

Results of Archaeological Test Excavation

Dawn Meats Ireland (Slane)
Extension to Wastewater Treatment Plant (WWTP)
with treated effluent rising main pipeline
Painestown, Co. Meath

Excavation Licence No. 21E0649

Prepared for: Panther Environmental Solutions Ltd., on behalf of Dawn Meats
Ireland (Slane)
Planning Authority: Meath County Council
Planning Ref: 21/424
Licensee: Grace Fegan
Issue date: December 2021
Prepared by: Grace Fegan, Shanarc Archaeology Ltd.



Copies of this report have been presented to:	The client; the National Museum of Ireland; the Department of Housing, Local Government and Heritage, and the Planning Department Meath County Council.
Please Note:	<p>The International and European conventions on the protection of cultural heritage ratified in Ireland have been taken into consideration for the purposes of this report. The National Monuments Acts 1930-2014, the Heritage Act 1995, the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999, the Planning and Development Act 2000 (as amended), and relevant guidelines issued by the statutory bodies have been consulted in the assembly of this report.</p> <p>All of the recommendations made within this assessment are based on design plans and information provided by the client at the time of writing. Should any alterations be made to design plans or development proposals, further assessment may be necessary.</p> <p>Recommendations are subject to approval by the National Monuments Service at the Department of Housing, Local Government and Heritage.</p>
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1. Introduction

This archaeological test-excavation report has been prepared by Shanarc Archaeology Ltd. for Panther Environmental Solutions Ltd. on behalf of Dawn Meats Ireland, in association with a proposal by Dawn Meats Ireland to construct an extension to an existing wastewater treatment plant (WWTP), with works to include a treated effluent rising main pipeline to a discharge point on the River Boyne (Figure 1).

The report details the results of archaeological test-excavation carried out in accordance with Excavation Licence No. 21E0649, granted by the Department of Housing, Local Government and Heritage to licensee Grace Fegan, Shanarc Archaeology Ltd. The archaeological test-excavations were carried out further to the submission of an EIAR and subsequent correspondence from the Development Applications Unit of the Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media dating to 7th April 2021 (Appendix 1).

The method statement that accompanied the licence application proposed the excavation of 8 trenches – 5 at Ardmulchan townland and 3 at Painestown. It has not been possible to access the land at Ardmulchan and so this report concerns the 3 trenches at Painestown alone.

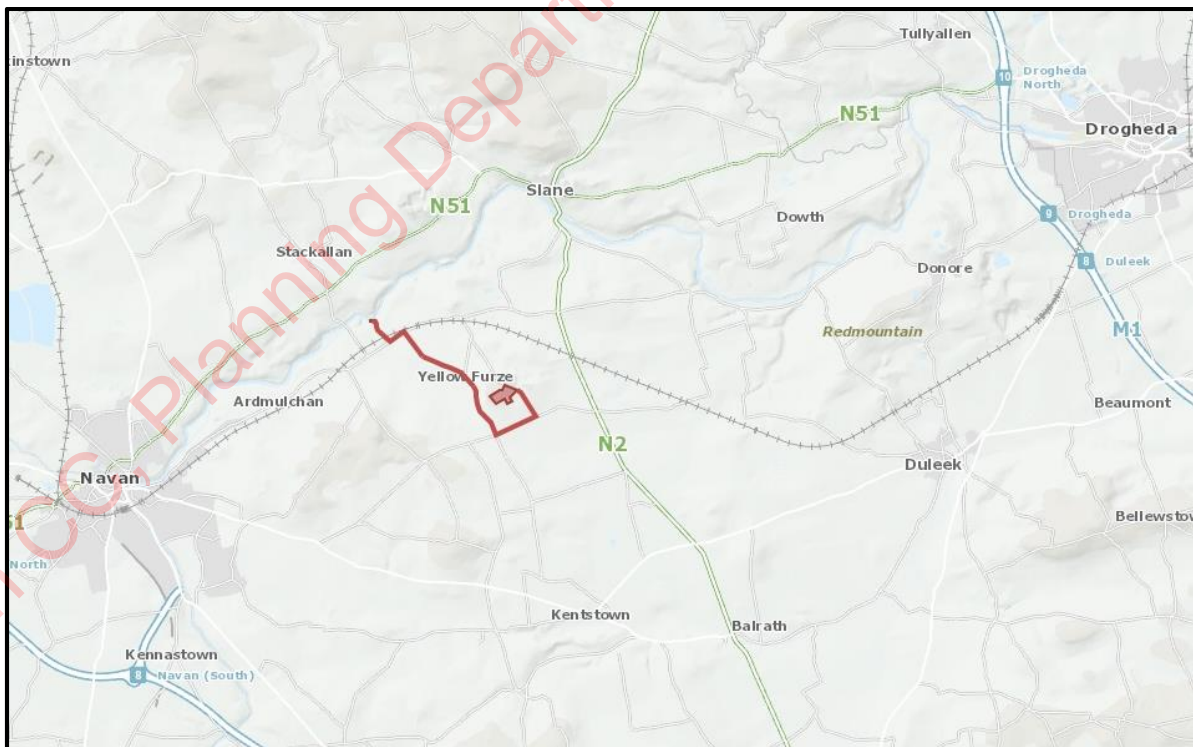


Figure 1 General location of the proposed project (red outline) (OSi Licence No. EN 0077921).

1.1 Site Description

The project is sited in a rural and predominantly agricultural environment. The proposed pipeline route follows the network of local roads for the most part, with the exception of the start and end points at the existing facility (Painestown) and on the bank of the River Boyne (Armdulchan). The effluent rising main pipeline is aligned along a section of Windmill Road, the L1013, Yellow Furze Road, the L1600 (Boyne Road) and an unnamed local road leading from the L1600 to private lands abutting the River Boyne at the discharge point, traversing Painestown, Seneschalstown, Dollardstown, Hayestown-Carnuff Little and Armdulchan townlands (Figure 2).

The wayleave of the effluent rising main pipeline at the existing facility in Painestown townland was the location of the test trenching undertaken on 19th November 2021. At the time of writing, access for test trenching at the terminal site in Armdulchan has not been possible.

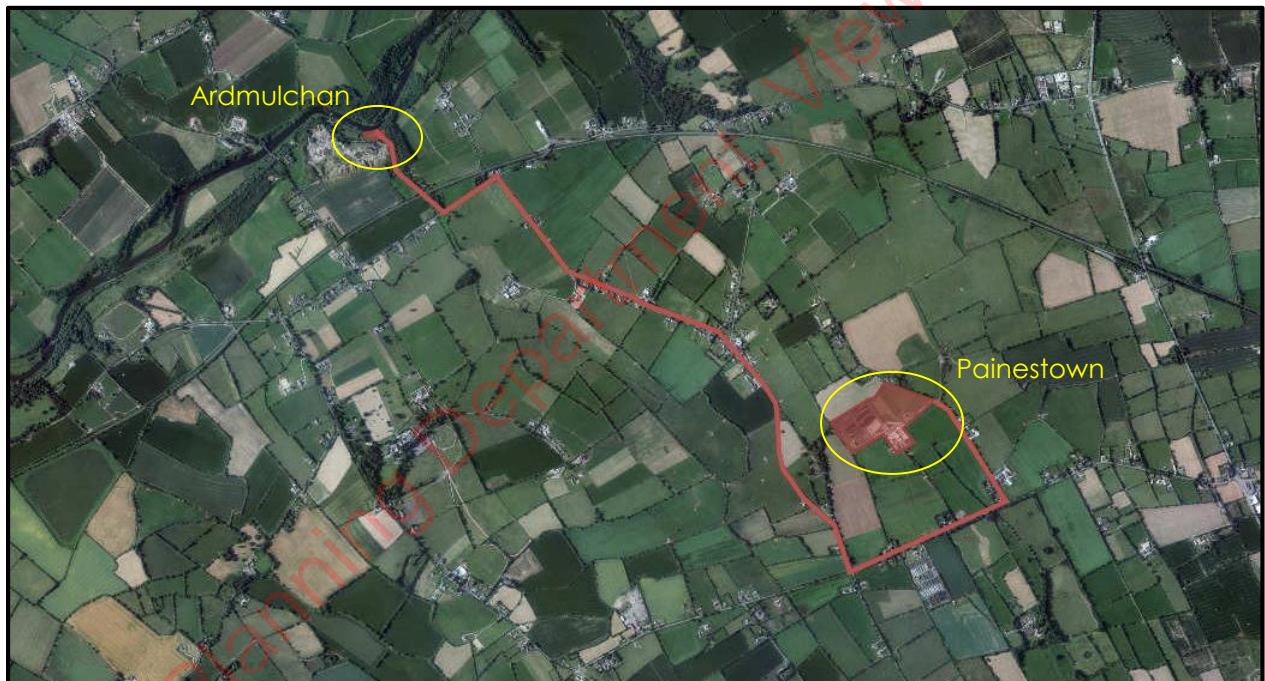


Figure 2 Proposed WWTP and pipeline project (red outline) in local context (OSi Licence No. EN 0077921).

