

Luas Finglas

Environmental Impact Assessment Report 2024

Appendix A20.1:
Archaeological Monitoring Report
- Geotechnical Investigations



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Report on Archaeological Monitoring of Geotechnical Investigations Luas Finglas Co. Dublin

Licence 21E0657

Client: Ground Investigations Ireland

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February 2022

Licence/Registration No.	21E0657
Site Name [Townland 1, Ward or Street Name]	Finglas
County	Dublin
Type of Report [Archaeo-geophysical report, St. i. Report, St. iii. Report etc.]	Archaeological Monitoring
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Client	Barry Transport/Egis. for TII
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1 Summary:

This report details the results of archaeological monitoring of Geotechnical Investigations (GI) on behalf of Ground Investigations Ireland (GII) for Luas Finglas. Transport Infrastructure Ireland (TII) is proposing a new extension to the northern end of the Luas Green Line. The proposed project comprises a 4km extension to the existing Luas Green line from its terminus at Broadstone to Finglas Village accommodating four new Stops; these are St Helena's, Finglas Village, Mellows Park and Charlestown. The proposed alignment will be constructed mostly at-grade using grass track and will include a parallel cycle path along much of the route.

Two new bridge structures will also be required, one at Broombridge over the existing Midland Great Western Railway (MGWR) and Royal Canal, and the other at Tolka Valley Park over the Tolka River. There is limited existing information on the ground conditions underlying the proposed route. Additional ground investigation is therefore required to supplement the existing information and inform the design process.

The Emerging Preferred Route for Luas Finglas was announced in 2020. The Preferred Route (PR) is currently in design stage by Barry Egis on behalf of TII. Upon finalisation of the PR for which an Environmental Impact Assessment Report (EIAR) will be prepared in support of a Railway Order Application to An Bord Pleanála. A Preliminary Sources Study Report (PSSR) is a desk study which documents the geotechnical and other investigation implications for the project has been completed and the information contained in this method statement is based upon the findings from this report. -The proposed GI are required to inform the selection of the PR, the design of the proposed scheme and ultimately the EIAR process.

The proposed locations for the GI works were reviewed by the TII Project Archaeologist and Barry Egis' Consultant Archaeologists. A total of 52 GI locations required archaeological monitoring under licence due to their location within, or in proximity to a Recorded Monument and Place (RMP) an Area of Archaeological Potential, greenfield/park land which could have a negative archaeological impact. In addition a number of developed areas (e.g. car parks or road verges) will be monitored to provide evidence of the presence or absence and which is the subject of this method statement.

The ground works commenced on the 22nd September 2021 and were completed by January 17th 2022. The works were carried out under Licence 21E0657, issued by the Department of Housing, Local Government and Heritage (DHLGH) in consultation with the National Museum of Ireland (NMI) to licensee Yvonne Whitty. All monitoring was carried out Yvonne Whitty for GII on behalf of TII.

2 Description of the Emerging Preferred Route

Starting in the south at the existing Luas Broombridge Stop, the proposed EPR crosses over the existing Irish Rail MGWR train line and Royal Canal, continuing through the Broombridge Industrial Estate over the Tolka River which runs along the southern boundary of the Tolka Valley Park. The route meanders northwards through the park, across Tolka Valley road, St Helena's Road, Mellows Road, continuing northwards along the Finglas Bypass green space corridor before crossing over at the North Road roundabout, continuing in a north-eastern direction along St Margaret's Road before terminating in Charlestown, south of the M50. Land use along the route varies between industrial, residential and parklands (Plates 1-5).



Plate 1: Mellowe's Road facing east.



Plate 2: Saint Margaret's Road facing south.



Plate 3: Broombridge Road, facing south.



Plate 4: View from Tolka Valley Road facing south.



Plate 5: View from Tolka Valley Road facing north.

3 Luas Finglas Location Map:

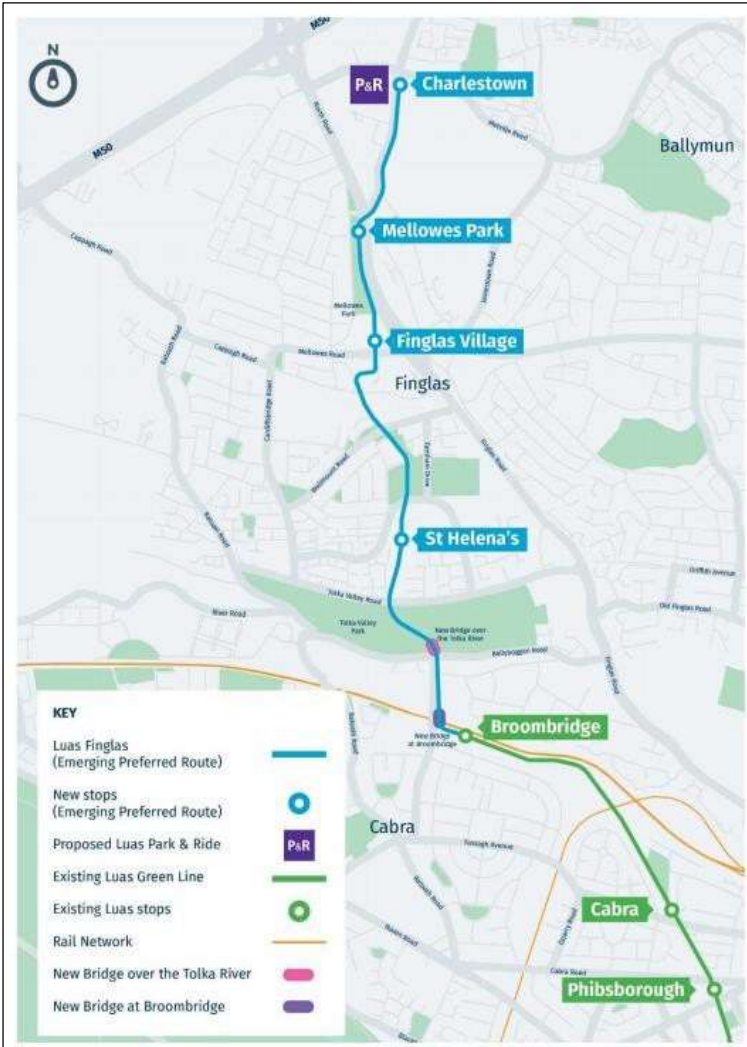


Figure 1: Luas Finglas Emerging Preferred Route (source www.luasfinglas.ie)

Planning history:

Luas Finglas is the proposed extension of the Luas Green Line from its terminus in Broombridge to the north of Finglas in Charlestown, beside the junction of the M50 and N2. Several potential routes for the proposed extension have been assessed and documented in two Option Selection Reports. Shortlisted options were evaluated in accordance with the six

criteria of DTTaS' CAF: Economy, Safety, Environment, Accessibility and Social Inclusion and Integration, and included the development of a Cost Benefit Analysis (CBA). Based on the findings of the Stage 2 assessment report, an Emerging Preferred Route (EPR) for Luas Finglas was selected

The EPR will include four new stops along its approximate 4km length; these are St Helena's, Finglas Village, Mellows Park and Charlestown (See Figure 1). The final stop at Charlestown, close to the M50 will include a 600-vehicle park and ride facility. This will help reduce traffic driving through the area and adjacent villages of Cabra and Phibsborough. The alignment will be constructed mostly at-grade using grass track and will include a parallel cycle path along much of the route. Two new bridge structures will also be required, one at Broombridge over the

The Preferred Route (PR) currently in design stage by Barry Egis on behalf of TII has been completed. In line with light rail practice a provisional study area of 250m from the EPR has been adopted (Figure 2). This will be amended to 250m from the redline boundary in greenfield land and 100m from the redline boundary in urban environments, once the alignment and all associated temporary and permanent land take has been determined.



Figure 2: Study area 250m zone around Luas line (Barry Transportation and Egis, 2021).

Once the Preferred Route has been selected statutory and non-statutory consultation will be undertaken and a reference design and EIAR will be developed in support of a RO application.

A Preliminary Sources Study Report (PSSR) has been undertaken, this is a desk study which documents the geotechnical and other investigation implications required to inform the decision-making process for the proposed PR and EIAR. The information from the GI monitoring will be used to inform the EIAR and the Luas Finglas Cultural Heritage Strategy in accordance with the Code of Practice for Archaeology.

4 Receiving Archaeological and Historical Environment

The information contained within this method statement has been collated from the PSSR which is compiled from various sources as detailed below and also includes a site visit by the applicant¹. A full archaeological and historical background of the receiving environment will be prepared for the final monitoring report for this project. In summary the cultural heritage constraints have been reviewed within a 250m zone of the proposed EPR route from the following sources:

- Archaeological Survey of Ireland including:
 - Register of National Monuments;
 - Record of Monuments and Places (RMP); and
 - Sites and Monuments Record (SMR);
- Database of Irish Excavation Reports (<https://excavations.ie/>);
- Topographical files of the National Museum of Ireland;
- Cartographic analysis;
- National Inventory of Architectural Heritage (NIAH);
- Record of Protected Structures for Dublin City Council (DCC).

Additional constraints include DCC designated Conservations Areas (CA) which are present at various locations along the EPR and these comprise areas extending along the Royal Canal and Tolka Valley and within the medieval core of Finglas town. The EPR also incorporates the Zone of Archaeological Potential for the historic town of Finglas (RMP DU014-066000-).

A number of significant cultural heritage constraints are located within the study area for the proposed project. These cultural heritage constraints have statutory protection in accordance with the National Monuments Act 1930 (as amended) and the Planning and Development Act 2000 (as amended). Thirty-five Recorded Monuments and Places (RMPs), 21 Protected Structures (RPSs) and five Conservation Areas (CAs) have been identified. These cluster around the Royal Canal, the Tolka Valley, the medieval village of Finglas. The study area also borders Prospect Cemetery at Glasnevin (DCC RPS 2749) a significant cultural heritage constraint dominated by its iconic round tower housing the burial crypt of Daniel O'Connell, and surrounded by the graves of other notable political and religious leaders such as those of Charles Stewart Parnell, Sir Charles Gavan Duffy and Oliver Plunkett.

In the south of the study area lies the Royal Canal CA. The canal, its associated walls, tow paths and lock gates are of cultural and industrial heritage significance; it is crossed by two bridges which are protected structures namely Broom Bridge (DCC RPS 909) and H.S. Reilly Bridge (DCC RPS 913).

During excavations for the Luas Cross City in 2015 significant remains associated with the movement of cattle to the markets at the Liffey junction, north of Bannow Road. Below several

¹ *Luas Finglas Preliminary Design & Statutory Process Preliminary Sources Study Report* is the main source used in the preparation of this method statement.

metres of fill at the 7th Lock, Chemical Manure Works (c. 1861–1870) were identified between the rail track and the Royal Canal (Licence 15E0185).

'Finglas Wood Bridge', facilitating crossing of the River Tolka, within Tolka Valley Park is a Protected Structure (DCC RPS 906) of likely mid-16th century date, while the park is a CA. Five RMPs are associated with both the park and the River Tolka and include the site of a medieval tower house (RMP DU014-076001-), a 17th century mill (RMP DU018-001), and a possible medieval bridge (RMP DU014-075).

The study area is dominated by the early medieval village of Finglas (RMP DU014-066000-) established in the 6th century by St Canice and further developed as an episcopal manor in the 12th century. Recorded Monuments within the town include the early medieval ecclesiastical complex, the episcopal manor, a Holy Well dedicated to St Patrick and the remains of the town defences known as 'King William's Ramparts' (RMPs DU014-066002 – DU014-066017-). King William's Ramparts, St Patrick's Well, and St Canice's Church are also Protected Structures (DCC RPSs 8733, 8734, 8735 and 4851). 'Rose Hill' House to the east of the Main Street is both a recorded monument and a protected structure (RMP DU014-079- --; DCC RPS 4850); the neighbouring Woodland Lodge (Towson's Cottage) is also a protected structure (DCC RPS 4849). Three CAs are located within Finglas Village.

Meakestown, just south of the M50 is the site of an 'extensive brick manor' recorded by the Civil Survey in 1654 (RMP DU014-020001-), to the west of which lies the site of Meakstown Castle (RMP DU014-020002-) with a further early medieval settlement lying to the east in Poppintree (RMPSU014-115--)."²

4.1 National Monuments

Under the National Monuments Act 1930 (as amended) and its various amendments archaeological sites in the ownership or guardianship of the state or a Local Authority and sites under preservation orders may be designated as National Monuments and offered the highest level of protection under Irish Legislation.

There are no National Monuments in the townlands in which the proposed works will take place.

Record of Monuments & Places and Sites & Monuments Record

The RMP is a published list of archaeological monuments and places, generally predating AD 1700, known to the National Monuments Service of the DHLGH, which receive statutory protection.

The Sites and Monuments Record (SMR) provides details of documentary sources and field inspections of recorded sites, and also contains information on potential sites which are not contained in the RMP but are identified for inclusion to the next published revision of the RMP.

A summary of RMP constraints within 250m of the EPR are listed in Table 1 below ³ (Appendix 3).

² Info kindly supplied by Emer Dennehy TII Project Archaeologist Luas Finglas.

³ Archaeological Survey of Ireland (ASI) descriptions sourced from National Monuments Service's Historic Environment Viewer (www.archaeology.ie).

RMP No.	Classification	Description	Easting (ITM)	Northing (ITM)
DU014-066002-	Ritual site – holy well	This is a natural spring enclosed within a railing and embellished with a monument to St Patrick, murals and a grotto. A stone-lined bath in the front may have been built in the 1760's when the well was developed as a spa (Daly 1957, 20; Ó Danachair, 1958, 76). This was a station well according to the Ordnance Survey Name Books. The waters were thought to cure sore eyes and inveterate ulcers. Still venerated.	712845	738997
DU014-066003-	House – 17 th century	Named on the 1 st edition OS 6-inch map (1837) as 'Cardiff castle in ruins'. The OS 6-inch map shows an L-shaped building N of the road. This area has since been developed. Not visible at ground level.	712658	738903
DU014-066005-	House – 16 th /17 th century	A manor established by Archbishop Comyn in 1181 appears to have been on the present site of the convent which on the 1 st edition OS 6-inch map (1843) is called Springmount, later known as Fortwilliam. In 1228 Archbishop Luke established an episcopal residence on the site. During the period that Alexander de Bicknor held the See of Dublin 1317-1319, this residence became known as the Court. It was a substantial mansion. There are references to stone walls, leaden gutters, iron bars, kitchen, brewhouse and furnaces (Ball 1920, 85). The Civil survey (1654-6) mentions a 'stone house' at Oldcourt on the church farm at Finglas (Simington 1945, 140). Excavations in 1992 failed to reveal any traces of the site (O'Flanagan 1993, 27). Further excavations in 1995 revealed the walls of a rectangular, two-roomed structure (L 20m, Wth 4.5m) associated with 16 th -17 th century material. This has been interpreted as an out-building associated with Fortwilliam (Halpin 1996, 24-25).	712787	738816
DU014-066008-	Town defences	The N section of 'King William's Rampart' forms a boundary wall to the present Vicarage garden and the S boundary of the car park. It runs in a NE-SW direction (L 80m, Wth 3.5-6m, H 1.5-3.5m). Both faces are revetted with stone walling. In the W end of the rampart is a vaulted chamber entered from a round-arched opening. The vault runs N-S (dims. L 3.7m, Wth 3.6m, H 2m.). It is lit by slit opes. Between 1986 and 1994 excavations in the immediate vicinity of the site produced 13 th -15 th -century pottery and evidence for an E extension to the rampart (Cotter 1992, 16). This site may be interpreted as fortifications erected by the Duke of Ormonde in 1649 (Anon 1897, 452; Joyce 1912,	712901	739038

RMP No.	Classification	Description	Easting (ITM)	Northing (ITM)
		270-1).		
DU014-076001-	Castle – tower house	Finglaswood House, formerly the home of the Seagrave family, incorporated a tower house. This was a square tower defended by gun loops with fine hammer-dressing on the entrance doorway (Anon 1897, 446-7; Joyce 1912, 273-4; Ball 1920, 89-91). The building was demolished before the early 1970s. No visible at ground level.	712965	737721
DU014-066009-	Church	Situated at the edge of a plateau with a valley to the E. This is a medieval parish church on the site of an earlier monastery associated with St Canice. The later church is of nave and chancel type with a vaulted porch entrance (dims. L 12.8m, Wth 7.25m). Built of coursed limestone masonry. The W gable of nave is heavily buttressed and contains a round segmental arched window with a circular window above. On W side of nave is a round arched window, partly blocked and a later pointed window inserted. The chancel is narrower than the nave and entered through a pointed arched opening. There is a sandstone piscina along the S wall and pointed arched aumbrey close by. The chancel was originally lit by a double-light cusped, ogee-headed window (L 7.6m, Wth 5.6m.). The S aisle is entered through wide round arches with pillars. There is a blocked pointed doorway in S wall of S aisle (dims. L 13.2m, Wth 3.15m; see Stubbs 1916, 27-45; Anon 1987, 451-4). In the SE corner of the chancel are two 17 th century graveslabs, one commemorating Richard Treswell d. 1672 (DU014-066015-) the other to the Ryves family dates from 1647 (DU014-066016-).	713097	738860
DU014-066017-	Graveyard	Situated at the edge of a plateau with a valley to the E. This graveyard marks the site of an earlier monastery associated with St Canice. It contains the remains of a medieval parish church that contains in the SE corner of the chancel two 17 th century graveslabs (DU014-066015-; DU014-066016-). In the SE corner of the graveyard just inside the entrance is a large granite ringed cross (DU014-066010-).	713083	738812

Table 1: RMP sites within 250m of EPR.

In terms of impacts upon Zones of Notification (ZoN) associated with RMP sites, at the southern end of the scheme in the River Tolka Park, the GI works will impact upon the ZoN associated with a medieval tower house (RMP DU014-076001-). This site was demolished before the 1970's and is not visible today (Table 1, Figure 3 and Plate 6) though there is a potential that associated sub-surface remains survive beneath the park landscaping.

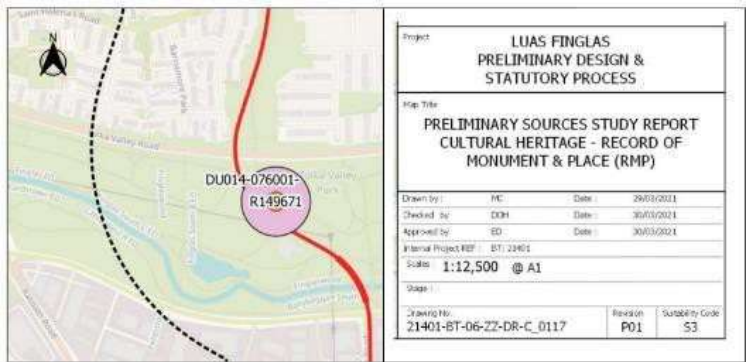


Figure 3: Extract from PSSR report in relation to RMP site (DU014-076001-) in Tolka Valley Park, red line is Luas EPR (Barry Transportation and Egis, 2021).



Plate 6: Tolka Valley Park, view towards location of medieval tower house (RMP DU014-076001-).

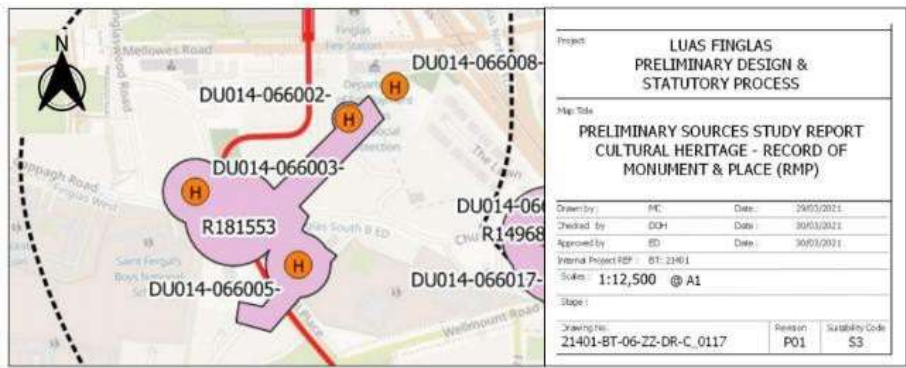


Figure 4: Extract from PSSR report in relation to RMPs DU014-66005-, DU014-066003- and DU014-066002-; red line is Luas EPR (Barry Transportation and Egis, 2021).

To the northeast of Patrickswell place the Luas and GI works will pass through the ZoN associated with the site of a 16th-17th century house (RMP DU014-066005-), a holy well (RMP DU014-066002-) and also the site of a 17th century house located on Cardiff Castle Road (RMP DU014-066002-) (Figure 4, Table 1).

There is no above ground trace of the 16th-17th century houses (RMP DU014-066005-) which are occupied by a modern terrace of houses.



