A Report on Archaeological Testing at Kerdiffstown, Co. Kildare

Prepared for Kildare County Council/RPS
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Disclaimer

The results, conclusions and recommendations contained within this report are based on information available at the time of its preparation. Whilst every effort has been made to ensure that all relevant data has been collated, the authors and AMS accept no responsibility for omissions and/or inconsistencies that may result from information becoming available subsequent to the report's completion.

Summary

This report details the results of licensed archaeological testing undertaken on lands adjacent to the former landfill at Kerdiffstown near Naas, County Kildare. The works are being carried out in advance of remedial works that aim to develop the site into a multi-use public amenity park.

The project was granted planning permission in May 2018. It comprises remedial works at the c.27ha landfill site and includes a variety of infrastructural components to facilitate this, such as upgrading of the existing entrance, demolition of old buildings and structures, insertion of new water pipes and construction of park infrastructure, as well as landscaping and other groundworks.

Archaeological test investigations were carried out in three phases in November 2018, late February–early March 2019 and mid-April 2019. A total of 33 test trenches, measuring 1,746.30m in maximum length, were excavated in five separate areas (Field Locations 1, 2, 4, 5 and 6) of the site. Phase 1 was undertaken over a four-day period (21–23 and 26 November 2018) by Ros Ó Maoldúin, with the assistance of Fintan Walsh and Alan Danaher. Phase 2 was conducted over a six-day period (25 February–4 March 2019) by Ger Dowling, with the assistance of Alan Danaher. Phase 3 was carried out over a two-day period (16 and 17 April 2019) by Ger Dowling. The remaining area, Field Location 3, is the proposed location of the surface water outfall point into the Morell River and was investigated during the Wade Survey (Hardy & Rudzinski 2019).

A variety of archaeological features of varying date and significance were identified in three of the five areas investigated (Field Locations 1, 2 and 4). The array of evidence represented is extensive, ranging from a prehistoric burial site or ring-ditch to medieval occupation layers and other remains, as well as features associated with agricultural activity and possible metalworking/charcoal production.

The ring-ditch (c.6m in diameter), several pits and linear ditches, as well as the possible metalworking feature or charcoal-production pit were identified in various parts of Field Location 1. The ring-ditch lies in the Zone of Archaeological Potential of a mound (KD019-018), which was reportedly levelled in the 1950s.

Archaeological features and deposits of probable medieval date were identified in the vicinity of Kerdiffstown church (KD019-006001) and graveyard (KD019-006002–4) in Field Location 2. This area was previously subject to a geophysical survey (Leigh 2018) and subsurface remains were expected.

A ditch of unknown antiquity was discovered in Trench 4.2 in Field Location 4, while nothing of archaeological interest was identified in Field Locations 5 and 6.

It is recommended that if preservation *in situ* is not possible that all the newly-identified archaeological remains be fully excavated and recorded in advance of development at the site. Additional archaeological monitoring/testing is also recommended for areas that were inaccessible at the time of the present work.

The above recommendations are subject to the approval of the National Monuments Service and the Director of the National Museum of Ireland. Proposed mitigation measures should comply with the *National Monuments Act 1930* (as amended). Preservation by record should be undertaken under an excavation licence issued under Section 26 of the *National Monuments Act 1930* (as amended) and be in accordance with the *Framework and Principles for the Protection of the Archaeological Heritage* (DAHGI 1999).

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Abbreviations and Definitions

Abbreviation	Definition
AMS	Archaeological Management Solutions Ltd
EIAR	Environmental Impact Assessment Report
ITM	Irish Transverse Mercator
KCC	Kildare County Council
NMS	National Monuments Service
NMI	National Museum of Ireland
SMR	Sites and Monuments Record

Coordinate System

All GPS coordinates given in this report are in Irish Transverse Mercator (ITM).

Introduction

This document describes the results of the archaeological test trenching at the former landfill site at Kerdiffstown near Naas, Co. Kildare, in November 2018, late February–early March 2019 and mid-April 2019. A total of 33 test trenches in five separate areas at the site were excavated in order to identify any subsurface archaeological remains that may be present. A wade survey at the proposed location of the surface outfall point into the Morell River was also conducted and is the subject of a separate report (Hardy & Rudzinski 2019, licence refs. 18D0126 & 18R0238).

The investigations were undertaken on behalf of Kildare County Council and RPS consulting engineers in advance of remedial works that aim to develop the site into a multi-use public park. The remediation project was granted planning permission in May 2018 (An Bord Pleanála Case Reference: PL 09.JA0041).

Site Location

Kerdiffstown landfill is located in the townland of Kerdiffstown (parish of Kerdiffstown, barony of Naas North: ITM 691360, 722041), about 1km northeast of Naas, Co. Kildare (Figure 1). The site is situated immediately north of the N7 National Primary Route and comprises a former quarry, landfill and waste processing facility that encompass lands of some 27ha in total. It has been progressively backfilled with waste by a variety of operators since the 1950s and now contains a large (unused) recycling facility and a lined landfill cell which is partially filled with waste. Substantial quantities of waste have also been deposited across extensive (unlined) areas of the site, with further smaller quantities of waste stockpiled at other locations around the site.

The landfill (approx. 90m above sea level) occupies level terrain directly west of a small, northerly-flowing stream known as the Morell River. The surrounding landscape comprises suburban housing and light industrial-type buildings to the south, farmland to the west and a golf course to the north and east. The local geology is dominated by Viséan limestone and calcareous mudstone, overlain by complex mineral soils (‘Straffan Complex’) primarily derived from limestone till with some shale and sandstone.

Five separate areas (Field Locations 1, 2, 4, 5 and 6) were targeted for investigation as part of the present work (Figure 2). Field Location 1 comprises a small triangular area of rough pasture that contains the site of a mound (KD019-018). Field Location 2 occupies a narrow band of land located directly northwest and southeast of Kerdiffstown church and graveyard (KD019-006001–4). Field Location 4 corresponds to the length of the foul/leachate outfall pipeline between the southern boundary of the landfill site and the L2005 road. Field Location 5 comprises two small rectangular

parcels of land situated beside one another close to the southern boundary of the landfill, while Field Location 6 equates to the line of an underground water pipe to be installed just to the west of the Morell River, parallel to the tarmac road accessing Kerdiffstown House. This latter work was undertaken in the period following the completion of the main excavation works and the compilation of the present report. For those reasons, Field Location 6 is treated of separately at the end of this report (see 'Field Location 6' Section below).

The remaining area, Field Location 3, is the proposed location of the surface water outfall point into the Morell River and was investigated during the Wade Survey (see Hardy & Rudzinski 2019).

Proposed Development Works

The presence of large quantities of (uncapped) waste and the lack of appropriate infrastructure to manage pollution arising from this waste means that the former landfill at Kerdiffstown may pose an environmental pollution risk. The upstanding buildings and structures at the site also present potential dangers. As such, Kildare County Council (KCC) intends to fully remediate the site in order to reduce the risks posed by its current condition to public health and safety and the environment. The project – the 'Kerdiffstown Landfill Remediation Project' – aims to transform the site into a public amenity, comprising a multi-use public park (sport pitches, changing rooms, playgrounds, etc.). Following this Remediation Phase, the site will continue to be managed by Kildare County Council and regulated by the Environmental Protection Agency (EPA) as a remediated landfill whilst operating as a multi-use public park.

KCC applied for planning permission for the Remediation Project in August 2017. The application was accompanied by an Environmental Impact Assessment Report (Jacobs 2017) and planning permission was granted An Bord Pleanála (Case Reference: PL 09.JA0041) in May 2018. An Industrial Emissions Activities Licence (IEAL) application has also been submitted. It is anticipated that the project will take approximately five to seven years to complete.

Proposed remedial works will involve:

1. Construction of new site entrance and realignment of the L2005 Kerdiffstown Road;
2. Demolition of 3 properties (REC010, REC011 and REC016) and concrete structures in Zone 2A, Zone 2B and Zone 4;
3. Installation of new foul and leachate pipeline connections to Johnstown Pumping Station;
4. Construction of a new Landfill Infrastructure Compound;
5. Removal of stockpiles of materials;
6. Temporary stockpiling;
7. Re-profiling and filling;

8. Installation of capping systems;
9. Installation of new or supplementary gas wells and gas venting measures;
10. Construction, cleaning and commissioning of surface water management infrastructure;
11. Removal of the existing flare stack in Zone 1 and the second back-up flare, commencing use of new flare stack in the new Landfill Infrastructure Compound supported by a back-up flare;
12. Inspection and repair of concrete hard standings in Zone 2A and Zone 2B;
13. Removal of existing perimeter screening bund in Zone 1;
14. Construction of park infrastructure, including multi-use sports pitches, a building with changing rooms, public toilets and stores, car parking, a children's playground, informal trails and defined viewpoints;
15. Planting and landscaping; and
16. Ecological enhancement and mitigation features such as hibernacula, nesting boxes and log piles.

Archaeological Background

Much of the landfill site has been disturbed by waste disposal activities in recent times and nothing of archaeological potential is recorded there today. However, several sites and features are located within its immediate environs and fall within the proposed project area (Figure 3). These comprise the site of a mound (KD019-018) and the remains of Kerdiffstown church (KD019-006001) and an associated graveyard (KD019-006002–4).

Other sites within a 500m radius of the site comprise the find-spot of an architectural fragment (KD019-067) and a nineteenth-century sawmill (KD019-064). Kerdiffstown House, an impressive three-storey Georgian residence dating from c.1860, also lies a short distance to the north (National Inventory of Architectural Heritage Ref. No. 11812025; Record of Protected Structures No. B19–23).

Table 1: Previously recorded sites and monuments within 500m of the development site

SMR No.	Site Type	Townland	Easting (ITM)	Northing (ITM)
KD019-018	Mound	Kerdiffstown	691404	722156
KD019-006001	Church	Kerdiffstown	691449	722277
KD019-006002	Garveyard	Kerdiffstown	691436	722269
KD019-006003	Graveslab	Kerdiffstown	691436	722269
KD019-006004	Graveslab	Kerdiffstown	691436	722269
KD019-067	Architectural fragment	Palmerstown Demesne	691618	722773
KD019-064	Mill – sawmill	Palmerstown Demesne	691621	722768

A small field of rough pasture located within the western part of the project area is the recorded location of the mound (KD019-018). Although it exhibits no obvious surface trace today, the mound was investigated by staff of the National Museum of Ireland in the 1950s following its destruction by quarrying. Finds from the site included two bone comb fragments and a fragment of bronze wire, while dark soil, interpreted as possible habitation refuse, was also noted (SMR files/NMI Topographical File).

Directly east of the proposed project area are the remains of Kerdiffstown church (KD019-006001), a medieval structure believed to be dedicated to St Lawrence. The building is poorly preserved and consists of a rectangular nave and levelled chancel. The associated graveyard (KD019-006002) is overgrown but appears defined by a small roughly square area, within which lies two medieval grave slabs (KD019-006003–4), as well as several eighteenth- and nineteenth-century grave stones (SMR files).

There is one recorded find from the Kerdiffstown area: an architectural fragment (KD019-067). It consists of a well-dressed chamfered limestone arch-stone of likely thirteenth/fourteenth-century date, which was incorporated into the eastern gable wall of a later masonry structure. The architectural fragment most likely derives from nearby Kerdiffstown church (SMR files).

As far as can be ascertained, the only previous archaeological investigation at the landfill site involved monitoring of an extension to the waste facility in 2003 (O'Carroll 2003). Nothing of archaeological or potential archaeological significance was identified as a result of this work. Similarly, nothing of archaeological interest was discovered during a two-phase programme of archaeological testing in Kerdiffstown townland in 2003 (O'Donnchadha 2003a; 2003b).

An archaeological, cultural heritage and architectural heritage assessment, forming part of an overall EIAR for the Kerdiffstown Landfill Remediation Project, was completed by Jacobs in 2017 (Jacobs 2017). This included a field inspection of the proposed development site and a geophysical (magnetic gradiometry) survey of the site of the mound (KD019-018). No new features of archaeological interest were identified during the field inspection (Jacobs 2017:254–57) and geophysical prospection did not identify any magnetic responses indicative of an archaeological mound (Leigh 2017; licence number 17R0027; Figure 4). While much of the survey data is impacted by the presence of an adjacent spoil heap, a faint curving trend identified in the southern quadrant of the survey area (labelled '5' on Figures 7 and 8) was tentatively suggested to represent the subsurface remains of a possible archaeological feature (Leigh 2017).

The assessment highlighted the archaeological potential of the surrounding lands and the potential impact of ground disturbances associated with the proposed remediation works on the site of the mound (KD019-018) and Kerdiffstown church and graveyard (KD019-006001–2). It was also noted that the insertion of a surface water outfall pipeline into the Morell River, and the insertion of pipeline routes through the southern part of the Kerdiffstown demesne, may impact upon previously unrecorded archaeological features, deposits or artefacts. In relation to the two areas tested in this report, chapter 10 of the EIAR recommended the following mitigation measures (Jacobs 2017:265–67):

> *A limited programme of archaeological testing shall be carried out to the immediate north and south of the recorded church site, within the footprint of the proposed works due to the proximity of the church and the potential for these areas to contain buried archaeological remains. This investigation will be carried out under licence to the DoAHRRGA. Full provision shall be made available for the preservation by record of any features or deposits that may be discovered, if that is deemed the most appropriate manner in which to proceed (following consultation with the DoAHRRGA). The standing remains of the church and graveyard shall be fenced off with non-intrusive fencing during the course of remediation works in this area, in order to prevent inadvertent impacts with plant and equipment.*

> *An archaeological wade survey shall be carried out at the proposed location of the surface water outfall point into the Morell River. This investigation will be carried out under licence to the DoAHRRGA. Full provision shall be made available for the preservation by record of any features or deposits that may be discovered, if that is deemed the most appropriate manner in which to proceed (following consultation with the DoAHRRGA).*
>
> *All topsoil stripping associated with the proposed remediation works, including the surface water outfall pipeline and pipelines through the southern part of Kerdiffstown demesne, shall be monitored by a suitably qualified archaeologist. Full provision shall be made available for the preservation by record of any features or deposits that may be discovered, if that is deemed the most appropriate manner in which to proceed (following consultation with the DoAHRRGA).*

More recently, a Scope Document relating to archaeological services for the Remediation Project was prepared by RPS Group in July 2018 and this reiterated the recommendations set out in the 2017 EIAR.