1.2 Proposed Development

The proposed development would include an extension to an existing approved effluent plant development (Planning Ref: LB180300) at the Dawn Meats (Slane) facility, and the construction of a new c. 6.15km underground effluent rising main pipeline from the effluent plant to an outfall on the River Boyne. The 150mm diameter effluent rising main pipe will be laid in a trench

approximately 450mm in width (+/- 100mm), with the cover to the pipe approximately 900 to 1000mm.

The route of the pipeline will utilise public roadways for the most part, with the exception of the start and end point at the existing facility and on the bank of the River Boyne. Where possible, the pipeline will be laid within the grass verge, which will facilitate the backfilling of the trench with excavated material. In cases where the trench is excavated on the roadway, it will be backfilled with imported hardcore (Cl. 808, compacted in layers in accordance with Cl. 802 or Cement Bound Granular Material, Category B (CBGM B) to SRW Series 800).

It is proposed that a single construction compound be located at the existing Dawn Meats facility at Painestown, on lands that were previously assessed and subject to archaeological testing (Licence No. 18E0476, Planning Ref: LB/180300).

1.3 Planning Background

In August 2018, Shanarc Archaeology Ltd. carried out extensive test-excavation at the site of the proposed effluent treatment plant at the Dawn Meats (Slane) facility. The investigations were undertaken in accordance with Excavation Licence No. 18E0476, issued by the Department of Culture, Heritage and the Gaeltacht. Six test trenches, measuring 2m in width and approximately 20m in length, were machine excavated within the area proposed for development. No features or material of archaeological significance were identified. The investigation identified fills of made ground with frequent inclusions of plastic, wood and concrete waste, consistent with considerable disturbance in the modern era and associated with the infilling of older effluent ponds.

In 2020, an Archaeological, Architectural & Cultural Heritage Impact Assessment of the effluent plant extension and rising main pipeline was undertaken by Shanarc Archaeology Ltd to identify the likely and significant effects on the receiving environment and to propose ameliorative measures to mitigate these effects. This assessment formed a chapter of an EIAR compiled by Panther Environmental Ltd.

In April 2021, correspondence from the Development Applications Unit of the Department of Tourism, Culture, Arts, Gaeltacht, Sports and Media requested that an Archaeological Impact Assessment should be compiled including the results of geophysical survey, archaeological testing of locations along the pipeline route in close proximity to known monuments and proposed construction compounds.

The proposed development design has been updated since the submission of the EIAR and a single construction compound has been proposed – at the existing facility at Painestown, previously subject to archaeological testing (18E0476).

In July 2021, a detailed gradiometer survey of the terminal site at Ardmulchan was completed (Licence No. 21R 0182). The majority of the survey data collected appears to indicate modern ferrous disturbance; however, the survey did produce some evidence for potential archaeological activity within the outfall area. Evidence suggests potential archaeology may consist of possible pit features, though excavation would be required to determine the exact nature and archaeological significance of these.

An excavation licence was applied for and received (21E0649) for archaeological test-excavation at two greenfield sites in a) the vicinity of the River Boyne at Ardmulchan and b) the route between the proposed WWTP and the public road at Painestown. As the remainder of the proposed pipeline route is located along existing public roads, excavation and reinstatement of the public road for test trenching purposes was considered impractical prior to planning approval. On 19th November, three test trenches were excavated at Painestown, but it was not possible to access the site at Ardmulchan.

2. Receiving Environment

2.1 Archaeological and Historical Background

2.1.1 Prehistoric Period

Mesolithic c. 7000-4000BC

The earliest evidence of human occupation in Ireland can be seen in the remains of Mesolithic hunter-gatherers, who arrived in Ireland c. 7000BC, in the form of flint scatters and shell middens. Much of the activity in this era was riverine, allowing the natural resources furnished by the sea and rivers to be exploited. There is a strong possibility of encountering Mesolithic material at river crossings (O'Driscoll 2017, 44), although the River Boyne may contain evidence of sub-surface Mesolithic activity elsewhere along its banks.

Neolithic c. 4000-2400BC

The transition from the Mesolithic to the Neolithic periods is marked by the shift from a hunter-gatherer lifestyle to the introduction of an agricultural economy. Neolithic monuments, evidence of communal funerary and ritual activity, represent a change in burial practices and religion during this era, as well as being emblematic of an increasingly settled style of occupation. *Brú na Bóinne* is a complex of 40 passage graves, enclosures, henges and a cursus at Newgrange, Knowth and Dowth. Recognised as a world heritage site, it is situated approximately 6 km northeast of the proposed development area.

A site identified as a megalithic passage tomb (ME025-006, NM546) is situated 0.55km from the proposed development area. During the construction of a house, two stones with megalithic art were recovered adjacent to a low mound, thought to represent the remains of a passage tomb.

Approximately 5km east of the proposed development area, an excavation (00E0613) in the townland of Newtown revealed a flint scatter, believed to date to the late Neolithic. A transverse arrowhead was also discovered at the site.

Bronze Age c. 2400BC-500BC

Activity during the Bronze Age is characterised by the introduction of metalworking technology, as is evidenced by changes in material culture as well as the nature of sites and monuments of this era. The first metal artefacts were made of copper, before it was mixed with tin to form bronze. Stone tools continued in production and use. *Fulacht fiadh* are generally associated with this period. Described as horseshoe- or oval-shaped mounds, formed of burnt stone and charcoal, surrounding a pit that naturally filled with water, this site type is commonly thought to have been used for cooking. More recently a range of alternative theories have been proposed, including suggestions that the pits were employed for brewing or for sweat-houses. Despite the ubiquity of this class of monument across the country, there are none in the townlands associated with the proposed development, or townlands in the immediate vicinity, which is indicative of a lack of archaeological investigation in the area.

In the townland of Ardmulchan, a wedge-shaped cist covered by a large capstone, containing cremated remains (ME025-065) was identified in 1959, 0.54km from the proposed development area.

A cairn, comprising a low circular mound of earth and stones with a diameter of 30m and a central mound with a diameter of 5m has been identified in the townland of Kingstown and Carnuff Great (ME026-007). Thought to have had symbolic importance and have been

significant assembly sites, these possible burial monuments are associated with the Neolithic era, with their use continuing into the Bronze Age (O'Sullivan and Downey 2011).

Iron Age c. 500BC-AD 400

An inland promontory fort is recorded in the townland of Carrickdexter (ME019-032) comprising a semi-circular area backing onto a 30m-high cliff. This site type is thought to have its origins in the Iron Age, but continued in use into the Early Medieval period.

An Ogham stone (ME026-009) was recovered from the grounds of Seneschalstown House in the 1940s and removed to the National Museum. Ogham, a system of strokes across a vertical central line, was the earliest form of writing in Ireland and began to be used from c.300 AD. The inscription on this example, two lines on the face, read 'MAQI-CAIRATINI AVI INEQAGLAS' (Macalister, 1945, 45)

2.1.2 Historic Era

Early Medieval Period 5th-12th century

The introduction of Christianity to Ireland occurred during the 5th century A.D., and settlement during this era is represented by the ringfort, alternatively referred to as 'Rath' 'Lios' or 'dún' to indicate an earthen bank and exterior ditch enclosing a central area, or 'cashel' to indicate a stone-walled enclosure. Usually circular or sub-circular and often sited on raised ground, there are over 45,000 currently identified in Ireland, making this the most common site type in the country. Smaller, univallate examples were homesteads for lower ranks of society, while larger bi- or tri-vallate examples were used by lords or wealthy landowners. Several examples of this site type have been identified in the vicinity of the survey area.