Plate 7: Location of Cardiff Castle occupied by modern houses to rear of green area (RMP DU014-066002-), facing northwest.



Plate 8: Saint Patrick's holy well (RMP DU014-066002-).

4.2 Topographical files

The Irish Antiquities Division of the National Museum of Ireland (NMI) retains an extensive archive of small finds and objects discovered across Ireland and reported to the NMI and its predecessors since the nineteenth century. It represents a critical resource for archaeological research, where registered objects are recorded by townland in the Topographical Files. An analysis of the NMIs published record (www.heritagemaps.ie) indicated that there are currently no known stray finds recorded within the study area for the EPR.

4.3 Previous Archaeological Excavations

There are fifteen excavations recorded within 100m of the EPR and at least twenty-two recorded within the 250m study area surrounding the route. For the purpose of this method statement excavations 100m either side of the EPR are detailed in Table 2 and Figure 5 below. The archaeological excavations outlined below support the results of the desk-based assessment and confirm the proposed GI works are located within an archaeologically rich landscape associated with the early medieval ecclesiastical site at Finglas. It is interesting to note that at the northern end of the scheme a possible ecclesiastical enclosure which was destroyed by post medieval quarrying was encountered (Licence 94E0010). This ditch may be encountered during the construction works. Curvilinear ecclesiastical settlements such as at Finglas, conform to what looks like a universal pattern. The characteristics of this pattern commonly include an inner and outer curvilinear enclosure, with a church, burial ground and other ecclesiastical structures and features (for example the round tower and high crosses) located within the inner enclosure.

The most significant archaeology in the immediate vicinity of the proposed stabling yard on Bannow Road, was found during excavations associated with the Luas Cross City in 2015 (Licence 15E0185). This area yielded significant remains associated with the movement of cattle to the markets at the Liffey junction. Below several metres of fill at the 7th Lock, Chemical Manure Works (c. 1861–1870) were identified between the rail track and the Royal Canal. This site was approximately 60m northwest of the GI locations on Bannow Road (Figure 8, Plate 9 and Table 2).



Plate 9: Manure Works Liffey junction (courtesy Emer Dennehy).

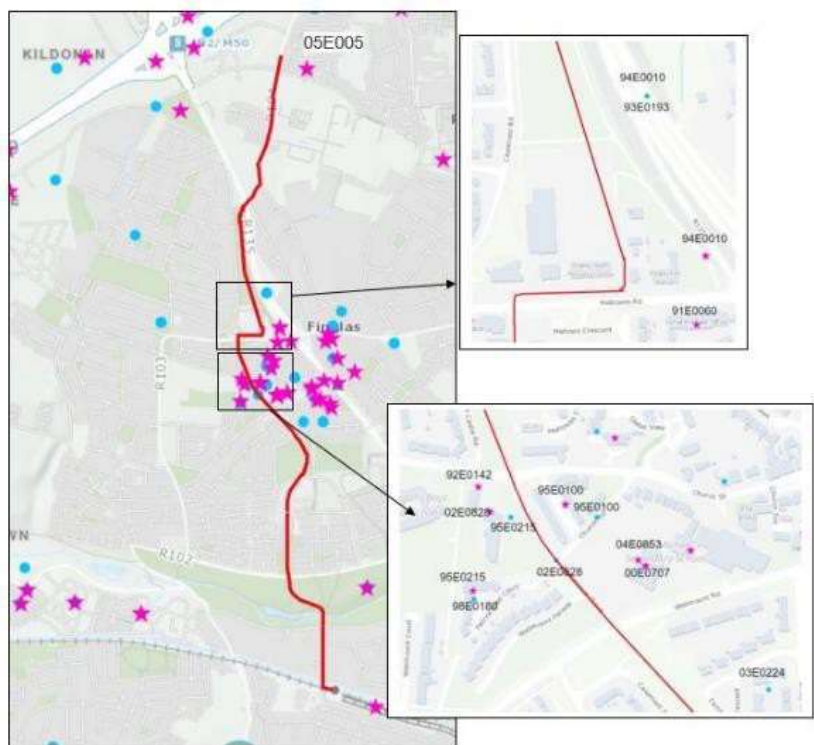


Figure 5: Excavations illustrated by pink star and blue dots within 100m of the EPR (www.heritagemaps.ie).

Licence No	Street/Townland	Site Type	Author
03E0224	Church Road, Finglas	Early medieval	Alan Hayden
02E0828	Patrickswell Place, Finglas	No archaeological significance	Tom Rogers
95E100	Holy Faith Convent, Cappagh Road	Urban Medieval	Martin Reid
95E100	Holy Faith Convent, Cappagh Road	Urban Medieval	Eoin Halpin
02E0828	Patrickswell Place, Finglas	No archaeological significance	Thomas Rogers
95E0215	Patrickswell Place, Finglas	Rampart	Eoin Halpin
92E0142	Cappagh Road/Patrickswell Place, Finglas	No archaeological significance	Neil O'Flanagan
00E0707	St. Michaels Secondary School, Wellmount Road, Dublin	No archaeological significance	Stephen Johnston
04E0853	St. Michaels Secondary School, Wellmount Road, Dublin	No archaeological significance	Stuart Halliday
94E0010	Finglas By-pass	Possible ecclesiastical enclosure	Eoin Halpin
93E0193	Finglas By-pass	Possible ecclesiastical enclosure	Eoin Halpin
94E0010	Finglas By-pass	Possible ecclesiastical enclosure	Eoin Halpin
91E0060	Mellows Road	No definite archaeological features but occupation debris found.	Claire Cotter
05E0058	St. Margaret's Road, Meakstown	No archaeological significance	Kara Ward
95E0215	King William's Ramparts	No archaeological significance	Eoin Halpin
98E0180	Patrickswell Lane	Probable 17th-century earthen rampart	Noel Dunne
15E0185	LCC- Broadstone D7, to Broombridge Dublin 11	Urban post-medieval	James Hession

Table 2: Excavations within 100m of the EPR.

4.4 Cartographic Analysis

Historic and current topographical maps represent very important sources that can reveal the progress of natural erosion and human development across a landscape/riverscape over time.

Analysis of historic mapping shows the human impact on the landscape and its evolving nature over clearly defined time intervals. The comparison of editions of historic maps can show how some landscape features have been created, altered or removed over a period of time.

The PSSR report details that *'historic mapping (1888-1913) indicates much of the land along the proposed route was historically pasture with intermittent estate buildings in the wider vicinity of the route. Local industries included several quarries dotted around the area with material extraction typically comprising sands and gravel along the River Tolka and limestone rock (Calp) which was hewn for building works. Other historical industries included a cotton mill and a large tannery'* (Barry Transportation and Egis, 2021, p. 16).

GI works were also carried out at an additional area just north of Bannow Road (Figure 8). Historic map analysis and previous excavations in advance of the Luas Cross City works identified Chemical Manure Works (c. 1861–1870) located at the 7th Lock between the rail track and the Royal Canal. This area was in use for the movement of cattle to markets, and the GI works were located within the area labelled 'Cattle Sidings' (Figure 8).

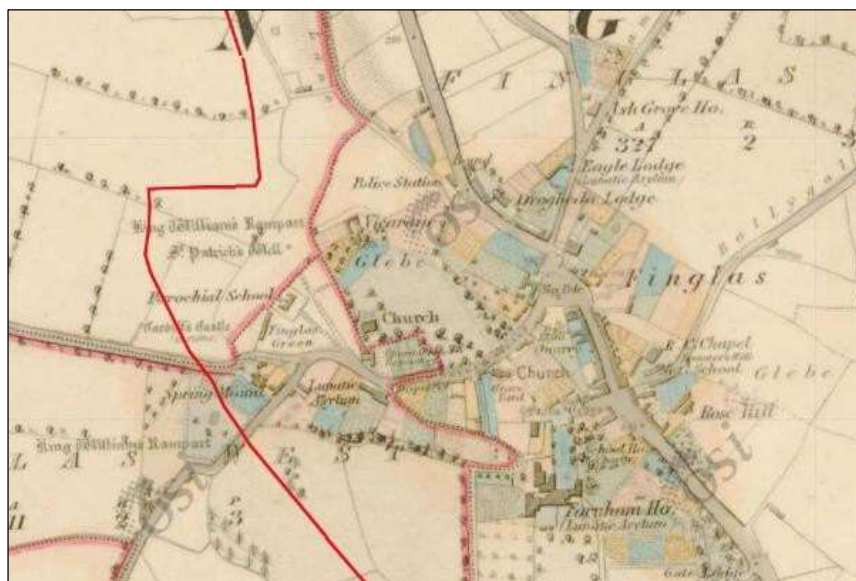


Figure 6: EPR route overlay on historic first edition six inch mapping 1880 (source www.heritagemaps.ie).

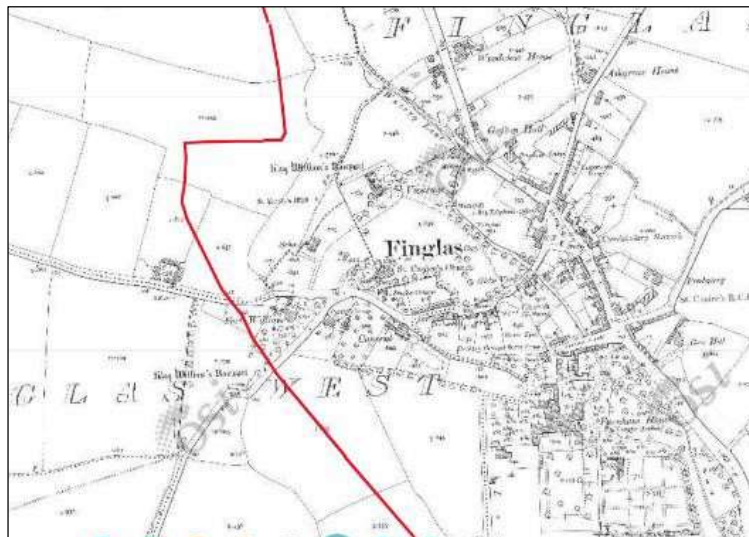


Figure 7: EPR route overlay on historic third edition historic mapping 1913 (source www.heritagemaps.ie).

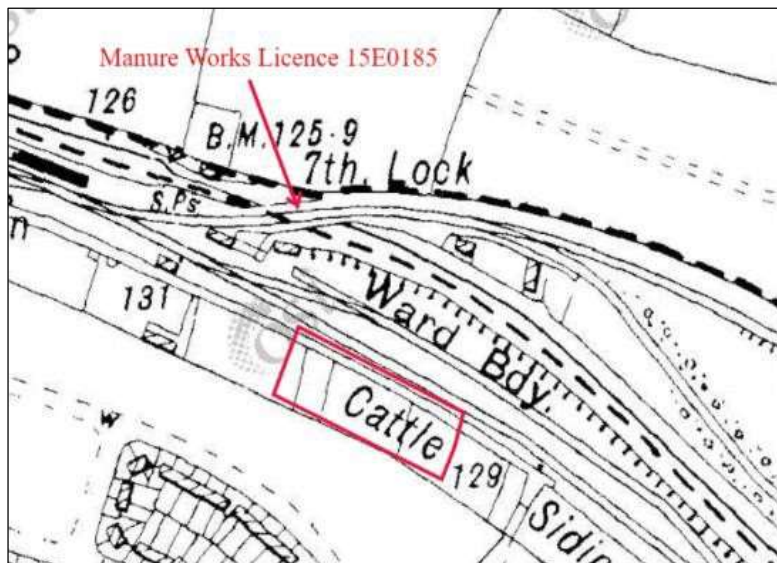


Figure 8: 6-inch Cassini Map of area north of Bannow Road, GI locations in red box (source www.archaeology.ie)

4.5 Place Name Analysis

Place names are an invaluable source of information as they may record a forgotten history or a long-forgotten site which may still survive below the surface of the ground. Although most placenames were anglicised by the Ordnance Survey in the 1830s it is still possible to determine Anglo-Norman or Viking influence.

In terms of the Luas EPR the route passes through the townlands from south to north listed below;

- Ballyboggan South
- Finglaswood
- Finglas West
- Cardiff Castle
- Finglas East
- the townland boundary between Jamestown Little, Stockens and Glebe
- Charlestown

Townland boundaries in Ireland are likely to represent much earlier land divisions; however, the term townland was not used to denote a unit of land until the Civil Survey of 1654. Gaelic land ownership required a clear definition of territories for each sept and a need for strong permanent fences around their territories. Townland boundaries along ridge-tops, streams, or bogs are more likely to be older in date than those composed of straight lines. Barony boundaries are thought to represent even older land divisions.

4.6 Architectural Heritage

The NIAH was established on a statutory basis by the enactment of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999. The NIAH uses a range of base layers to assist in the selection of sites of architectural heritage value including the relevant planning authority's existing Record of Protected Structures (RPS), the First Edition Ordnance Survey maps and selected published sources. The PSSR report details the NIAH listed structures some of which are also Record of Protected Structure (RPS) and significantly RMPS or sites of archaeological potential (e.g. Finglaswood Bridge and King William's Ramparts) within the 250m study area of the EPR as listed in Tables 3 and 4 below (Figure 23, Figure 24 and Figure 25).

Reg. No	Name	Easting (ITM)	Northing (ITM)
50130011	St Helena's Resource Centre	713068	738265
50130007	House (Formerly Rectory/glebe/vicarage/curate's house)	712926	739014
50130010	The Elms	713018	738847
50130015	Finglaswood Bridge*	713136	737581
50130008	St Canice's Church of Ireland	712935	738905
50130023	Granite Milestone	712847	739576
50060126	Broome Bridge	713127	737197

Table 3: National Inventory of Architectural Heritage (NIAH) listed structures within 250m of the EPR. Archaeological constraints highlighted with an *

RPS No.	Description	Easting (ITM)	Northing (ITM)
909	Broome Bridge (Royal Canal)	713127	737197
906	Finglas Wood Bridge (Tolka Valley, Finglas)*	713136	737581
7575	St Helena's: house/community centre (St. Helena's Road, Finglas)	713068	738265
8733	King William's Ramparts, Southern Section (Patrickswell Court)*	712745	738750
1152	Ruined church, graveyard and stone cross*	713083	738812
1553	The Elms: boundary wall, stone entrance porch and front of house (Church Street)	713017	738848
1554	St Canice's Church of Ireland, Church (Church Street)	712931	738903
8735	St Patrick's Well (Mellowes Crescent/Mellowes Court)*	712845	738998
8734	King William's Ramparts, Northern Section (The Lawn)*	712902	739038

Table 4: Extract from DCC Record of Protected Structures (RPS). Archaeological constraints highlighted with an *

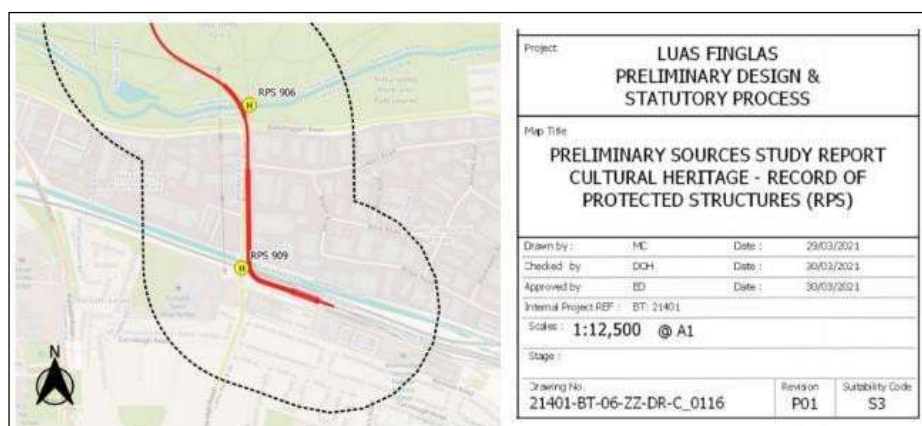


Figure 9: Extract from PSSR report in relation to RPS sites 906 (Finglas Wood Bridge) and 909 (Bromm Bridge). (Red line is Luas EPR; (Barry Transportation and Egis, 2021).

The closest RPS sites to the EPR are two historic limestone arch bridges one at the Royal Canal called Broome Bridge (RPS 909) and at Tolka Valley Park is Finglas Wood Bridge RPS 906. The north section of Broome Bridge (RPS 909) originally spanned the Royal Canal only and was constructed in the late 18th century. It was later extended to south in the mid 19th century to accommodate the MGWR tracks. The Finglas Wood Bridge (RPS 906), located on the southern boundary of the Tolka Valley Park which spans the River Tolka and is possibly mid-16th century in date.



Plate 10: Finglas Wood Bridge RPS 909.

5 Methodology

Ground investigations are the first phase of exploratory Luas Finglas works to be carried out. The proposed GI are required to inform the design of the PR and EIAR process. TII Project Archaeologist and Barry Egis' Consultant Archaeologists have identified areas of Archaeological Potential in which the GI works are located. A total of 52 GI locations required archaeological monitoring, see Section 6 below (Figures 10-22).

The GI works involved the excavation of trial pits, boreholes and window sampling. The geology of the study area comprises a blanket of cohesive glacial till (Dublin Boulder Clay) with localised areas of glaciofluvial sands and gravels deposited along the path of the Tolka River System and its supporting streams and tributaries (Barry Transportation and Egis, 2021, p. 14).

Inspection pits to check for buried services were excavated at borehole and window sample locations by a mixture of hand dug techniques and machine assist hand excavation using a flat grading bucket under archaeological supervision. The hand dug inspection pits were 1.2 metres below ground level or to the top of archaeological deposits, if encountered. The inspection pits were to check for buried services at the location of each exploratory hole prior to drilling. The inspection pits were 0.3m x 0.75m approx. 1.2m deep and were kept as small as possible. The trial pits were larger approx. 0.5m x 2.5m in plan and up to 4m deep.

All trial pits/excavations were opened, logged and backfilled on the same day unless otherwise instructed by the TII Project Archaeologist. Once declared free of utilities, trial pits were excavated by a mini digger with flat grading bucket to complete the excavations. Upon completion of the trial pit excavation the GI rig was put in place. Bore hole sampling was carried out using a 5 Dando 2000 Cable Percussion boring rig. The boring technique allowed the installation of a casing tube, 0.20m in diameter inside the borehole. Upon completion, the tube was withdrawn, and the plastic liner removed and sealed for logging by a Geotechnical

Engineer. The trial pits were excavated by a mini digger with a flat grading bucket and the boreholes will be excavated by machine under archaeological supervision. They were excavated to a depth of 1.8m on average and/or to the top of archaeological deposits whichever was encountered first. No archaeology was encountered during the course of monitoring the GI works.

Window sampling was carried out by a mobile rig on rubber tracks. The sampler used a one-metre-long extension rod which was driven into the ground by a percussion method using a drop hammer, obtaining plastic lined cores to a depth of up to 10m in suitable conditions (generally 6m). The retrieved cores were then analysed for a full soil profile report for geotechnical purposes. The logs of the soil profile and interpretation of the strata will be contained within the final monitoring report for this project. Due to the restrictive nature of the sample and machinery used, the potential for window sampling to immediately inform the archaeological record through archaeological monitoring is very poor. For this reason such samples have generally been excluded from archaeological monitoring by the TII Project Archaeologist.

The trial pits were monitored by the licenced archaeologist. The inspection pit was monitored and if natural was not reached, the borehole was monitored until natural was found. No finds or features of archaeological significance were recorded during the course of monitoring.

6 Monitoring Results

A total of 52 of GI locations required archaeological monitoring under Licence 21E0657 due to their location within, or in proximity to a Recorded Monument and Place (RMP) an Area of Archaeological Potential, greenfield/park land which could have a negative archaeological impact.


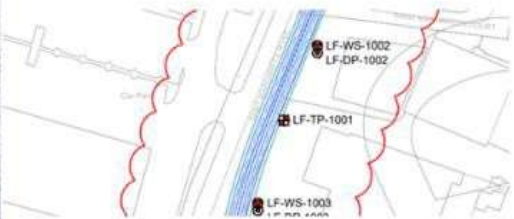
The following tables provide details of the stratigraphy, location and photo of each archaeologically monitored GI work which comprised, boreholes (CPRC), trial pits (TP) and window samples (WS).

The tables detail GI works from north to north; starting at Charlestown and terminating at the existing Luas Broombridge stop. Land use along the route varies between industrial, residential and parklands.

The locations of geotechnical pits are shown on Figure 10-22.