Moreover, in order to further help inform future archaeological investigations, a geophysical survey was undertaken in the vicinity of Kerdiffstown church and graveyard (KD019-006001–2) (Leigh 2018; licence number 18R0161; Figure 5). The survey, which was focused on a long irregular strip of pasture to either side of the church and graveyard, identified a number of anomalies of potential archaeological interest, most notably in the area directly south of the church (KD019-006001). Here, the survey revealed a rectilinear pattern of positive and negative responses (labelled 'F' on Figure 9 and Figure 10), which are thought to reflect the subsurface remains of a large ditch-type feature perhaps flanked by a possible stone wall; these potential features may be the footprint of an enclosure. A large curvilinear positive anomaly (labelled 'G' on Figure 9 and Figure 10) may represent an associated in-filled ditch.

A possible arc-shaped cropmark was also noted during the survey at the northern end of the target area, extending slightly westwards from the modern tarmaced path. This potential cropmark was suggested to represent a modern feature, possibly a former path; however, no obvious trace of any feature was identified in this area by the geophysical survey (Leigh 2018, 4).

Archaeological Testing Strategy

As stated in the introduction, archaeological test investigations at Kerdiffstown were carried out in three phases in November 2018, late February–early March 2019 and mid-April 2019. A total of 33 test trenches, measuring 1,746.30m in maximum length, were excavated in five separate areas (Field Locations 1, 2, 4, 5 and 6) of the proposed development site (Figure 6; see Table 2–Table 5 below for details).

Phase 1 was undertaken over a four-day period (21–23 and 26 November, 2018) by Ros Ó Maoldúin, with the assistance of Fintan Walsh and Alan Danaher. A total of 12 test trenches were excavated in Field Locations 2 and 4: nine in Field Location 2 and three in Field Location 4.

Phase 2 was conducted over a six-day period (25 February–4 March, 2019) by Ger Dowling with the assistance of Alan Danaher. This involved the excavation of seven trenches in Field Location 1 and four in Field Location 5. As part of these works, six additional trenches were also excavated in Field Location 2, immediately adjacent to Kerdiffstown church. This revised testing methodology was prompted by the receipt from Kildare County Council in February 2019 of updated plans relating to the proposed construction of a drainage channel and associated roadway with perimeter fencing at Field Location 2. Permission to excavate the new trenches was granted by the NMS following the submission of an Addendum to the original Method Statement for Excavation Licence 18E0655.

Phase 3, involving the excavation of four test trenches in Field Location 6, was conducted by Ger Dowling over two days (16 and 17 April, 2019) as a second addendum to the original Method Statement (see 'Field Location 6' Section below).

The test trench layout was designed to encompass as much of the footprint of the target areas as possible and, in Field Locations 1 and 2, target any potential archaeological features identified by previous geophysical investigations. The trenches were set out with a differential GPS and the excavations conducted using a mechanical digger with a toothless (grading) bucket, measuring 2m in width. All soils in each of the test trenches were excavated in horizontal layers of no more than 0.20m in thickness until sterile subsoil/bedrock or the surface of potential archaeological features/structures/deposits/objects were encountered. Where potential archaeological features or deposits were identified, test trenches were expanded in order to fully expose the horizontal and vertical extent of the possible remains. Thereafter, the newly-identified features were cleaned and test excavated by hand in order to help establish their nature, extent and significance.

The areas targeted for investigation are outlined below.

Field Location 1

This comprises a small triangular area of rough pasture (total area 14,704m^2) that contains the site of a mound (KD019-018) and partly surrounds a residential building and associated yard (Figure 7&Figure 8; Plate 1). A total of 11 test trenches, measuring approximately 886 linear metres overall, were initially proposed for excavation in this area. However, following the establishment of an exclusion zone (100m in diameter) around a badger sett in the eastern field boundary in early 2019, it was not possible to excavate any trenches in the southeast quadrant of the area (see Figure 7 & Figure 8). This reduced the number of trenches to six (Trs 1.1–1.6). As such, the potential significance of the faint curving trend identified in the 2017 geophysical survey (labelled '5' on Figure 7 & Figure 8) cannot be determined at the present time.

An additional trench (Tr. 1.7) was positioned to investigate the extent of archaeological activity in the area of a newly-identified ring-ditch, while a small roughly north–south extension to Trench 2.2 was excavated to fully expose an archaeological feature.

Table 2: Test trench lengths, Field Location 1

Trench No.	Length
1.1	208m
1.2	190.50m
1.3	169m
1.4	63m
1.5	56m
1.6	31.50m
1.7	13.50m
Total length	731.50m

Field Location 2

This area occupies a narrow band of land (total area c.5,003m^2) located adjacent to Kerdiffstown church and graveyard (KD019-006001–4) on the northwest, west and southeast (Figure 9 & Figure 10; Plate 2). The land here is largely flat and covered by low grass, though the ground rises steeply to the west in the area of a large embankment of dump material that marks the eastern perimeter of the former landfill. A gravelled road has recently been constructed around the edge of the dump, directly adjacent to Kerdiffstown church and graveyard on the west (Plate 3).

A total of 15 trenches (Trs 2.1–2.15) were excavated in Field Location 2: five to the southeast of the church and graveyard (Trs 2.1–2.5); and nine (Trs 2.6–2.15) to the west and northwest (Figure 9 & Figure 10). A small northeast-facing extension to Trench 2.8 was excavated to investigate a potential

archaeological anomaly, while two trenches (Trs 2.2 and 2.3) were positioned to investigate linear and curvilinear anomalies (labelled 'F' and 'G' on Figure 9 & Figure 10) identified by the 2018 geophysical survey. The potential presence of an underground service near the church also meant that Trench 2.13, as designed in the Addendum to the original Method Statement, had to be divided into two shorter trenches, namely Trenches 2.13 and 12.14.

Table 3: Test trench lengths, Field Location 2

Trench No.	Length
2.1	80m
2.2	13m
2.3	12m
2.4	75m
2.5	10m
2.6	8.50m
2.7	9m
2.8	40m
2.9	3m
2.10	39m
2.11	27m
2.12	24m
2.13	11m
2.14	23m
2.15	27m
Total length	401.50m

Field Location 4

This area corresponds to the length of the foul/leachate outfall pipeline between the southern boundary of the landfill site and the L2005 road (a total area of 3,516m^2). Three trenches (Trs 4.1–4.3) were excavated here (Figure 11 & Figure 12). Two parallel ENE–WSW trenches (Trs 4.1 and 4.2) were excavated next to the L2005. A 2m-long spur extending to the south of Trench 4.2 was added to investigate the extent of a ditch feature. Trench 4.3 extended the length of the proposed outfall pipeline.

Table 4: Test trench lengths, Field Location 4

Trench No.	Length
4.1	35m
4.2	52m
4.3	147m

Trench No.	Length
Total length	234m

Field Location 5

This comprises two small rectangular parcels of land (total area 3,772m^2) located beside one another near the southern boundary of the landfill site (Figure 11 & Figure 12). The westernmost area presently forms the front garden of a residential house. One trench (Tr. 5.1) was excavated in the garden and three trenches (Trs 5.2–5.4) in the neighbouring field to the east.

Table 5: Test trench lengths, Field Location 5

Trench No.	Length
5.1	40.40m
5.2	61.60m
5.3	62.50m
5.4	62.80m
Total length	227.30m

Archaeological Testing Results

Field Location 1

As mentioned previously, seven test trenches were excavated in Field Location 1 (see Figure 7 & Figure 8; Plate 4). The soil stratigraphy in all of the trenches (Trs 1.1–1.7) is generally uniform, comprising a moderately compact greyish-brown sandy topsoil that ranges in depth from about 0.5m to as much as 1.2m in places. The deepest soils were encountered in the middle of Trenches 1.1–1.3, in the area of several broad hollows, and this may attest to land reclamation works in recent decades, perhaps involving the re-contouring of land by levelling and soil infilling of natural depressions. Indeed, the reported destruction of the mound (KD019-018) in the 1950s attest to modern interventions in this area.

A number of features of archaeological interest were identified in Trenches 1.1–1.3 and Trench 1.7 (Figure 13–Figure 17). These were cut into the glacial till – a greenish-grey sandy matrix with occasional gravel patches – and comprised a ring-ditch (c.6m in diameter), as well as several pit-type features and linear ditches. A possible metalworking feature or charcoal-production pit was also discovered at the eastern end of Trench 1.3. Nothing of potential archaeological significance was identified in Trenches 1.4–1.6.

Trench 1.1

This trench measured 208m in length (northwest–southeast) and c.0.4–1.2m in maximum depth. It extends across the buffer zone of the mound site (KD019-018).

The southern part of a ring-ditch (C.314) was uncovered in the approximate centre of Trench 1.1 (Figure 13, Figure 14 and Figure 17; Plate 5 & Plate 6). The exposed portion of the monument likely comprises just under one half of its full extent, with the remaining unexcavated segment extending under the northern baulk of the trench. The ring-ditch is circular in plan with a maximum diameter of c.6m. It is defined by a c.1.3m-wide cut, with gently sloping sides that break gradually to a shallow concave base. It has a maximum depth of c.0.14m. There is one fill, C.313, a moderately compact blackish-brown silty clay that contains frequent flecks of charcoal and what appears to be fragments of burnt (human?) bone (Sample No. 5). The shallow nature of the remains is likely reflective of disturbance to the monument in the past. A possible pit (C.315) was discovered inside the ring-ditch and is defined by a circular spread (c.0.3m in diameter) of blackish-brown soil that contains frequent charcoal; this may represent a burial (cremation?) pit.

Evidence of possible agricultural activity is also indicated in Trench 1.1 by two linear ditches (C.304 and C.306) which were identified at the western end of the trench (Figure 13–Figure 15; Plate 7).

Both features are defined by broad c.2m-wide bands of light-brown sandy clay (C.303 and C.305) that extend north-northwest–south-southeast across the cutting. C.303 and C.305 contain animal bone (Sample Nos 1 and 2), some of which display butchery marks. Sections excavated through these deposits revealed that they fill U-shaped cuts (C.304 and C.306) with gradually sloping sides. Ditch C.304 has a maximum depth of c.0.6m, while ditch C.306 is c.0.3m deep. These features may represent relict field boundaries, though they are not recorded on early cartographic sources and their antiquity is unknown. Ditch C.306 is likely to be a continuation of Ditch C.308, which was identified in Trench 1.2.

Trench 1.2

This cutting measured c.190m in length (northwest–southeast) and c.0.4–1.1m in maximum depth. It extends across the buffer zone of the mound site (KD019-018).

Three linear ditches and a possible shallow ditch/drain were identified at the western end of this trench. The westernmost ditch, C.308, is c.1.9m wide and reaches a maximum depth of c.0.42m (Figure 13, Figure 14 and Figure 16; Plate 8). It has moderately sloping sides that give way to a broad, U-shaped base. It is filled by a friable light-brown sandy clay (C.307) that contains occasional animal bone (Sample No. 3).

About 20m to the east of C.08 are two further ditches, C.310 and C.312, which appear to overlap on the north (Figure 13, Figure 14 and Figure 16; Plate 9). Ditch C.310 is defined by a shallow U-shaped cut and moderately sloping sides. It measures c.1.2m in maximum width and has a maximum depth of c.0.2m. Ditch C.312 is also defined by a U-shaped cut and moderately sloping sides. It measures c.1.2m in width at the top, narrowing to c.0.6m at the base, and has a maximum depth of c.0.4m. Both ditches are filled with a soft light-brown sandy clay, C.309 (C.310) and C.311 (C.312). The latter fill contained animal bone (Sample No. 4). Although the date and significance of these features are unknown, they may be associated with ditch C.319 in Trench 1.3.

A narrow curving band of light-brown sandy clay (C.316; length of arc c.6m) was also encountered roughly midway between the newly-identified ditches in Trench 1.2 (Figure 13, Figure 14 and Figure 17; Plate 10). A section excavated across C.316 showed it to fill a U-shaped cut (C.317) that measures c.0.6m in maximum width and c.0.30m in depth. This feature may represent a drainage feature, though its precise role and significance are uncertain.

Trench 1.3

This trench measured c.169m in length (northwest–southeast) and c.0.4–1.1m in maximum depth. It extends across the buffer zone of the mound site (KD019-018).

The most interesting discovery in this trench is a pit-type feature (C.322) located at its eastern end (Cover Plate and Plate 11). It is rectangular in plan (c.1.3m by 0.7m) with a north–south long axis, and is defined by a layer of dark blackish-brown silty clay that contains frequent flecks of charcoal. This feature could represent the remains of a metalworking feature/charcoal-production pit. It appears to be a solitary feature, though further work may reveal additional features of archaeological interest in this area.

The only other find in Trench 1.3 was that of a linear ditch, C.319, at the western end of the cutting (Figure 13, Figure 14 and Figure 17). Oriented northeast–southwest, C.319 extends for a distance of c.8m across the width of the cutting. It is defined by a U-shaped cut, with moderately sloping sides, and measures c.1.2m in maximum width. It has a maximum depth of c.0.45m and is filled with a soft light-brown sandy clay, C.318.

Trench 1.7

This trench was excavated to assess whether additional archaeological features were present in the area directly south of the ring-ditch, C.314. The trench measured c.13m in length (northwest–southeast) and c.0.4–0.8m in maximum depth. It lay within the buffer zone of the mound site (KD019-018).