A ringfort in the townland of Ardmulchan (ME025-007, NM496) is described as a raised oval area, 38m in diameter, having an external berm and outer scarp. An enclosure at Dollardstown (ME026-001) may have been a ringfort, or alternatively a motte. It comprises a raised area with two berms and the remains of earthen banks. A ringfort in the townland of Realtoge (ME06-011) comprised an uneven oval area defined by an earthen bank and external fosse, with a house site defined by an earthen bank against the inner edge of the bank to the east.

Medieval Period 12th-16th century

When the Anglo-Normans arrived in 1169, as mercenaries under Dermot Mac Murrough, the landscape changed dramatically, signified by the construction of several new types of

homestead, defensive buildings and ecclesiastical sites. Motte-and-bailey defensive settlements, comprising large flat-topped mounds atop which wooden castles were constructed, date to the early years of the Anglo-Norman conquest. An example of this site type is situated in the townland of Thurstanstown (ME019-047), comprising a grass-covered flat-topped oval mound with an irregular berm enclosing the base. A bank defines the berm from the south to the northwest, which may have constituted a bailey. A second motte (ME025-019) is situated in the townland of Ardmulchan, just over 2km from the proposed development area. Again, it is a flat-topped grass-covered earthen mound defined by a bank.

Moated sites were defended farmsteads which characterise Anglo-Norman settlement throughout Ireland. An example of this site type has been identified in the townland of Reatoge (ME026-012), described as a rectangular area defined by a bank, highest at the corners, and an external fosse. Later in the Anglo-Norman era, stone tower-houses began to be built. A three-storey tower-house, having a stair tower and a garderobe tower, is recorded in the townland of Slanecastle Demesne (ME019-033002), which was thought to have been built by the D'Exeter family. This family had lost their land by the 17th century (Wilde 1850, 149-50), presumably as a consequence of the wars of that century.

In the medieval period, the monastic tradition which had heretofore flourished took on a new form, as several Continental orders were introduced during the 12th century. In the town of Navan, the Church of St Mary's was confirmed by John deCourcy to the Augustinian canons in 1189. The ecclesiastical settlement here is thought to have been founded prior to the Anglo-Norman settlement of the county, as a charter of 1175-84 was witnessed by an abbot.

Several ecclesiastic sites of early date are to be found in the wider survey area. In the townland of Painestown, a church (ME026-022) was described as being in ruins, with its chancel in poor repair, by Ussher in his visitation of 1622 (Elrington 1864, 64), although Lewis (1837) notes that the steeple had been repaired in 1823. Now visible only as the outline of a rectangular structure, Ardmulchan Parish Church (ME025-020) is dated to 1232 (Cogan 1862, 70). It was in ruins at the time of Ussher's visitation, although the chancel was undergoing repair. By the time of Dopping's Visitation (1682-5), the parish of Ardmulchan had been united with that of Painestown (Ellison 1971, 33-4). A three-storey bell tower adjoins the west end of the church; O'Neill dates this structure to the 15th century (2002, 17). An example of a sandstone cross slab (ME025-020002) is present at the site, having a raised ringed cross; it is reused on a doorway in the tower. Cross carved pillar stones are thought to date to the 9th and 10th centuries, indicating an earlier origin for this ecclesiastic site.

Civil parishes were based on the medieval church parish, which preserved the Gaelic *tuath* territorial boundary. Following the Anglo-Norman invasion, the *tuath* were retained for administrative purposes, and later re-named as parishes or manors. Grants of land were given by Hugh de Lacy in 1175 to an Ade Dullard and Paganus Dullard and it is suggested that the local placenames of Dollardstown and Painestown may derive from these (<https://www.beauparcparish.ie/parish-history>, retrieved 10 March 2020).

Post Medieval Period c. AD1600-1800

The Down Survey map of 1657 indicates that the land of the parish of Painestown was predominantly owned by James Almer, who held the lands at Dollardstowne and Thenshalstown (Seneschalstown), Thurstianstowne and Rowlandstowne, while Simon Dalywill held 427 acres of arable pasture in the centre of the parish.

19th & 20th Centuries

From the 18th century, defensive settlements and castles gave way to the construction of country houses, and landed estates with associated demesnes began to develop across the country. Extensive demesne landscapes are apparent on historic maps in the vicinity of the proposed development site, including Ardmulchan Demesne, seat of R. Taafe Esq., Beuparc, the residence of Gustavus Lambert, Esq., Dollardstown, once the seat of the Meredyth family, and Seneschalstown, the property of the Aylmer family.

The construction of the Boyne navigation began in 1748, under the direction of engineer David Jebb. It comprises a number of sections of canal alongside the River Boyne, and was intended to carry bulk goods, including coal and wheat, inland, while carrying wheat, flour and oatmeal milled in the vicinity of the river towards the sea port. A number of mill complexes can be seen along the riparian zone of the Boyne and the canals on the early Ordnance Survey maps. The locks on the canal were named after local landowners, reflecting investment in the endeavour.

Samuel Lewis describes Painestown as being of good quality land, which was employed for tillage and pasture in equal measure. A church, described as 'old, but very neat edifice, with a handsome tower' had had a gallery erected and the steeple roofed and repaired in 1823. Lewis (1837) also describes a school, having 30 boys and 12 girls, which situated at Yellow Furze. The Church of the Assumption was built in 1826, replacing the earlier structure, and renovated in 1862. A modern church (RPS Ref. MH026-107) was built to designs by Simon Aloysius Leonard in 1964 (<https://www.dia.ie/works/view/57844>, retrieved 16 March 2020).

The Drogheda to Navan Railway was constructed under the auspices of the Dublin & Belfast Junction Railway in 1850, and was taken over by the Great Northern Railway in 1876.

2.2 Cartographic Analysis

The following historic maps were consulted, of which relevant extracts are presented below.

- Down Survey map of the Barony of Duleek, Eastmeath County, 1657 (Figure 3);
- Down Survey map of the Parish of Painestown, Eastmeath County, 1657 (Figure 4);
- Down Survey map of the Barony of Skreen, Eastmeath County, 1657 (Figure 5);
- Taylor and Skinner's Map, 1777 (Figure 6);
- First edition Ordnance Survey 6" map, 1837-43 (Figure 7);
- 1906-09 edition Ordnance Survey 25" map, 1906-09 (Figure 8), and
- c. 1940 edition Cassini 6" Ordnance Survey map (Figure 9).

The Down Survey map of the Barony of Duleek (Figure 3) shows the parish of 'Paynestonne' with its component townlands of Dollardstonne, Thenshallstonne (now Seneschalstown), Painestown, Ronlanstonne (which appears to have been later absorbed into Painestown), and 'Thurstianstonne' (now Thurstiantown). The map indicates that the land of the parish of Painestown was predominantly owned by James Almer, who held the lands at Dollardstowne and Thenshalstown (Seneschalstown), Thurstianstowne and Rowlandstowne, while Simon Daly will held 427 acres of arable pasture in the centre of the parish.

