed all archaeological potential. The proposed development in this area would be thus considered to have an **Imperceptible Impact** on the archaeological resource.

Built Heritage: This area, although not located in an Architectural Conservation Area, is situated to the immediate rear of a Protected Structure, the ‘Salmon Leap’ Public House (RPS: 009).

- The proposed development would have **no physical impacts** on the Protected Structure.
- The proposed building and associated silos would exceed the height of the roofline of this Protected Structure and would thus detract from the view of the building from the northern & eastern approaches. However, an existing building (pump-hall – see **Figure 4 & Plate 5**) – located within the WTP site already exceeds this roofline height and the proposed silos.

⁷ EPA, 2017

- The proposed building and associated silos would be located within the exiting boundary of the WTP to the rear of the Protected Structure and thus would not obstruct views of the building. The existing WTP site abuts the southern boundary of the Salmon Leap Inn. It is proposed to construct the lime silos in a portion of the WTP site that is adjacent to this boundary.
- Where views of this Protected Structure may be altered, the development as proposed is in keeping with the existing long-standing industrial/service infrastructure character of development within the WTP site.
- The Landscape & Visual Impact Statement produced for the project (*Cunnane Stratton Reynolds - 2021*) should be referenced for more specialist detail which is beyond the scope of this report.

4.2 'NEW' WTP SITE (SOUTHERN SITE)

Proposed Sulphuric Acid Storage & Dosing Facility (approx. 294m²) with associated sub-surface dosing line (approx. 195m).

Archaeology: This area where the storage & dosing facility is proposed is located within the perimeter of the existing WTP site. The development site presents as a landscaped greenfield area. However, a review of previous construction works together with aerial imagery from that time (2011-2013) indicate that the site was previously substantially altered and disturbed. A series of trial pits were introduced across the WTP site area, including this part of the site, prior to the original WTP construction. These were archaeologically monitored and produced no material of archaeological significance.

The construction of the proposed storage & dosing facility/building within the perimeter of the existing WTP would be thus considered to have an **Imperceptible Impact** on the archaeological resource due to the disturbed and developed nature of the proposed site.

Built Heritage: The proposed development 'New' WTP site is located >400m from Protected Structure – Cooldrinagh House ("Beckett's Hotel" - RPS: 040). The elevation of the proposed structure is low (8.65m) relative to the adjacent buildings and will be screened from the Protected Structure by the existing WTP and local topography.

The proposed development at this location would be thus considered to have an **Imperceptible Impact** on the built heritage resource of the area.

4.3 PIPELINE

An associated dosing line is proposed to connect between 'Old' and 'New' WTP sites. The proposed route option involves installation of approx. 195m in length in a greenfield area, immediately inside (east of) and parallel to the existing fenceline and running from the southern WTP site to the Northern WTP site – subject to existing sub-surface utility constraints (See **Figure 1**).

Archaeology: The pipeline installation works have the potential to have a **permanent, direct, negative impact** on previously unrecorded archaeology across the western side of the general site within an area of high archaeological potential. The diameter, depth and precise locations of the excavations proposed, together with the methodologies employed for the pipeline installation, will determine the **significance of effect**.

It should be noted that the dosing pipeline route option outlined above impinges for a length of approx. 120m on the established Zone of Notification for a Ring-Barrow (RMP: DU017-075001-) and within the area of a previously identified prehistoric lithic scatter as listed in the RMP (DU017-079----).

Although this recorded site has been previously archaeologically excavated and re-instated in 1995, there remains the potential for encountering unrecorded archaeology and further retrieval of lithics within the proposed works corridor (See **Figure 2 & Figure 5**).

Built Heritage: The pipeline installation works are proposed within the existing WTP site and located >235m from a Protected Structure – the Salmon Leap Inn (RPS:009). The pipeline will be a sub-surface installation and full re-instatement will be carried out post-construction stage. These works are thus considered to have **no potential for impact** on the built heritage resource of the area.

5 MITIGATION

The following details procedures & mitigation measures that should be implemented during planning, design & construction stages of this project.

5.1 **Archaeology**

- Where proposed works impinge on the established Zone of Notification for Archaeological Sites/Monuments there is a statutory requirement to submit notification to the National Monuments Service of the DoHLGH under Section 12(3) of the National Monuments (Amendment) Act 1994.
- A maximum consultation period of 2 -months follows submission of notification during which no works should be undertaken without the express consent of the Minister of Housing, Local Government & Heritage.
- Detailed mitigation measures should be developed in consultation with NMS. These may include advance testing/monitoring of site investigations and/or archaeological monitoring of construction works. Such mitigation measures should be undertaken by a suitably qualified archaeologist under licence to the NMS of the Department of Housing, Local Government & Heritage.

5.2 **Built Heritage**

- The proposed development has no potential for physical impacts on the built heritage resource.

- Where there is the potential for visual impacts of the Salmon Leap Public House (RPS: 009); this is further assessed in the Landscape & Visual Impact Assessment prepared for this project by Cunnane Stratton Reynolds (2021) and suitable mitigation options are detailed in the project Design Statement prepared by Taylor McCarney Architects (2021).

6 SITE INVESTIGATIONS

A programme of advance site investigations may be undertaken to inform the detailed design of the proposed development. Where the types and locations of these SI are appropriate to identifying archaeological potential, these could be archaeologically monitored to further inform archaeological mitigation in detailed design & construction.

Boreholes are not generally conducive to real-time archaeological monitoring as the ground insertion is generally small in diameter (<300mm) and little material is retrieved.

Trial Pits can be successfully archaeologically monitored and can provide a keyhole insight to archaeological potential where present.

Slit Trenches can be successfully archaeologically monitored and often provide good archaeological information which can be useful in determining the archaeological potential of an area and informing future mitigation in design & construction phases.

Archaeological review of Site Investigation data upon completion of such works, including photographs, logs, etc., can occasionally be beneficial and provide information on archaeological potential within a specific area.

7 CONCLUSIONS & RECOMMENDATIONS⁸

The following is a summary of the findings and recommendations resulting from this assessment.