6.1 Trial Pits



Exploratory Hole ID	LF-TP-1001
Date	17/01/2022
Depth	3.30m
Width	0.80m
Length	3.5m
Location	Saint Margaret's Road
Depth	Description
0.00m-0.30m	Tar surface
0.30m-0.55m	Made ground-mid brown compact sandy clay- water pipe exposed in this layer
0.55m-1.20m	Old topsoil layer?- dark brown silty clay
1.20m-2.20m	Natural ground- a mid yellowish brown silty clay
2.20m-3.25m	Natural ground- very dark brown boulder clay
Comments	Natural ground exposed at 1.20m BGL and an old topsoil layer was also visible in section above the natural ground

See Figure 21 for larger scale map


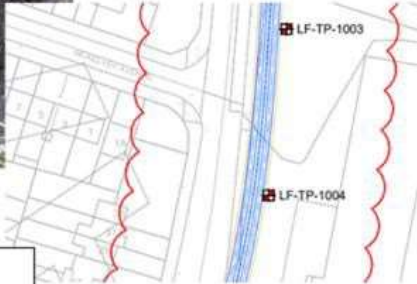
LF TP 1002 was cancelled.

Exploratory Hole ID	LF-TP-1003
Date	06/12/2021
Depth	4m
Width	0.50m
Length	4m
Location	Green area Saint Margarets Road
Depth	Description
0.00m-0.10m	Sod
0.10m-0.70m	Made ground- firm brown silty clay with moderate small cobble inclusions
0.70m-1.90m	Made ground- a stiff dark brown silty sandy clay with moderate small cobbles and occasional boulders
1.90m-4m	Natural ground- Dark grey compact mid brown gravelly boulder clay with moderate rounded cobble inclusions
Comments	Natural ground, Dublin boulder clay exposed at 3m BGL



See Figure 20 for larger scale map

Exploratory Hole ID	LF-TP-1004
Date	06/12/2021
Depth	3m
Width	0.50m
Length	4m
Location	Green area Saint Margarets Road
Depth	Description
0.00m-0.10m	Sod
0.10m-0.70m	Made ground- firm brown silty clay with moderate small cobble inclusions
0.70m-1.90m	Made ground- a stiff dark brown silty sandy clay with moderate small cobbles and occasional boulders
1.90m-3m	Natural ground- Dark grey compact mid brown gravelly boulder clay with moderate rounded cobble inclusions
Comments	Natural ground, Dublin boulder clay exposed at 1.90m BGL

See Figure 20 for larger scale map



Exploratory Hole ID	LF-TP-1005
Date	06/12/2021
Depth	3.50m
Width	0.50m
Length	3.30m
Location	Green area Saint Margarets Road
Depth	Description
0.00m-0.10m	Sod
0.10m-0.70m	Made ground- firm brown silty clay with moderate small cobble inclusions- pipe at 0.70m
0.70m-1.90m	Made ground- a stiff dark brown silty sandy clay with moderate small cobbles and occasional boulders
1.90m-4m	Natural ground- Dark grey brown compact clayey gravelly sand with moderate rounded cobbles inclusions
Comments	Natural ground, Dublin boulder clay exposed at 1.90m BGL


See Figure 20 for larger scale map

Exploratory Hole ID	LF-TP-1006
Depth	4m
Width	0.60m
Length	3.80m
Date	30/09/2021
Location	Mellowes Park
Depth	Description
0.00m-0.10m	Sod and topsoil a dark brown silty sand
0.10m-1.90m	Made ground- very compact mid yellowish brown sandy clay a redeposited natural with frequent medium pebble incusions and occasional small cobbles and angular limestone cobble inclusions
1.90m-2.60m	Natural ground - a mid yellowish brown very compact sandy clay with moderate rounded large cobble inclusions
2.60m-4m	Natural ground- a dark grey sand which had frequent small cobble inclusions and occasional small boulders
Comments	This trench was located at the northern end of Mellowes Park and natural ground was exposed at 1.90m BGL. The natural ground changes to a dark grey sand at 2.60m BGL. There was no evidence of an old sod layer in section so the level of disturbance to natural ground cannot be properly assessed.

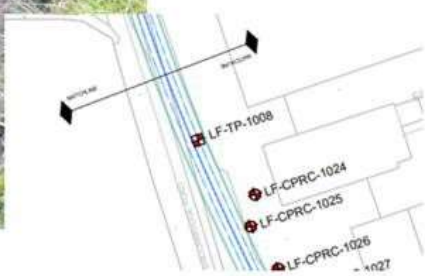


Exploratory Hole ID	LF-TP-1007
Depth	4.5m
Width	0.60m
Length	3.40m
Date	30/09/2021
Location	Green area east of Casement Road
Depth	Description
0.00m-0.10m	Sod and topsoil a mid brown gravelly clay
0.10m-1.20m	Made ground- mid orange brown silty clay a redeposited natural with occasional fine pebble inclusions- a modern drainage pipe was cut through this layer at the southern end of the trench
1.20m-1.42m	Made ground-mid greyish brown clay, occasional modern debris inclusions and occasional small cobble inclusions
1.42m-2.4m	Made ground- a dark greyish brown clay with occasional modern debris inclusions including bed springs and a plastic bag was exposed at a depth of 2m BGL
2.4m-4.5m	Natural ground- a mid orange brown sterile clay
Comments	Natural was exposed at a depth of 2.4m BGL however there was no old topsoil layer visible and redeposited natural (dublin boulder clay) which contained modern debris lay on top of the natural ground indicating that the original ground level may have been disturbed during the infilling of the area
<div>  <div>See Figure 17 for larger scale map</div>  </div>	



Exploratory Hole ID	LF-TP-1008
Date	07/12/2021
Depth	4m
Width	0.50m
Length	4m
Location	Broombridge Road
Depth	Description
0.00m-0.20m	Sod- Brown gravelly topsoil
0.20m-0.50m	Made ground-Brown sandy gravelly clay
0.50m-0.80m	Made ground- Greyish brown sandy gravelly clay, cast Iron pipe at 0.50m BGL
0.80m-1.50m	Made ground?- Firm grey/brown slightly sandy gravelly clay
1.50m - 2.20m	Made ground?- Compact greyish brown slightly sandy gravelly clay with occasional cobbles and boulders of various shapes
2.20m- 3.50m	Natural ground- compact dark grey slightly sandy gravelly clay with moderate angular to subrounded cobbles and boulder inclusions
3.50m- 4m	Natural ground- compact lighter grey slightly sandy gravelly clay with moderate angular to subrounded cobbles inclusions
Comments	Natural ground, Dublin boulder clay exposed at approx 2.20m BGL



See Figure 10 for larger scale map





Exploratory Hole ID	LF-TP-2001
Date	07/10/2021
Depth	4.5m
Width	0.80m
Length	4m
Location	Patrickswell Place
Depth	Description
0.00m-0.10m	Sod and topsoil a dark brown silty clay which contained frequent modern debris material including plastic
0.18m-0.30m	Possible natural- a mid orange brown silty clay
0.30m-1.05m	Natural ground- a mid greysih yellow gravelly sand
1.05m-2.40m	Natural ground- abalck boulder clay which contained occasional small cobble inclusions
Comments	A modern pit was visible at the northern end of the trench it was 0.60m deep and 0.80m wide. It was filled with topsoil (a dark brown silty clay) and plastic fertilizer bags were at the base of the cut. This pit cut through the possible natural layer exposed at 0.18m BGL.

See Figure 15 for larger scale map

Exploratory Hole ID	LF-TP-2002
Date	07/10/2021
Depth	3.30m
Width	0.80m
Length	3.5
Location	South of Wellmount Road
Depth	Description
0.00m-0.18m	Sod and topsoil a light brown sandy clay
0.18m-0.75m	Made ground-mid yellowish brown compact sandy clay- redeposited natural
0.75m-2.10m	Natural ground- a mid yellowish brown compact boulder clay
2.10m-3.30m	Natural ground- a very dark grey gravelly sand with frequent coarse pebble inclusions.
Comments:	Natural ground exposed at 0.75m BGL and was sealed by a redeposited natural. This area did not appear to be extensively disturbed.

See Figure 15 for larger scale map

Exploratory Hole ID	LF-TP-2003
Date	06/10/2021
Depth	4.5
Width	0.80m
Length	3.5
Location	Green area south of Wellmount Road
Depth	Description
0.00m-0.20m	Sod and topsoil a dark brown silty sand
0.20m-0.90m	Made ground-Mid orange brown compact sandy clay,- redeposited natural mixed with topsoil which had moderate coarse pebble inclusions. Occasional red brick fragments and a small piece of bone was recovered from this layer which was not retained
0.90m-2.20m	Natural ground a mid yellowish brown soft boulder clay
2.20m-3.80m	Very dark grey boulder clay with occasional large cobbles and contained lenses of gravels and sands which contained abundant fine pebble inclusions
Comments	Natural ground exposed at 0.90m BGL and was sealed by a redeposited natural which contained occasional red brick fragments and a fragment of undiagnostic bone. This area did not appear to be extensively disturbed





Exploratory Hole ID	LF-TP-2004
Date	06/10/2021
Depth	4.2m
Width	0.80m
Length	2.9m
Location	Green area north of Saint Helena's Road
Depth	Description
0.00m-0.20m	Sod and topsoil a dark brown silty sand
0.20m-0.90m	Made ground-Mid orange brown compact silty clay,- redeposited natural which had occasional modern debris including plastic
0.90m-1.90m	Natural ground a mid orange brown boulder clay with occasional small and large cobble inclusions
1.90m-4.20m	Very dark grey boulder clay with occasional large cobbles and contained lenses of gravels and sands which contained abundant fine pebble inclusions
Comments	Natural ground exposed at 0.90m BGL and was sealed by a redeposited natural which contained occasional modern debris. This area did not appear to be extensively disturbed.





See Figure 14 for larger scale map

Exploratory Hole ID	LF-TP-2005
Date	05/10/2021
Depth	4.2m
Width	0.80m
Length	2.9m
Location	Green area north of Saint Helena's Road
Depth	Description
0.00m-0.20m	Sod and topsoil a dark brown silty clay
0.20m-0.52m	Made ground- Mid greyish brown gravelly clay with occasional large sub angular cobble inclusions and moderate small sub rounded and sub angular cobbles and modern debris
0.52m-0.90m	Made ground-Mid orange brown compact silty clay- redeposited natural
0.90m-1.40m	Made ground- dark brown silty clay which had modern debris material including plastic
1.40m-2m	Made ground- mid dark orange brown silty clay with occasional red brick and clay sewer pipe fragments
2m-3m approx	Natural ground - a mid orange brown boulder clay
3m-3.50m approx	Natural ground - a dark grey sandy gravel layer
3.50m-4.20m	Natural ground- a light orange brown boulder clay which contained moderate small cobble inclusions and frequent coarse pebble inclusions
Comments:	Very difficult to see stratigraphy in trench due to its depth and diffuse boundary between the horizons.

See Figure 14 for larger scale map

Exploratory Hole ID	LF-TP-2006
Type	Trial Pit
Depth	4.5m
Width	0.50m
Length	2.9m
Location	Green area east of Saint Helena's Road
Depth	Description
0.00m-0.10m	Sod
0.10m-0.10m	Topsoil a dark brown silty clay
0.10m-1.10m	Made ground-Mid yellowish brown compact silty clay, moderate modern debris inclusions frequent medium sized stones and occasional cobbles
1.10m-4.5m	Made ground- a soft, loose dark brown silty clay which had moderate cobbles inclusions
Comments	Very difficult to see stratigraphy in trench due to sun and depth of trench. Natural not exposed










See Figure 13 for larger scale map

Exploratory Hole ID	LF-TP-2007
Depth	4.5m
Width	0.50m
Length	6.50m
Location	Green area known locally as the Valley
Depth	Description
0.00m-0.10m	Sod
0.10m-0.20m	topsoil a mid brown compact stoney clay with frequent sub angular nad sub rounded stone inclusions
0.20m-0.30m	A mid yellowish brown silty clay with moderate sub rounded limestone inclusions (size 0.12m x 0.15m)
0.30m-0.70m	A mid yellowish brown silty clay with moderate sub rounded limestone inclusions (size 0.12m x 0.15m)
0.70m-1.40m	Made ground- a very dark grey silty clay which had frequent stone inclusions and modern debris material plastic
1.40m-3.60m	Made ground- a dark grey silty clay which had frequent stone inclusions and modern debris material including plastic wavin pipes, iron metal and plastic
3.60m-4.50m	Natural was a mid greyish yellow silty clay which was very compact
Comments	Debris material directly on top of natural ground; debris included red and yellow brick, plastic, concrete. Fibre optic cable in this trench





Exploratory Hole ID	LF-TP-2008
Date	23/09/2021
Depth	4.5
Width	0.50m
Length	4m
Location	Green area known locally as the Valley
Depth	Description
0.00m-0.10m	Sod
0.10m-0.20m	topsoil a mid brown compact stoney clay
0.20m-1.30m	A mid yellowish brown silty clay with moderate sub rounded limestone inclusions
1.30m-4.50m	Made ground- a dark grey silty clay which had frequent stone inclusions and modern debris material including plastic wavin pipes, iron metal and plastic
Comments	Natural not exposed.
 <div data-bbox="636 1117 993 1155">See Figure 13 for larger scale map</div> 	

Exploratory Hole ID	LF-TP-2009
Date	13/10/2021
Depth	4.50m
Width	0.80m
Length	3.5m
Location	Green area north of Tolka Valley Road (known locally as The Valley)
Depth	Description
0.00m-0.10m	Sod and topsoil a mid brown sandy clay
0.10m-0.20m	Made ground-Mid yellowish brown compact sandy clay,- redeposited natural
0.20m-0.80m	Made ground-Mid greyish brown clay contains frequent modern debris material including concrete bricks, plastic, coke cans, wood and metal
0.80m-1.90m	Made ground- brown sandy gravelly clay with frequent concrete inclusions
1.90m - 2.50m	Made ground- Black old topsoil layer mixed with with tree roots and plastic bags
2.50m-3.90m	Made ground- Dark grey sandy clay which contained frequent modern debris material and occasional large boulders
3.90m- 4.50m	Natural ground?- Grey clayey sandy gravel with occasional cobbles and boulders
Comments	Natural ground may have been exposed at 3.90m BGL. Area appears to be part of dump that was filled in in recent times given the volume of plastic and modern debris


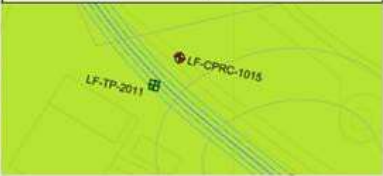




See Figure 12 for larger scale map

Exploratory Hole ID	LF-TP-2010
Date	27/09/2021
Depth	4.35m
Width	0.50m
Length	4.5m
Location	Tolka Valley Park
Depth	Description
0.00m-0.10m	Sod
0.10m-0.40m	Topsoil a mid brown sandy clay with small stone inclusions and red brick fragments
0.40m-2.60m	Made ground-Brown sandy gravelly clay with moderate metal and red brick fragments inclusions
2.60m- 4.50m	Made ground- dark grey sandy gravelly clay with frequent inclusions of red brick, metal, plastic, glass and modern pottery
Comments	Natural ground not exposed



See Figure 12 for larger scale map


Exploratory Hole ID	LF-TP-2011
Date	27/09/2011
Depth	3.2m
Width	0.50m
Length	3.5m
Location	Tolka Valley Park
Depth	Description
0.00m-0.20m	Sod
0.20m-0.50m	topsoil a dark greyish brown loose gravelly clay with frequent modern debris inclusions
0.50m-3m	A mid orange brown sandy clay with moderate modern debris inclusions including metal pipes and red brick
3m-3.20m	Dublin boulder clay- A dark brown sandy gravelly clay with occasional decayed black mudstone inclusions
3.2m	Rock
Comments:	Very disturbed trench with modern debris material exposed to depths of 3m which overlay dublin boulder clay
<div>  <div> <p>See Figure 12 for larger scale map</p>  </div> </div>	

Exploratory Hole	LF-TP-3001
Date	14/12/2021
Depth	4.5m
Width	1.2m
Length	2m
Location	Stabling Site
Depth	Description
0.00m-0.20m	Sod and topsoil a dark brown gravelly clay
0.20m-1.40m	Made ground- brown sandy gravelly clay with plastic and red brick
1.40m-3.5m	Natural ground? moderately compact brown slightly sandy gravelly clay moderate inclusions of sub rounded cobbles and boulders
3.5m-4.5m	Compact dark grey sandy gravelly clay with moderate subangular to subrounded cobbles and boulder inclusions (see photo)
Comments	In stables, probable natural ground exposed at 1.4m BGL, sides collapsed in during digging



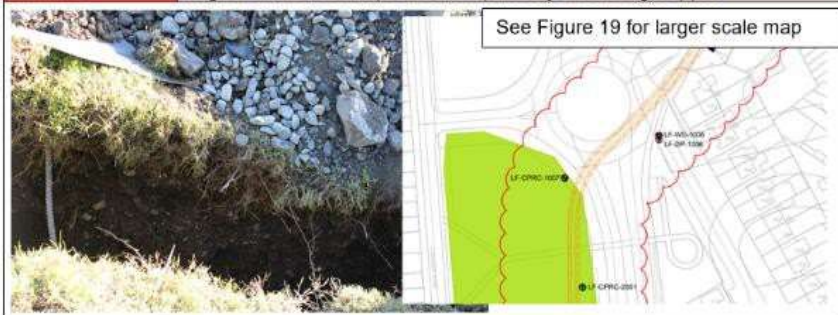
See Figure 22 for larger scale map



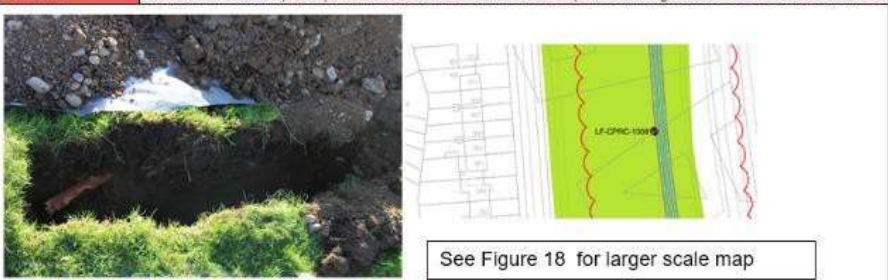
Exploratory Hole ID	LF-TP-3002
Date	14/12/2021
Depth	4.5
Width	0.90m
Length	2m
Location	Stabling site
Depth	Description
0.00m-0.30m	Sod and topsoil a dark brown silty clay
0.30m-0.60m	Made ground: Redeposited natural a mid yellowish brown silty clay
0.60m-2.30m	Made ground: Mid grey boulder clay compact with frequent small rounded pebble inclusions
2.30m-4.50m	Very dark grey gravelly boulder clay with frequent inclusions of limestone boulders which are sub angular in shape (see insert below)
Comments	In stables, natural ground exposed at 2.30m BGL
<div><div>See Figure 22 for larger scale map</div></div>	

6.2 Cable Percussion with rotary core follow-on (CPRC)

Exploratory Hole ID	LF-CPRC-1007
Date	01/10/2021
Depth	1.2m
Width	0.4
Length	1.2
Location	Mellows park adjacent to the by-pass.
Depth	Description
0.00m-0.25m	Sod and topsoil a mid brown silty clay
0.25m-0.60m	Made Ground- Mid brown sandy clay with occasional small boulders and frequent small pebbles
0.60m-1.20m	Made Ground- Dark brown sandy clay with frequent coarse pebble inclusions and occasional modern debris (black terram)
2.90m	Natural ground a very dark greyish brown boulder clay
Comments	The ground in this area is very disturbed, the park is adjacent the Finglas by-pass



Exploratory Hole ID	LF-CPRC-1008
Date	01/10/2021
Depth	1.2m
Width	0.4
Length	2m
Location	Mellows Park
Depth	Description
0.00m-0.13	Sod and topsoil a mid brown silty clay
0.13m-0.55m	Made Ground- Mid brown sandy clay with moderate small cobble inclusions. Drainage pipe visible at the northern end of the trench
0.55m-1.20m	Made ground- Old topsoil layer- Dark brown silty clay
1.20m-2m	Made ground- greyish brown mottled grey gravelly clay with occasional angular cobbles
2m-6m	Made ground- Very stiff brownish grey gravelly clay with occasional cobble and shell fragments
6m	Natural ground- a compact grey sandy gravelly clay
Comments	Mellows Park - an old topsoil layer visible in section of trench at 0.55m BGL, small shell fragments recovered between 2m-6m BGL





Exploratory Hole ID	LF-CPRC-1009
Date	01/10/2021
Depth	1.2m
Width	0.4m
Length	2m
Depth	Description
0.00m-0.22m	Sod and topsoil a mid brown sandy gravel
0.22m-0.82m	Made Ground- Mid brown sandy clay with moderate angular and sub rounded limestone small cobbles and frequent coarse pebbles and occasional large cobbles. Occasional modern debris including red brick and concrete
0.82m-1.20m	Old topsoil layer- Dark brown silty clay
2m	Natural ground a grey sandy boulder clay exposed at 2m BGL
Comments	Mallowes park an old topsoil layer visible in section of trench at 0.82m BGL



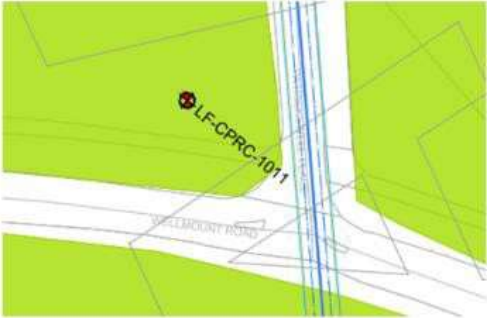

See Figure 18 for a larger scale map

Exploratory Hole ID	LF-CPRC-1010
Date	29/09/2021
Depth	1.2m
Width	0.4m
Length	2m
Location	North of Mellowes Road
Depth	Description
0.00m-0.10m	Sod and topsoil a mid orange brown sandy gravel
0.28m-0.46m	Made ground-Gravel layer an old surface comprised of abundant small pebbles with occasional modern glass and pottery
0.46m-1.2m	Made ground- Moderately compact mid orange brown sandy clay which contained moderate coarse pebble inclusions and a broken plastic pipe.
1.2m-2.80m	Made ground- greyish brown gravelly clay which occasional red brick and concrete inclusions
2.80m	Natural ground a brown sandy gravelly clay
Comments:	Lump of concrete located at the western end of the trench 0.50m BGL


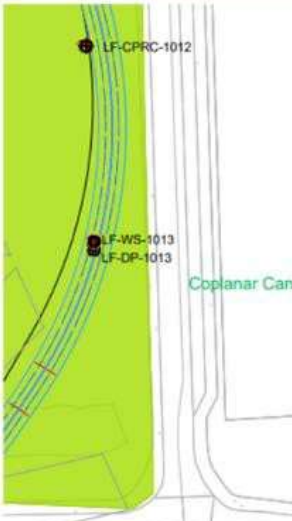



See Figure 17 for a larger scale map



Exploratory Hole ID	LF-CPRC-1011
Date	08/10/2021
Depth	1.2m
Width	0.40m
Length	2m
Location	Green area west of Wellmount Road
Depth	Description
0.00m-0.18m	Sod and topsoil a dark brown silty clay
0.18m-0.90m	Made ground-mid brown sandy clay may be redeposited natural or disturbed natural from building of houses.
0.90m-1.20m	Natural ground a mid orange brown compact sandy gravelly clay.
Comments	Natural ground exposed at 0.90m BGL.