Two probable pits were discovered roughly midway along the line of Trench 1.7, less than 4m south of the ring-ditch (Figure 13, Figure 14 and Figure 17 ; Plate 12). The larger of the two, C.321, is somewhat irregular in plan and measures c.2.3m along its northwest–southeast long axis and c.0.95m in width. It extends under northern baulk of the trench. A test pit excavated into the southern side of C.321 showed it to be filled by a dark-brown silty clay (C.320) that contains frequent flecks of charcoal (Sample No. 6). It reached a maximum depth of c.0.4m, though it may get deeper towards its (unexcavated) centre. A second smaller pit-like feature (C.323) was identified directly adjacent to C.21, on the west. Defined by a circular spread of dark-brown silty clay, C.323 measures c.0.3m in diameter.

The only other feature recorded in Tr. 1.7 comprises a narrow ditch/furrow-like feature, C.325 (Figure 13, Figure 14 and Figure 17; Plate 12). Oriented northwest–southeast, it is defined by a c.0.50m-wide band of dark-brown silty clay (C.324). Charcoal flecks were noted within the matrix of C.324, which was c.0.15m in depth. This feature is difficult to interpret and little can be said about its potential origin – whether archaeological or modern/agricultural – on the basis of the present evidence. No obvious trace of this feature was revealed in the other trenches excavated in this area.

Table 6: Contexts in Trs 1.1 –1.3 and 1.7

Context	Type	Description
C.301	Layer	Topsoil 0.4– 1.2m deep. Present throughout and in all trenches.
C.302	Layer	Subsoil, cut by archaeological features and below topsoil.
C.303	Fill	Fill of linear ditch C.304. Light-brown sandy clay containing animal bone.
C.304	Cut	Cut of linear ditch, oriented NNW–SSE and filled by C.303. C.304 is c.2m wide and 0.6m deep. It has moderately sloping sides that break gradually to a concave base.
C.305	Fill	Fill of linear ditch C.306. Light-brown sandy clay containing animal bone.
C.306	Cut	Cut of linear ditch, oriented NNW–SSE and filled by C.305.C.306 is c.2m wide and 0.3m deep. It has moderately sloping sides that break gradually to a U-shaped base.
C.307	Fill	Fill of linear ditch C.308. Light-brown sandy clay containing animal bone.
C.308	Cut	Cut of linear ditch, oriented NNW–SSE and filled by C.307. C.308 is c.1.9m wide and reaches a maximum depth of c.0.42m. It has moderately sloping sides that break gradually to a U-shaped base. Possibly the same feature as linear ditch C.306.
C.309	Fill	Fill of linear ditch C.310. Light-brown sandy clay.
C.310	Cut	Cut of linear ditch, oriented NE–SW and filled by C.309. C.310 measures c.1.2m in maximum width, and has a maximum depth of c.0.2m. It has moderately sloping sides that break to a concave base. Overlaps with linear ditch C.312 on the north.
C.311	Fill	Fill of linear ditch C.312. Light-brown sandy clay containing animal bone.
C.312	Cut	Cut of linear ditch, oriented NE–SW and filled by C.309. C.312 is defined by a U-shaped cut and moderately sloping sides. It measures c.1.2m in width at the top, narrowing to c.0.6m at the base, and has a maximum depth of c.0.4m. Overlaps with linear ditch C.310 on the north.
C.313	Fill	Fill of ring-ditch C.314. Blackish-brown silty clay that contains charcoal and fragments of burnt bone.
C.314	Cut	Cut of circular ring-ditch (c.6m in diameter). Defined by a c.1.3m-wide cut, with gently sloping sides that break gradually to a shallow, concave base. It has a maximum depth of c.0.14m.
C.315	Layer	Possible pit fill found inside ring-ditch C.314. C.315 is defined by a circular spread (c.0.3m in diameter) of blackish-brown soil. Contains frequent charcoal. Not tested but may represent a burial pit.
C.316	Fill	Fill of ditch C.317. Light-brown sandy clay.
C.317	Cut	Cut of ditch, filled by C.316. C.317 is defined by a U-shaped cut that measures c.0.6m in maximum width and c.0.30m in depth. Possible drainage feature.
C.318	Fill	Fill of ditch C.319. Light-brown sandy clay.
C.319	Cut	Cut of linear ditch, oriented NE-SW and filled by C.318. C.312 is defined by a U-shaped cut, with moderately sloping sides, and measures *c*.1.2m in maximum width. It has a maximum depth of *c*.0.45m.
C.320	Fill	Fill of possible pit C.321. C.320 is defined by dark-brown silty clay that contains frequent flecks of charcoal.

Context	Type	Description
C.321	Cut	Cut of possible pit, filled by C.320. C.321 irregular in plan and measures *c*.2.3m along its northwest–southeast long axis and *c*.0.95m in width. It is *c*.0.40m in depth, though it may be deeper towards its (unexcavated) centre.
C.322	Layer	Rectangular layer (*c*.1.3m by 0.7m). Dark blackish-brown silty clay that contains frequent flecks of charcoal. Possible metalworking feature or charcoal-production pit.
C.323	Layer	Possible pit found immediately adjacent to C.321. C.323 is defined by a circular spread of dark-brown silty clay, *c*.0.3m in diameter.
C.324	Fill	Fill of ditch/furrow C.325. C.324 is defined by dark-brown silty clay, with charcoal flecks.
C.325	Cut	Cut of linear ditch/furrow-like feature, oriented NE–SW and filled by C.325. C.324 is defined by a U-shaped cut, and measures *c*.0.5m in maximum width. It has a maximum depth of *c*.0.15m.

Table 7: Sample list, Field Location 1

Sample No.	Context	Description
1	C.303	Animal bone from ditch fill
2	C.305	Animal bone from ditch fill
3	C.307	Animal teeth from ditch fill
4	C.311	Animal bone from ditch fill
5	C.313	Bulk soil (charcoal and burnt bone)
6	C.320	Bulk soil (charcoal)

Field Location 2

A total of 15 test trenches (Trs 2.1–2.15) were excavated in the vicinity of Kerdiffstown church and graveyard (KD019-006001–4) (see Figure 9 & Figure 10). For the purposes of the present report, the trenches are grouped according to their location and discussed in the order in which they were excavated. As such, Trenches 2.1–2.5 (Group 1) to the southeast of the church are considered first, followed by Trench 2.9 (Group 2) to the east and Trenches 2.6–2.8 (Group 3) to the northwest. Finally, the most recently excavated trenches, Trenches 2.11–2.15 (Group 4), are discussed.

A wide variety of archaeological features and deposits were encountered in Field Location 2, most notably in the area of the church (Figure 19–Figure 22).

Group 1: southeast of the church

Trenches 2.1–2.3

The trenches to the southeast of the church (Trs 2.1–2.5) were excavated to a depth of between 0.5m and 1.2m and archaeological material was discovered in all five (Figure 20). The topsoil (C.01)

was between 0.3m and 1m deep and accumulations of other material (C.02), presumably colluvial and fluvial, also covered the archaeology in parts of the trenches. C.02 ranged from 0.1m to 0.5m deep.

The archaeology uncovered comprised pits and boundary or drainage ditches cut into, and underlying, a charcoal-rich layer of soil (C.13) containing significant amounts of medieval pottery and butchered animal bone (Plate 13). This layer was between 0.2m and 0.35m deep and covered more colluvial and fluvially derived material (C.14/17), some of which also contained flecks of charcoal, animal bone and one possibly worked flint.

Trenches 2.1–2.3 were conjoined and are therefore discussed here as one. They were designed to test the centre of the area south of the medieval church (KD019-006001–4). Trench 2.1 ran along the line of the development and Trenches 2.2 and 2.3 extended from it, with the intention of testing the linear and curvilinear features identified in the geophysical survey (labelled 'F' and 'G' on Figure 9 & Figure 10).

The topsoil in Trenches 2.1–2.3 was between 0.3m and 0.5m deep. It was deepest near the southwestern ends of Trenches 2.2 and 2.3, probably due to an accumulation of material falling from the large landfill bank to the west.

There was a 0.1m to 0.3m deep layer of light yellowish-brown clayey silt (C.02) containing occasional pebbles and no obvious cultural material underneath the topsoil in Trench 2.3 and along much of the length of Trench 2.1 (Plate 14 & Plate 19). It thinned towards the northwestern end of Trench 2.1 and was not present in Trench 2.2.

C.13 was between 0.2m and 0.35m deep and present throughout Trenches 2.1–2.3. It contained varying concentrations of medieval pottery, butchered animal bone and charcoal. Three corroded iron objects were also retrieved from this layer. Initially, when encountered in Trench 2.2 and the northwestern end of Trench 2.1, C.13 was lifted to reveal features beneath it. However, when it became apparent that C.13 contained a significant amount of medieval material, it was decided to only expose its surface, assess its extent and excavate occasional test pits into it. The latter were dug in order to assess its depth and see what lay beneath it. One northeast to southwest orientated linear feature (C.11) was found cut through the surface of C.13. A slot was excavated through its fill, but no dateable remains were retrieved.

All other features in Trenches 2.1–2.3 underlay C.13, and therefore predated it. These included a large oval pit (C.04) and a northwest–southeast orientated linear feature (C.05) in Trench 2.2 and a northeast–southwest orientated linear feature (C.07) and pit (C.09) in Trench 2.1. The only typologically dateable remains retrieved from these features were medieval pottery. Several animal

bones, including those of cattle, sheep and possibly pig, some of which was obviously butchered, were also retrieved. The northeast–southwest linear feature (C.05) identified in Trench 2.2 might correspond with the linear trend identified in the 2018 geophysical survey (labelled 'F' on Figure 9 & Figure 10). It was of broadly similar morphology and at right angles to the linear feature (C.07) in Trench 2.1 and medieval pottery was retrieved from the fill of both, suggesting that the overall pattern of rectilinear boundaries identified in the geophysical survey is medieval and extends into the area of the development.

A complex mixture of interleaving clays, silts and gravels (C.14/17) underlay C.13. In the slots excavated into this material there were flecks of charcoal and in Trench 2.2 there was some animal bone (Plate 17). It appears to be mostly fluvially derived and there may be the remains of a paleochannel/former riverbed underlying the line of the proposed development.

Table 8: Contexts in Trenches 2.1–2.3

Context	Type	Description
C.01	Layer	Topsoil 0.3–0.5m deep. Present throughout and in all trenches.
C.02	Layer	Fluvial and colluvial material above the archaeological material and below topsoil. Present along most of Trs 2.1 and 2.3.
C.03	Fill	Fill of pit C.04. Mid-dark brown silty clay containing frequent flecks of charcoal, animal bone and some medieval pottery.
C.04	Cut	Cut of large oval pit under C.13. A piece of medieval pottery was picked up from its surface, so it was not deemed necessary to test excavate it. There were signs of *in-situ* scorching around its edge and the material it is cut into (C.14) also contained animal bone. It is c.2.5m long and of unknown width and depth.
C.05	Cut	Cut of NE–SW orientated linear under C.13. It is c.0.7m wide and 0.3m deep, and has moderately sloping sides that break gradually to a concave base. It appears to be at right angles to C.07 and is likely associated.
C.06	Fill	Fill of C.05.
C.07	Cut	Cut of NW–SE orientated linear under C.13. It is c.0.6m wide and 0.25m deep and has moderately sloping sides that break gradually to a concave base. It appears to be at right angles to C.07 and is likely associated.
C.08	Fill	Fill of C.07.
C.09	Cut	Cut of shallow pit with gently sloping sides that broke gradually to a flat/concave base. It was 1.5m long and 0.2m deep. No artefacts were retrieved from its fill.
C.10	Fill	Fill of C.09.
C.11	Cut	Cut of NE–SW orientated linear feature cut through the surface of C.13. It is c.0.7m wide and 0.25m deep and no dateable remains were found in the slot excavated through its fill.
C.12	Fill	Fill of C.11.
C.13	Layer	Layer of cultural material under C.02 and C.01, and above C.14. It varied from mid brown to dark purplish brown and contained varying concentrations of medieval pottery, animal bone and charcoal.

Context	Type	Description
C.14/C.17	Layer	Layer under C.13. Mixture of silts, gravels and clays. In some slots excavated there were flecks of charcoal present in this layer and in Tr. 2.2 there was some animal bone.
C.25	Cut	Cut of WNW–ESE orientated linear feature cut through C.17 and under C.13. It was of at least 0.8m deep and 1m wide.
C.26	Fill	Fill of C.25.

Trench 2.4

Trench 2.4 was placed to investigate the southern extent of the area to the south of the medieval church. The topsoil here ranges from 0.2m to 0.4m in depth and overlies a 0.3–0.45m deep layer of light yellowish-brown clayey silt containing occasional pebbles but no obvious cultural material (C.02). A northeast–southwest linear feature (C.20) cutting through the surface of this material was revealed midway along the trench (Figure 20;Plate 21). No dateable material was retrieved from its fill (C.21) and it is likely to be a relatively modern feature, perhaps a drainage ditch.

The cultural layer, C.13, underlies C.02 and is present in most of Trench 2.4, but thins out near its southeastern extent, and for the last 10m it is patchy (Figure 19). A curvilinear feature (C.15) is cut into the surface of C.13, c.24m from the southeastern end of Trench 2.4 (Figure 20; Plate 22). It is 0.15m wide, 0.06m deep and has a projected diameter of c.4m. It seems unlikely to have had a structural function and it may simply be a root cast.

Three test pits were cut through C.13 in Trench 2.4 and, as in Trenches 2.1–2.3, it contained medieval pottery and occasional pieces of butchered animal bone. In one of the test pits, a north-northeast to south-southwest linear feature (C.23) was identified. No dateable remains were retrieved from its fill (C.24) but given its position under C.13 it is likely to be medieval or earlier. The material underlying C.13 in the two most northwesterly test pits is composed of light grey silts, but in the southeastern test pit and in the southeastern end of Trench 2.4, where C.13 was patchy, the underlying material comprises mostly rounded pebbles (C.17). A water-rolled and heavily patinated flint, which may have been a prehistoric scraper, was found on the surface of this material (Plate 24).