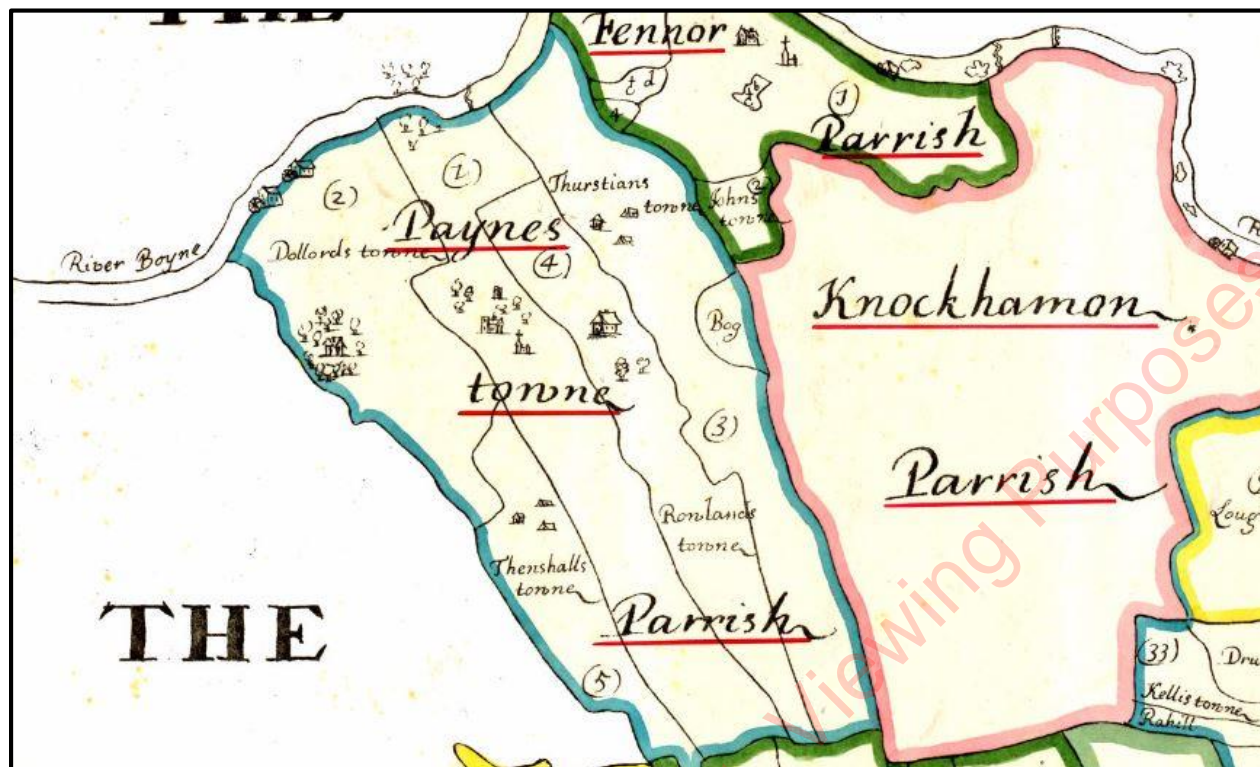


Figure 3 Down Survey map of the Barony of Duleek (Source: downsurvey.tcd.ie).

Dollardstown demesne is depicted as a substantial house surrounded by trees, and a pair of watermills are shown on the River Boyne at the northern boundary of the townland. The more detailed map of the parish of Painestown (Figure 4) indicates that these were a 'Tuck Mill' and a 'Corn Mill.' Three smaller structures are shown in Thenshallstowne (now Seneschalstown), labelled on the parish map as 'Cabins.' A single-arch bridge is depicted crossing the river from Painestown, which is not extant today, nor is it represented on any of the later maps. On the Barony map, a church is shown that probably represents ME026-002, the Church of the parish of Paynestown, referred to by Ussher (1622). Just northwest of this, a house of large scale is depicted, of which no trace is extant and which is not represented on subsequent maps, in addition to a tower. On the more detailed parish map, the tower is marked as 'ruined' and the substantial house is marked as 'a stone house.'

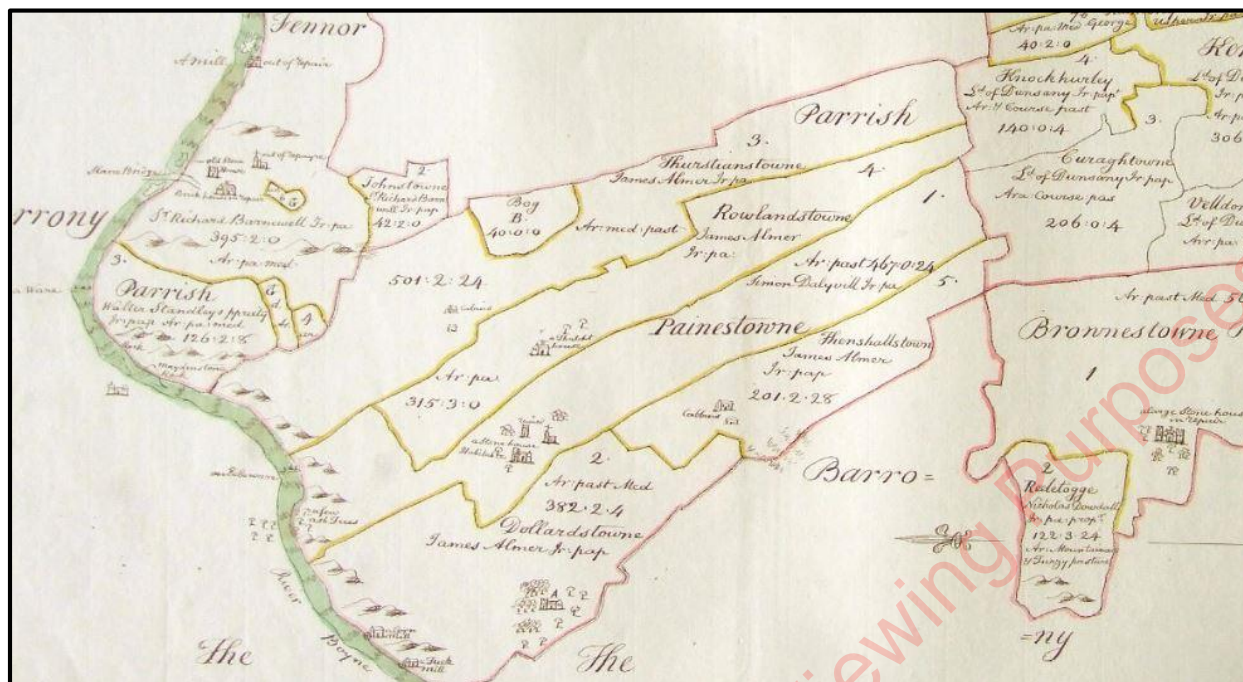


Figure 4 Down Survey map of the Parish of Painestown (Source: downsurvey.tcd.ie).

The townland of Haystown and Carnuff Little, a component of the parish of Ardmulchan, is represented on the Down Survey map of the Barony of Skreen (Figure 5), as 'Hysetonne & Carnulfe'. The townland of Ardmulchan is also illustrated, with the parish Church (ME025-020) depicted.

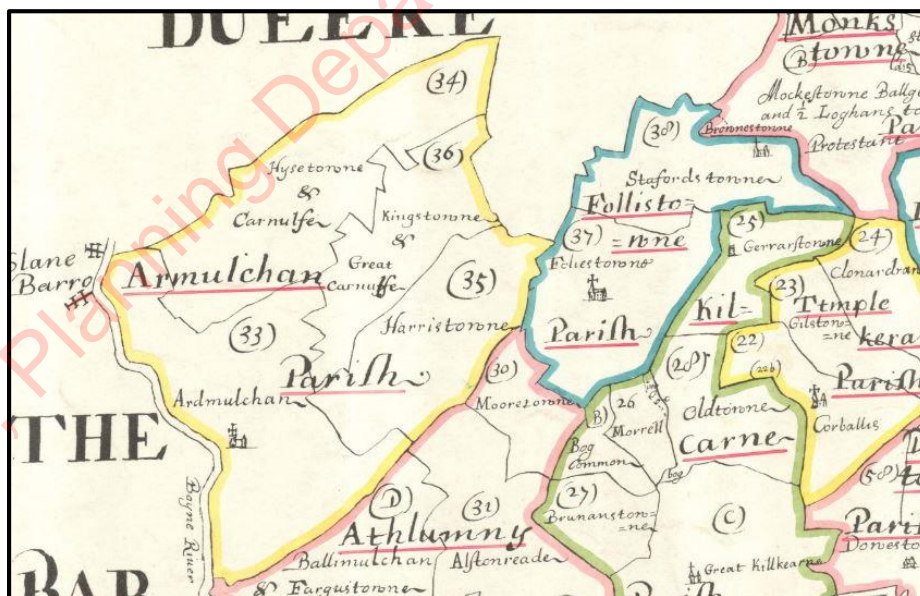


Figure 5 Down Survey map of the Barony of Skreen (Source: downsurvey.tcd.ie).

Taylor & Skinners 'Maps of the roads of Ireland' was based on a survey undertaken in 1777 (Figure 6). Map number 263 covers the area to the north and west of the survey area, as it

details the road from Slane to Navan. Haystown Demesne (Ld. 13th of Leighlin & Ferns), Dollardstown Demesne (Meredyth Esq) and Beaupark (Lambert Esq) are all depicted therein. A bridge crossing the River Boyne is shown, which may be the current 'Broad Boyne Bridge.'



Figure 6 Taylor & Skinner's map of road 'From Slane to Navan and Kells' 1777 (Source: swilson.info).

The first edition Ordnance Survey 6-inch map (1837-43) depicts an improved landscape, with field systems enclosed by hedgerows and roads (Figure 7).