See Figure 15 for a larger scale map



Exploratory Hole ID	LF-CPRC-1012
Date	05/10/2021
Depth	1.2m
Width	0.40m
Length	2m
Location	Football pitches north of Saint Helena's Road.
Depth	Description
0.00m-0.40m	Sod and topsoil a dark brown sandy clay
0.40m-0.70m	Made ground- light greyish brown sandy clay
0.70m-1.05m	Made ground- a mid greyish, yellowish brown silty clay which had iron sheeting and black earthenware and creamware
1.05m-1.20m	Natural ground- a brownish grey compact gravelly clay
Comments	The ground in this area is relatively undisturbed and the debris material which seals the natural ground is 20th century in date.
<div style="display: flex; justify-content: space-around; align-items: center;">   </div> <div style="text-align: center; margin-top: 10px;"> <p>See Figure 14 for large scale map</p> </div>	

Exploratory Hole ID	LF-CPRC-1013
Date	22/09/2021
Depth	1.23
Width	0.40m
Length	2m
Location	Green area west of St. Helena's Court- known locally as 'The Valley'
Depth	Description
0.00m-0.18m	Sod and topsoil a dark brown silty clay
0.18m-0.28m	Modern debris layer a dark brown silty clay with frequent modern debris inclusions
0.28m-0.68m	Made ground- mid brown silty clay which moderate angular stone inclusions
0.68m-1.23m	Made ground- Dark greyish brown silty clay with modern debris inclusions
2m	Natural a greyish brown boulder clay exposed at 2m BGL
Comments	Natural was exposed at 2m BGL and above this was disturbed ground.





See Figure 13 for larger scale map


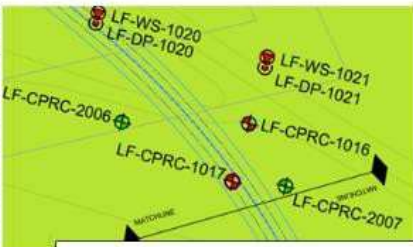
Exploratory Hole ID	LF-CPRC-1014
Date	13/10/2021
Depth	1.2m
Width	0.40m
Length	2m
Location	Tolka Valley Park
Depth	Description
0.00m-0.12m	Sod and topsoil a dark brown sandy clay
0.12m-0.28m	Made ground- light greyish brown sandy clay which had moderate small cobble and occasional large cobble inclusions with occasional red brick fragments
0.28m-1.20m	Made ground- a mid brown sandy clay which had moderate small cobble and occasional large cobble inclusions with occasional red brick fragments
Comments	Natural ground exposed at 4.30m BGL. A brownish grey gravelly clay with occasional angular to subangular cobbles. The made ground level from 0.28m-1.20m directly overlay the natural ground

See Figure 12 for larger scale map


Exploratory Hole ID	LF-CPRC-1015
Date	24/09/2021
Depth	1.3m
Width	0.50m
Length	2m
Location	Tolka Valley Park
Depth	Description
0.00m-0.10m	Sod and topsoil which is a mid brown sandy gravel contains frequent modern debris material inclusions
0.10m-0.45m	Mid greyish brown sandy gravelly clay with moderate inclusions of modern debris
0.45m-0.80m	Made ground- greyish brown sandy clay which contained frequent inclusions of modern debris material
0.80-1.20m	Made ground- mid greyish brown sandy clay with moderate inclusion of modern debris material
1.20m-1.30m	Dark greyish brown silty clay not natural
Comments:	Natural not exposed Rig hit rock at 1.8m. Made ground overlay rock. The modern debris included, plastic, glass, wood etc
 <p>See Figure12 for large scale map</p>	

Exploratory Hole LF-CPRC-1016	
Date	23/09/2021
Type	Trial Pit
Depth	1.2m
Width	0.50m
Length	2m
Depth	Description
0.00m-0.20m	Sod and topsoil a mid brown silty clay
0.20m-0.82m	Made Ground- Mid brown silty clay with frequent angular stones mixed with topsoil and frequent inclusions of modern debris material
0.82m-1.20m	Made ground- dark brown silty clay
3.2m	Natural ground- a brown silty gravelly clay
Comments:	Rig hit natural ground a brown silty gravelly clay at 3.2m and refusal was at 3.5m


See Figure 12 for large scale map

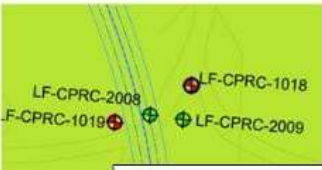
Exploratory Hole ID LF-CPRC-1017	
Date	29/09/2021
Depth	1.23m
Width	0.50m
Length	2m
Location	Green area north of Ballyboggan Road
Depth	Description
0.00m-0.10m	Sod and topsoil a dark brown sandy clay frequent small stone inclusions
0.10m-0.70m	Modern debris layer a dark slightly orangey brown silty clay with frequent modern debris inclusions and frequent limestone cobbles
0.70m-1.20m	Dark greyish brown fine sandy clay with petrified roots- old topsoil layer
1.7m	Possibly still made a ground a brown gravelly clay
Comments:	Natural not hit borehole hit refusal at 1.70m.




See Figure 12 for large scale map


Exploratory Hole ID	LF-CPRC-1018
Date	28/09/2021
Depth	1.2m
Width	0.5m
Length	2m
Location	Tolka Valley Park
Depth	Description
0.00m-0.10m	Sod and topsoil a dark brown sandy clay
0.10m-0.50m	Made ground-Mid yellowish brown compact sandy clay a redposuted natural with occasional inclusions of red brick and modern plastic
0.50m-0.53m	Old tarmac layer, fragmented
0.53m-0.80m	Made ground- a mid brown silty clay which had moderate inclusions of limestone cobbles which were angular and sub rounded and occasional modern debris material
0.80m-1.2m	Loose dark brown sandy clay which contained abundant modern debris inclusions comprising plastic, metal and also frequent angular limestone sub rounded and angular cobbles
Comments:	Borehole hit natural at 7.30m BGL, above this were made ground layers that contained red brick and occasional shell fragments

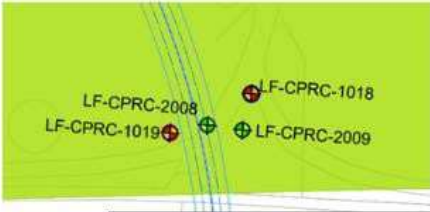




See Figure 11 for large scale map


Exploratory Hole ID	LF-CPRC-1019
Date	28/09/2021
Depth	1.2m
Width	0.5m
Length	2m
Location	Tolka Valley Park
Depth	Description
0.00m-0.10m	Sod and topsoil a dark brown sandy clay
0.10m-0.40m	Topsoil a loose mid brown silty clay which contained frequent small stone inclusions and occasional modern debris- shovel found in this layer
0.40m-0.71m	Made ground- a mid brown compact silty clay which had moderate small stone inclusions and modern debris including red brick, metal
0.71m- 1.20m	Mid to dark brown with orange hue silty clay which contained moderate limestone sub angular small stones
Comments:	Borehole hit natural at 4.65m, above this was made ground with modern debris material including plastic and metal

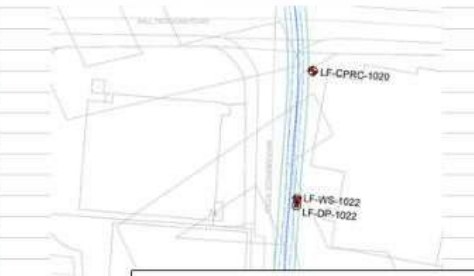




See Figure 11 for large scale map


Exploratory Hole ID	LF-CPRC-1020
Date	21/10/2021
Type	Inspection Pit
Depth	1.35m
Width	0.50m
Length	0.50m
Location	Westrock Business Centre, Broombridge Road
Depth	Description
0.00m-0.10m	Tarmac
0.10m-0.60m	Made ground-804 layer
0.60m- 1.35m	Made ground a mid brown gravelly sandy clay occasional red brick fragments and root inclusions
1.35m- 2.60m	Natural boulder clay a mottled mid brownish with yellow mottling brown boulder clay
Comments:	Natural ground exposed at 1.35m BGL. No finds or features of archaeological significance exposed.

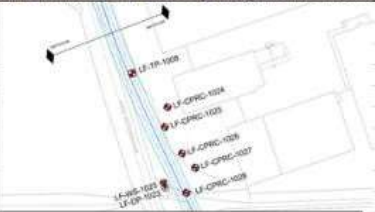




See Figure 11 for large scale


Exploratory Hole ID	LF-CPRC-1027
Date	26/11/2021
Depth	1.2m
Width	0.4m
Length	0.4m
Location	Broombridge Road
Depth:	Description:
0.00m-0.10m	Tarmac car park surface
0.10m-0.40m	Made ground-road make up layer
0.40m-0.90m	Made ground- Moderately compact mid yellowish greyish brown silty clay
0.90m-1.20m	Natural ground a dark grey silty clay
Comments:	Natural ground located at 0.90m BGL. No finds or features of archaeological significance exposed.

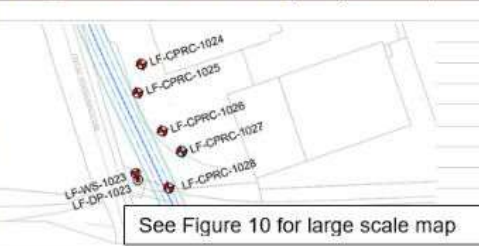




See Figure 10 for large scale map


Exploratory Hole ID LF-CPRC-1028	
Date	20/12/2021
Depth	1.2m
Width	0.4m
Length	0.4m
Location	Broombridge Road/ Canal
Depth:	Description:
0.00m-0.20m	Topsoil
0.25m-0.90m	Made ground- brownish/black sandy gravelly clay with occasional mortar and red brick inclusions
0.90m-1.20m	Made ground- Brown sandy gravelly clay with occasional red brick and mortar inclusions
1.20m	Natural ground- Brown gravelly clay with occasional cobble inclusions
Comments:	Natural ground located at 1.20m BGL. No finds or features of archaeological significance exposed

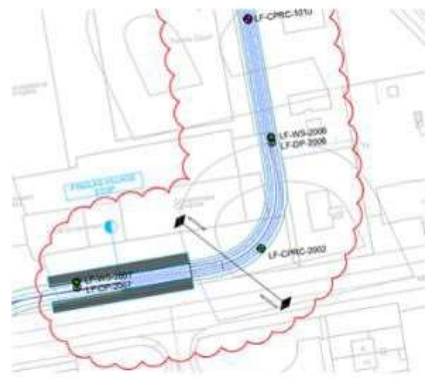






See Figure 10 for large scale map

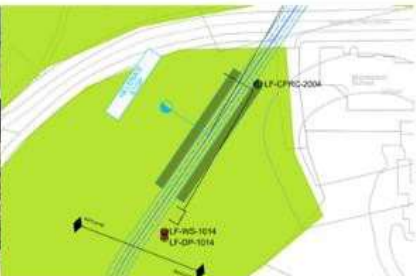
Exploratory Hole ID LF-CPRC-2002	
Date	16/12/2021
Depth	IP dug to 1.2m
Width	0.40m
Length	0.40m
Location	Finglas Village Stop
Depth	Description
0.00m-0.10m	Tarmac surface
0.10m-0.50m	Made Ground- Grey slightly sandy very gravelly clay with crushed rock
0.50m-1.40	Made Ground- Grey brown sandy clay with moderate root inclusions
1.40m	Natural ground- a compact greyish brown sandy gravelly clay
Comments:	Natural ground was exposed at a depth of 1.40m BGL







See Figure 16 for large scale map

Exploratory Hole ID	LF-CPRC-2003
Date	13/10/2021
Depth	1.2m
Width	0.40m
Length	2m
Location	Cardiff Castle Road
Depth	Description
0.00m-0.23m	Sod and topsoil a dark brown silty clay
0.23m-0.48m	Made ground-Dark brown sandy clay contains modern debris material
0.48m-0.57m	Redeposited natural- lense of yellowish brown sandy clay
0.57m-1.20m	Old topsoil layer? - Dark brown silty clay contains inclusions of red brick, clay pipe stem
Comments:	Natural ground was exposed at a depth of 1.4m BGL and comprised a dark brown boulder clay. At 2.3m BGL this changed to a grey boulder clay.
 	
See Figure 16 for larger scale map	

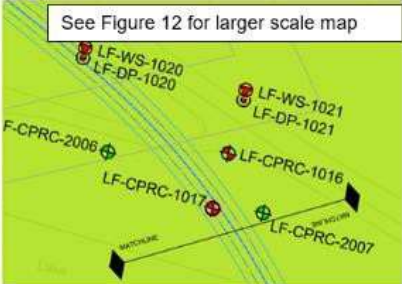

Exploratory Hole ID	LF-CPRC-2004
Date	22 and 29/09/2021
Depth	1.5m
Width	0.40m
Length	2m
Location	Green area south of Saint Helena's Road
Depth	Description
0.00m-0.10m	Sod
0.10m-0.50m	Made ground-Mid yellowish brown compact stoney clay
0.50m-1.50m	Made ground- a dark brown silty clay which had frequent stone inclusions and modern debris material
1.50m-5.90m	Made ground- greyish brown silty clays which had frequent stone inclusions and modern debris material including wood, plastic glass, charcoal, red brick and mortar
Comments:	Natural a brown sandy gravelly clay exposed at 5.90m, refusal at 10m.
 	
See Figure 14 for larger scale map	

Exploratory Hole ID	LF-CPRC-2006
Date	27/09/2021 and 8/10/2021
Depth	1.2m
Width	0.50m
Length	2m
Location	Tolka Valley Park
Depth	Description
0.00m-0.12m	Sod and topsoil a mid brown silty clay
0.12m-0.46m	Made Ground- Mid dark yellowish brown gravelly sand which contained modern debris material including plastic material
0.46m-0.83m	Made ground- dark brown silty clay which contained occasional red brick and limestone cobble inclusions.
0.83m-1.10m	Made ground-Dark brown silty clay which appears to be an old topsoil layer
1.10m-1.70m	Made ground- Natural a brown silty gravelly clay
1.70m- 2.30m	Rock
Comments	Possible old topsoil layer visible


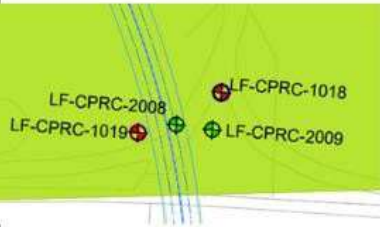




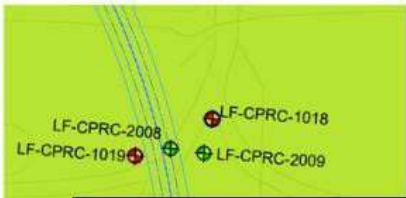
See Figure 12 for larger scale map

Exploratory Hole ID	LF-CPRC-2007
Date	23-24/09/2021
Depth	1.2m
Width	0.50m
Length	2m
Location	Tolka Valley Park
Depth	Description
0.00m-0.18m	Sod and topsoil a mid brown silty clay with modern plastic and debris material
0.18m-0.80m	Mid orange brown silty clay with frequent angular stones mixed with topsoil
0.80m-1.20m	Made ground- dark brown silty clay which had frequent angular stone inclusions and modern debris material
4m	Natural ground, a brown gravelly clay with occasional cobble inclusions
Comments:	Rig hit natural hit at 4m BGL.





See Figure 12 for larger scale map

Exploratory Hole ID	LF-CPRC-2008
Date	28/09/2021
Depth	1.2m
Width	0.5m
Length	2m
Location	Tolka Valley Park
Depth	Description
0.00m-0.10m	Sod and topsoil a dark brown sandy clay
0.10m-0.40m	Made ground-Bark yellowish brown compact sandy clay which contained frequent limestone rounded cobbles and angular flat limestone and occasional red brick fragments
0.40m-1.2m	Moderately compact dark brown silty clay which contained frequent angular limestone sub rounded and angular cobbles and occasional red brick fragments
Comments:	Pipe located 0.40m below surface at eastern end of trench, natural not exposed. No finds or features of archaeological significance exposed
  <p>See Figure 11 for larger scale map</p>	


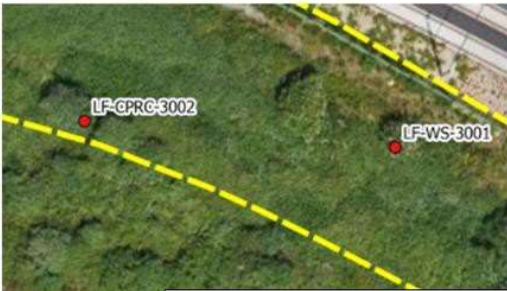
Exploratory Hole ID	LF-CPRC-2009
Date	27/09/2021 and 5/10/2021
Depth	1.2m
Width	0.50m
Length	2m
Location	Tolka Valley Park
Depth	Description
0.00m-0.16m	Sod and topsoil a mid brown gravelly clay
0.16m-1.20m	Mid to dark brown gravelly clay with frequent small stone inclusions
1.2m-5.8m	Brown gravelly clay with moderate plastic, red brick
Comments:	Natural not exposed rubbish all the way down to rock at 5.8m. No finds or features of archaeological significance exposed
  <p>See Figure 11 for larger scale</p>	

Exploratory Hole ID	LF-CPRC-3001
Date	14/12/2001
Type	Inspection Pit
Depth	1.2m
Width	0.90m
Length	2m
Depth	Description
0.00m-0.20m	Concrete
0.20m-1.20	Made ground- Greyish brown gravel with frequent concrete fragments
Comments	GI logs- Natural appears to have been exposed at 4.8m BGL and comprised a stiff, dark grey sandy gravelly clay

See Figure 22 for larger scale map


Exploratory Hole ID	LF-CPRC-3002
Date	14/12/2001
Type	Inspection Pit
Depth	1.2
Width	0.90m
Length	2m
Depth	Description
0.00m-0.30m	Sod and topsoil a dark brown silty clay
0.30m-0.80m	Redeposited natural a mid yellowish brown silty clay
0.80m-1.2m	Dark brown silty clay mixed with modern debris material including red brick and plastic
Comments	GI logs- Natural appears to have been exposed at 2.3m BGL and comprised a stiff, dark grey sandy gravelly clay

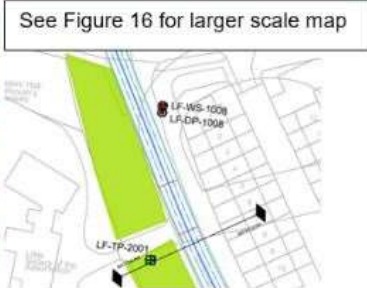
See Figure 22 for larger scale map

7 Window Samples



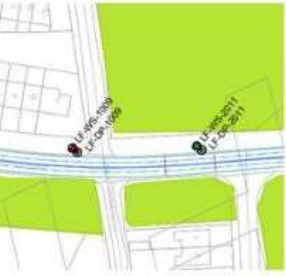
Exploratory Hole ID	LF-WS-1008
Date	29/11/2021
Depth	1.2m
Width	0.40m
Length	0.50m
Location	Patrick's Well Road
Depth	Description
0.00m-0.10m	Sod and topsoil a dark brown sandy clay
0.10m-0.55m	Made ground-Mid yellowish brown sandy gravelly clay with occasional small rounded cobble inclusions. An oyster shell was recovered at 0.40m BGL.
0.55m-1.20m	Made ground?- a dark greyish brown sandy gravelly clay which contained occasional rounded coarse pebble inclusions.
Comments	Unclear if natural was exposed. An oyster shell was recovered at 0.40m BGL.