7.1 Archaeology

- The landscape at Cooldrinagh is an area of high archaeological sensitivity as attested by the numerous archaeological finds, features and deposits encountered over previous development-led excavations associated with the existing WTP infrastructure.
- The majority of the ‘Old’ and ‘New’ WTP sites have been subject to intensive archaeological investigations in advance of various construction phases. Some previous WTP design proposals have been adapted and/or relocated due to the presence of significant archaeological features and material.
- The proposed storage building and dosing facility at the ‘Old’ WTP site are to be located on the site of an existing workshop and activated carbon building, once these structures have been demolished. Existing sub-surface infrastructure throughout this area together with building foundations indicates that this part of the site has negligible archaeological potential remaining.
- The proposed acid storage building and dosing facility at the ‘New’ WTP site are to be located in a greenfield area adjacent to the existing WTP buildings. This area has been substantially altered and disturbed during previous construction and landscaping works as indicated in previous planning applications, construction drawings, archaeological reports and on aerial imagery dated 2011-2103 (OSi Digital Globe – see **Figure 3**). This area was also subject to site investigations prior to the construction of the existing WTP. These were archaeologically monitored and nothing of archaeological significance was noted.
- Where dosing lines are proposed, as indicated in **Figure 1, Figure 2 & Figure 5**, there remains moderate archaeological potential given the density of previously recorded archaeology in the immediate area. Specifically, the greenfield area immediately inside (east of) the existing roadside fenceline presents moderate to high potential for encountering previously unrecorded archaeological deposits. Although there is anecdotal evidence of an existing pipeline inside and parallel to this fenceline, which might indicate this area has been previously disturbed, this has yet to be confirmed.
- Where this proposed pipeline impinges on the Zone of Notification of the above-mentioned sites (approx. 120m as indicated in **Figure 2 & Figure 5**), statutory notification to the National Monuments Service is required.

⁸ This report and all recommendations herein are based on site design information available at time of writing (September 2021). Should changes to the works scope be required, further assessment may be necessary. Recommendations are subject to the approval of the National Monuments Service and South Dublin County Council Archaeologist/Heritage Office as appropriate.

- It is recommended that any proposed site investigations comprising Trial Pits or Slit Trenches be archaeologically monitored where these are located along the proposed dosing line route/s within the Zone of Notification for sites/monuments listed in the RMP or within previously undisturbed, greenfield areas. This should be undertaken by a suitably qualified archaeologist under licence/consent to the NMS, as applicable. Information gathered at this advance stage may be used to inform mitigation in design.
- It is recommended that any groundworks proposed within the established Zone of Notification for sites/monuments as listed in the RMP (DU017-075001- & DU017-079----) and previously undisturbed greenfield areas be subject to a programme of archaeological monitoring during construction by a suitably qualified archaeologist under licence/consent to the NMS, as applicable.
- Where trenchless technologies such as directional drilling are employed during dosing line installation works, such monitoring would be restricted to launch/recovery pits. Deployment of trenchless technology should be approved by NMS as there is potential to disturb sub-surface archaeological material in the process.
- Temporary works which may also require monitoring include preparatory groundworks for sheet-piling/bracing and clearance for working compounds.
- Where proposed works impinge on the established Zone of Notification for Archaeological Sites/Monuments there is a statutory requirement to submit notification to the National Monuments Service of the DoHLGH under Section 12(3) of the National Monuments (Amendment) Act 1994.
- A maximum consultation period of 2 -months follows submission of notification during which no works should be undertaken without the express consent of the Minister of Housing, Local Government & Heritage.

7.2 Architectural Heritage

- There are 6no. buildings, structures or features listed in the Record of Protected Structures as established in the South County Dublin Development Plan within the area under assessment.
- These structures are located outside the boundary of the proposed development area as illustrated in Figure 8.
- The development as proposed would have no physical impacts on these protected structures or their settings. The proposed works are sufficiently distanced and appropriately sited within the existing water treatment plant sites to negate additional physical impacts.
- The development as proposed would have a moderate visual impact on views of a Protected Structure (Salmon Leap Inn – RPS: 009), as discussed in **Section 4**. This is further detailed in the Landscape & Visual Impact Assessment as prepared for this project by Cunnane Stratton Reynolds (2021) and recommendations for mitigation are contained in the project Design Statement prepared by Taylor McCarney Architects (2021).

- It is recommended that appropriate re-instatement of existing surfaces and greenfield areas within the WTP site should be carried out post-construction.
- All contractors should be apprised of the locations and sensitivities of protected structures and their settings including roadside features & furniture such as the milestone on the Leixlip Road (RPS: 014) and entrance pillars at Cooldrinagh Lane (RPS: 021). This would be particularly relevant during construction stage to minimise the risk of inadvertent impacts by construction vehicles and plant.
- All movement and storage of plant, equipment, vehicles, spoils, fuels and sundries should be limited to designated works areas to minimise the risk of accidental impacts to the built heritage of the area.

8 FIGURES

Figures reproduced from the Ordnance Survey of Ireland by permission of the Government. Licence No. 3-3-34