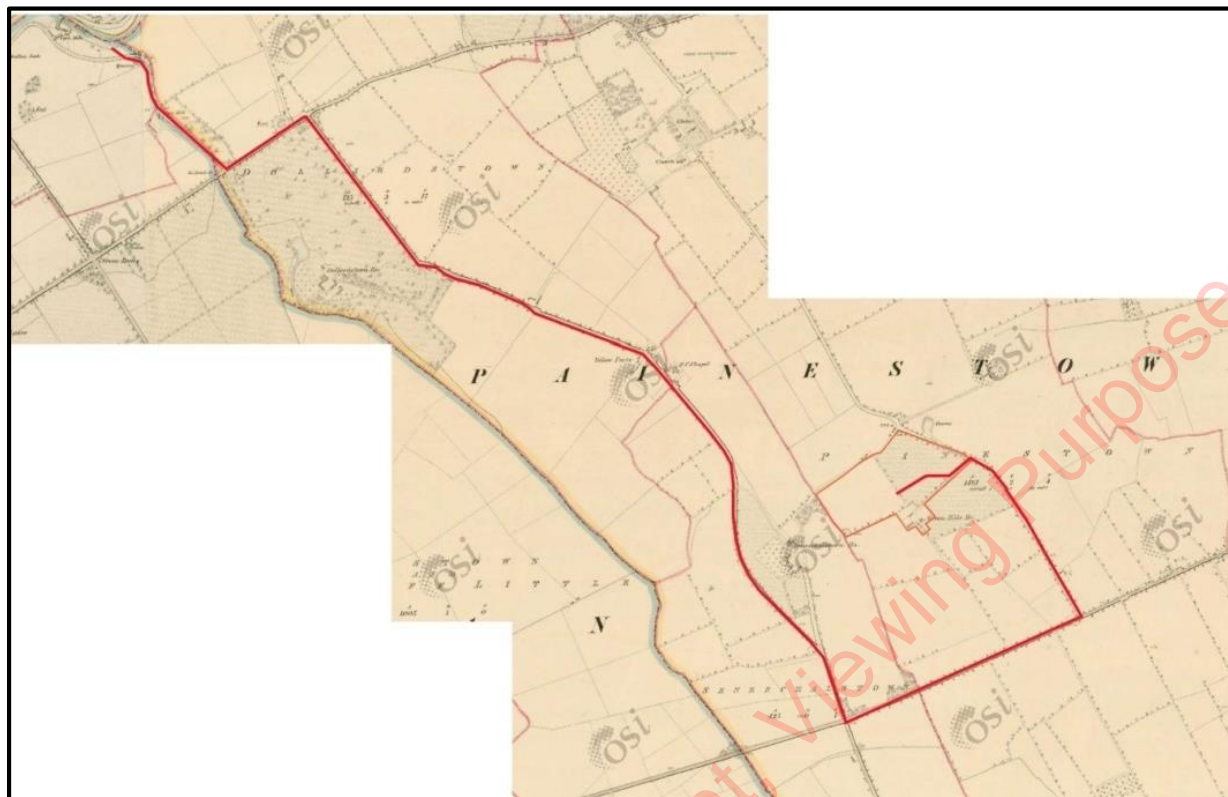


Figure 7 Location of proposed effluent treatment plant and rising main pipeline (in red) on first edition OS map 1837-43 (OSI Licence EN0077921).

To the north of the pipeline route, the River Boyne is shown, as well as sections of the Boyne navigation canal system, which was constructed in the 1750s-1760s. Several associated structures are shown, including Stackallen Lock (NIAH Ref. 14402507, RPS Ref MH026-100) and Broadboyne Bridge (NIAH Ref 14402505). A Corn Mill complex and associated Mill Race are depicted in close proximity to the outflow pipe. A second Corn Mill complex is depicted on the west side of the road running north towards the River Boyne. The Dollardstown enclosure (ME026-001) is represented as 'fort' and depicted as a circular three-enclosed feature. A number of small rectangular structures are shown immediately to the north-west of it. Opposite the junction with Yellow Furze Road, a trio of rectangular-plan structures, representing a farm house and pair of outbuildings which remain extant today are shown. Yellow Furze is shown as a single street having intermittent small structures on either side; the Church of the Assumption, which had been built in 1826 to replace the original structure, is depicted on the north-east side of the road. Shaded grey areas signify the demesne landscapes associated with Dollardstown House and neighbouring Haystown, with smaller grey areas signifying land associated with Green Hills House - the house site is located in the grounds of the Dawn Meats (Slane) facility - and with Seneschalstown House. A large house, with a yard partly enclosed by a series of linear buildings to the south, is depicted at Seneschalstown House, along with partly tree-lined avenues. A

smaller house and two linear farm buildings are depicted in enclosed spaces at Green Hills House. It too had a tree-lined avenue to the road, where there was a rectangular building, a possible lodge structure.

Part of the map sheet of the 1906-1909 edition 25-inch Ordnance Survey map (Figure 8), which covers the Dollardstown House area, is missing. As a result, it is not possible to ascertain developments that took place in the intervening period in this area. The available portion of the map depicts the proposed effluent rising main pipeline outlet location on the bank of the River Boyne. The Corn Mills shown on the preceding map have been replaced by a Woollen Mill, with the footprint of its structures altered somewhat. A weir has been constructed adjacent to the Mill. The Drogheda to Navan Railway Line (later part of the Great Northern Railway of Ireland), has been constructed and is depicted in the wider vicinity of the proposed development area. The village of Yellow Furze is shown to have had a very regular and formal field system put in place. The irregular layout of small structures has been removed, and replaced with a series of semi-detached houses having similar curtilage and yards to the rear. The Church, which had been renovated in 1862, is shown, with a rectangular structure marked 'School' now depicted within the curtilage of the school. A road has been constructed, running north towards Beauparc Graveyard (ME026-002002-) and the location of the historic church at Painestown (ME026-002). The grounds of Seneschalstown House, and the buildings associated with Green Hills House are also shown, as well as the newly-constructed Ashfield House. The location of the effluent treatment plant is depicted as a field, in agricultural use, adjacent to Green Hills House. Some structures in the yard at Green Hills House are potentially partly ruined/roofless, while the structure at the end of the avenue at Green Hills House is no longer depicted. In comparison, increased activity and development is depicted at Seneschalstown House, which has more formalised gardens.



Figure 8 Location of proposed effluent treatment plant and rising main pipeline (red outline) on 25 inch edition OS map, 1906-1909 (OSI Licence EN0077921).

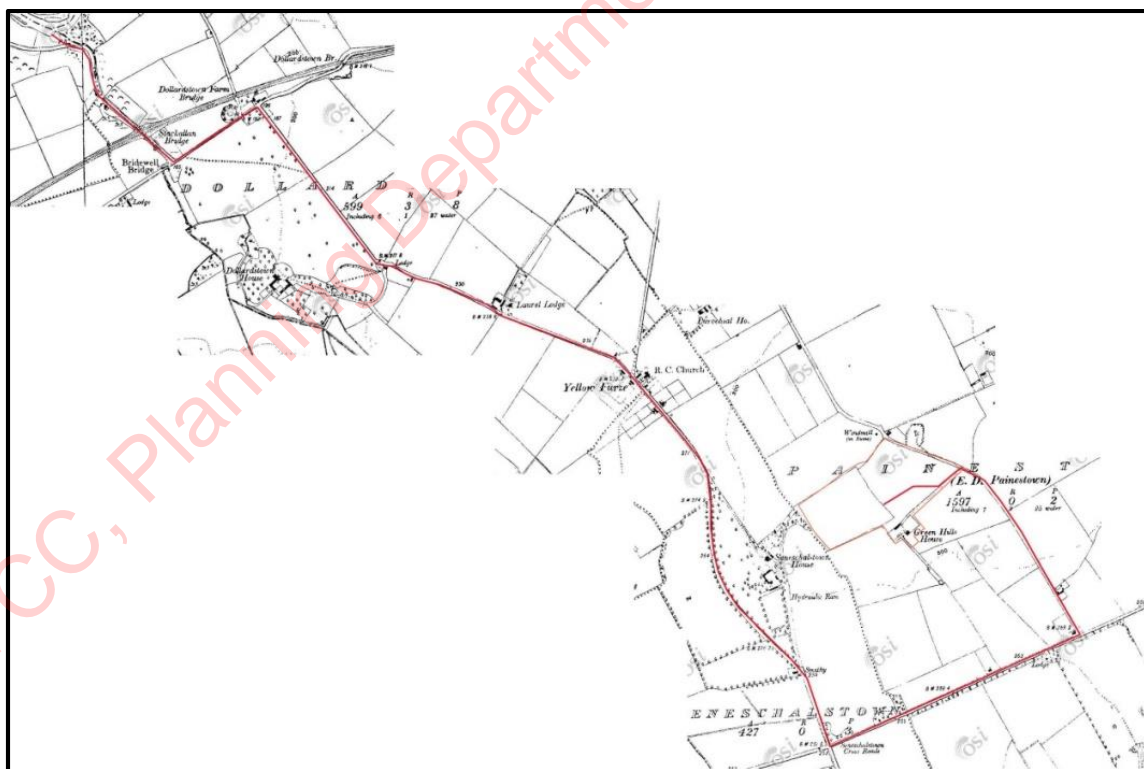


Figure 9 Location of proposed effluent treatment plant and rising main pipeline (red outline) on 6 inch Cassini OS map, c. 1940 (OSI Licence EN0077921).