See Figure 16 for larger scale map



Exploratory Hole ID	LF-WS-1009
Date	26/11/2021
Depth	1.2m
Width	0.50m
Length	0.50m
Location	Patrickswell Court
Depth	Description
0.00m-0.20m	Sod and topsoil a dark brown sandy clay
0.20m-0.70m	Made ground-dark brown sandy gravelly clay
0.70m-1.20m	Natural ground a dark greyish brown sandy gravelly clay.
Comments	Natural ground exposed at 0.70m BGL

See figure 15 for larger scale map



Exploratory Hole ID LF-WS-1018	
Depth	1.2m
Width	0.50m
Length	2m
Location	Tolka Valley Park
Depth	Description
0.00m-0.20m	Sod and topsoil a dark brown sandy clay
0.20m-0.80m	Made ground-Mid orange brown sandy gravelly clay
0.80m-1.20m	Made ground- a dark greyish sandy clay which had frequent modern debris inclusions comprising plastic, coke can, wood etc.
Comments	Natural not exposed in trial pit






See Figure 12 for larger scale map

Exploratory Hole ID LF-WS-1019	
Depth	0.65m
Width	0.50m
Length	1.50m
Location	Tolka Valley Park
Depth	Description
0.00m-0.20m	Sod and topsoil a mid brown gravelly clay with modern debris material
0.20m-0.65m	Made ground-mid orange brown gravelly sand with moderate cobble and frequent small sub angular limestone fragments and modern debris material
Comments	Limestone bolder/rock was silt at 0.65m BGL

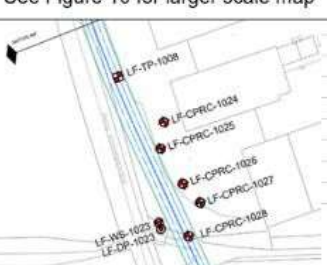



See Figure 12 for larger scale map


Exploratory Hole ID	LF-WS 1023
Date	26/11/2021
Type	Window Sample
Depth	1.2m
Width	0.50m
Length	0.50m x 0.50m
Location	
Depth	Description
0.00m-0.17m	Tarmac road surface
0.17m-0.65m	Concrete
0.65m-0.80m	Made ground- dark brown silty clay which had frequent root inclusions
0.80m-1.10m	Stone layer comprising large angular stones size(0.25m x 0.15m x 0.05m)
Comments:	Possible wall (no mortar bond visible) or stone dump, located at 0.80m BGL adjacent the canal. Given the limited size of the inspection pit its exact function could not be ascertained.




See Figure 10 for larger scale map




Exploratory Hole ID	LF-WS-2010
Date	13/10/2021
Depth	0.65m
Width	0.50m
Length	1.50m
Location	Cardiff Castle Road
Depth	Description
0.00m-0.18m	Sod and topsoil a dark brown sandy clay
0.18m-0.44m	Made ground-light brown compact sandy gravelly clay
0.44m-1.20m	Made ground-mid brown sandy gravelly clay which had frequent very coarse pebble inclusions and modern debris inclusions
Comments	Natural ground not exposed - GI logs indicate that there was made ground which contained plastic, red brick and mortar to a depth of 3m, where the WS was complete




See Figure 16 for larger scale map




Exploratory Hole ID	LF-WS-3001
Date	14/12/2001
Depth	1.2m
Width	0.90m
Length	2m
Location	Bannow Road
Depth	Description
0.00m-0.40m	Sod and topsoil a dark brown sandy clay with modern debris material
0.40m-0.70m	Redeposited natural a mid greyish yellow sandy clay
0.70m-1.2m	Mid yellow silty clay, natural not exposed
Comments	Natural ground not exposed in trial pit, however WS logs notes that at 2.35m, very stiff dark grey sandy gravelly clay exposed, may be natural ground




See Figure 22 for larger scale map



Exploratory Hole ID	LF-WS-3002
Date	14/12/2001
Depth	1.2m
Width	0.90m
Length	2m
Location	Bannow Road
Depth	Description
0.00m-1.20m	Made ground- Dark brown sandy clay with frequent inclusions of modern debris material, wood, plastic, red brick
Comments	Natural ground not exposed in trial pit, however WS logs notes that at 3.9m, very stiff dark grey to black sandy gravelly clay exposed, may be natural ground





See Figure 22 for larger scale map

8 Conclusions

Monitoring of the GI investigation works confirmed the natural ground comprises a blanket of cohesive glacial till (Dublin Boulder Clay) with localised areas of glaciofluvial sands and gravels deposited along the path of the Tolka River System. Although historically much of the land along the proposed route was historically pasture with intermittent estate buildings in the wider vicinity of the route, construction in recent years has altered the landscape dramatically.

No finds or features of archaeological significance were exposed during the course of monitoring. The stratigraphy is described below along the EPR from the south at the stabling site on Bannow Road towards Saint Margaret's Road at the northern end of the route.

At the proposed stabling site on Bannow Road, historic map analysis and previous archaeological excavations indicate that there is potential for industrial/archaeological heritage to be uncovered. Although no archaeology was identified in the GI pits, the area was not subject to significant ground disturbance and there appears to be on average 3m of made ground in this area. It is noted that significant archaeological remains in the form of manure works were uncovered beneath several meters of fill approximately 60m north of the proposed stabling yard. Furthermore the location of the proposed stabling site is marked as 'Cattle Sidings' on historic mapping.

Natural ground was exposed at depths of between 0.90m and 1.20m along the Broombridge Road, beneath tarmac surfaces.

The Tolka Valley Park and The Valley (the green area north of Tolka Valley Park) comprised dump/contaminated material associated with historic landfills. The GI works impacted upon the ZoN associated with a medieval tower house (RMP DU014-076001-). This site was demolished before the 1970's and is not visible today. No traces of masonry or any structures associated with the site were uncovered in any of the GI investigation pits, however that does not mean that sub surface remains do not survive beneath the landfill material.

The Tolka Valley Park comprises undulating landscaped ground which is made up of modern landfill waste sitting on top of natural ground. The stratigraphy at Tolka Valley Park comprised modern debris material which contained plastic, sealed by a redeposited clay capping and 20th century material was dumped on top of this capping layer. Only at the area adjacent to the river, at the lowest part of the site west of the council depot was an old topsoil level visible at CPRC 2006. This was at the southern end of the park, east of the modern council depot at the lowest point of the park. This is the only area of the park which may have had the least impact on potential archaeology from landfill activities. This old topsoil layer was exposed at 0.83m BGL and rock was exposed at 1.70m BGL.

The Valley comprises an area of waste land which was filled in with modern debris material with an average depth of between 3.6m-5m. Natural ground comprised a mid-greyish yellow silty clay. The shallowest depth at what natural ground was encountered was at 3.6m below ground in trial pit LF TP 2007. Elsewhere the boreholes encountered natural ground at an average depth of 5m BGL. The modern debris material contained a mix of plastic wavin pipes and occasional yellow and moderate red brick fragments which lay directly above the natural ground and indicates that the area was subject to significant ground disturbance in recent years. The landfill was sealed by a clay capping, as was the case at Tolka Valley Park. A trench for a fibre optic cable was excavated east to west across the width of the Valley for an approximate length of 205m. The trench was 0.60m wide and was excavated to an average depth of 0.70m, natural ground was not exposed along the entire width of the Valley.

At Eire's Isle pitch natural ground was exposed at 2m BGL in TP 2005 at the southern end of the pitch adjacent the road. It was a mid-brown boulder clay and the layers above it contained

modern debris. Natural ground was exposed at an average depth of 1m BGL elsewhere on the pitch.

To the northeast of Patrickswell Place the Luas and GI works will pass through the ZoN associated with the site of a 16th-17th century house (RMP DU014-066005-), a holy well (RMP DU014-066002-) and also the site of a 17th century house located on Cardiff Castle Road (RMP DU014-066002-). There is no above ground trace of the 16th-17th century houses (RMP DU014-066005-) which are occupied by a modern terrace of houses. This area may be suitable for geophysical survey given the depth at which natural ground has been uncovered and the fact that the area does not appear to have been heavily disturbed.

At Cardiff Castle Road natural ground was exposed at a depth of 1.40m BGL at CPRC 2003 in the green area.

At Casement Road natural ground was exposed between 0.75m and 0.90m BGL. At the green area between Wellmount Road and Wellmount Parade natural ground was exposed at 0.90m BGL. At Patrickswell place the natural ground was exposed at 1.05m BGL.

Mellowes Park is a flat grassy park with tarmac footpaths running around the green area. Two trial pits were excavated, one at the southern end of the park to a depth of 4.50m TP 1007 and one at the northern end of the park TP 1006. The ground at the southern end of the park was filled in with redeposited dark grey boulder clay which contained occasional modern debris material and the ground at the northern end of the park was filled in with redeposited natural. Natural ground was exposed at 1.9m at the northern end of the park and 2.4m at the southern end of the park. As there were no surviving old sod layers visible in the section face of both these trial pits it is unclear how much original ground had been disturbed. A possible old topsoil layer was visible at the location of CPRC 1008, at 0.55m BGL.

At the northern limit of the scheme along Saint Margaret's Road, natural ground was exposed at varying depths. A possible old topsoil layer was visible in TP 1001 and natural ground was exposed at 1.20m. Elsewhere the depth varied to 1.9m (TP 1003- TP 1005).

All further archaeological mitigation will be agreed between TII and NMS in accordance with the code of Practice and taking into account the results of the GI investigation archaeological monitoring report.

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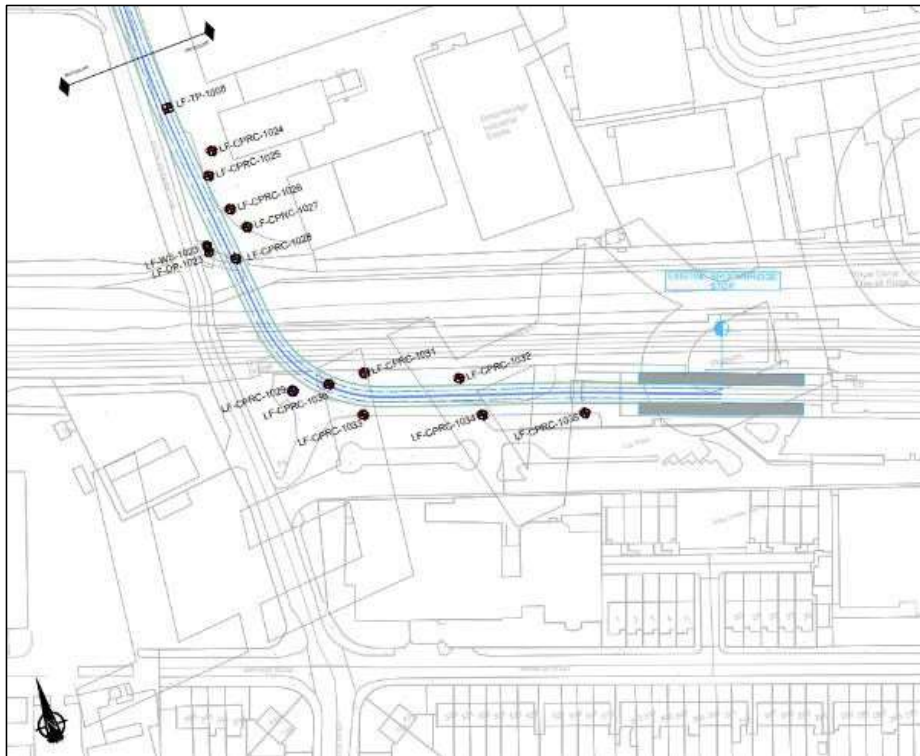


Figure 10: GI Plan Sheet 1, Luas Finglas (Barry Transportation and Eegis).



Figure 11: GI Plan Sheet 2, Luas Finglas (Barry Transportation and Eegis).



Figure 12: GI Plan Sheet 3, Luas Finglas (Barry Transportation and Eegis).



Figure 13: GI Plan Sheet 4, Luas Finglas (Barry Transportation and Eegis).

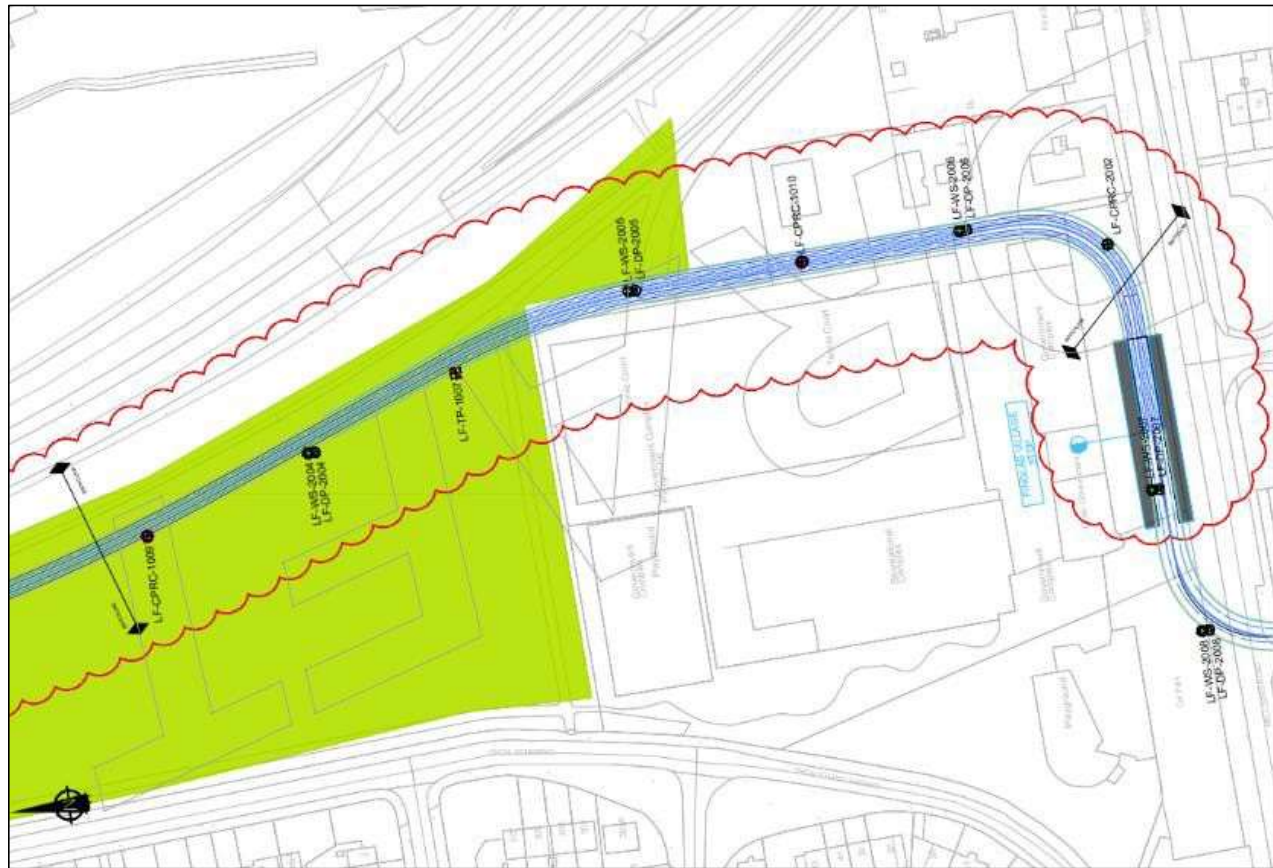


Figure 17: GI Plan Sheet 8, Luas Finglas (Barry Transportation and Eegis).



Figure 18: GI Plan Sheet 9, Luas Finglas (Barry Transportation and Eegis).

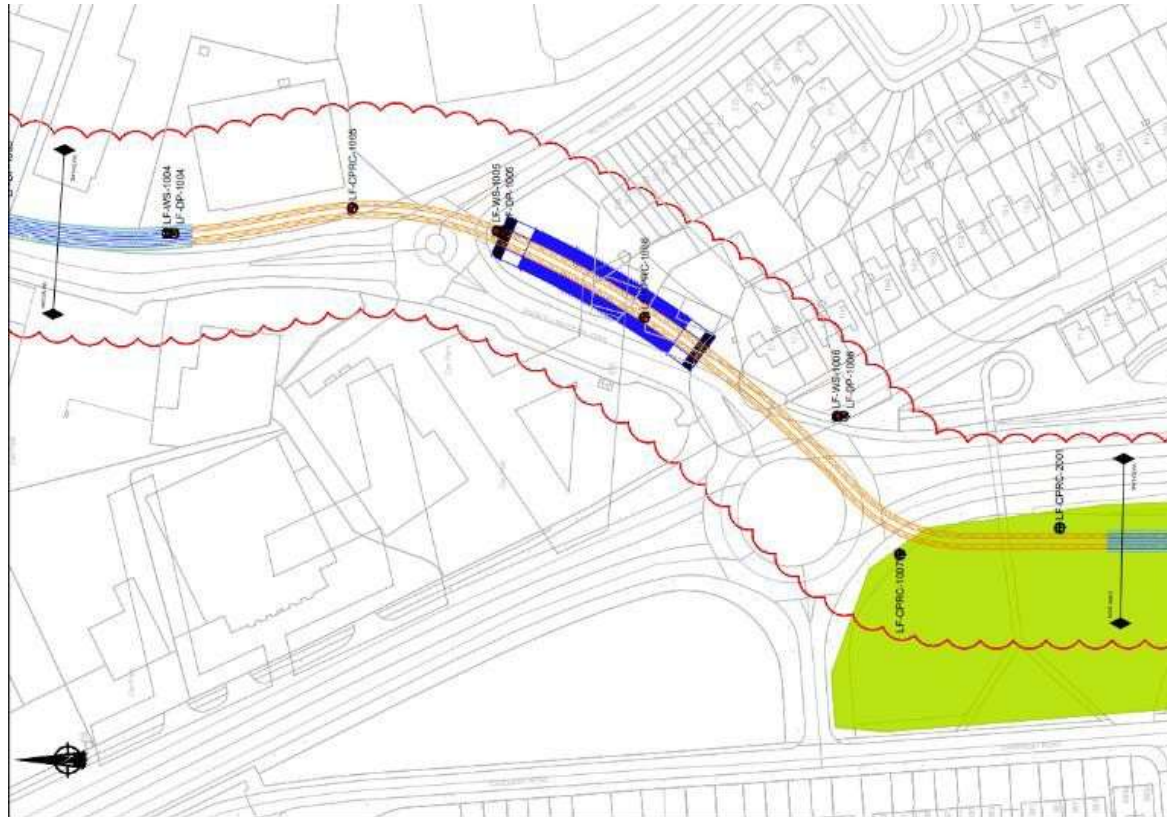


Figure 19: GI Plan Sheet 10, Luas Finglas (Barry Transportation and Eegis).