In the southeastern end of Trench 2.4, where C.13 only existed in patches, a pit (C.18) was revealed. It is cut into C.17 and measures 1.3m long by 0.6m wide. It is filled by light grey clayey silt with occasional flecks of charcoal (C.19). It was not test excavated.

The medieval archaeology clearly extends the full length of the trench and there is potential for earlier remains in the fluvial deposits.

Table 9: Contexts in Trench 2.4

Context	Type	Description
C.01	Layer	Topsoil 0.3– 0.5m deep. Present throughout and in all trenches.
C.02	Layer	Fluvial and colluvial material above the archaeological material and below topsoil. Present along all of Tr. 2.4 and ranging from 0.3–0.45m in depth.
C.13	Layer	Layer of cultural material under C.02 and above C.14 and C.17. It varied from mid brown to dark purplish brown and contained varying concentrations of medieval pottery, animal bone and charcoal. In Tr. 2.4, it varied from 0.3m in depth in the northwestern end of the trench to occasional patches of material in the southeastern end.
C.14/C.17	Layer	Layer under C.13. Mixture of silts, gravels and clays. In some slots excavated there were flecks of charcoal present in this layer and in Tr. 2.2 there was some animal bone.
C.15	Cut	Curvilinear feature cut into surface of C.13, 24m from the southeastern end of Tr. 2.4. It is 0.15m wide and 0.06m deep and surrounds a space with a projected diameter of c.4m.
C.16	Fill	Fill of C.15.
C.17	Layer	Fluvial deposits in the southeast end of Tr. 2.4. Different in composition, but occupies the same stratigraphic horizon as C.14 in Trs 2.1–2.3.
C.18	Cut	Cut of oval pit or linear feature cut into C.17: 1.3m long, 0.6m wide and of unknown depth.
C.19	Fill	Fill of C.18. Light grey clayey silt with occasional flecks of charcoal.
C.20	Cut	Cut of linear cut through C.02.
C.21	Fill	Fill of C.20.
C.23	Cut	Cut of a NNE–SSW linear under C.13, revealed in a test slot
C.24	Fill	Fill of C.23.

Trench 2.5

Trench 2.5 was positioned immediately south of the church. The topsoil is up to 1m deep here and its removal revealed a north–south orientated linear feature (C.51) that was cut into colluvial material (C.02) (Figure 20; Plate 25 & Plate 26). It was filled by small pebbles and had light yellowish accretions along the sides of its cut. It is likely a relatively modern feature, but no typologically dateable material was retrieved from its fill. Some animal bone was retrieved. The excavation of a test pit through C.51 revealed C.13 at a depth of 0.25m under the surface of C2. This proved that the cultural horizon C.13 continues into this area and it was deemed preferable not to disturb these contexts further during testing.

Table 10: Contexts in Trench 2.5

Context	Type	Description
C.01	Layer	Topsoil 1m deep.

Context	Type	Description
C.02	Layer	Fluvial and colluvial material above the archaeological material and below topsoil. Present along all of Tr. 2.5.
C.13	Layer	Layer of cultural material under C.02. It varied from mid brown to dark purplish brown and contained varying concentrations of medieval pottery, animal bone and charcoal. In Tr. 2.5 the surface of this material is 1.2m beneath the top of the sod.
C.51	Cut	Cut of a N–S linear feature cut into the surface of C.02. It was 0.6m wide, 0.3m deep and had steeply sloping sides that broke gradually to a concave base. Light yellow accretions had accumulated on the edges of the cut.
C.52	Fill	Fill of linear feature C.51. Light brown clayey silt and pebbles.

Group 2: east of the church

Trench 2.9

The southern portion of the trench originally planned for the area north of the church was not accessible due to a tree line and the proximity of the access road to Kerdiffstown House. One trench (Tr. 2.9) was excavated immediately northeast of the church to test the depth of deposits in this area (Figure 21; Plate 27).

The topsoil was 0.8m deep and covered a cultural layer (C.94) rich in butchered animal bone; this may be the same layer as C.117 in Trench 2.11 a short distance to the west (see below). A pit (C.95) was cut into the surface of this material (Plate 28 & Plate 29). A test pit cut into pit fill (C.93) revealed a highly oxidised surface at a depth of 0.15m. This was predominantly oxidised yellow (C.96) but a bright orange curvilinear band ran through it (C.97), perhaps where more intense heat had occurred. A line of stone (C.98), running north from the oxidised material, was also observed protruding from C.94 and may form part of a structure. No pottery or other typologically dateable material was retrieved from this trench. However, this is clearly the surface of *in-situ* archaeological deposits, likely of medieval date and associated with the church or attendant agricultural/industrial activity. The highly oxidised surface and possible stone structure might represent a cereal kiln or metalworking feature.

Table 11: Contexts in Trench 2.9

Context	Type	Description
C.01	Layer	The topsoil was 0.8m deep in Tr. 2.9.
C.93	Fill	Fill of cut C.95. Dark grey clayey silt containing butchered animal bone and frequent charcoal flecks.
C.94	Layer	Layer of light greyish brown clayey silt containing occasional flecks of

Context	Type	Description
C.95	Cut	Probable pit cut into C.94. Partially revealed pit/feature cut through C.94. The revealed extent was 1.2m long and 0.8m wide. A slot cut into its upper fill C.93 revealed C.96, possibly another fill. It was decided not to disturb it further during testing.
C.96	Deposit	Highly oxidised/burnt yellow surface within pit C.94.
C.97	Deposit	Orange band within C.96.
C.98	Structure	Stone feature within C.94.

Group 3: northwest of the church

Trenches 2.6–2.8

Three trenches (Trs 2.6–2.8) were excavated to the northwest of the medieval church. This is on higher ground, overlooking the church. The topsoil in this area was only 0.2m to 0.35m deep and its removal revealed a mixture of natural glacial deposits. There were no archaeological features present in Trenches 2.6 or 2.7 and only features of potential archaeological significance were identified in Trench 2.8 (Figure 21).

It was not possible to conduct a geophysical survey in this area (Leigh 2018; see Figure 9 & Figure 10 in this report). However, survey to the east of the road adjacent to the test trenches suggested that archaeological activity might continue into this area.

A single pit (C.83) was uncovered 15m from the southeast end of Trench 2.8 (Plate 30). It was filled by dark brown silty clay and angular stones and contained some obviously butchered animal bone. However, no typologically datable material was retrieved from its fill and it may be a relatively recent feature.

Two parallel linear features were also found near the northwestern end of Trench 2.8, one 2m wide (C.91) and the other 0.7m wide (C.89). They were filled by topsoil-like material (C.90 & C.92) and are likely to be of relatively modern date. No typologically dateable material was retrieved from either feature, but butchered animal bone was retrieved from the fill (C.92) of the wider one (C.91).

Table 12: Contexts in Trench 2.8

Context	Type	Description
C.01	Layer	Topsoil 0.3–0.5m deep. Present throughout and in all trenches.
C.83	Cut	Cut of oval pit, 1.1 m long, 0.7m wide and 0.3m deep. It had gently sloping sides that broke gradually to a concave base.
C.84	Fill	Fill of pit C.83.
C.87	Cut	Cut of N–S linear feature – modern/post-medieval feature.

Context	Type	Description
C.88	Fill	Fill of C.87 – post-medieval creamware pottery found in fill.
C.89	Cut	Cut of NE–SW linear feature. 0.7m wide.
C.90	Fill	Fill of C.89. Dark brown silty clay.
C.91	Cut	Cut of NE–SW linear feature. 2m wide.
C.92	Fill	Fill of C.91. Dark brown silty clay with roots. Butchered animal bone retrieved.

Group 4: west and northwest of the church

This group consists of six trenches: one (Tr. 2.10) located directly west of the church and four (Trs 2.11–2.15) just to its northwest (Figure 22). The topsoil (C.101) varied from 0.4–0.8m in depth across the target area. In Trenches 2.12–2.14, old topsoil (C.108/C.112) was found beneath an accumulation of modern debris-filled soil (C.107) that derives from the adjacent landfill bank to the west. No trace of topsoil was uncovered in Trench 2.10 or at the northwest end of Trench 2.12 where a gravelled road has been constructed around the western perimeter of the landfill. Archaeological layers were revealed in all of the trenches and mainly comprised soil horizons containing charcoal, animal bone and/or pottery sherds. A number of possible ditches and deposits were also discovered.

The trenches are discussed in the order they were excavated, beginning with Trench 2.15.

Trench 2.15

This trench measured 27m in length (northwest–southeast). The topsoil here averages 0.2m in depth and covers a 0.2m-deep subsoil (C.102) defined by a band of mid-brown sandy clay containing occasional small stones. Two features of archaeological interest were uncovered: a narrow ditch/drain (C.106) and a possible shallow ditch or spread (C.104). Both of these overlay the natural gravels which were visible throughout the cutting.

C.106 is defined by a linear band of dark-brown sandy clay (C.105) that extends across the width of the trench in a northeast–southwest direction (Figure 22 & Figure 23; Plate 31). A section excavated through this material showed it to fill a shallow U-shaped cut that measures c.0.9m in maximum width and c.0.2m in depth. This feature, which is of unknown antiquity, may represent a narrow ditch or drain. A roughly linear band of mid-brown sandy clay (C.103) was also identified towards the southwestern end of the trench (Figure 22 & Figure 23). It measures c.2.3m in width and fills a shallow, somewhat irregular-shaped depression or cut (C.104), c.0.32m in average depth. The exact significance of this feature is uncertain and it may comprise a soil-filled depression of unknown extent, rather than a ditch.

Trenches 2.13 & 2.14

These were originally intended to form part of a single trench that was split in two following the identification of a possible underground service during on-site works. As such, they are considered here together as one. Trench 2.14 measured 27m in length and Trench 2.13 measured 11m in length. Both were aligned northwest–southeast.

The principal feature identified here comprised a soil layer (C.109) defined by band of loose gravelly light-brown silty clay (Figure 22; Plate 32). This material was identified across much of the two trenches, beneath the buried topsoil (C.108). Although modern red brick fragments were noted in the upper surface of C.109, its lower matrix contains animal bone and some pottery sherds of potential medieval date. Two test pits were excavated through this material in order to help assess its depth and potential significance. Test Pit 1, at the northeast end of Trench 2.14, showed that it thins out to no more than 0.05m in this area. It also appears patchy and shallow in Trench 2.13. A slightly deeper stratigraphy was revealed in Test Pit 2, at the southeast end of Trench 2.14 (Figure 24; Plate 33). Here, C.109 (c.0.34m deep) covered another band of gravelly greyish-brown silty clay (C.110). The latter, which overlay the natural gravels, also contained animal bone (Plate 34). It was c.0.40m in maximum depth.

Trenches 2.11 & 2.12

These conjoined T-shaped trenches are considered here together as one. Trench 2.12 measured 24m in length (aligned northwest–southeast) and Trench 2.13, located immediately adjacent to Kerdiffstown church and graveyard, measured 24m in length (aligned northeast–southwest). Once again, a series of probable cultural layers were identified in these trenches.

A layer of mid-brown clay (C.113) was encountered throughout much of Trench 2.12; it seems to thin out towards the southeast end of the cutting, where it only occurs in patches (Plate 35). A test pit excavated through this material at the northwest end of the trench indicates that it reaches a depth of c.52m. Nothing of obvious archaeological interest was noted in the matrix of C.113 and while it may represent a natural ‘sub-soil’, it could equally relate to archaeological activity. As such, care was taken not to disturb this context during testing. A semi-circular band of light-pinkish clay (C.114) identified at the southeast end of Trench 2.12 may represent the remains of a burnt pit/fire spot (Plate 36). It measures c.1.3m in diameter and extends under the northern baulk of the trench.

The ground level across Trench 2.11 falls gently from west to east, where it terminates close to Trench 2.9. A layer of light greyish-brown clayey silt (C.117) was revealed in the southeast end of Trench 2.11. This context resembles C.94 in Trench 2.9 and, like the latter, C.117 contains occasional flecks of charcoal. A larger spread of charcoal and ash-like material (C.115) was also noted in the

matrix of this material (Plate 37). A second cultural horizon, this time defined by a spread of mid-brown clayey slit (C.116) that contains charcoal, animal pottery and sherds of medieval pottery, was also uncovered in the central area of Trench 2.11, and extending slightly into Tr. 2.12 (Plate 38). C.116 likely relates to medieval activity and may correspond to C.13 in Trenches 2.1–2.5, though this is uncertain. C.117 only occurs in patches at the western end of Trench 2.11, where the ground rises and the natural gravels become more visible.

Trench 2.10

This trench measured 39m in length (northwest–southeast) and extends close to Kerdiffstown church and graveyard on the west.

A layer of mid-brown clayey slit (C.118) was revealed in the middle of the trench (Figure 22; Plate 39). This material is similar in composition to C.117 in Trench 2.11 and also contained charcoal flecking. C.118 appears to have been substantially disturbed and only survives as a c.1m-wide band (c.0.4m deep) in the middle of the trench. Indeed, it appears to have been cut away on the east where it is covered by a modern deposit of gravel, C.119 (Plate 40). Nothing else of potential archaeological significance was identified in this trench.

Table 13: Contexts in Trenches 2.10–2.15

Context	Type	Description
C.101	Layer	Topsoil 0.4–0.8m deep. Present throughout and in all trenches. Same as C.108 and C.12.
C.102	Layer	Subsoil, mid-brown sandy clay, cut by archaeological features and
C.103	Fill	Fill of possible ditch/natural depression C.104. Mid-brown sandy clay.
C.104	Cut	Irregular cut of possible ditch/natural depression and filled by C.103. C.104 is c.2.3m wide and 0.32m deep.
C.105	Fill	Fill of linear possible ditch/drain C.106. Dark-brown sandy clay.
C.106	Cut	Cut of possible ditch/drain, oriented NE–SW and filled by C.105.C.106 is c.0.9m wide and 0.2m deep. It has moderately sloping sides that break to a U-shaped base.
C.107	Layer	Band of dark brown clay, c.20m in average depth, containing modern debris (plastic, iron, glass, etc.). Represents spill from adjacent landfill bank. Same as C.112.
C.108	Layer	Topsoil, now buried beneath landfill spill C.107. C.108 measures c.0.1m in average depth. Same as C.101 and C.112.
C.109	Layer	Spread of loose, light-brown silty clay, averaging c.0.30m in depth. Contains frequent gravel, as well as some animal bone and pottery sherds.
C.110	Layer	Band of gravelly, greyish-brown silty clay, averaging c.0.30m in depth. Contains animal bone.