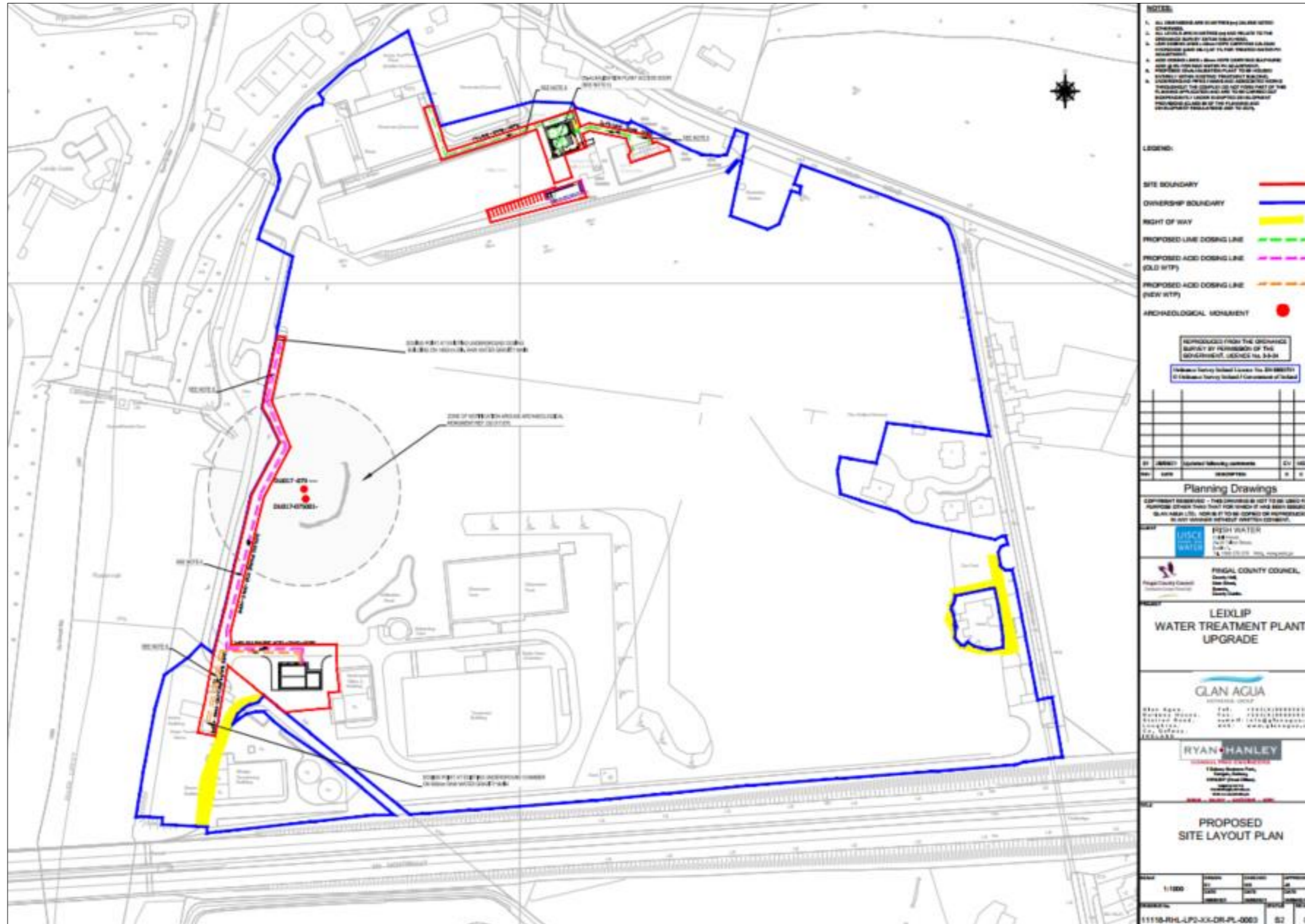


Figure 1: Overview of Leixlip WTP site boundary with proposed works indicated (See Planning Application Drawing Pack - 11118-RHL-LP2-XX-DR-PL-003) (Scale 1:1000)



Figure 2: Aerial overview of the existing Leixlip WTP sites with proposed developments and relevant archaeological area indicated (Source: Bing Maps)