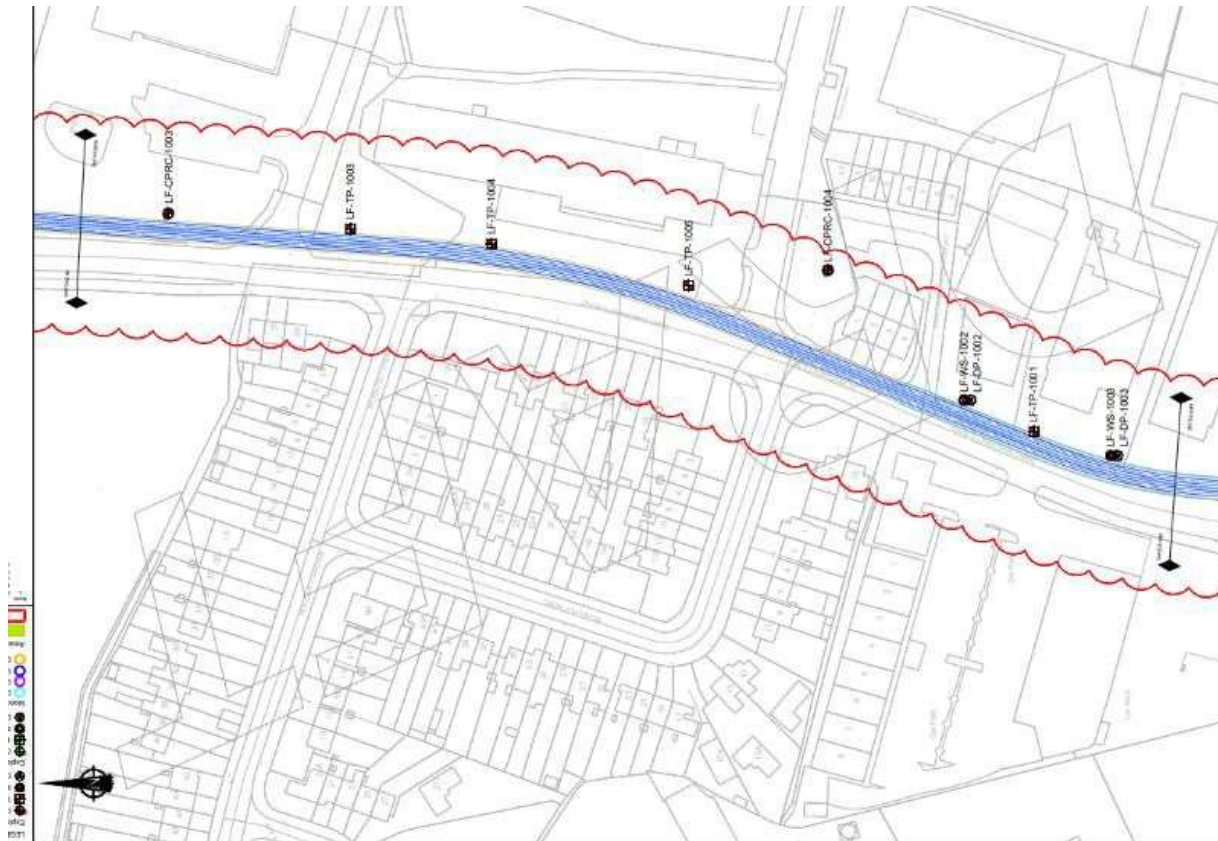


Figure 20: GI Plan Sheet 11, Luas Finglas (Barry Transportation and Eegis).

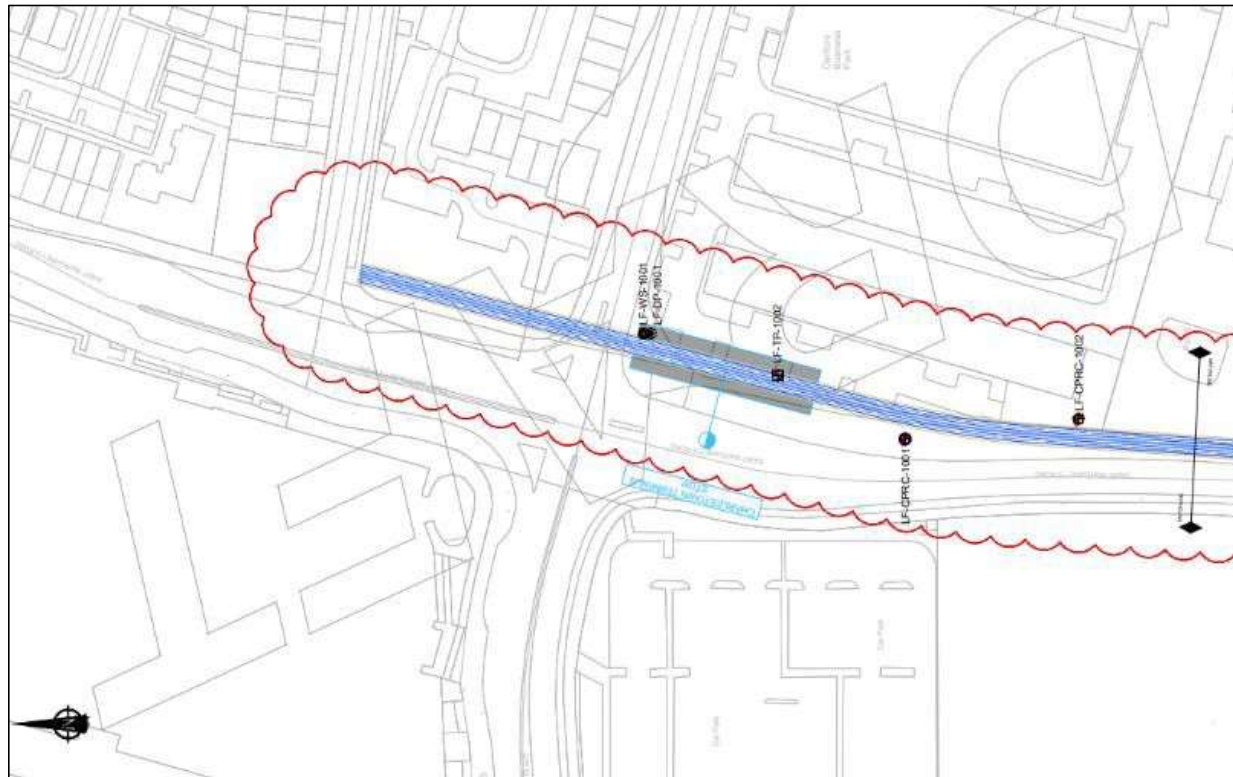


Figure 21: GI Plan Sheet 12, Luas Finglas (Barry Transportation and Eegis).



Figure 22: Stabling site, proposed GI locations.

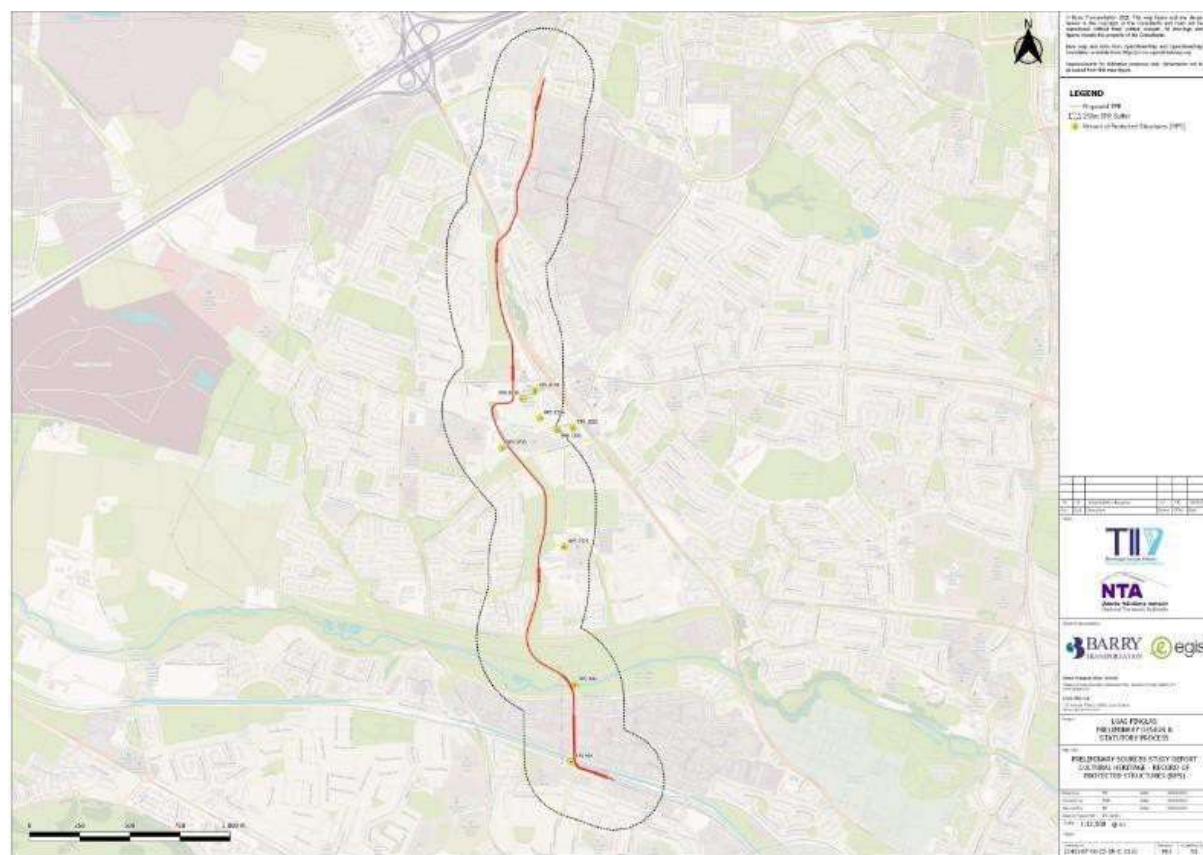


Figure 23: RPS Structures PSSR.

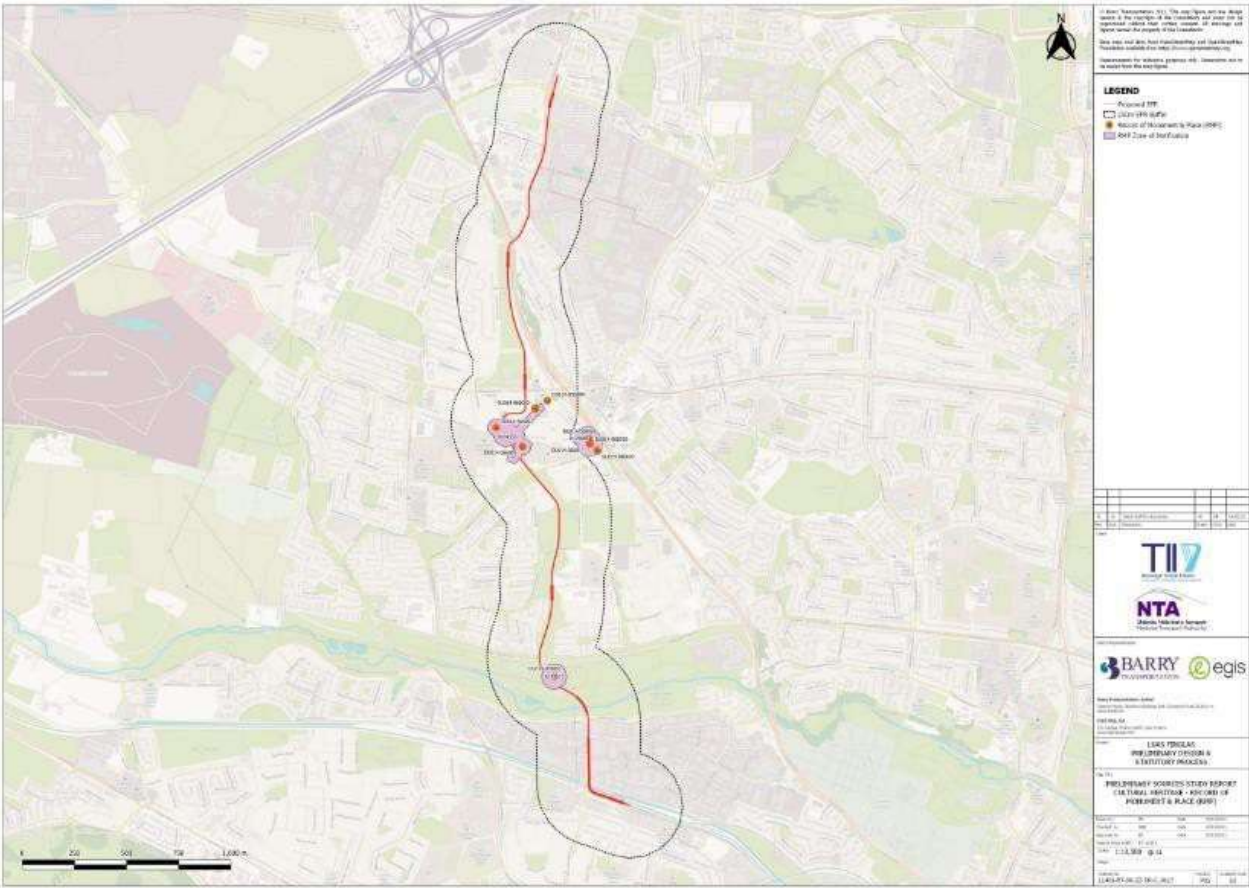


Figure 24: RMP Sites PSSR

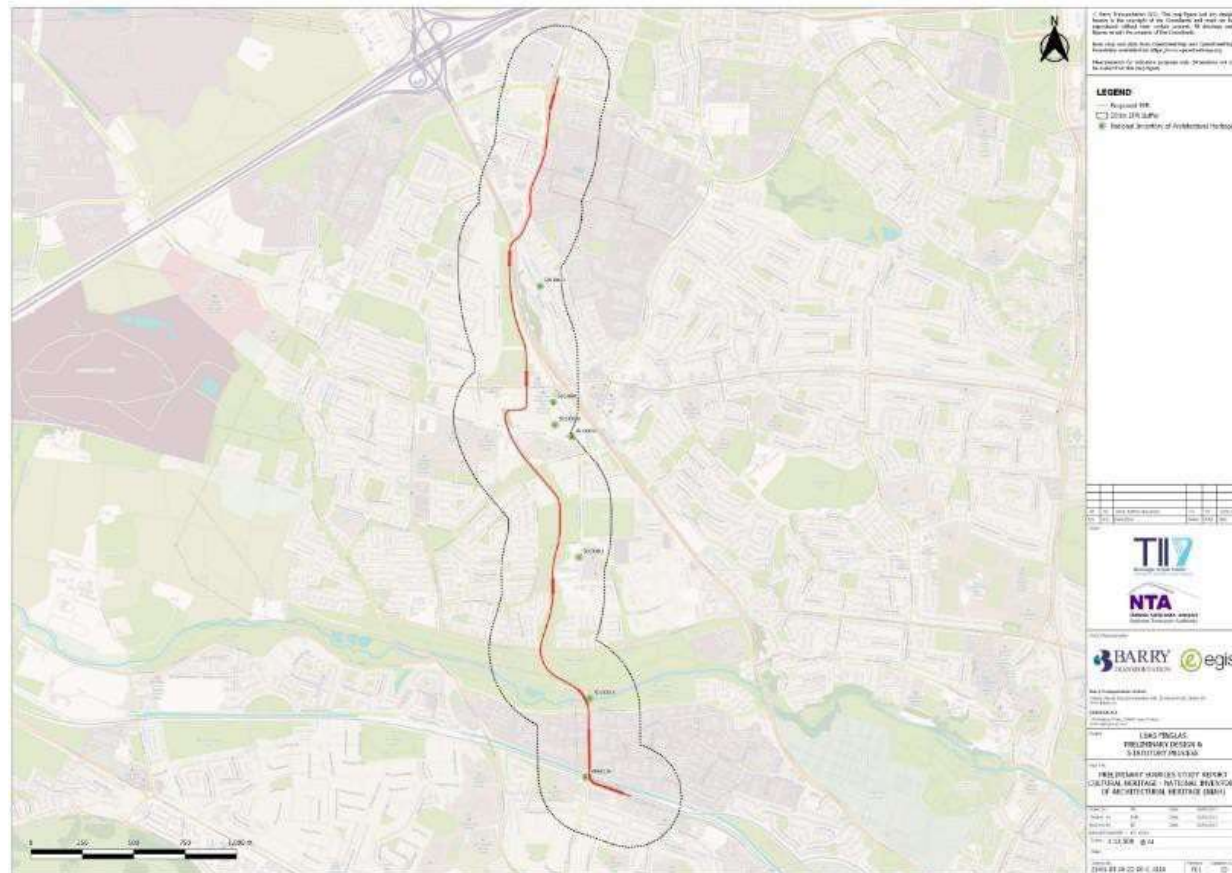


Figure 25: NIAH Sites within EPR, extract from PSSR.



Yvonne Whitty

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Report on Archaeological Monitoring of
Geotechnical Investigations
Luas Finglas
(Broombridge to Charlestown)
Co. Dublin

Extension to Licence 21E0657

Client: Ground Investigations Ireland

Yvonne Whitty

February 2023

Licence/Registration No.	21E0657 Extension
Site Name [Townland 1, Ward, or Street Name]	Ballyboggan South, Cardiff Castle, Grangegorman North, Finglas West and Finglas Wood.
Townland URL [refer Logainm.ie]	https://www.logainm.ie/en/s?txt=finglas&str=on
County	Dublin
Type of Report [Archaeo-geophysical report, St. i. Report, St. iii. Report etc.]	Archaeological Monitoring
Scheme name	Luas Finglas
Client	Barry Transport/Egis. for TII
Executive Summary [Free Text in single cell]	<p>This report details archaeological monitoring of 6 number additional Luas Finglas Geotechnical Investigations ('GI'; Phase II). Luas Finglas is a proposed new extension to the northern end of the Luas Green Line. The proposed project comprises a 4km extension to the Luas Green line from its existing terminus at Broombridge to Finglas Village (Charlestown) accommodating four new Stops; these are St Helena's, Finglas Village, Mellows Park and Charlestown. The proposed alignment will be constructed mostly at-grade using grass track and will include a parallel cycle path along much of the route. The Phase II GI works comprised the excavation of 16 soil infiltration trial pits. The proposed locations for the GI works were reviewed by the TII Project Archaeologist and seven were deemed to have a potential archaeological impact and were to be monitored under an extension of the existing Licence 21E0657; however only 6 were ultimately proceeded with).</p> <p>Archaeological monitoring of Phase II works took place on 10th October 2022 under the direction of the licence holder Yvonne Whitty. The works comprised the excavation of trial pits that were on average 1.00m long x 0.50m wide x 1.60m deep.</p> <p>Monitoring of the GI works confirmed the natural ground comprises a blanket of cohesive glacial till (Dublin Boulder Clay) with localised areas of glaciofluvial sands and gravels deposited along the path of the Tolka River System. The Tolka Valley Park comprised landfill which was on average 5m in depth and sealed natural ground. No</p>

	<p>archaeological features, stratigraphy or objects were found during monitoring of the Phase II GI works.</p> <p>A report detailing the Phase I works comprising the archaeological monitoring of 52 GI trial pits in accordance with the existing Licence 21E0657 was submitted to the statutory authorities in May 2022.</p>
Site Director [Surname, Firstname]	Whitty, Yvonne
Author 2 [Surname, Firstname]	Whitty, Yvonne
Author 3 [Surname, Firstname]	
Archaeological Consultancy [Free Text]	De Faoite Archaeology
Report Date of submission [Year-Month]	2022-11
Period 1	
Period 2	
Period ... [insert as required]	Landfill containing waste spanning the 20 th -21 st centuries
ITM [Northing/project start point]	713772
ITM [Easting/project start point]	736951
ITM [Northing/project finish point]	712870
ITM [Easting/project finish point]	740525

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Executive summary

This report details archaeological monitoring of Phase II Geotechnical Investigations (GI; where required) for a proposed 4km extension to the existing Luas Green Line (Luas Finglas), County Dublin under Licence 21E0657.

The GI works comprised the excavation of trial pits for infiltration tests. Seven of the sixteen GI locations required archaeological monitoring due to their proximity to either a Recorded Monument and Place, or other area of archaeological potential however only six were ultimately proceeded with. Archaeological monitoring of these works took place on the 10th October 2022 under the direction of the licence holder Yvonne Whitty.

The trial pits were on average 2.00m long x 0.40m wide and ranged in depth from 1.5m to 2.8m. The depth of each trial pit was dependent on the purpose of the required infiltration tests. Natural ground (comprising a blanket of cohesive glacial till - Dublin Boulder Clay) was exposed in two trial pits with the remainder excavated within made ground. No archaeology or archaeological objects were found during monitoring of the GI works.

1 Introduction

This report details the results of archaeological monitoring of six number additional Geotechnical Investigations (GI; Phase II) on behalf of Ground Investigations Ireland (GII) for Luas Finglas.

Luas Finglas is a proposed new extension to the northern end of the Luas Green Line (refer to Figure 1). The proposed project comprises a 4km extension to the existing Luas Green line from its terminus at Broombridge to Finglas Village accommodating four new Stops; these are St Helena's, Finglas Village, Mellowes Park and Charlestown. The proposed alignment will be constructed mostly at-grade using grass track and will include a parallel cycle path along much of the route.

The archaeological works were carried out by Yvonne Whitty on behalf of GII for Transport Infrastructure Ireland (TII). The existing Licence 21E0657 was reactivated and extended to cover this second phase of monitoring.