Context	Type	Description
C.111	Fill	Modern gravels, noted at NW end of Tr. 2.12. Relates to recent road construction.
C.112	Cut	Topsoil, now buried beneath landfill spill C.107. C.112 measures c.0.1m in average depth. Same as C.101 and C.108.
C.113	Layer	Mid-brown clay, c.0.32m in maximum depth. Only noted in Tr. 2.12.
C.114	Layer	Semi-circular spread (c.1.3m in diameter) of light pinkish soil. Not tested but may represent a burnt pit or fire spot.
C.115	Layer	Small spread of charcoal and ash-like material identified in the upper surface of C.117.
C.116	Layer	Band of mid-brown clayey slit. Contains charcoal, animal pottery and pottery sherds. May correspond to C.13 in Trs 2.1–2.5.
C.117	Layer	Spread of light greyish-brown clayey silt that contains charcoal. Not tested, but may correspond to C.94 in Tr. 2.9.
C.118	Layer	Band of mid-brown sandy clay, c.1m wide by 0.4m deep. Contains charcoal. May correspond to C.117 in Tr. 2.11.
C.119	Layer	Modern gravel fill identified over C.118 in Tr. 2.10.

Field Location 4

This area corresponds to the length of the foul/leachate outfall pipeline between the southern boundary of the landfill site and the L2005 road (a total area of 3516m^2). Three trenches (Trs 4.1–4.3) were excavated in this area (Figure 11 & Figure 12).

Trench 4.1

Trench 4.1 was positioned closest to the L2005 road. Removal of the sod revealed a dump of modern building rubble along its length. A test trench was cut into this midway along its length and larger lumps of concrete were revealed at c.0.5m deep. This area is heavily disturbed and since there is an asbestos water main crossing here it was not deemed wise to continue excavation.

Trench 4.2

Trench 4.2 was located at the bottom of a steep slope. The topsoil was up to 1m deep and a piece of medieval pottery was retrieved from it, midway along the length of Trench 4.2. A ditch (C.201) was revealed under the topsoil at this location and a small extension to Trench 4.2 was excavated (Figure 25; Plate 41–Plate 43) to investigate the full width of the ditch. The ditch was c.2.5m wide and c.0.3m deep. A stone alignment (C.203) was uncovered along its southern side. This appears to be a stone drain cut into the side of the ditch, but at 1.3m depth it was not possible to investigate it further.

Table 14: Contexts in Trench 4.2

Context	Type	Description
C.01	Layer	Topsoil 0.6–1m deep.
C.201	Cut	Cut of east–west linear feature at base of hillslope.
C.202	Fill	Fill of C.201. Dark greyish brown silty clay containing occasional flecks of charcoal.
C.203	Structure	Stone feature in edge of C.201, only partially exposed. Traversed the width of the extension: 2m length.

Trench 4.3

This trench extended the length of the outfall pipe (Plate 44). Several modern agricultural linear features and a large linear feature back-filled with sand (Plate 45) were revealed within its length. There were no archaeological features identified within Trench 4.3.

Field Location 5

Trenches 5.1–5.4

Field Location 5 comprises two small rectangular parcels of land (total area 3,772m^2) located beside one another near the southern boundary of the landfill site (Figure 11 & Figure 12). The westernmost area presently forms the front garden of a residential house. One trench (Tr. 5.1) was excavated in the garden and three trenches (Trs 5.2–5.4) in the neighbouring field to the east (Plate 46 & Plate 47). The soils ranged from c.0.3–1.1m in depth, being deepest in the southern part of Trenches 5.2–5.4, where the ground slopes steeply.

Nothing of potential archaeological interest was identified in this area.

Backfilling

During excavation, sod and topsoil were separated from lower deposits and then placed back on the trenches last. All areas were carefully backfilled and tracked-over by the mechanical excavator to ensure a neat finish (Plate 48).

Field Location 6

Background

A third phase of test trenching was conducted at the site in mid-April 2019. This was focused on an underground water pipe to be installed just to the west of the Morell River. The trench for the proposed water pipe will be c.1.5m deep and 1.2–1.5m in width. It will extend for a distance of approximately 640m from the outfall pipe southeast of Kerdiffstown church and graveyard (KD019-006001–4) to a field gate located directly adjacent to the main entrance to the grounds of

Kerdiffstown House. The route of the proposed water pipe corresponds to Field Location 6 (see Figure 26).

Plans for the installation of the water pipe were not contained within the scope of works set out in the original Method Statement and permission to excavate the addition trenches was granted by the NMS (12 April 2019) following the submission of a second addendum to original Method Statement for the current licence 18E0665. It was noted in that addendum that while most of the proposed pipeline route will run parallel to the tarmac road accessing Kerdiffstown House and close to the tree-line, it will also traverse areas previously tested under the current licence (i.e. Field Locations 2 and 4). As such, it may impact on archaeological features and deposits identified in those areas during testing, including cultural soil layers (C.13 and C.17) in Field Location 2, as well as a ditch-type feature (C.202) in Field Location 4.

The new test trenches were designed to determine whether sub-surface archaeological remains are present along the proposed route of the water pipe. It was originally intended to excavate five test trenches along the water pipe route; however, the southernmost of the proposed trenches (labelled Tr. 6.5 in the addendum) could not be excavated due to the presence of a septic tank, waste pipe and percolation area in the green space located directly north of Kerdiffstown gate house. Moreover, the adjacent area of pasture to the southwest, in Field Location 4, had been previously disturbed by the installation of a water main (Plate 49 and Plate 50) and disturbed ground containing modern debris was encountered at this location – to the east of Tr. 4.1 – during earlier testing undertaken as part of the present project. It ought to be noted that the results of the earlier testing provide a good assessment of the archaeological potential of this area.

Four trenches (Trs 6.1–6.4) were excavated along the line of the proposed water pipe (Table 15; Figure 27).

Table 15: Test trench lengths, Field Location 6

Trench No.	Length
6.1	40m
6.2	38m
6.3	50m
6.4	24m
Total length	152m

Results

Nothing of potential archaeological interest was identified in this area.

The stratigraphy encountered in each of the four trenches (Trs 6.1–6.4) was generally uniform throughout, comprising a thin band of topsoil (c.0.1m in average depth) over a light brown subsoil that ranges from 0.2m to 0.3m in depth (Plate 51 and Plate 52). The subsoil covered a sticky, orangey-grey 'gley-like' clay that contained numerous small snail shells within its matrix. This clay likely comprises a natural fluvial deposit. A number of test pits dug through it showed that it varied in thickness from c.0.9m, in Tr. 6.1, to less than 0.20m at the southern end of Tr. 6.4 and covered a band of orangey-grey gravels that probably represent former riverbed material (Plate 53).

An accumulation of modern debris-filled soil noted beneath the topsoil in Tr. 6.1 either derives from the construction of the adjacent tarmac road or from the landfill bank a short distance to the west. Three gravel-filled drains containing plastic pipes were also identified in Tr. 6.3 (Plate 54).

Discussion

Archaeological test trenching at Kerdiffstown produced interesting results, revealing a variety of archaeological features of varying date and significance in three of the four areas investigated. The array of evidence represented is extensive, ranging from a prehistoric burial site or ring-ditch to medieval occupation layers and other remains, as well as features associated with agricultural activity and possible metalworking/charcoal production.

Field Location 1

The earliest phase of activity is represented by a ring-ditch (C.314), the southern sector of which was uncovered during the present project. The ditch, which has a projected overall diameter of c.6m, only survives as a low-profile feature suggesting that it has been substantially disturbed by later activity. It does, however, lie within the buffer zone for the mound (KD019-018) reportedly levelled in the 1950s, though whether the ring-ditch originally encircled the putative mound – thus comprising part of a ring-barrow or bowl barrow with outer ditch – cannot be established on the basis of the current evidence. Nevertheless, the ring-ditch likely acted as a focus for burial, as indicated by the possible burnt human bone in its fill and the presence of what may be a cremation pit in its interior. A number of other features recorded in its immediate vicinity may relate to associated activity and include two possible pits, the larger of which measures at least 2.3m in diameter. The significance of a nearby furrow-like feature is uncertain, but it too may be of archaeological interest.

A series of linear ditches was also identified in Field Location 1. While the date and significance of these features are unknown, they could represent relict field boundaries associated with post-medieval (or earlier) agriculture. The possible remains of a metalworking feature or charcoal-production pit were also discovered at the eastern part of this area and, as noted above, may be associated with other, as yet unidentified archaeological features.

Field Location 2

All of the testing areas in the vicinity of Kerdiffstown church and graveyard (KD019-006001–4) have been shown to contain significant archaeological features and deposits of probable medieval origin. This includes a series of linear ditches and pits cut into and underlying a rich cultural layer (C.13) in Trenches 2.1–2.5, and a possible structure (kiln?) in Trench 2.9. Underling these is a fluvial-derived horizon that also has the potential to contain material of archaeological interest.

Archaeological deposits, mainly comprising soil layers containing artefacts (pottery sherds) and ecofacts (animal bone and charcoal), were also identified in Trenches 2.10–2.14, with two ditch-type

features revealed in Trench 2.15. Interestingly, the pattern of linear features identified to the south of the church appears to correspond to the linear and curvilinear features identified in the 2018 geophysical survey and together may indicate a rectilinear pattern of medieval (field?) boundaries. Moreover, it is possible that much of the cultural material (pottery, animal bone, charcoal, etc.) contained within the newly-identified soil layers was introduced as part of medieval manuring activities; indeed, medieval farmers often supplemented dung and earth with domestically derived waste products like pottery (Jones 2012, 152).

The area further to the northwest of the church (Trs 2.6–2.8) was largely devoid of archaeological features, apart from one undated pit and a pair of linear features. No domestic or religious structures were encountered during testing, nor were any human burials identified. It ought to be noted, however, that such remains may well be present under the cultural soil layers, or in other untested areas near the church.

Field Location 4

Only one feature of potential archaeological significance was identified here: a ditch in Trench 4.2 that contained a stone alignment. A sherd of medieval pottery found in topsoil overlying the ditch raises the possibility that the latter is of archaeological interest, though the pottery may derive from elsewhere on the site.

Field Location 5

Nothing of potential archaeological interest was identified in this area.

Field Location 6

Nothing of potential archaeological interest was identified in this area.

Recommendations

Based on the findings of the testing, the following recommendations are made:

Field Location 1

1. It is recommended that if preservation *in situ* is not possible that the archaeological remains within the footprint of the proposed development in this area be archaeologically excavated and recorded in advance of development at the site.
2. It was not possible to test the southeastern quadrant of Field Location 1 due to the establishment of an exclusion zone around a badger sett. It is recommended that once the exclusion zone is lifted, the area be archaeologically tested or subject to archaeological monitoring.

Field Location 2

1. It is recommended that if preservation *in situ* is not possible that the archaeological remains within the footprint of the proposed development to the south, west and northwest of Kerdiffstown church and graveyard be archaeologically excavated and recorded in advance of development at the site.
2. No definite archaeological remains were uncovered in the northern part of Field Location 2 (Trs 2.6–2.8). It is recommended that this area be monitored during the removal of topsoil.

Field Location 4

1. It is recommended that the full extent of the ditch in Trench 4.2, and 5m to either side, be exposed and that it be excavated and recorded in advance of the development works at this site.

Field Location 5

No further work is recommended in this area.

Field Location 6

No further work is recommended in this area.

The above recommendations are subject to the approval of the National Monuments Service and the National Museum of Ireland. Proposed mitigation measures should comply with the *National Monuments Act 1930* (as amended). Archaeological excavation should be undertaken under a licence issued under Section 26 of the *National Monuments Act 1930* (as amended) and be in accordance with the *Framework and Principles for the Protection of the Archaeological Heritage* (DAHGI 1999).