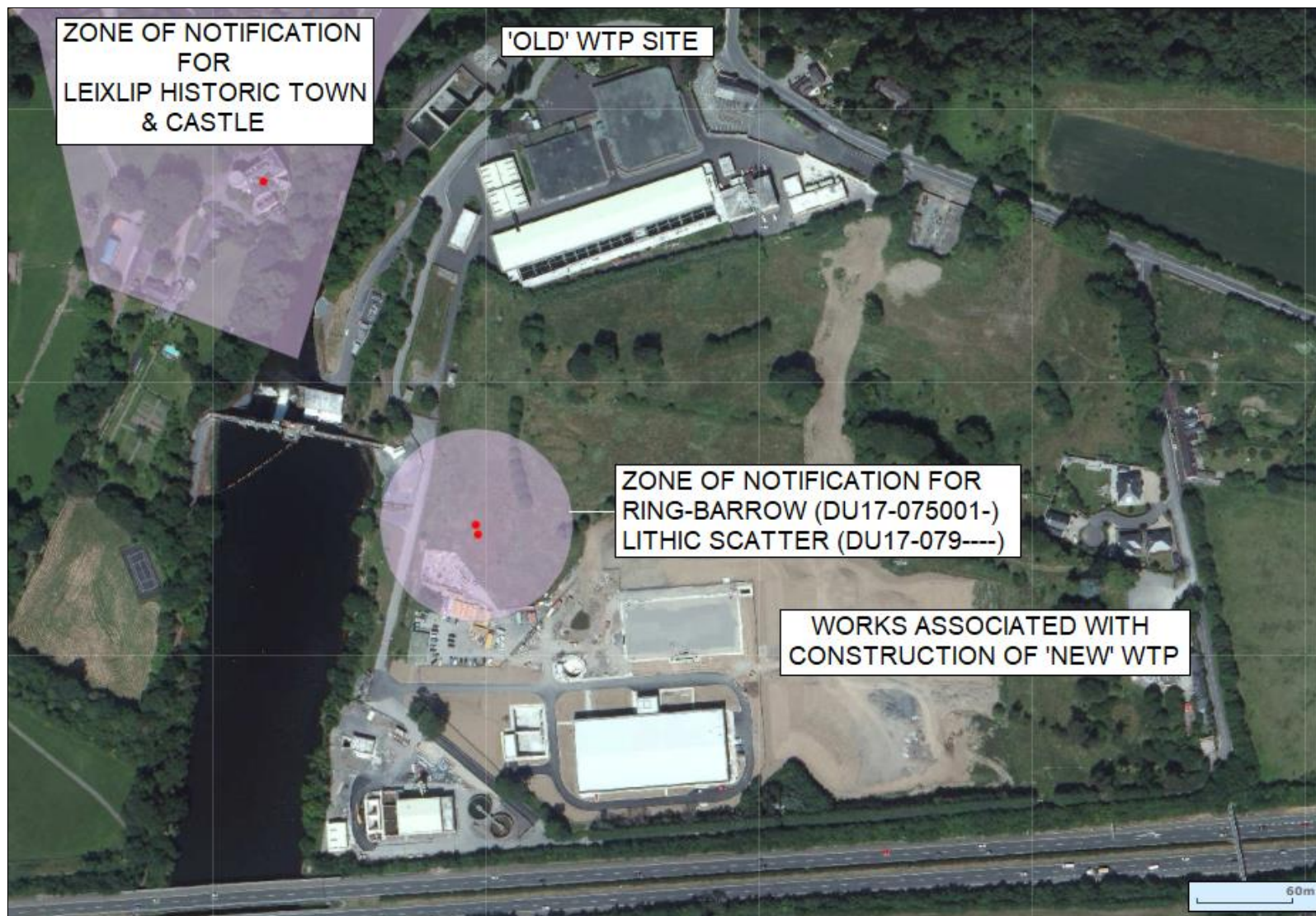


Figure 3: Aerial overview from 2011-2013 indicating extents of previous groundworks at 'New' WTP site (Source: Historic Environment Viewer)

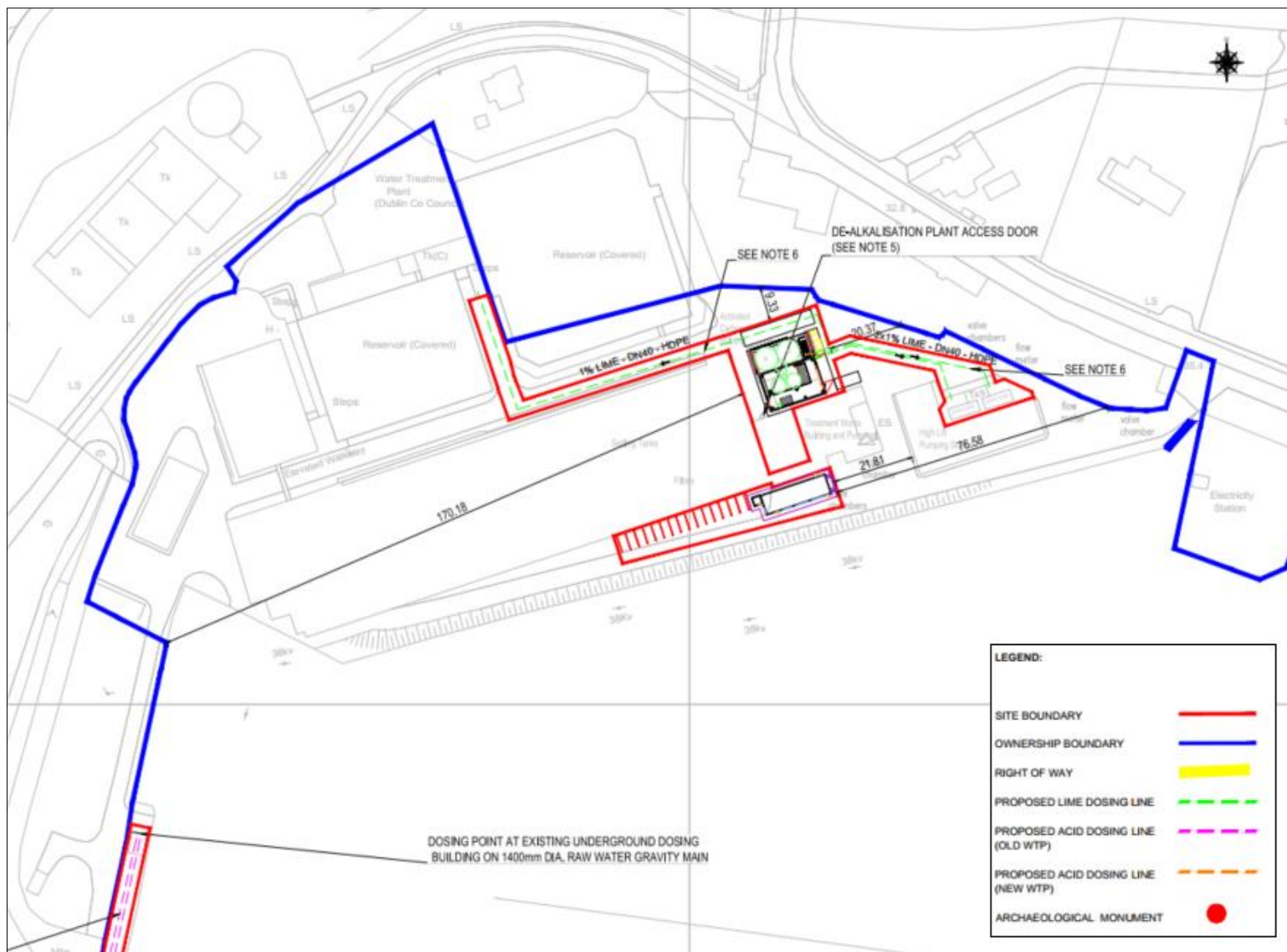


Figure 4: Proposed new infrastructure at the 'Old' Leixlip WTP site (Scale 1:500)