The Phase II GI works comprised the excavation of 16 soil infiltration test trenches. The proposed locations for the GI works were reviewed by the TII Project Archaeologist and seven were deemed to have a potential archaeological impact and were to be monitored under a reactivation and extension of the existing Licence 21E0657. One of these locations was subsequently not proceeded with and in total six locations were monitored.

A report detailing the Phase I works comprising the archaeological monitoring of 52 GI trial pits in accordance with the existing Licence 21E0657 was submitted to the National Monuments Section, Department of Housing, Local Government and Heritage (DHLGH) and the National Museum of Ireland (NMI) on 12 May 2022. Only one potential feature, a possible wall was identified during monitoring at Broombridge (trial pit LF WS 1023). This feature was identified in the environs of the Royal Canal which may relate to the historic limestone bridge at Broome Bridge or an associated historic structure (DCC RPS 909).

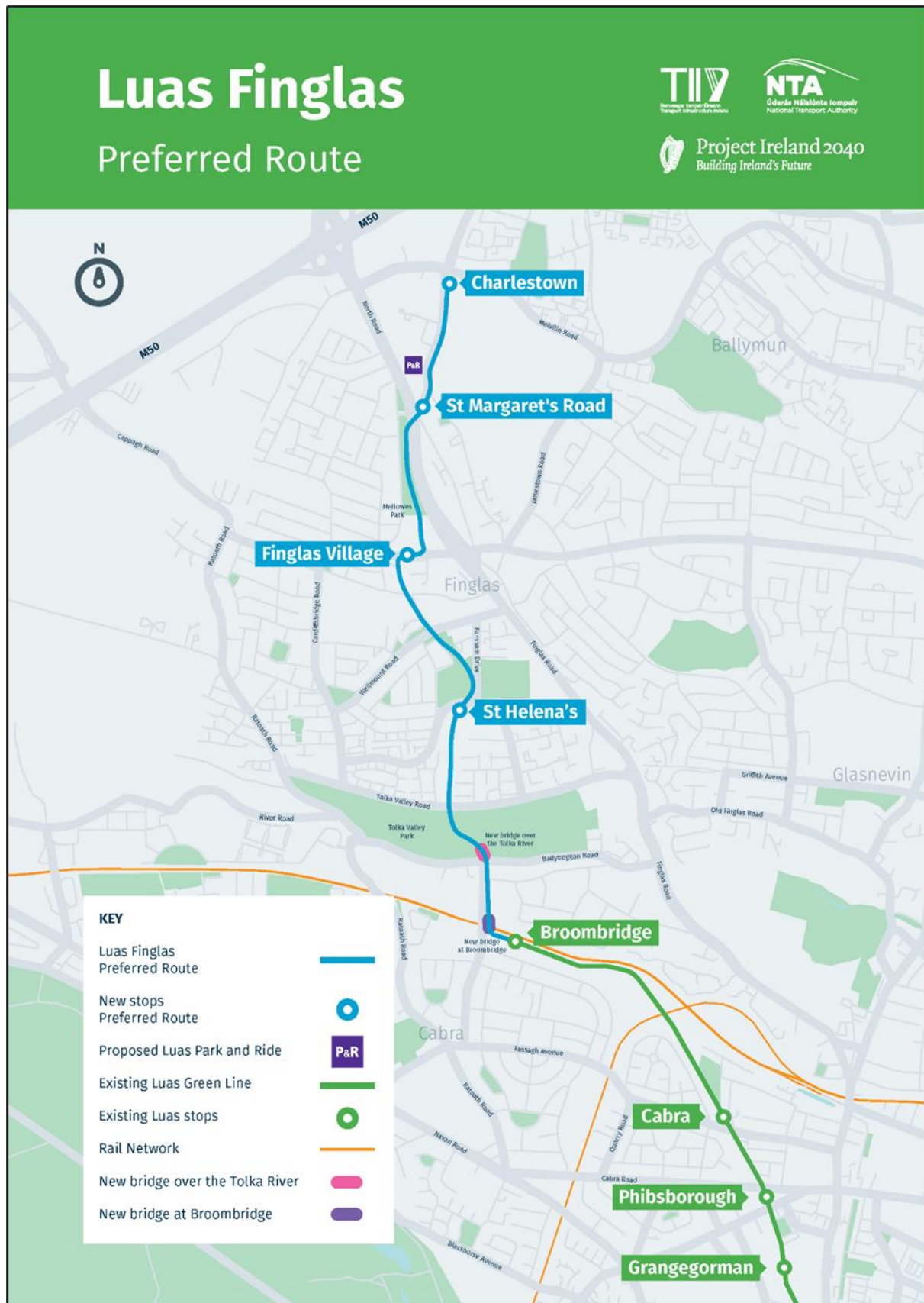


Figure 1: Luas Finglas Preferred Route (source www.luasfinglas.ie)

2 Receiving Cultural Heritage Environment

A detailed description of the baseline environment was provided within the original Phase I Report for Licence 21E0657. The information contained within the original Method Statement report was collated from the following sources:

- Archaeological Survey of Ireland including:
 - Register of National Monuments.
 - Record of Monuments and Places (RMP).
 - Sites and Monuments Record (SMR).
- Database of Irish Excavation Reports (<https://excavations.ie/>).
- An analysis of the NMIs published record (www.heritagemaps.ie);
- Cartographic analysis.
- National Inventory of Architectural Heritage (NIAH).
- Record of Protected Structures for Dublin City Council (DCC).

A number of significant cultural heritage constraints are located within the 250m study area for the proposed project. These cultural heritage constraints have statutory protection in accordance with the National Monuments Act 1930 (as amended) and the Planning and Development Act 2000 (as amended). Thirty-five RMPs, 21 Protected Structures (RPSs) and five Conservation Areas (CAs) have been identified. These cluster around the Royal Canal, the Tolka Valley, the medieval village of Finglas.

In the south of the study area lies the Royal Canal Conservation Area (CA). The canal, its associated walls, tow paths and lock gates are of cultural and industrial heritage significance; it is crossed by Broome Bridge which is a Protected Structure (DCC RPS 909).

'Finglas Wood Bridge', facilitating crossing of the River Tolka, within Tolka Valley Park is a Protected Structure (DCC RPS 906) of likely mid-16th century date, while the park is a CA. Five RMPs are associated with both the park and the River Tolka and include the site of a medieval tower house (RMP DU014-076001-), a 17th century mill (RMP DU018-001----), and a possible medieval bridge (RMP DU014-075----).

The study area is dominated by the early medieval village of Finglas (RMP DU014-066000-) established in the 6th century by St Canice and further developed as an episcopal manor in the 12th century. Recorded Monuments within the town include the early medieval ecclesiastical complex, the episcopal manor, a Holy Well dedicated to St Patrick and the remains of the town defences known as 'King William's Ramparts' (RMPs DU014-066002 – DU014-066017-). King William's Ramparts, St Patrick's Well, and St Canice's Church are also Protected Structures (DCC RPSs 8733, 8734, 8735 and 4851). 'Rose Hill' House to the east of the Main Street is both a recorded monument and a protected structure (RMP DU014-079--; DCC RPS 4850); the neighbouring Woodland Lodge (Towson's Cottage) is also a protected structure (DCC RPS 4849).

Meakestown, just south of the M50 is the site of an 'extensive brick manor' recorded by the Civil Survey in 1654 (RMP DU014-020001-), to the west of which lies the site of Meakestown

Castle (RMP DU014-020002-) with a further early medieval settlement lying to the east in Poppintree (RMPSU014-115---).¹

Additional constraints include DCC designated Conservations Areas (CA) which are present at three locations along the Preferred Route (PR_ comprising areas of land extending along the Royal Canal, the Tolka Valley and within the medieval core of Finglas town. The PR also incorporates the Zone of Archaeological Potential for the historic town of Finglas (RMP DU014-066000-). With local residents identifying a green areas to the south of Ravenscourt as marking a possible burial location.

RMP No.	Classification	Description	Easting (ITM)	Northing (ITM)
DU014-066002-	Ritual site – holy well	This is a natural spring enclosed within a railing and embellished with a monument to St Patrick, murals, and a grotto. A stone-lined bath in the front may have been built in the 1760's when the well was developed as a spa (Daly 1957, 20; Ó Danachair, 1958, 76). This was a station well according to the Ordnance Survey Name Books. The waters were thought to cure sore eyes and inveterate ulcers. Still venerated.	712845	738997
DU014-066003-	House – 17 th century	Named on the 1 st edition OS 6-inch map (1837) as 'Cardiff castle in ruins'. The OS 6-inch map shows an L-shaped building N of the road. This area has since been developed. Not visible at ground level.	712658	738903
DU014-066005-	House – 16 th /17 th century	A manor established by Archbishop Comyn in 1181 appears to have been on the present site of the convent which on the 1 st edition OS 6-inch map (1843) is called Springmount, later known as Fortwilliam. In 1228 Archbishop Luke established an episcopal residence on the site. During the period that Alexander de Bicknor held the See of Dublin 1317-1319, this residence became known as the Court. It was a substantial mansion. There are references to stone walls, leaden gutters, iron bars, kitchen, brewhouse and furnaces (Ball 1920, 85). The Civil survey (1654-6) mentions a 'stone house' at Oldcourt on the church farm at Finglas (Simington 1945, 140). Excavations in 1992 failed to reveal any traces of the site (O'Flanagan 1993, 27). Further excavations in 1995 revealed the walls of a rectangular, two-roomed structure (L 20m, Wth 4.5m) associated with 16 th -17 th century material. This has been interpreted as an out-building associated with Fortwilliam (Halpin 1996, 24-25).	712787	738816

¹ Info kindly supplied by TII Project Archaeologist Luas Finglas.

RMP No.	Classification	Description	Easting (ITM)	Northing (ITM)
DU014-066008-	Town defences	The N section of 'King William's Rampart' forms a boundary wall to the present Vicarage Garden and the S boundary of the car park. It runs in a NE-SW direction (L 80m, Wth 3.5-6m, H 1.5-3.5m). Both	712901	739038
		faces are revetted with stone walling. In the W end of the rampart is a vaulted chamber entered from a round-arched opening. The vault runs N-S (dims. L 3.7m, Wth 3.6m, H 2m.). It is lit by slit opes. Between 1986 and 1994 excavations in the immediate vicinity of the site produced 13 th -15 th -century pottery and evidence for an E extension to the rampart (Cotter 1992, 16). This site may be interpreted as fortifications erected by the Duke of Ormonde in 1649 (Anon 1897, 452; Joyce 1912, 270-1).		
DU014-076001-	Castle – tower house	Finglaswood House, formerly the home of the Seagrave family, incorporated a tower house. This was a square tower defended by gun loops with fine hammer-dressing on the entrance doorway (Anon 1897, 446-7; Joyce 1912, 273-4; Ball 1920, 89-91). The building was demolished before the early 1970s. No visible at ground level.	712965	737721
DU014-066009-	Church	Situated at the edge of a plateau with a valley to the E. This is a medieval parish church on the site of an earlier monastery associated with St Canice. The later church is of nave and chancel type with a vaulted porch entrance (dims. L 12.8m, Wth 7.25m). Built of coursed limestone masonry. The W gable of nave is heavily buttressed and contains a round segmental arched window with a circular window above. On W side of nave is a round arched window, partly blocked and a later pointed window inserted. The chancel is narrower than the nave and entered through a pointed arched opening. There is a sandstone piscina along the S wall and pointed arched aumbrey close by. The chancel was originally lit by a double-light cusped, ogee-headed window (L 7.6m, Wth 5.6m.). The S aisle is entered through wide round arches with pillars. There is a blocked pointed doorway in S wall of S aisle (dims. L 13.2m, Wth 3.15m; see Stubbs 1916, 27-45; Anon 1987, 451-4). In the SE corner of the chancel are two 17 th century graveslabs, one commemorating Richard Treswell d. 1672 (DU014-066015-) the other to the Ryves family dates from 1647 (DU014-066016-).	713097	738860
DU014-066017-	Graveyard	Situated at the edge of a plateau with a valley to the E. This graveyard marks the site of an earlier monastery associated with St Canice. It contains the remains of a medieval parish church that contains in the SE corner of the chancel two 17 th century graveslabs (DU014-066015-; DU014-	713083	738812

RMP No.	Classification	Description	Easting (ITM)	Northing (ITM)
		066016-). In the SE corner of the graveyard just inside the entrance is a large granite ringed cross (DU014-066010-).		

Table 1: RMP sites within 250m of Preferred Route.

2.1 Previous Archaeological Investigations

There are thirty-seven previous archaeological investigations recorded in the Database of Irish Excavations as having been undertaken within the 250m study area surrounding the PR. Fifteen are recorded within 100m of the PR and at least twenty-two are recorded within the 250m study area surrounding the PR. For the purpose of this report only those archaeological investigations which were undertaken within 100m either side of the PR are detailed in Table 2 and Figure 5 below. The archaeological excavations outlined below support the results of the desk-based assessment and confirm the GI works were located within an archaeologically rich landscape associated with the early medieval ecclesiastical site at Finglas. It is interesting to note that at the northern end of the scheme, excavations in advance of the Finglas By-Pass identified the remains of a bank which was interpreted as the remains of a possible ecclesiastical enclosure, destroyed by post medieval quarrying (Licence 94E0010). Curvilinear ecclesiastical settlements such as at Finglas, conform to what looks like a universal pattern. The characteristics of this pattern commonly include an inner and outer curvilinear enclosure, with a church, burial ground and other ecclesiastical structures and features (for example the round tower and high crosses) located within the inner enclosure. Unexcavated portions of this ditch may be preserved within the proposed Luas Finglas temporary and permanent land take.

Excavations for Luas Cross City in 2015 uncovered significant remains associated with the movement of cattle to the markets at the Liffey Junction, north of Bannow Road (Plate 1).



Plate 1: Elements of the Manure Works at Liffey Junction under excavation for Luas Cross City (courtesy TII).

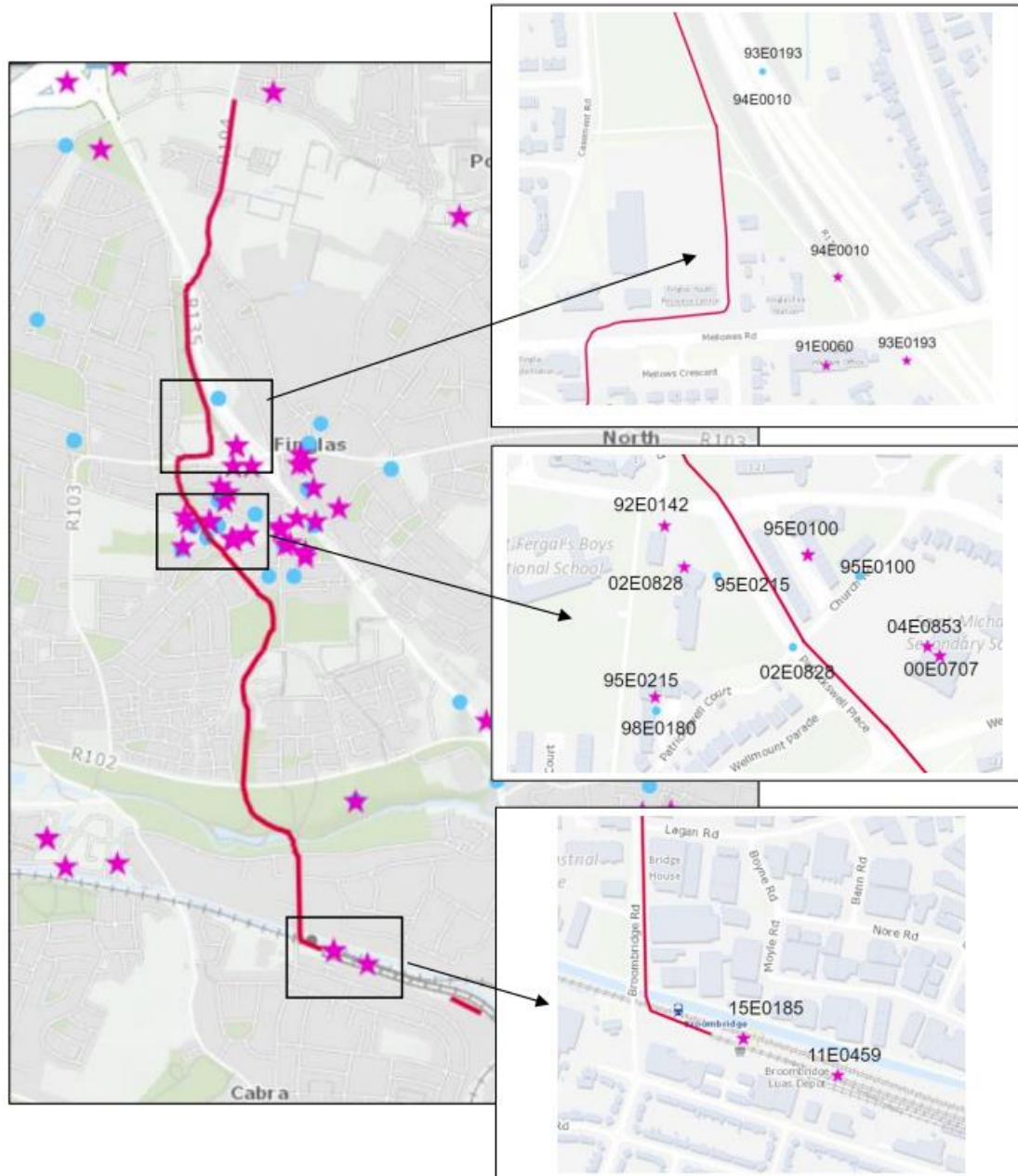


Figure 2: Excavations illustrated by pink star and blue dots within 100m of the Preferred Route (www.heritagemaps.ie).

Licence No	Street/Townland	Site Type
03E0224	Church Road, Finglas	Early medieval
02E0828	Patrickswell Place, Finglas	No archaeological significance
95E100	Holy Faith Convent, Cappagh Road	Urban Medieval
95E100	Holy Faith Convent, Cappagh Road	Urban Medieval
02E0828	Patrickswell Place, Finglas	No archaeological significance
95E0215	Patrickswell Place, Finglas	Rampart
92E0142	Cappagh Road/Patrickswell Place, Finglas	No archaeological significance

Licence No	Street/Townland	Site Type
00E0707	St. Michaels Secondary School, Wellmount Road, Dublin	No archaeological significance
04E0853	St. Michaels Secondary School, Wellmount Road, Dublin	No archaeological significance
94E0010	Finglas By-pass	Possible ecclesiastical enclosure
93E0193	Finglas By-pass	Possible ecclesiastical enclosure
94E0010	Finglas By-pass	Possible ecclesiastical enclosure
91E0060	Mellowes Road	No definite archaeological features but occupation debris found.
05E0058	St. Margaret's Road, Meakstown	No archaeological significance
95E0215	King William's Ramparts	No archaeological significance
98E0180	Patrickswell Lane	Probable 17th-century earthen rampart
15E0185	LCC- Broadstone D7, to Broombridge Dublin 11	Urban post-medieval

Table 2: Archaeological Investigations within 100m of the Preferred Route (www.excavations.ie).