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Figures

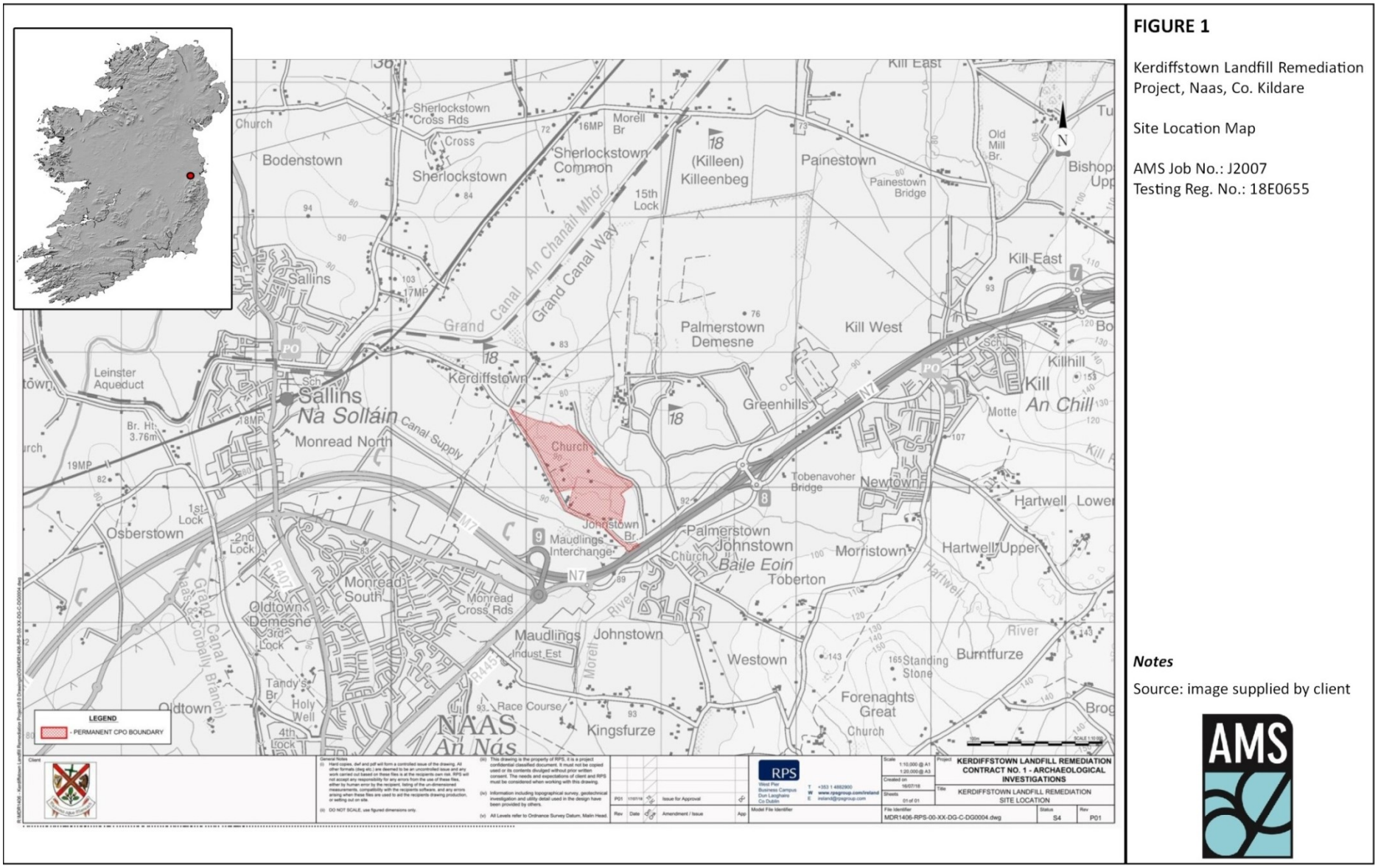

Figure 1: Kerdiffstown Landfill Remediation Project site location map

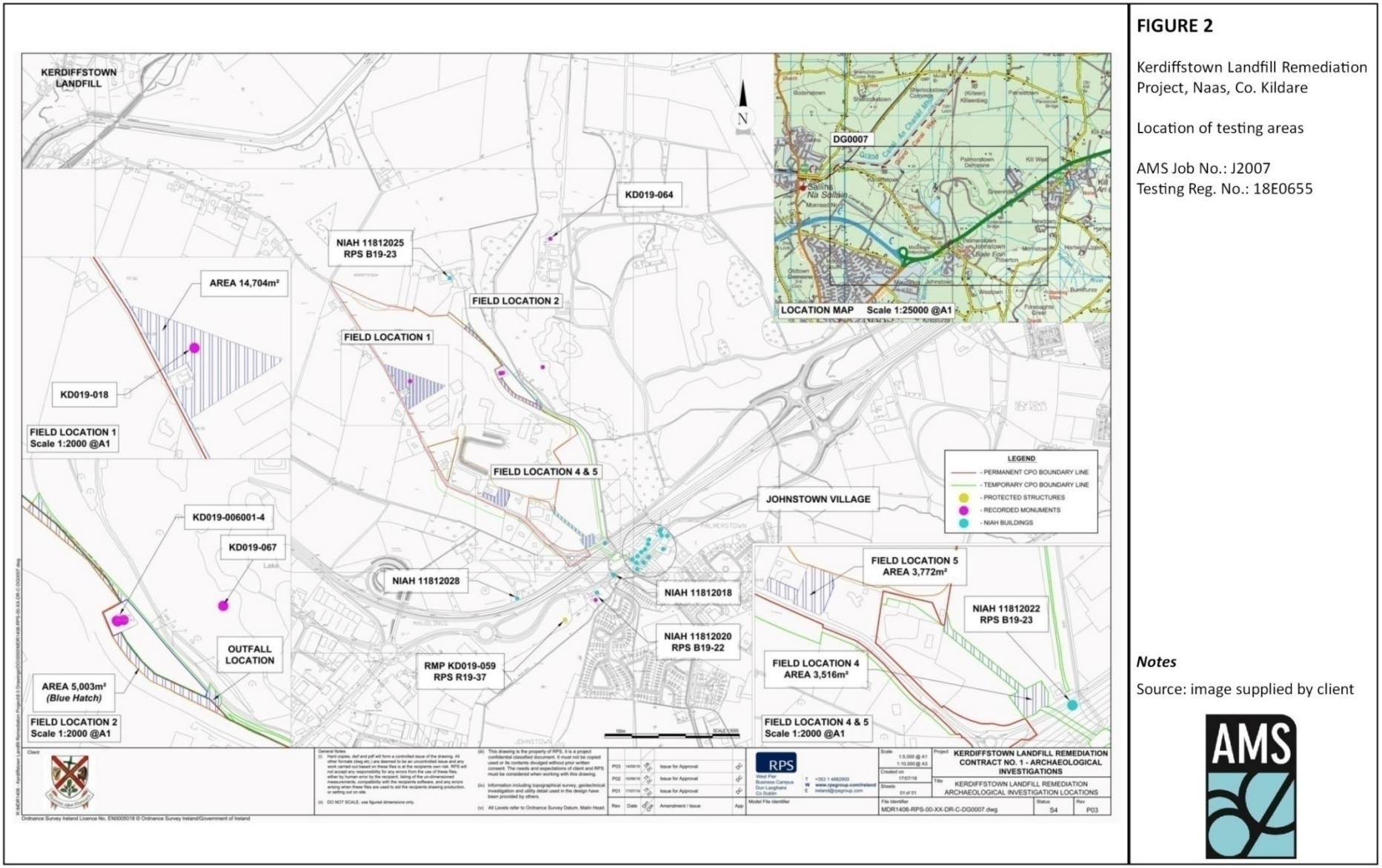

FIGURE 2

Kerdiffstown Landfill Remediation Project, Naas, Co. Kildare

Location of testing areas

AMS Job No.: J2007
Testing Reg. No.: 18E0655

Notes

Source: image supplied by client

Figure 2: Location of testing areas

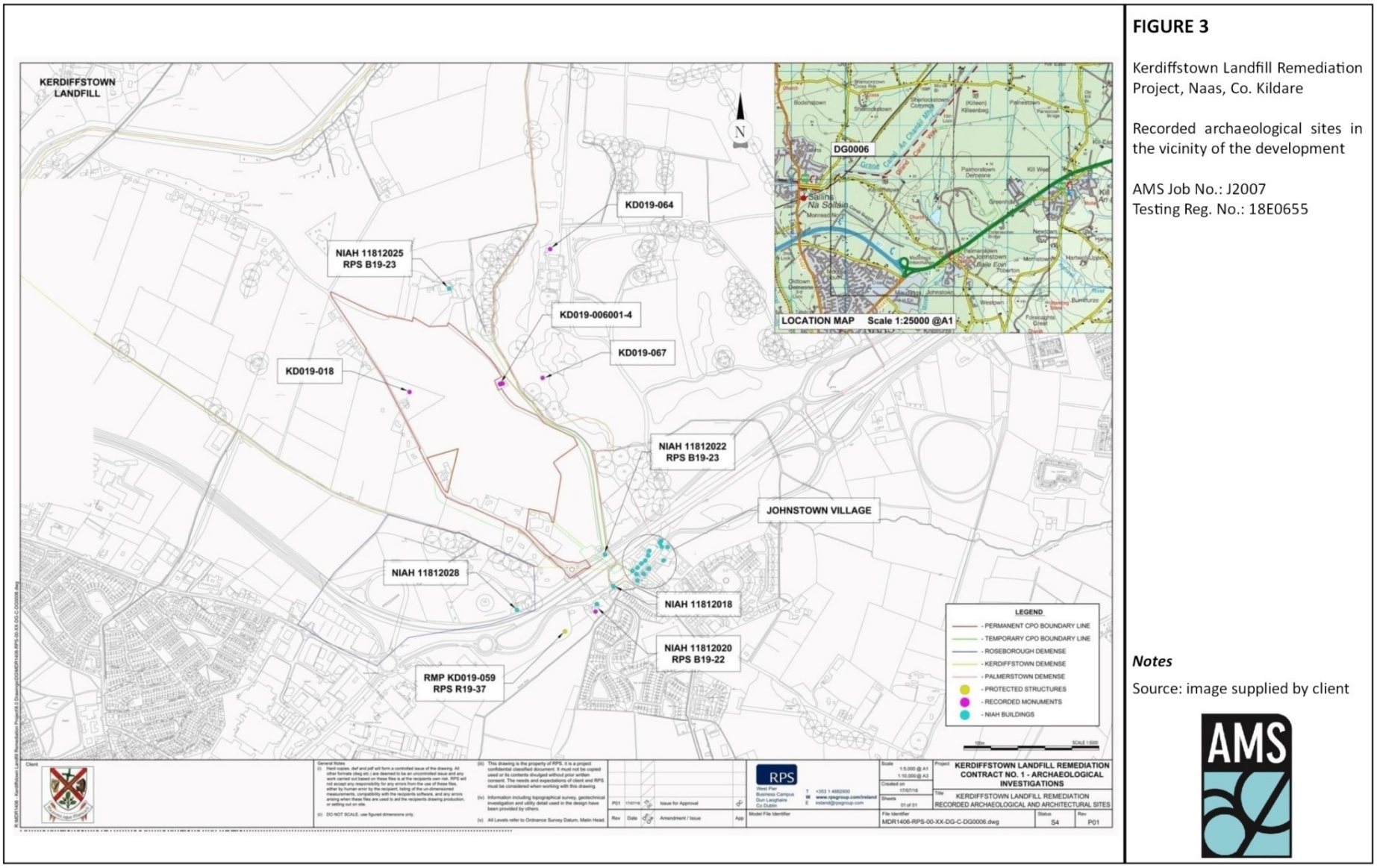

FIGURE 3

Kerdiffstown Landfill Remediation Project, Naas, Co. Kildare

Recorded archaeological sites in the vicinity of the development

AMS Job No.: J2007
Testing Reg. No.: 18E0655

Notes

Source: image supplied by client

Figure 3: Recorded archaeological sites in the vicinity of the development

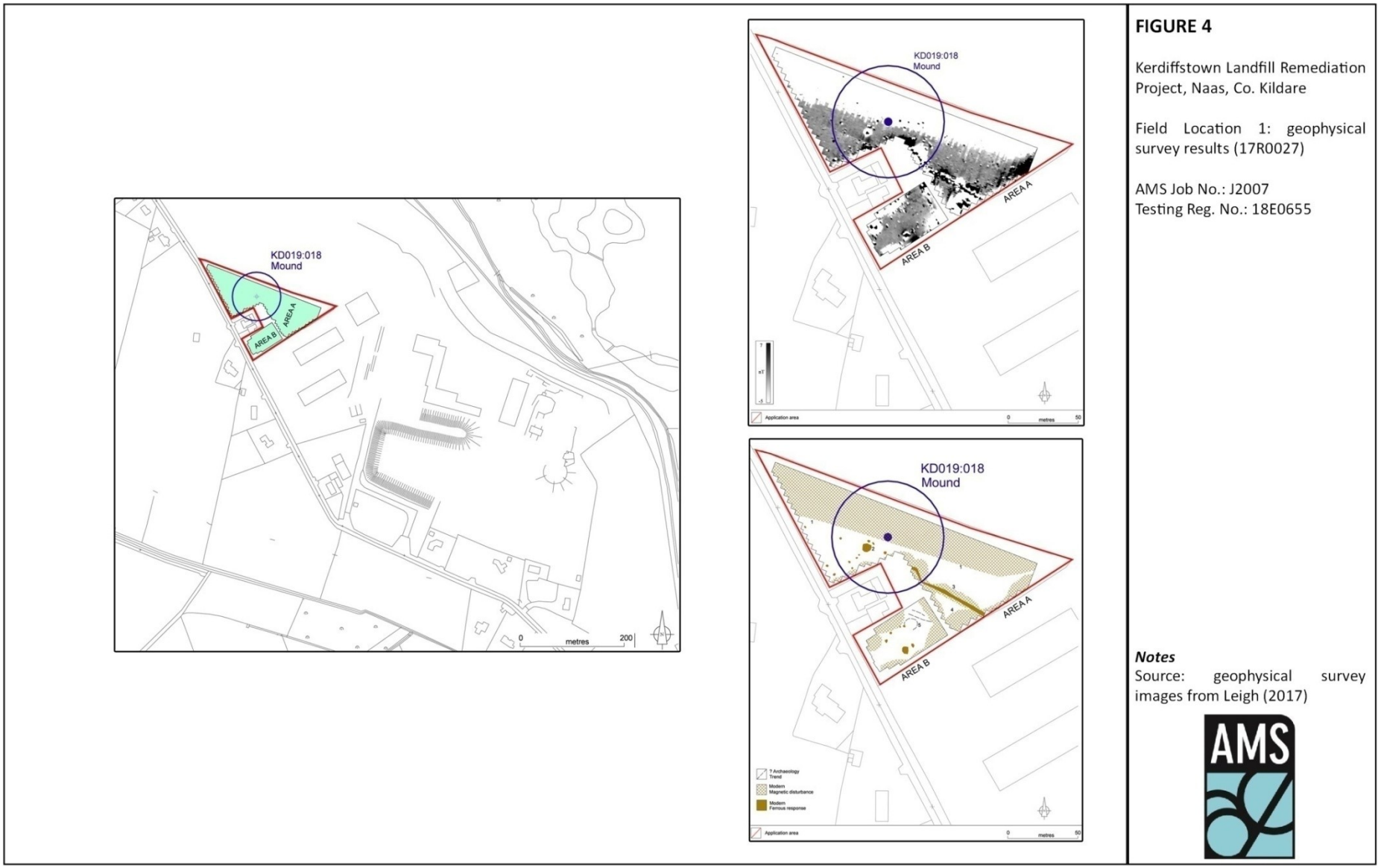

Figure 4: Field Location 1 geophysical survey results (17R0027)