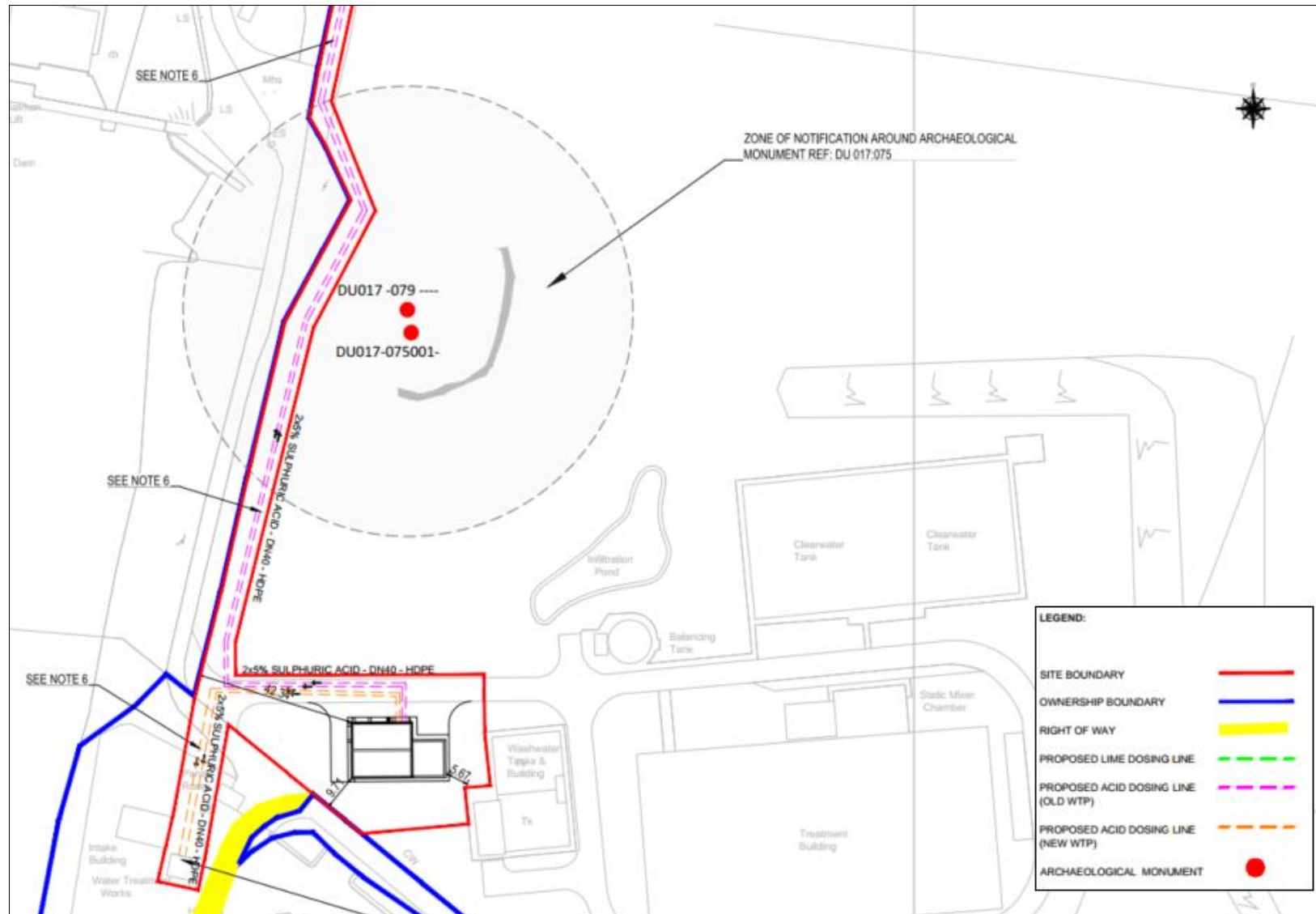


Figure 5: Annotated extract from Ryan Hanley Drawing 11118-RHL-LP2-XX-DR-PL-0010 showing pipeline location and Zone of Notification (Scale 1:500)