Cassini's later 20th century 6-inch Ordnance Survey map (Figure 9) no longer depicts the corn mill on the local road heading to the bank of the River Boyne. The Woollen Mill complex to the north-west is depicted and noted to be disused. The railway line and Stackallan Bridge, which carried the railway over this local road, is depicted, as well as Dollardstown Farm Bridge to the east and Sharps Bridge (NIAH Ref. 14402502) to the south-west. The farmhouse facing the junction with Yellow Furze road has been altered, now having an L-plan footprint. The Church of the Assumption appears to have the same footprint, although a short while later plans were made for the construction of a new church (<https://www.beauparcparish.ie/parish-history/beauparc-church/22-church-of-the-assumption-beauparc>, accessed 16 March 2020). Seneschalstown House and Green Hills House appear relatively unchanged.

2.3 Toponymy

A townland name may preserve valuable information relating to its archaeology, history, folklore, previous ownership, topography or land use. Many placenames were anglicised by the Ordnance Survey which begun in the 1830's. Despite some inaccuracies in translation, the Gaelic, Viking, Anglo-Norman and English origins of placenames are generally recognisable.

The route of the proposed pipeline runs through a number of townlands.

The townland name of Ardmulchan derives from *Ard Maolchan*, and is situated in the Barony of Skreen and the civil parish of Ardmulchan (www.logainm.ie, accessed 11 March 2020).

The townland of Dollardstown is depicted as 'Dollordstonne,' in the parish of 'Paynestonne,' on the 1657 Down Survey Map of the Barony of Duleek (Figure 3). A house is depicted on the site of Dollardstown House, indicating that the townland name may be derived from the estate name. It has been recorded as having several different variations on the name, including '*Baile an Dolartaigh*', 'Dollard's town' and 'Dullardston' (www.logainm.ie, accessed 11 March 2020).

The townland of Haystown and Carnuff Little is shown on the first edition Ordnance Survey map, and depicted as 'Hysetonne & Carnulfe' on the 1657 Down Survey Map of the Parish of Ardmulchan, in the Barony of Skreen (Figure 5). Haystown is derived from '*Baile Héigh*,' as it is described in 1836. Carnuff is derived from '*Carn Ulfa*' in reference to a cairn (www.logainm.ie, accessed 11 March 2020).

The townland of Painestown is situated within the civil parish of Painestown, the name of which is derived from '*Baile Phaghain*.' Depicted as 'Paynestonne' on the Down Survey maps, it has also

been written as 'Painestown,' 'Painestowne' or 'Painstown' (www.logainm.ie, accessed 11 March 2020).

The townland of Seneschalstown is situated within the civil parish of Painestown, and the barony of Duleek Lower. It derives from '*Baile an tSeanascail*' (www.logainm.ie, accessed 11 March 2020) and is represented from the Down Survey Map of the Barony of Duleek (Figure 3) as Tenshallstonne.

2.4 Sites and Monuments Record and Record of Monuments and Places

The Record of Monuments and Places records 9 RMP sites within a 500m radius of the proposed development site. The monuments are listed in Table 1, and their position relative to the development site is depicted on Figure 10.

Table 1: Recorded Monuments within a 500m radius of the proposed development site.

RMP No./ National Monument No.	Class	Townland	ITM Ref (E,N)	Proximity (m)
ME025-006 NM#546	Megalithic Tomb – passage tomb	Ardmulchan	691828, 771210	487
ME025-065	Cist	Ardmulchan	691960, 771133	419
ME025-007 NM#496	Ringfort-Rath	Ardmulchan	719321, 737565	363
ME026-001	Enclosure	Dollardstown	692955, 771160	0
ME026-019	Enclosure	Haystown and Carnuff Little	692688, 771004	0
ME026-019001	Burial	Haystown and Carnuff Little	692688, 771004	0
ME026-008	Barrow	Painestown	695254, 770210	162
ME026-009	Ogham Stone	Seneschalstown	694777, 769312	44
ME026-036	Enclosure	Haystown & Carnuff Little	692303, 770782	430

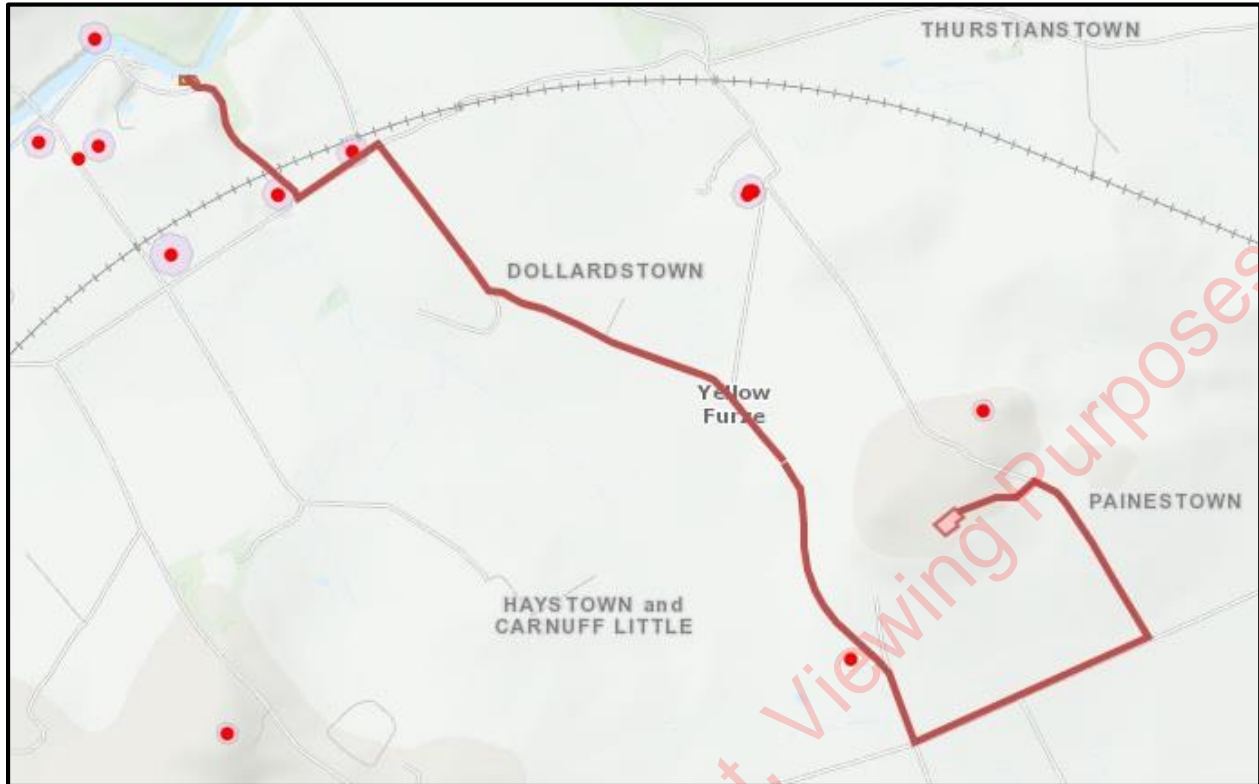


Figure 10 Location of proposed effluent treatment plant and rising main pipeline (red outline) relative to RMP sites (red dots) (OSI Licence EN0077921).