Figure 5: Field Location 2 geophysical survey results (18R0161)

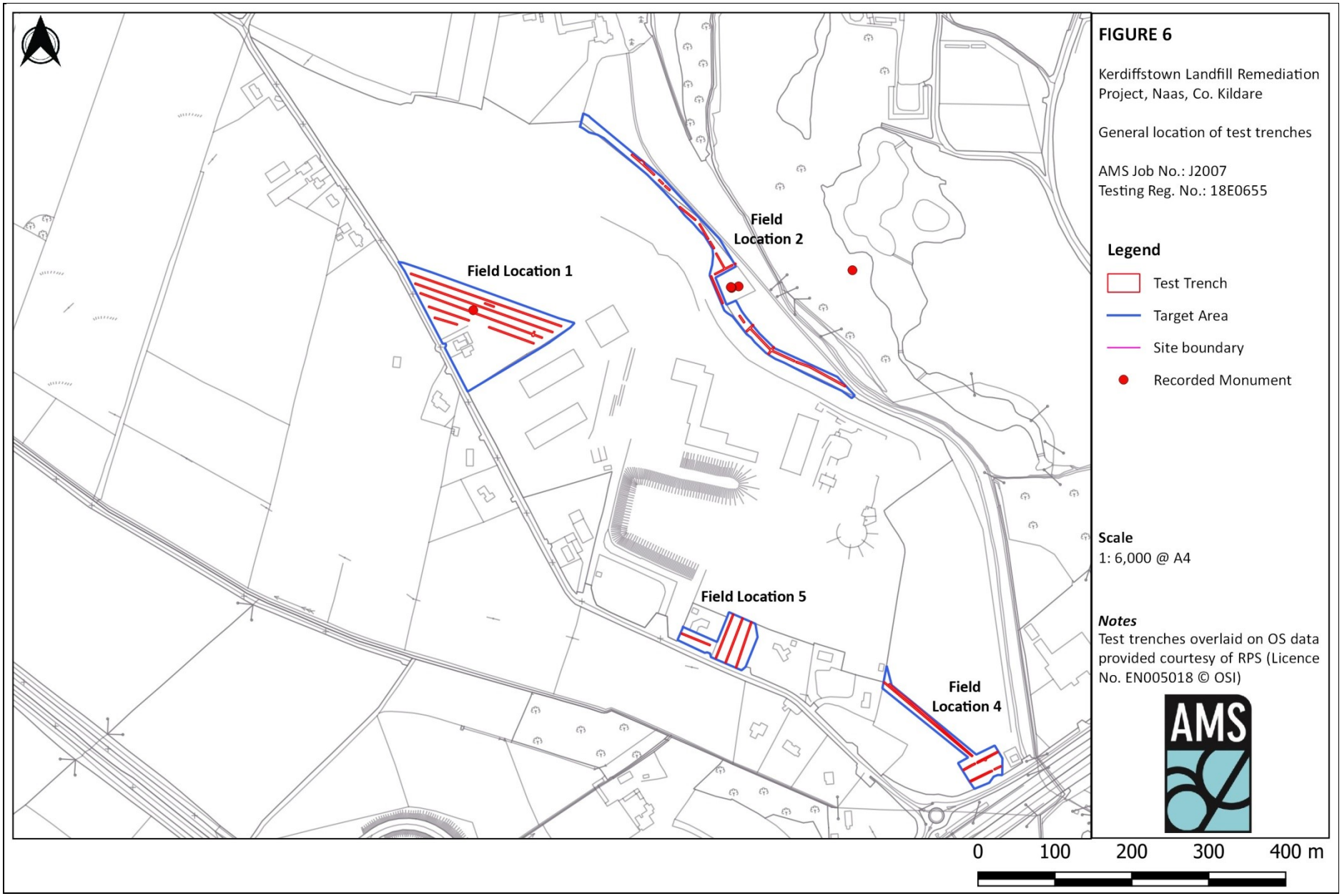

Figure 6: General location of test trenches

Figure 7: Location of test trenches, Field Location 1

Figure 8: Location of test trenches, Field Location 1 (aerial view)

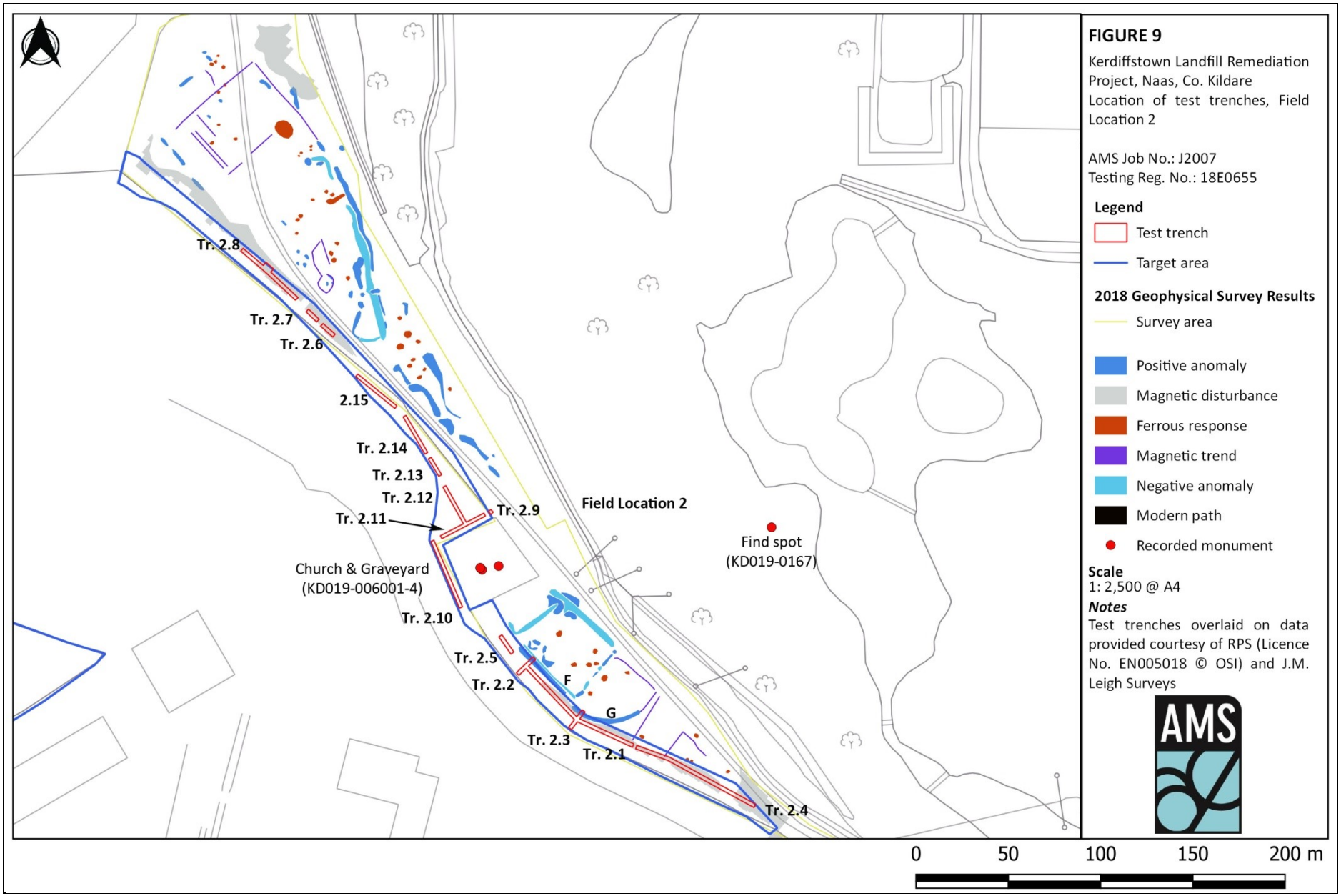

Figure 9: Location of test trenches, Field Location 2

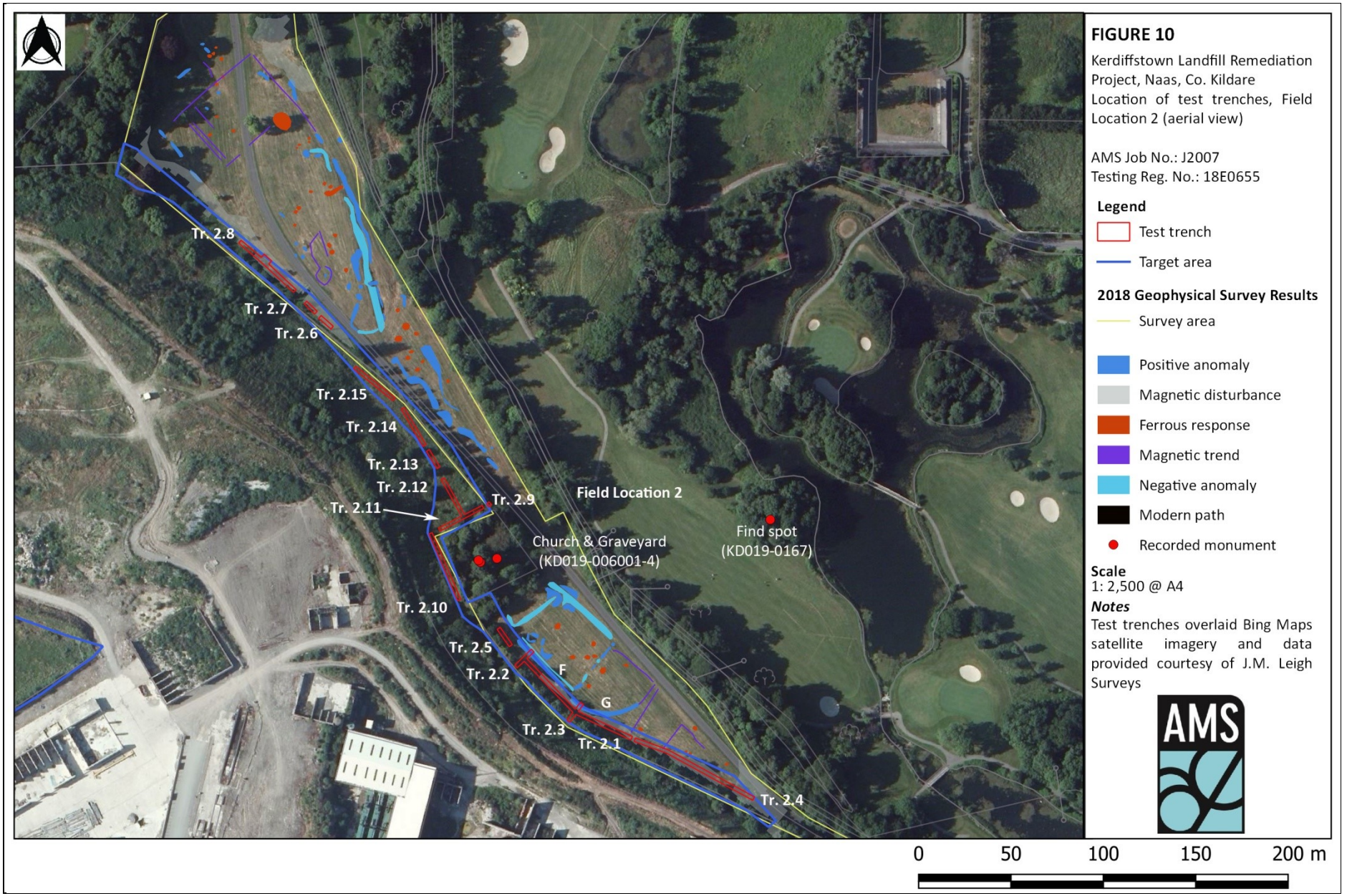

Figure 10: Location of test trenches, Field Location 2(aerial view)