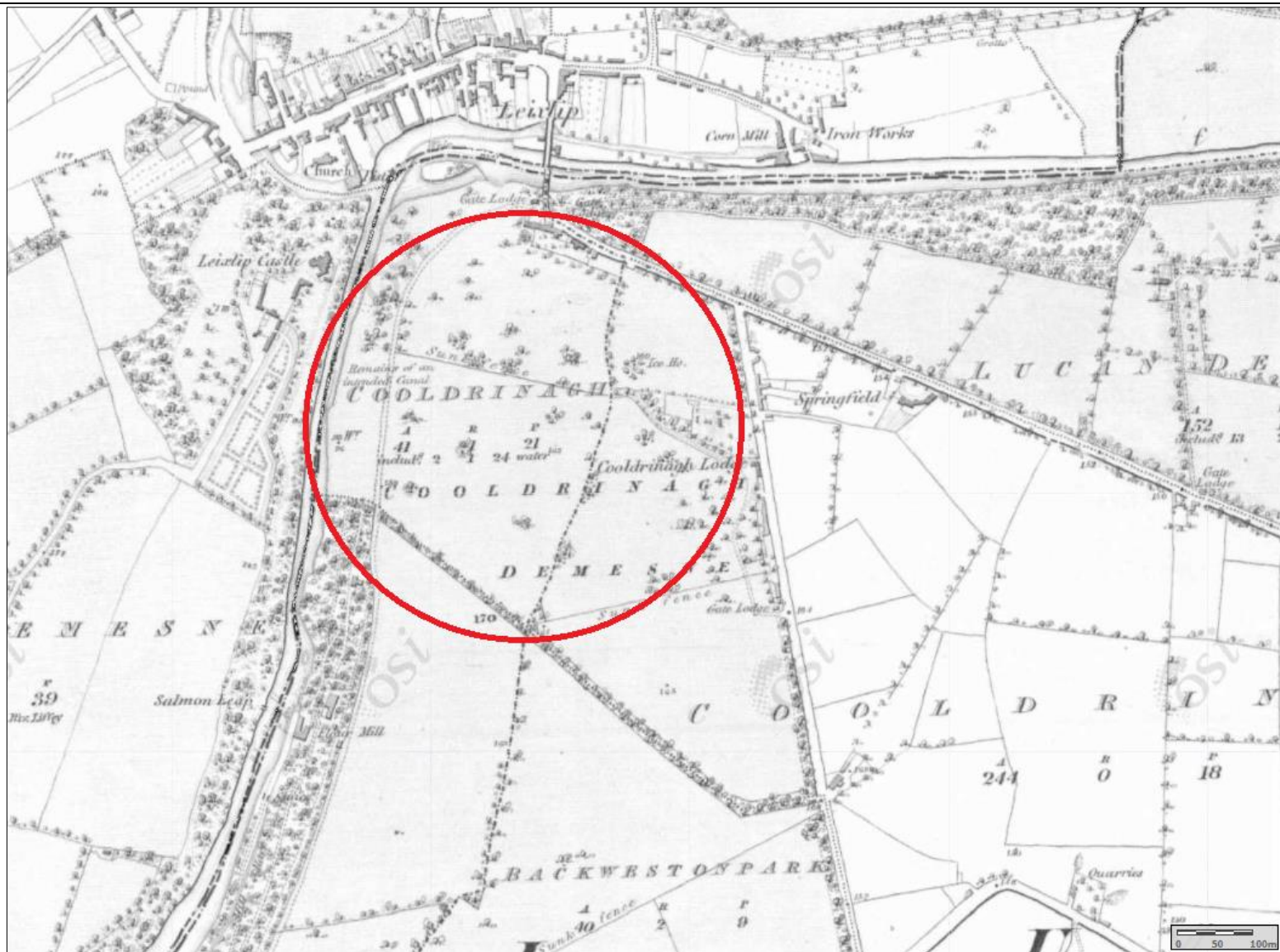


Figure 6: Excerpt from 1st edition OS survey (1837-43) indicating area of WTP sites within Cooldrinagh Demesne.

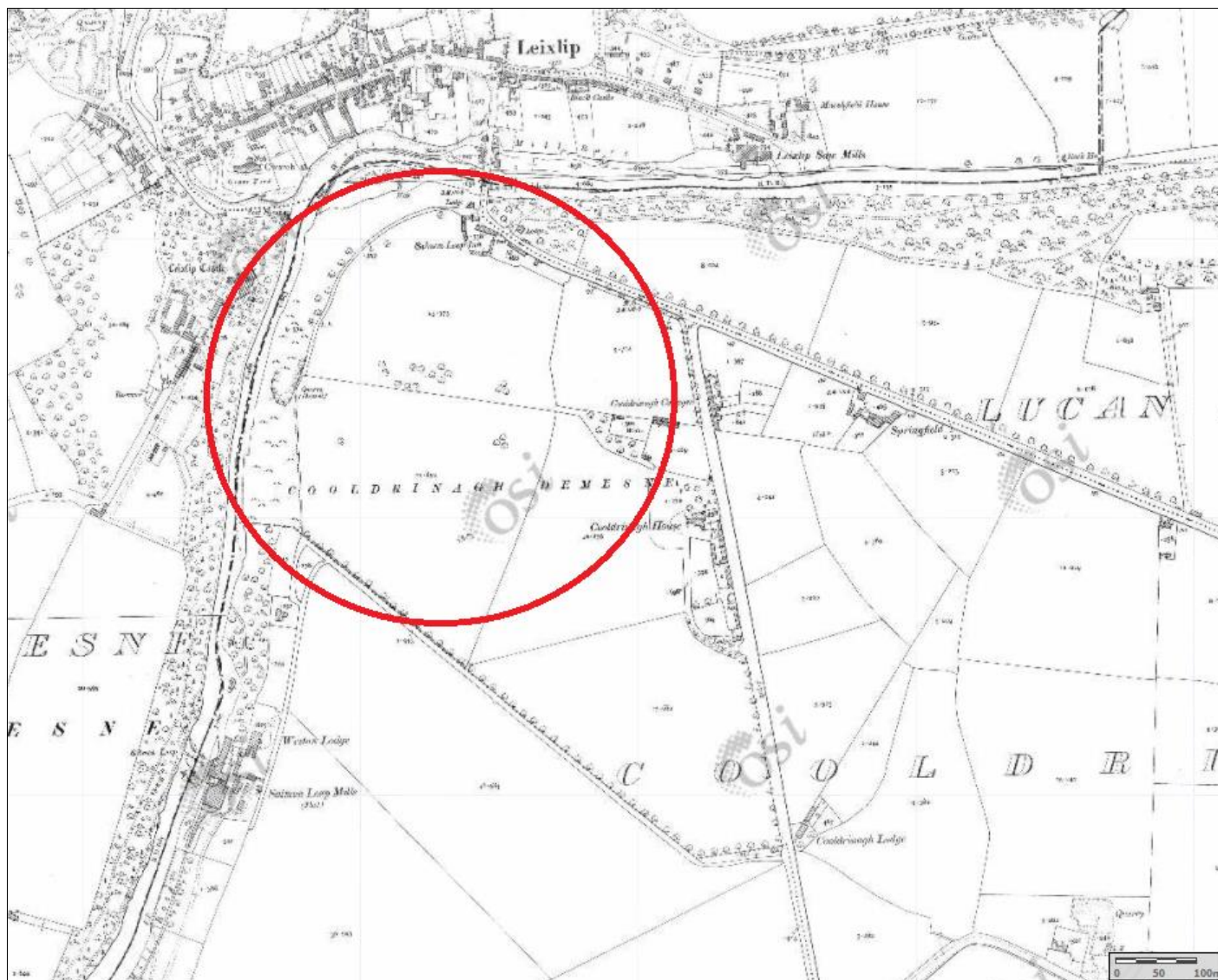


Figure 7: Excerpt from 2nd edition OS survey (1870-75) indicating area of WTP sites within Cooldrinagh Demesne.