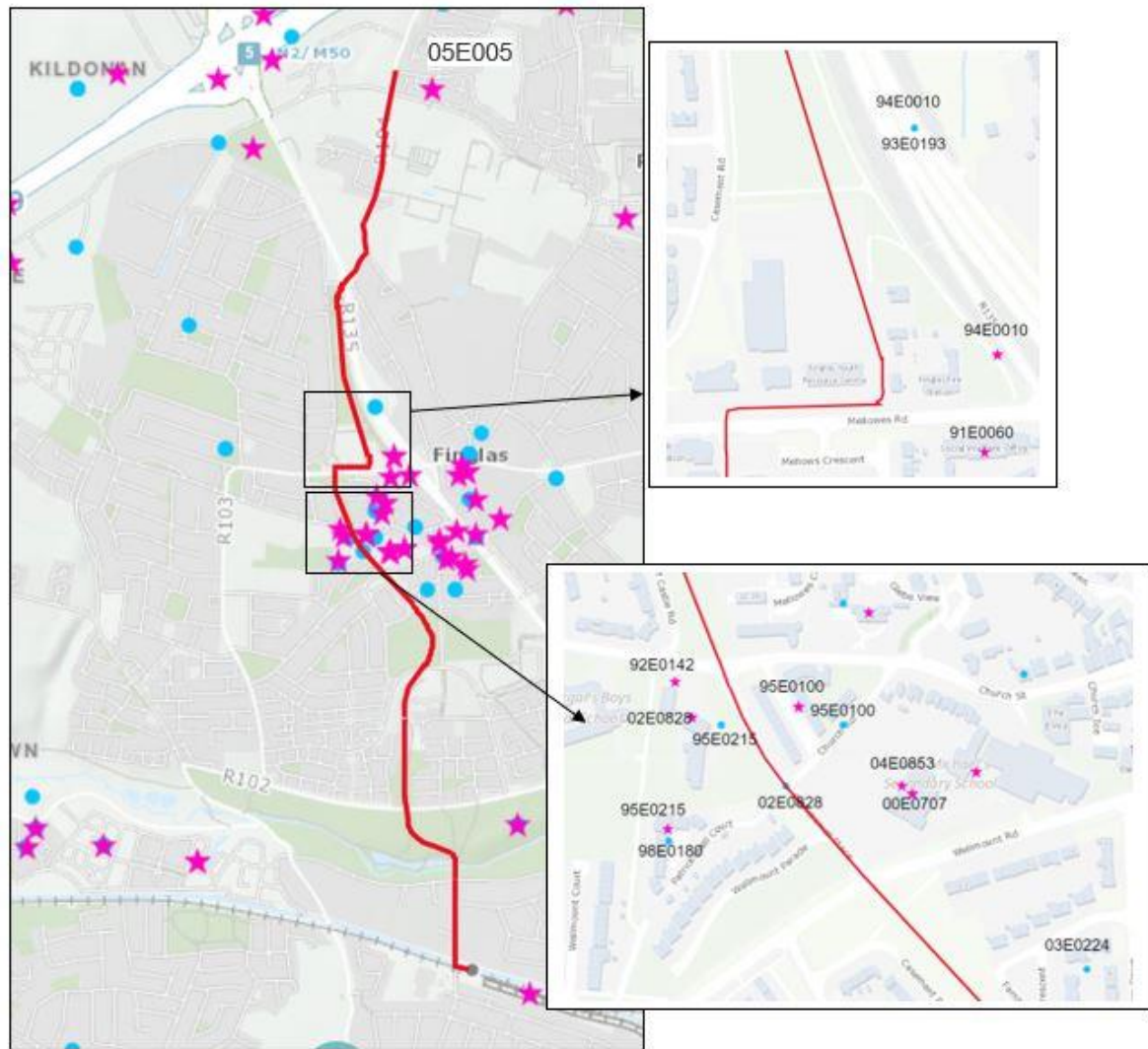


Figure 3: Excavations illustrated by pink star and blue dots within 100m of the Preferred Route (www.heritagemaps.ie).

Licence No	Street/Townland	Site Type	Author
03E0224	Church Road, Finglas	Early medieval	Alan Hayden
02E0828	Patrickswell Place, Finglas	No archaeological significance	Tom Rogers
95E100	Holy Faith Convent, Cappagh Road	Urban Medieval	Martin Reid
95E100	Holy Faith Convent, Cappagh Road	Urban Medieval	Eoin Halpin
02E0828	Patrickswell Place, Finglas	No archaeological significance	Thomas Rogers
95E0215	Patrickswell Place, Finglas	Rampart	Eoin Halpin
92E0142	Cappagh Road/Patrickswell Place, Finglas	No archaeological significance	Neil O'Flanagan
00E0707	St. Michaels Secondary School, Wellmount Road, Dublin	No archaeological significance	Stephen Johnston
04E0853	St. Michaels Secondary School, Wellmount Road, Dublin	No archaeological significance	Stuart Halliday

Licence No	Street/Townland	Site Type	Author
94E0010	Finglas By-pass	Possible ecclesiastical enclosure	Eoin Halpin
93E0193	Finglas By-pass	Possible ecclesiastical enclosure	Eoin Halpin
94E0010	Finglas By-pass	Possible ecclesiastical enclosure	Eoin Halpin
91E0060	Mellowes Road	No definite archaeological features but occupation debris found.	Claire Cotter
05E0058	St. Margaret's Road, Meakstown	No archaeological significance	Kara Ward
95E0215	King William's Ramparts	No archaeological significance	Eoin Halpin
98E0180	Patrickswell Lane	Probable 17th-century earthen rampart	Noel Dunne

Table 3: Excavations within 100m of the Preferred Route.

2.2 Cartographic Analysis

Historic and current topographical maps represent very important sources that can reveal the progress of natural erosion and human development across a landscape/riverscape over time.

Analysis of historic mapping shows the human impact on the landscape and its evolving nature over clearly defined time intervals. The comparison of editions of historic maps can show how some landscape features have been created, altered or removed over a period of time.

Historic Ordnance Survey (OS) 'mapping (1888-1913) indicates much of the land along the proposed route was historically pasture with intermittent estate buildings in the wider vicinity of the route. Local industries included several quarries dotted around the area with material extraction typically comprising sands and gravel along the River Tolka and limestone rock (Calp) which was hewn for building works. Other historical industries included a cotton mill and a large tannery' (Barry Transportation and Egis, 2021, p. 16).

GI works were also carried out at an additional area in the proposed stabling yard just north of Bannow Road (Figure 4). Previous excavations in advance of the Luas Cross City works identified Chemical Manure Works (c. 1861–1870) located at Liffey Junction on the MGWR (between the rail track and the 7th Lock of the Royal Canal). This area was in use for the movement of cattle to markets, and the GI works were located within the area labelled '*Cattle Sidings*' (Figure 4).

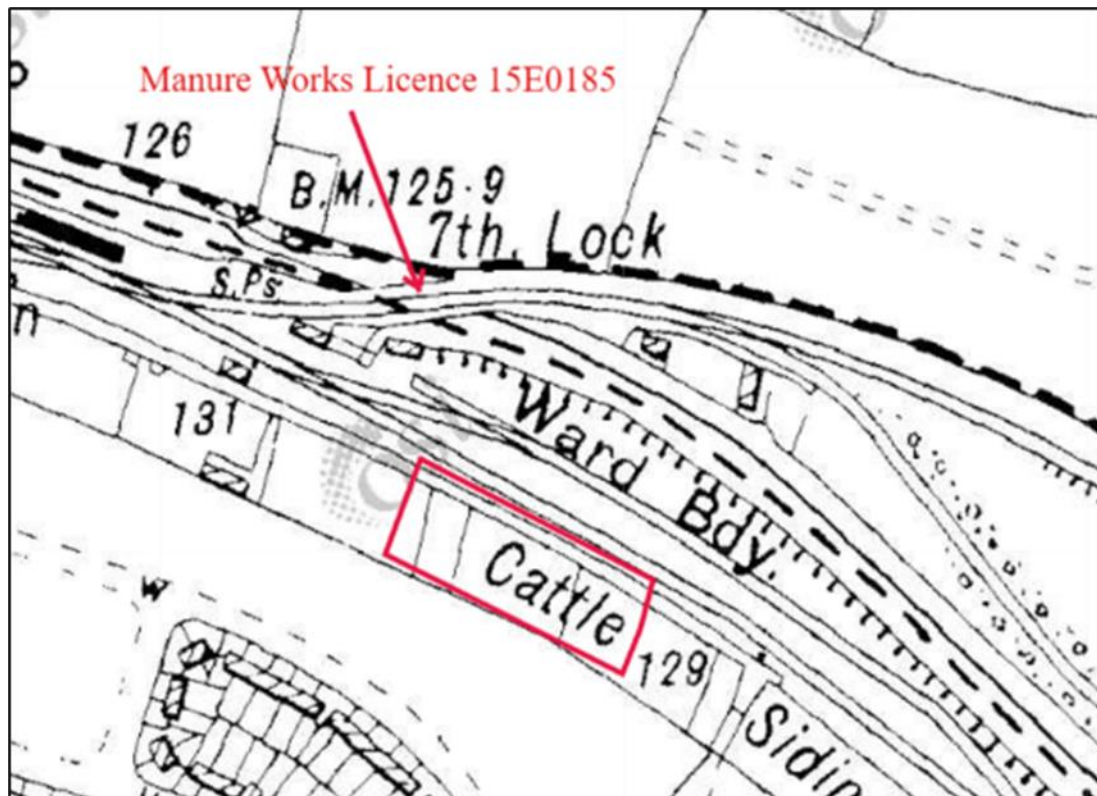


Figure 4: Extract from 6-inch Cassini Map of Liffey Junction on the to north of present day Bannow Road. Luas Finglas GI works associated with the proposed stabling yard, took place within redline area (source www.archaeology.ie)

3 Methodology

A total of 16 additional soil infiltration trial pits were proposed as part of this phase of GI works. The TII Project Archaeologist identified the works as being in proximity or likely to impact on seven Areas of Archaeological Potential (Table 4 and Appendix 2). See Section 4 below. Of the original proposals as set out in the licence application one trial pit LF-IT-2015 was descope from the works, leaving six Areas of Archaeological Potential to be monitored.

The geology of the study area comprises a blanket of cohesive glacial till (Dublin Boulder Clay) with localised areas of glaciofluvial sands and gravels deposited along the path of the Tolka River System and its supporting streams and tributaries (Barry Transportation and Egis, 2021, p. 14).

Soil infiltration trial pits were excavated at six locations by JCB machine using a flat grading bucket under archaeological supervision. The trenches were on average 2m x 0.4m x 1.6m (L x W x D). All trial pits that required archaeological monitoring were excavated to the full depth of excavation. Natural ground was exposed in trial pits LF-IT 2002 and 2003 and was not exposed in the case of four trial pits LF-IT 2001, 2005, 2011 and 2012. The trenches were all excavated to the depth required for the specified soil infiltrations tests, between 1.5m-1.8m deep.

All GI trial pits were opened, logged, photographed, GPS coordinates taken and backfilled on the same day.

Sheet Number	Infiltration Trial Pit Number	Archaeological Monitoring Required	Made Ground Depth (m)	Rationale
3	LF-IT-2015	Yes	N/A	Proximity to Jamestown Little and Finglas East Townland Boundary
8	LF-IT-2012	Yes	N/A	Locals report this area to have been used for human burial.
9	LF-IT-2011	Yes	0.9	Very close to King William's Ramparts RMP DU014-066008-.
13	LF-IT-2005	Yes	3.9	Precautionary due to proximity to RMP DU014-076001- and environs.
16	LF-IT-2003	Yes	N/A	To inform the archaeological potential of this field.
16	LF-IT-2002	Yes	N/A	To inform the archaeological potential of this field.
17	LF-IT-2001	Yes	N/A	Known area of archaeological potential (former manure works).
1	LF-IT-2017	No	1.2	No known archaeology. In disturbed road verge.
2	LF-IT-2016	No	1.9	No known archaeology. In disturbed road verge.
6	LF-IT-2014	No	2m to 6m	No known archaeology. Depth of made ground greater than proposed excavation.
7	LF-IT-2013	No	2.4	No known archaeology. Depth of made ground greater than proposed excavation.
10	LF-IT-2010	No	0.9	No known archaeology.
11	LF-IT-2009	No	2	Area highly disturbed.
11	LF-IT-2008	No	2	Area highly disturbed.
12	LF-IT-2007	No	2 to 3.6	Area highly disturbed.
12	LF-IT-2006	No	2 to 3.6	Area highly disturbed.

Table 4: Phase II GI trial pits: Luas Finglas Project Archaeologist location review, those requiring archaeological monitoring are highlighted in green.

4 Monitoring Results

The following tables provide details of the stratigraphy, location, and photo of each archaeologically monitored soil infiltration trial pits (IT). The location maps for the trial pits are attached as Appendix 2.

Exploratory Hole ID	LF-IT-2001
Date	10/10/2022
Depth	1.80m
Width	0.40m
Length	2.20m
Depth	Description
0.00m-0.30m	Sod and topsoil- dark brown sandy clay
0.30m-0.60m	Made ground- mid yellowish brown silty clay
0.60m-1.80m	Made ground- a compact mid yellowish brown with grey mottling sandy clay which contained moderate sub rounded pebble inclusions
Comments	Natural ground not exposed in this trench nor were any features/finds associated with the former manure works. Natural ground was exposed at 2.30m BGL in Phase 1 works at LF-TP-3002

See Appendix 2 Map Sheet No. 17.

Exploratory Hole ID	LF-IT-2002
Date	10/10/2022
Depth	1.70m
Width	0.40m
Length	2.00m
Depth	Description
0.00m-0.30m	Sod and topsoil- dark brown sandy clay
0.30m-1.50m	Made ground- mid yellowish brown silty clay which contained frequent red brick, glass and modern pottery
1.50m-1.70m	Natural ground- mid greyish brown boulder clay with frequent rounded cobble inclusions
Comments	Natural ground exposed at 1.50m BGL, no finds or features of archaeological significance exposed in this trench



See Appendix 2 Map Sheet No. 16.

Exploratory Hole ID	LF-IT-2003
Date	10/10/2022
Depth	1.60m
Width	0.40m
Length	2.30m
Depth	Description
0.00m-0.30m	Sod and topsoil- dark brown silty slightly sandy clay
0.30m-0.80m	Made ground- mid greyish brown silty clay
0.80m-1.10m	Natural ground- dark grey mid greyish brown boulder clay with frequent rounded cobble inclusions
Comments	Natural ground exposed at 1.10m BGL, no finds or features of archaeological significance exposed in this trench




See Appendix 2, Map Sheet No. 16.


Exploratory Hole ID	LF-IT-2005
Date	10/10/2022
Depth	1.70m
Width	0.40m
Length	2.20m
Depth	Description
0.00m-0.20m	Sod and topsoil- dark brown silty slightly sandy clay
0.20m-1.60m	Made ground- dark brown silty clay which contained frequent rounded cobbles and modern debris material including plastic and wood
1.60m-1.70m	Made ground/redeposited natural- greyish brown boulder clay which contained frequent root inclusions, a modern nail was also noted in this layer
Comments	Natural ground not exposed, no finds or features of archaeological significance exposed in this trench. Natural ground was exposed at 3.90m BGL in LF-TP-2009, Phase I GI works




See Appendix 2, Map Sheet No. 13.

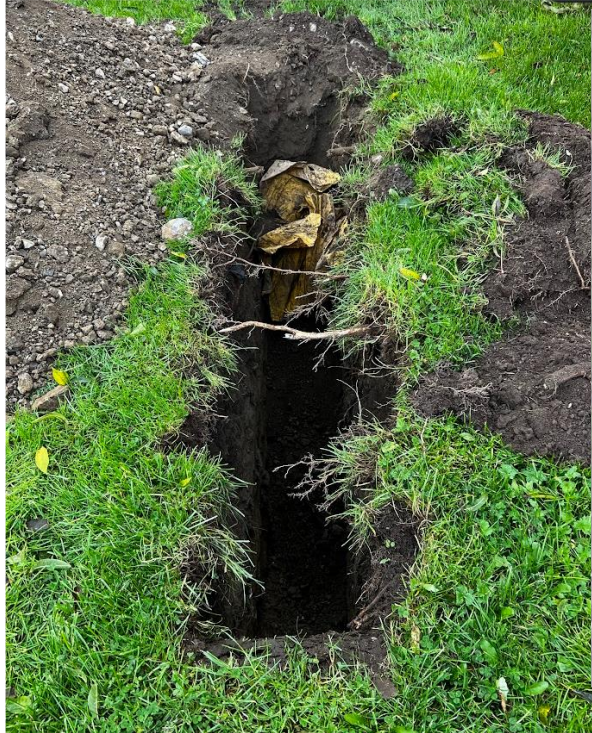
Exploratory Hole ID	LF-IT-2011
Date	10/10/2022
Depth	1.80m
Width	0.40m
Length	2.60m
Depth	Description
0.00m-0.20m	Sod and topsoil- dark brown silty slightly sandy clay
0.20m-1.80m	Made ground- mid yellowish brown sandy gravelly clay with modern plastic
Comments	Natural ground not exposed, no finds or features of archaeological significance exposed in this trench. Natural ground was exposed at 0.90m BGL in LF-CPRC-1011 in Phase I GI works





See Appendix 2, Map Sheet No. 9.

Exploratory Hole ID	LF-IT-2012
Date	10/10/2022
Depth	1.50m
Width	0.40m
Length	2.00m
Depth	Description
0.00m-0.20m	Sod and topsoil- dark brown silty slightly sandy clay
0.20m-0.60m	Made ground- mid brown silty clay which contained moderate root inclusions, red brick and plastic
0.60m-1.50m	Made ground- Possibly re-deposited natural, a mid yellowish brown sandy clay which contained frequent small rounded and sub angular pebble inclusions
Comments	Natural ground not exposed, no finds or features of archaeological significance exposed in this trench. Phase I GI works indicates that there is made ground to a depth of 3m at the location of LF-WS-2010



See Appendix 2, Map Sheet No. 8.

5 Conclusion

Monitoring of the Phase II GI works confirmed the natural ground comprises a blanket of cohesive glacial till (Dublin Boulder Clay) with localised areas of glaciofluvial sands and gravels deposited along the path of the Tolka River System. Although historically much of the land along the proposed route was pasture with intermittent estate buildings in the wider vicinity of the route, construction in recent years has altered the landscape dramatically.

The stratigraphy at the locations of the Phase II GI infiltration tests is described below along the Luas Finglas PR from the south at the stabling site on Bannow Road to Cardiff Castle Lane.

At the proposed stabling site on Bannow Road, historic map analysis and previous archaeological excavations indicate that there is potential for industrial/archaeological heritage to be uncovered. Although no archaeology was identified in the Phase II GI works, the area was not subject to significant ground disturbance and there appears to be on average 3m of made ground overlying natural in this area. It is noted that significant archaeological remains in the form of manure works were uncovered beneath several meters of fill approximately 60m north of the proposed stabling yard. Furthermore, the location of the proposed stabling site is marked as 'Cattle Sidings' on historic mapping. Natural ground was not exposed at the location of trial pit LF-IT-2001 which was excavated to the depth required for the infiltration test.

Natural ground was exposed at depths of between 0.90m and 1.20m along Broombridge Road, beneath tarmac surfaces during Phase I works. A potential wall was identified in the environs of the Royal Canal which may relate to the historic limestone bridge at Broome Bridge or an associated historic structure (DCC RPS 909). Two Phase II trial pits were monitored to the west of the Broombridge Road, and natural ground was exposed at depths of 1.50m LF-IT-2002 and 1.30m LF-IT-2003 which was similar to the stratigraphy identified to the east of Broombridge Road for Phase I works.

One phase II trial pit LF-IT-2005 was excavated in 'The Valley', the green area north of Tolka Valley Road/south of Saint Helen's Road, now comprises an area of waste land, but once was a mix of arable land and demesne lands associated with St Helena House (DCC RPS 7575). The house and outbuildings largely survive, however elements of its demesne, which incorporated woodlands, ornamental lakes and a 'Mount Oliviat' a probable folly, no longer survive.

A medieval tower house (RMP DU014-076001-) comprising the former site and grounds of Finglaswood House is located to the south of 'The Valley' in Tolka Valley Park. This site was demolished before the 1970's and is not visible today. No traces of masonry or any structures associated with the site were uncovered in any of the Phase I GI works, however that did not mean that sub surface remains do not survive beneath the landfill material. Therefore, monitoring of (LF-IT-2005) was completed due to the proximity to RMP DU014-076001- and environs. Natural ground was not exposed in the trial pit LF-IT-2005 which was excavated to a depth of 1.70m. Natural ground was exposed at a depth of 3.9m in an adjacent pit LF-TP-2009 during Phase I works.

At the green area between Wellmount Road and Wellmount Parade archaeological monitoring of trial pit LF-IT 2011 was carried out due to its proximity to 'King William's Ramparts' (RMPs DU014-066002 – DU014-066017) which is also a Protected Structure (DCC RPS 8733, 8734). Natural ground was not exposed during monitoring of the Phase II trial pit LF-IT-2011 which was excavated to a depth of 1.8m. Natural ground was exposed at a depth of 0.90m in Phase I works at CPRC 1011, indicating that the depth of made ground in this area varies.

To the northeast of Patrickswell Place the Luas Finglas PR will pass through the ZoN associated with the site of a 16th-17th century house (Cardiffs Castle; RMP DU014-066005-), a Holy Well (RMP DU014-066002-) and the site of a 17th century house located on Patrickswell Place (RMP DU014-066002-) comprising a former manor house of Archbishop Comyn. There is no above ground trace of either of the 16th-17th century houses with both sites now occupied by modern houses. Locals have also reported that the green area east of Cardiff Castle Road has been used for human burial.

In the green areas of land east of Cardiff Castle Road natural ground was exposed at depths of 1.40m BGL at LF-CPRC-2003 and 3m LF-WS-2010 during Phase I works. Natural ground was not exposed during monitoring of Phase II trial pit LF-IT-2012 which was excavated to a depth of 1.5m.

No archaeological stratigraphy, features or objects were identified during the course of monitoring the above-described works. In accordance with the agreed Code of Practice for Archaeology all further archaeological mitigation measures for Luas Finglas will be agreed between TII and DHLGH via the National Monuments Service of the DHLGH. All mitigation measures will consider the findings of this Phase II GI Archaeological Monitoring Report.

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