2.5 National Monuments

There are two National Monuments in proximity to the proposed development site. These are a megalithic passage tomb (ME025-006, NM No. 546) and a ringfort (ME025-007, NM No. 496) both in the townland of Ardmulchan, situated 487m and 363m respectively from the proposed treated effluent rising main pipeline route (Table 1).

2.6 Previous Archaeological Investigations

Few archaeological investigations have been undertaken in the wider vicinity.

Archaeological monitoring (1999:707) took place of ground works for the laying of a new gas pipeline from the south of Drogheda to the outskirts of Navan. Ground works involved the stripping of a 15m wide corridor and the excavation of a trench through 27 townlands, including Painestown. No features of a proven archaeological nature were uncovered as part of this investigation (Clinton, M, 1999).

Monitoring of groundworks (2011: 480) in advance of the erection of pylons for a 26km long ESB line through 18 townlands including Painestown similarly revealed nothing of archaeological significance (O Drisceoil, C., 2011).

In August 2018, Shanarc Archaeology Ltd. carried out extensive test excavation at the site of the proposed effluent treatment plant at the Dawn Meats (Slane) facility (Attachment G). The investigations were undertaken in accordance with Excavation Licence No. 18E0476, issued by the Department of Culture, Heritage and the Gaeltacht. Six test trenches, measuring 2 metres in width and approximately 20m in length, were machine-excavated around the area proposed for development. No features or material of archaeological significance were identified. The investigation identified fills of made ground with frequent inclusions of plastic, wood and concrete waste, consistent with considerable disturbance in the modern era and associated with the infilling of older effluent ponds.

2.7 Previous Archaeological Finds recorded in Topographical Files

A number of finds have been located in the immediate vicinity.

Haystown and Carnuff Little: 1981:16 Axehead

Axehead measuring 12.3cm in length, 3.5cm in maximum thickness, 2.9cm wide at the butt and 6.45cm wide at the cutting edge, in good condition with a finely polished surface, slightly chipped to the body and cutting edge. Found in a ploughed field in an area of reclaimed bogland.

Dollardstown:

The topographical files list no archaeological finds from Dollardstown.

Painestown: 1978:139 Axehead

A large polished stone axehead was acquired in 1978 which had been found 'many years ago in a bog close to a spread of antlers'. Trapezoidal in shape with a flat butt, one side is slightly convex and at roughly a right angle to the butt, while the other side is concave and outspreading, giving the axe a 'bearded' appearance. The cutting edge is worn and the axe is elliptical in cross section. The maximum length is 15.2cm, maximum width to cutting edge is 8.66cm and 5.8cm to the butt. Maximum thickness is 4.55cm.

1970:6 Ogham Stone

Originally found in Seneschalstown (also known as Painestown), this stone was taken to Seneschalstown House and thence to Piltown House, from where it was acquired by the NMI.

An inscription on the surface reads: 'MAQI – CAIRATINI AVI INEQAGLAS' (Macalister, 1945 46). However, an older inscription existed on an edge, which had been battered away, leaving it illegible. The NMI found no evidence of the earlier inscription when the stone was inspected in 1970.

Ardmulchan: 2002:199 Cremated bone

Found in a short cist burial (ME025-065).

Ardmulchan: 1961: 83 Flint Object

3. Archaeological Test Excavation

A total of 3 test trenches were machine excavated in greenfield along the route of the proposed pipeline at Painestown, between the existing Dawn Meats facility and the local road. (Figure 11).

Test-excavation was carried out on the 19th of November 2021 in bright, dry conditions using a mechanical digger with a 2m-wide flat grading bucket. The results are presented in Table 2.

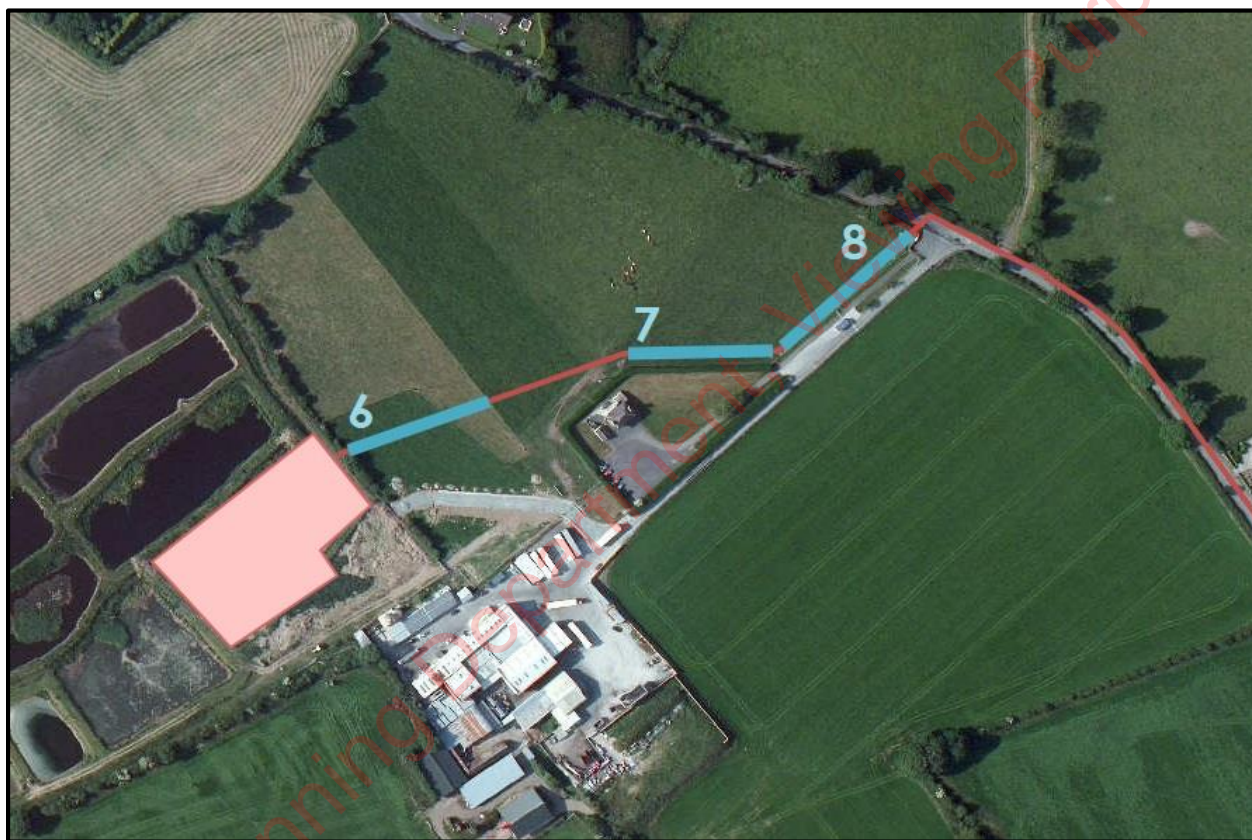


Figure 11 Test trench layout as excavated.

Table 2: Results of archaeological test-excavation.

Trench No.	Alignment	Length	Max. depth of topsoil	Comments
6	E-W	75m	0.60m	Mid-brown silty topsoil was present to a depth of between 0.40m and 0.60m – at its deepest in the western-most extent of the trench. This overlay a natural mid yellow/brown sandy clay with frequent medium-sized water-rolled stones. A land drain was noted 31m from the western end of the trench and

				running NE-SW across the trench, measuring 0.50m in width and filled with water-rolled stone. The trench was stopped at 70m in length due to the presence of below ground services including water and power (Plates 1, 3, 4, 5)
7	E-W	65m	0.55m	Mid-brown silty topsoil was present to a depth of between 0.40m and 0.55m – at its deepest in the easternmost extent of the trench. This overlay a natural mid-orange/brown sandy clay with frequent small angular stones. No finds or features of archaeological significance were noted. The trench began 5m E of its proposed starting point, due to the presence of below ground services including water and power (Plates 2, 6, 7)
8	SW-NE	70m	0.50m	Mid-brown silty topsoil was present to a depth of between 0.40m and 0.50m – at its deepest in the westernmost extent of the trench. This overlay a natural mid-orange/brown sandy clay with frequent small angular stones. No finds or features of archaeological significance were noted (Plates 2, 8, 9)

3.1 Test-Excavation Plates



Plate 1 Drone shot of Trench 6, N to top of image.