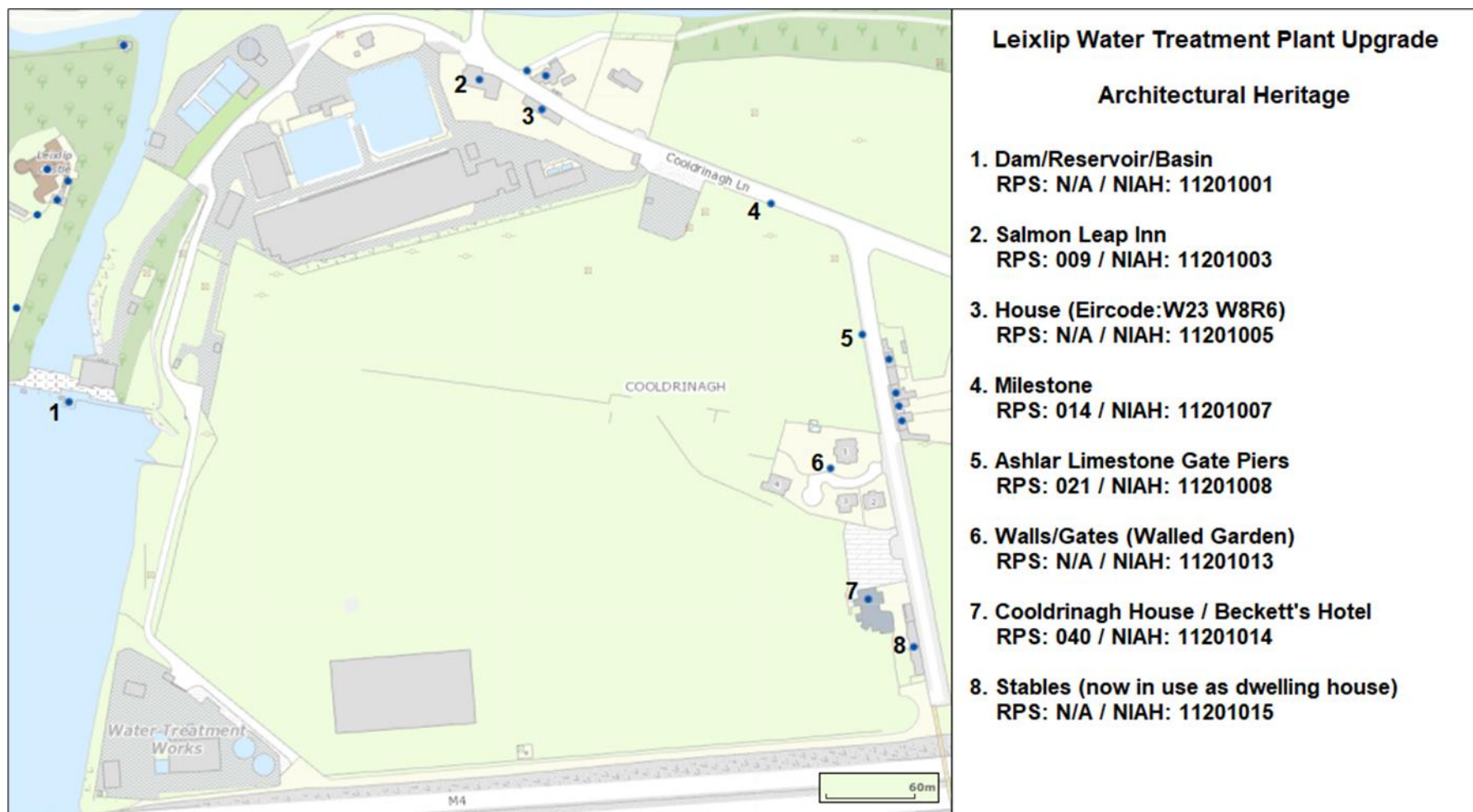


Figure 8: Architectural Heritage in vicinity of the Leixlip WTP site boundary – all located outside the WTP site boundary

9 PHOTOGRAPHIC RECORD



Plate 1: Location of proposed dosing facility at 'New' WTP site. Facing E.



**Plate 2: Existing road between WTP sites – dosing line is proposed to left of frame behind fenceline/treeline.
Facing S.**



Plate 3: Greenfield area to east of fenceline – dosing pipeline proposed to run north within this area. Facing N.



Plate 4: Looking S along proposed dosing pipeline route



Plate 5: Salmon Leap Public Inn (RPS: 009) with existing WTP infrastructure visible to rear.

10 ADDITIONAL REFERENCES

Little, A., et al. *Stone Dead? Uncovering Early Mesolithic Mortuary Rites, Hermitage, Ireland*, Cambridge Journal of Archaeology, 2016.

Collins, T., Coyne, F. *Fire and water...early Mesolithic cremations at Castleconnel, Co. Limerick*, Archaeology Ireland 17 (2) pp25-27, 2003.

Collins, T. *Hermitage, Ireland: life and death on the Western edge of Europe* in *Mesolithic Horizons: Papers presented at the Seventh International Conference on the Mesolithic in Europe*. Oxford: Oxbow. 876-879 (2009).

Waddell, J., *The Prehistoric Archaeology of Ireland*, Galway University Press, 1998.

Cahill, M. & Sikora, M. (eds) *Breaking Ground, Finding Graves – reports on the excavations of burials by the National Museum of Ireland, 1927 – 2006*, Wordwell, 2011.

11 APPENDIX I SOUTH COUNTY DUBLIN DEVELOPMENT PLAN 2016 - 2022

(A) ARCHAEOLOGY

The following policies and action relating to the protection of the Archaeological Resource are contained in the **Chapter 9** of the development plan:

HERITAGE, CONSERVATION AND LANDSCAPES (HCL) Policy 1 Overarching

It is the policy of the Council to protect, conserve and enhance natural, built and cultural heritage features, and to support the objectives and actions of the County Heritage Plan.

HCL1 Objective 1:

To protect, conserve and enhance natural, built and cultural heritage features and restrict development that would have a significant negative impact on these assets.

HCL1 Objective 2:

To support the objectives and actions of the County Heritage Plan, including the preparation of a County Biodiversity Plan.

HCL Policy 2 Archaeological Heritage

It is the policy of the Council to manage development in a manner that protects and conserves the Archaeological Heritage of the County and avoids adverse impacts on sites, monuments, features or objects of significant historical or archaeological interest.

HCL2 Objective 1:

To favour the preservation in-situ of all sites, monuments and features of significant historical or archaeological interest in accordance with the recommendations of the Framework and Principles for the Protection of Archaeological Heritage, DAHGI (1999), or any superseding national policy document.

HCL2 Objective 2:

To ensure that development is designed to avoid impacting on archaeological heritage that is of significant interest including previously unknown sites, features and objects.

HCL2 Objective 3:

To protect and enhance sites listed in the Record of Monuments and Places and ensure that development in the vicinity of a Recorded Monument or Area of Archaeological Potential (Notification) does not detract from the setting of the site, monument, feature or object and is sited and designed appropriately.

HCL2 Objective 4:

To protect and preserve the archaeological value of underwater archaeological sites including associated features and any discovered battlefield sites of significant archaeological potential within the County.

HCL2 Objective 5:

To protect historical burial grounds within South Dublin County and encourage their maintenance in accordance with conservation principles.

ACTION

The Council will continue to develop its programme of survey and maintenance of Council-owned monuments and structures of historic interest.

Additionally, **Chapter 11** of the development plan details the following development management standards relating to development proposals in proximity to areas of archaeological sensitivity:

11.5.1 ARCHAEOLOGICAL HERITAGE

- Development in the vicinity of archaeological sites shall accord with the requirements of the Framework and Principles for the Protection of Archaeological Heritage, DAHGI (1999) and shall be designed to have minimal impact on archaeological features. There is a presumption in favour of in-situ preservation of archaeological sites and monuments, and avoiding developmental impacts on archaeological heritage.
- Regard shall be had in relation to the Emerging Historic Landscape Character Assessments contained within the Landscape Character Assessment of South Dublin County (2015) when assessing relevant planning applications. Regard shall also be had in relation to archaeological concerns when considering proposed infrastructure and roadworks located in close proximity to Recorded Monuments and Places.
- An Archaeological Impact Assessment and Method Statement will be required to support development proposals that have the potential to impact on archaeological features. Archaeological testing should be carried out as part of an archaeological assessment where it's deemed that a proposed development may have an impact on an archaeological site or monument.
- A Conservation Plan may be required for development in the vicinity of a site or monument, to ensure the ongoing protection of the monument and its setting.
- A Visual Impact Assessment may be required for development proposals in the vicinity of upstanding remains.
- Full archaeological excavation shall be carried out where it is recommended by the National Monuments Service or any superseding body.
- Archaeological monitoring should be carried out during the course of development works where it is considered necessary to identify and protect potential archaeological deposits, features or objects.

(B) BUILT HERITAGE

Architectural heritage has several definitions and meanings for people. A useful rule of thumb (which is actually the legal situation) is set out in the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999 which provides the following definition:

- (a) structures and buildings together with their settings and attendant grounds, fixtures and fittings,
- (b) groups of such structures and buildings, and
- (c) sites, which are of architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest.

This rich architectural heritage contributes enormously to the overall built environment and, indeed, helps to give it definition in terms of place and character for those that live and work in the county as well as those who visit.

Chapter 9 of the development plan details the following policies pertaining to the protection of architectural heritage:

HERITAGE, CONSERVATION AND LANDSCAPES (HCL) Policy 3 Protected Structures

It is the policy of the Council to conserve and protect buildings, structures and sites contained in the Record of Protected Structures and to carefully consider any proposals for development that would affect the special character or appearance of a Protected Structure including its historic curtilage, both directly and indirectly.

HCL3 Objective 1:

To ensure the protection of all structures (or parts of structures) and the immediate surroundings including the curtilage and attendant grounds of structures contained in the Record of Protected Structures.

HCL3 Objective 2:

To ensure that all development proposals that affect a Protected Structure and its setting including proposals to extend, alter or refurbish any Protected Structure are sympathetic to its special character and integrity and are appropriate in terms of architectural treatment, character, scale and form. All such proposals shall be consistent with the Architectural Heritage Guidelines for Planning Authorities, DAHG (2011) including the principles of conservation.

HCL3 Objective 3:

To address dereliction and encourage the rehabilitation, renovation, appropriate use and re-use of Protected Structures.

HCL3 Objective 4:

To prevent demolition and inappropriate alteration of Protected Structures.

Additionally, **Chapter 11** of the development plan details the following development management standards in relation to the protection of architectural heritage.

11.5.2 PROTECTED STRUCTURES

(i) General

Works that would materially affect the character of a Protected Structure require planning permission. A declaration can be sought from the Planning Authority to list the type of works that would not affect the character of a Protected Structure and do not require planning permission.

(ii) Works to a Protected Structure

The Planning Authority will consider proposals for development or alterations to a Protected Structure based on the conservation principles set out in the Architectural Heritage Protection Guidelines for Planning Authorities, DAHG (2011). Development proposals for works to a Protected Structure or within the curtilage of a Protected Structure may require a method statement that describes the proposed works in appropriate detail.

An Architectural Heritage Impact Assessment may also be required in the case of applications for extensive or complex works that have the potential to have a significant impact on a Protected Structure. Assessments should be prepared by a conservation specialist in accordance with the requirements of the Architectural Heritage Protection Guidelines for Planning Authorities, DAHG (2011) and shall assess the likely effects of the proposed development on the special character of the Protected Structure and its setting.

For all works to a Protected Structure, the Planning Authority will seek to ensure that:

- Alterations and interventions do not detract from the significance or value of the structure,
- Original features of architectural and historic interest are retained and that new features are not presented as original or older features,
- Extensions are appropriately scaled, complement and are subsidiary to the main structure, and
- The special interest of the structure is not compromised when adhering to the requirements of Building Regulations. Regard should be had to the Advice Series on historic buildings published by the DEHLG.

(iii) Change of Use

The Planning Authority will consider proposals for the change of use or re-use of a Protected Structure based on the policies and objectives outlined in this Plan, but may operate a level of flexibility to help safeguard the ongoing use and preservation of the structure.

(iv) Development in Proximity to a Protected Structure

Planning applications for development in proximity to a Protected Structure may require a design statement to outline how the proposal responds to the setting and special interest of the Protected Structure and its curtilage.

Pastiche designs that confuse new features/structures with older and original features/structures should be avoided.

FEATURES OF INTEREST

Historic items situated within the public realm can contribute to the character, interest and visual amenity of rural, suburban, urban and industrial places throughout the County and are therefore worthy of retention and refurbishment.

HERITAGE, CONSERVATION AND LANDSCAPES (HCL) Policy 6 Features of Interest

It is the policy of the Council to secure the identification, protection and conservation of historic items and features of interest throughout the County including street furniture, surface finishes, roadside installations, items of industrial heritage and other stand-alone features of interest.

HCL 6 Objective 1:

To ensure that development within the County including Council development seeks to retain, refurbish and incorporate historic items and features of interest.

HCL 6 Objective 2:

To protect, preserve and maintain industrial heritage features including weirs, millraces, and mills along the River Dodder and River Liffey.