Plate 2 Drone shot of Trenches 7 and 8, N to top of image.



Plate 3 Trench 6, post-excavation, facing W.



Plate 4 Land drain in Trench 6, facing E.



Plate 5 Trench 6, post-excavation, facing E.



Plate 6 Trench 7, post-excavation, facing E.



Plate 7 Trench 7, post-excavation, facing W.



Plate 8 Trench 8, post-excavation, facing NE.



Plate 9 Trench 8, post-excavation, facing SW.

4. Conclusions

The Archaeological, Architectural & Cultural Heritage Impact Assessment of the effluent plant extension and rising main pipeline undertaken in 2020 by Shanarc Archaeology Ltd, and incorporated into the EIAR, recommended that pre-construction archaeological testing be undertaken on the proposed wayleave of the effluent rising main pipeline through zones of identified archaeological potential. It was noted that it would not be practicable to undertake pre-construction archaeological testing on public roads. In such cases, construction phase monitoring was recommended.

Pre-construction archaeological test trenching was possible at the greenfield sites through which the pipeline is proposed to run – at the existing facility at Painestown and the outfall area at Ardmulchan. However, due to access issues, at the time of writing test trenches could not be excavated at Ardmulchan.

This report is concerned with archaeological test-excavation on the proposed pipeline route at the existing facility in Painestown, where 3 trenches were excavated (Trenches 6-8). No finds or features of archaeological significance were noted during the course of the works.

5. Mitigation Measures

It is recommended that Trenches 1-5 as per the licence application method statement be excavated as soon as access can be gained to the outfall site at Ardmulchan.

Archaeological investigations between the existing plant and the local road at Painestown (18E0476, 21E0649) have produced no evidence of any finds or features of archaeological significance. Subject to the approval of the National Monuments Service, it is recommended that no further mitigation measures are required in this area.

It is recommended that groundworks for the proposed effluent rising main pipeline in areas of archaeological potential be archaeologically monitored, as per the recommendations of the Archaeological, Architectural & Cultural Heritage Impact Assessment.

It is envisaged that the following will apply:

- i. Where it is feasible, the preservation *in situ* of archaeologically significant material or structures may be recommended. Strategies for the *in situ* preservation of

archaeological remains are conducted in consultation with the statutory authorities, and may include avoidance, if possible, of the remains during construction, or preservation through redesign.

- ii. Where archaeologically significant material or structures cannot be preserved *in situ*, archaeological excavation and recording, to full resolution, will be necessary.
- iii. This work shall be undertaken in accordance with Section 26 of the National Monuments Acts 1930 – 2004, and with a method statement agreed in advance with the National Monuments Service (Department of Housing, Local Government and Heritage) and the National Museum of Ireland.
- iv. Adequate funds to cover excavation, fencing (if required), post-excavation analysis, reporting, and conservation work should be made available.

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Cartographic Sources

Taylor & Skinner Maps of the Roads of Ireland, 1777

Down Survey Map of County Meath, 1656-58

Down Survey map of Barony of Duleek, 1656-58

Down Survey map of Barony of Skreen, 1656-58

Ordnance Survey maps, 19th and 20th centuries

Electronic Sources

www.excavations.ie	Summary of archaeological excavations
www.archaeology.ie	Department website listing RMP sites and NIAH sites
www.heritagemaps.ie	Cultural heritage datasets
www.logainm.ie	Placenames database
www.downsurvey.tcd.ie	Down Survey maps
www.jstor.org	Journal articles, books and primary sources
www.dia.ie	Irish Architectural Archive
www.libraryireland.com/topog	A Topographical Dictionary of Ireland
www.meath.ie	Meath County Development Plan 2013-2019
www.swilson.info	Heritage map viewer

7. Appendices

Appendix 1 Letter from Development Applications Unit, 7th April 2021



An Roinn Turasóireachta, Cultúir,
Ealaíon, Gaeltachta, Spóirt agus Meán
Department of Tourism, Culture,
Arts, Gaeltacht, Sport and Media

Planning Ref: 21/424

(Please quote in all related correspondence)

7 April 2021

Director of Services-Planning
Meath County Council
Buvinda House
Dublin Road
Navan
Co Meath
C15 Y291

Re: Notification under Article 28 (Part 4) or Article 82 (Part 8) of the Planning and Development Regulations, 2001, as amended

Proposed Development: Planning Application by Dawn Meats Ireland (Unlimited Company) permission for the construction of an extension to an existing wastewater treatment plant (WWTP) where the works include:- a) Demolition of an existing storage building (17.50m²) and construction of a new single-storey industrial type building to enclose the DAF unit granted planning permission under planning reference LB180300 and to provide new enclosed storage and control rooms (total floor area 119m²). b) Install a new sludge press at intake to WWTP, change aeration tank to anoxic tank, install 2 no. additional aeration tanks, alteration to perimeter berm to increase the footprint of WWTP, by 539m² to that granted planning permission under planning permission LB180300. C) Treated wastewater rising main from the site of the proposed development to new discharge point at the River Boyne (distance 7.2km), where pipeline shall be laid along a section of Windmill Road, the L1013, Yellow Furze Road, the L1600 (Boyne Road), and the unnamed local road leading from the L1600 to the private lands abutting the River Boyne at the discharge point. This planning application is accompanied by an Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS). This application relates to a development which is for the purposes of an activity which holds an Industrial Emissions Licence (Reg No. P0811-02) at Painestown, Seneschalstown, Dollardstown,, Hayestown-Carnuff Little & Ardmulchan, Navan, Co Meath



Dear Sir or Madam,

I refer to correspondence dated 22 March 2021 received in connection with the above. Outlined below are heritage-related observations/recommendations co-ordinated by the Development Applications Unit under the stated headings.

Archaeology

The National Monuments Service has examined the archaeological component of the Archaeological, Architectural and Cultural Heritage section of the Environmental Impact Assessment Report (EIAR) (Section 14) submitted with the above planning application. The National Monuments Service notes the absence of any details relating to the location of 'working compounds' at the time of writing and the statement that this 'inhibits the overall efficacy of this report' (Section 14.1, page 297). The EIAR further states that the compound locations have not been inspected (Section 14.4.9, page 322).

Furthermore, the National Monuments Service notes that no archaeological test excavations have taken place along the route of the proposed pipeline, in particular, at the location of the outlet on the south bank of the River Boyne at Ardmulchan. This location on the river has a particularly high archaeological potential being located close to at the site of a corn mill, a series of weirs and a number of potential fording points (Section 14.5.4, page 348).

In the event that Further Information is requested in relation to this planning application it is recommended that an Archaeological Impact Assessment, as described below, should be prepared to assess the potential impact, if any, on archaeological remains in the area where development is proposed to take place. The statement should be submitted as Further Information. This will enable Planning Authority and the National Monuments Service to formulate an informed archaeological recommendation before a planning decision is taken.

Archaeological Impact Assessment should be compiled as follows:

1. The applicant is required to engage the services of a suitably qualified archaeologist to carry out an archaeological assessment of the development site. Where applicable the Further Information should include the results of an archaeological geophysical survey and archaeological testing of proposed construction compounds and at locations along the pipeline route that are in close proximity to known monuments. No sub-surface work should be undertaken in the absence of the archaeologist without his/her express consent.



2. The archaeologist will carry out any relevant documentary research and inspect the site. Test trenches may be excavated at locations chosen by the archaeologist (licensed under the National Monuments Acts 1930-2004), having consulted the site drawings.
3. Having completed the work, the archaeologist should submit a written report to the Planning Authority and to the National Monuments Service in advance of the planning decision. Where archaeological material/features are shown to be present, preservation *in situ*, preservation by record (excavation) or monitoring may be required.

It should be borne in mind that, if significant archaeological remains are found, refusal might still be recommended, and/or further monitoring or excavation required. A final decision should not be made on this application until the Planning Authority and the National Monuments Service has had the opportunity to evaluate the Archaeological Assessment. The National Monuments Service will forward a recommendation based on the Archaeological Assessment to the Planning Authority.

You are requested to send further communications to the Development Applications Unit (DAU) referrals@chg.gov.ie, or to the following address:

The Manager
Development Applications Unit (DAU)
Government Offices
Newtown Road
Wexford
Y35 AP90

Yours faithfully,

Brian Bone
Development Applications Unit