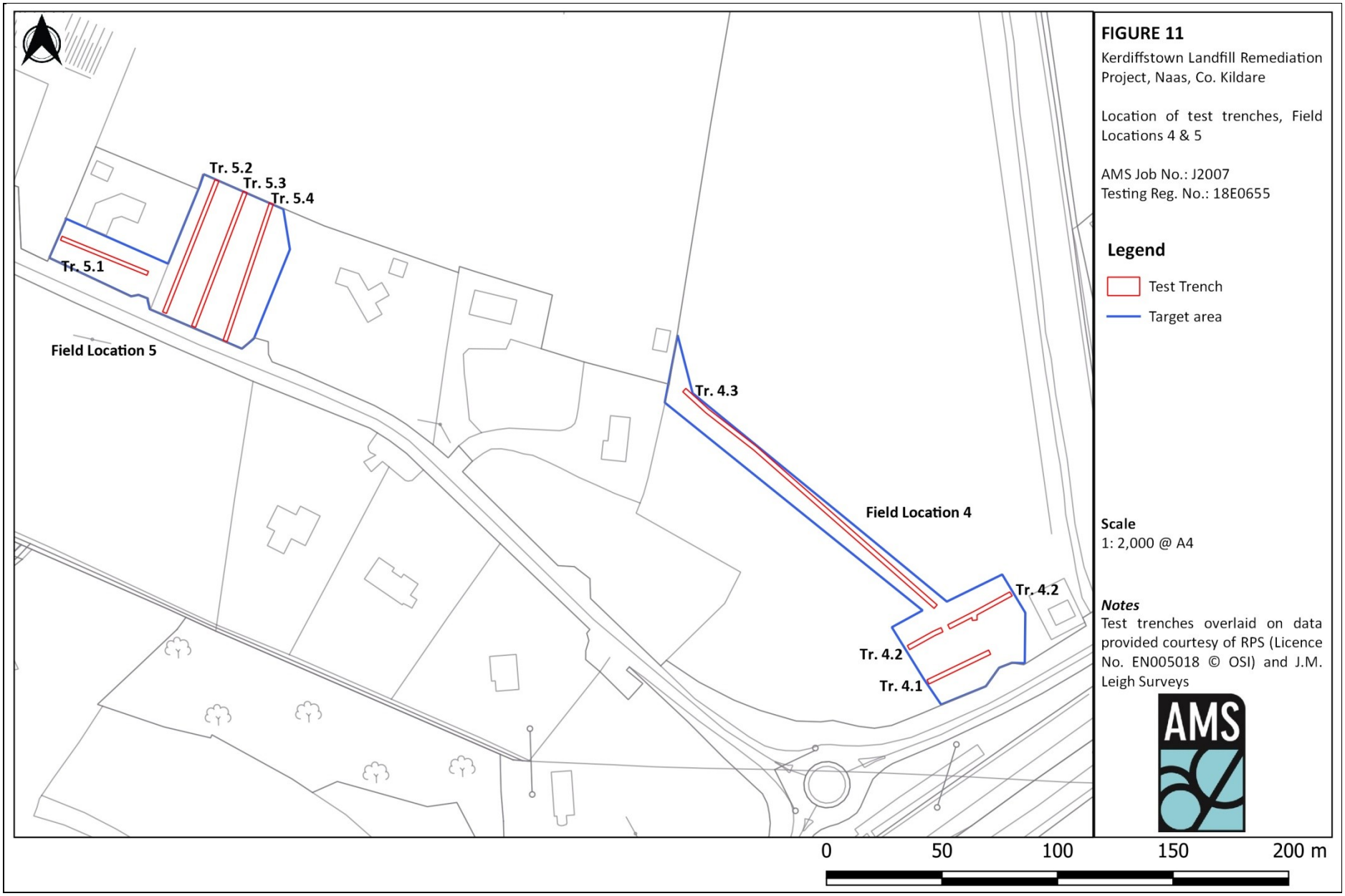

Figure 11: Location of test trenches, Field Locations 4 and 5

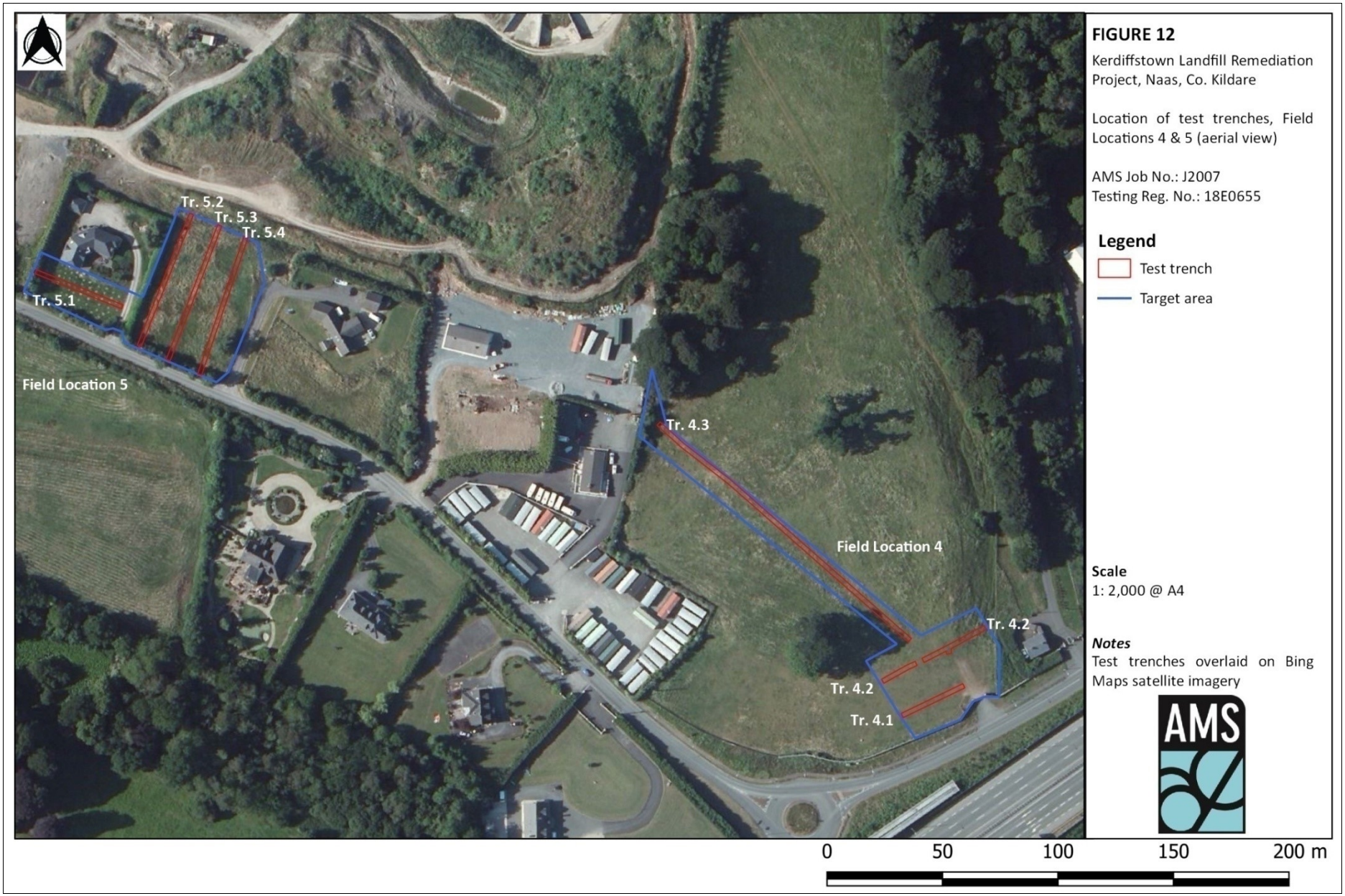

Figure 12: Location of test trenches, Field Locations 4 and 5 (aerial view)

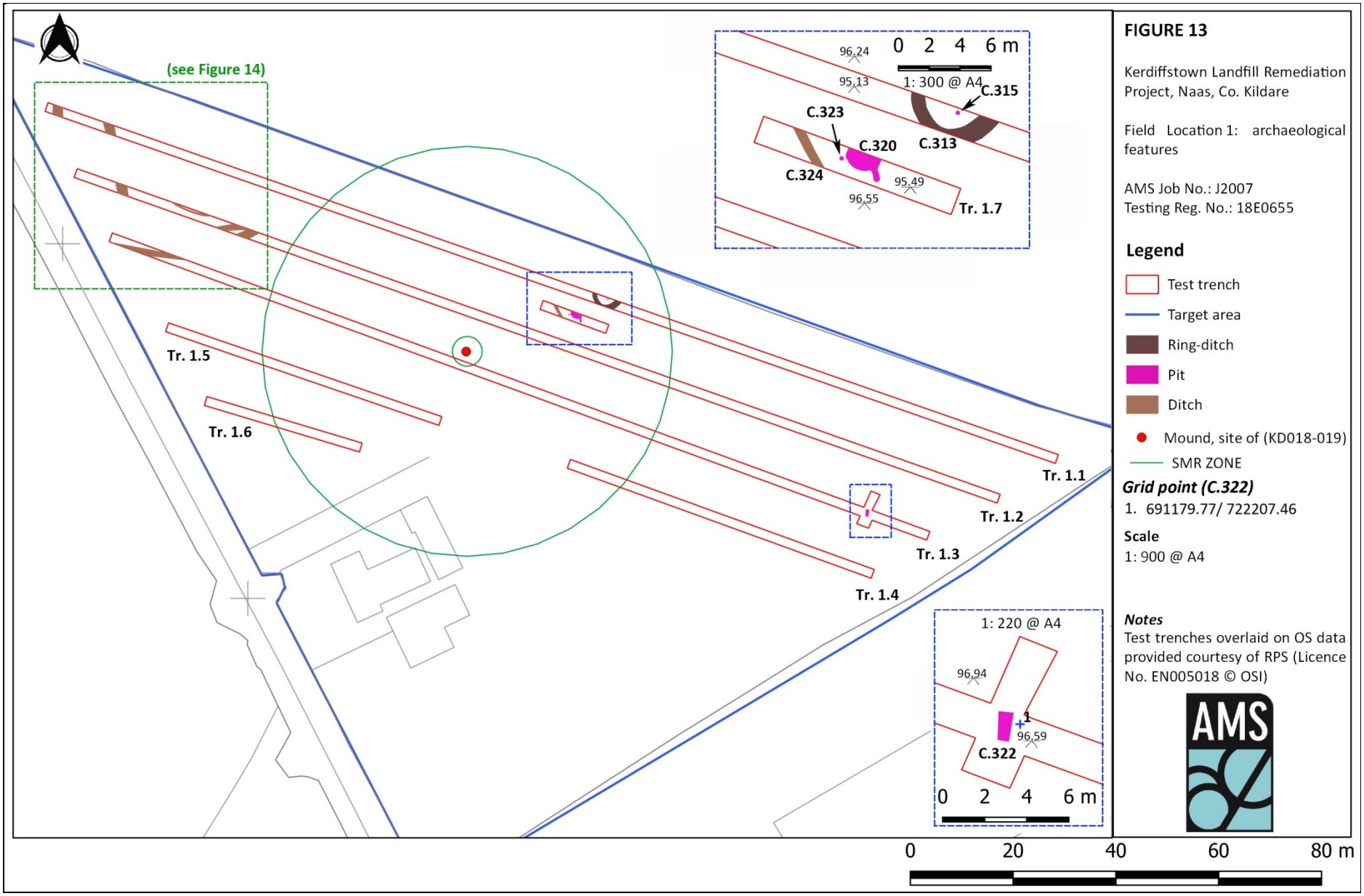

Figure 13: Field Location 1: archaeological features

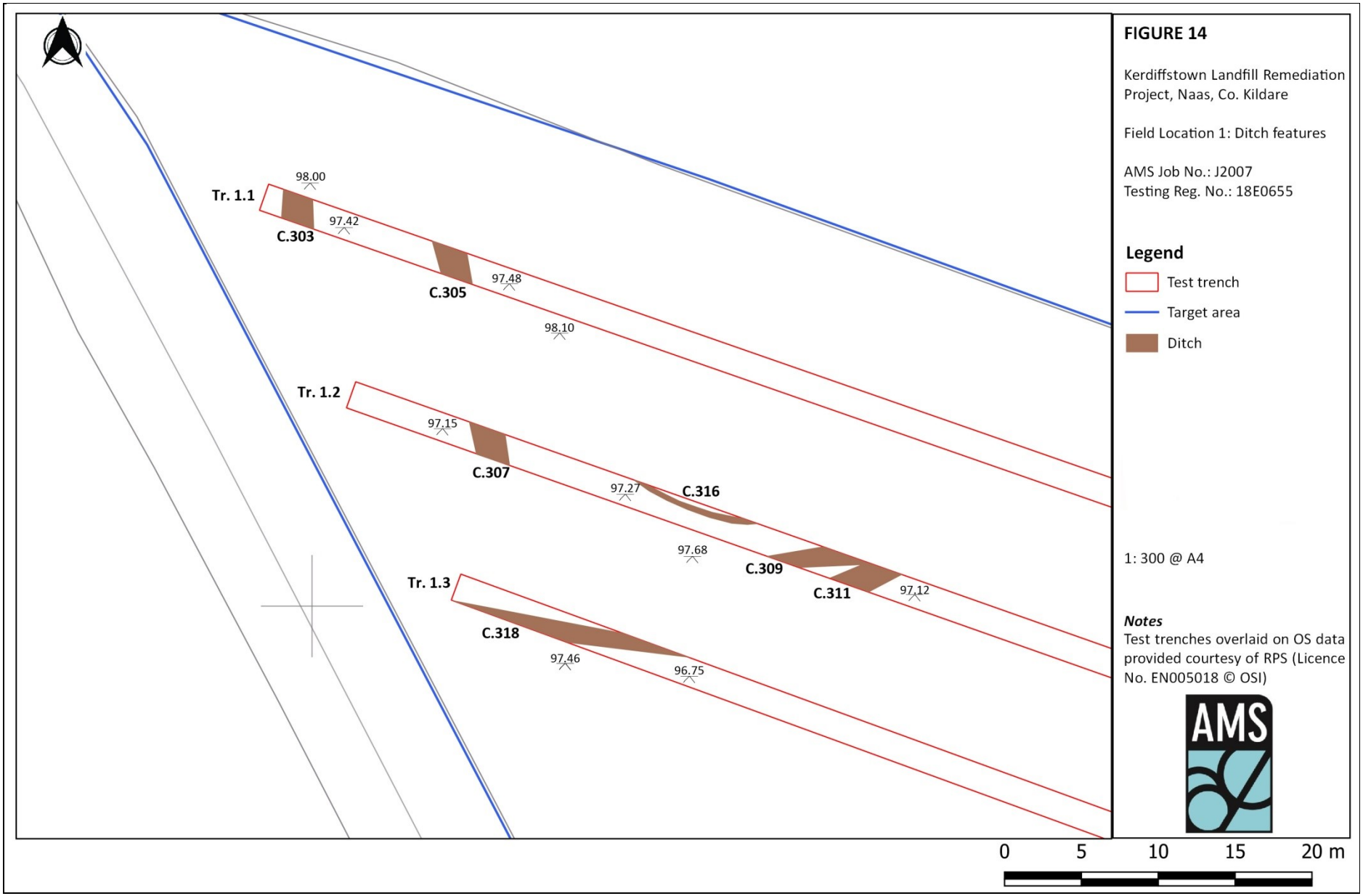

Figure 14: Field Location 1: ditch features

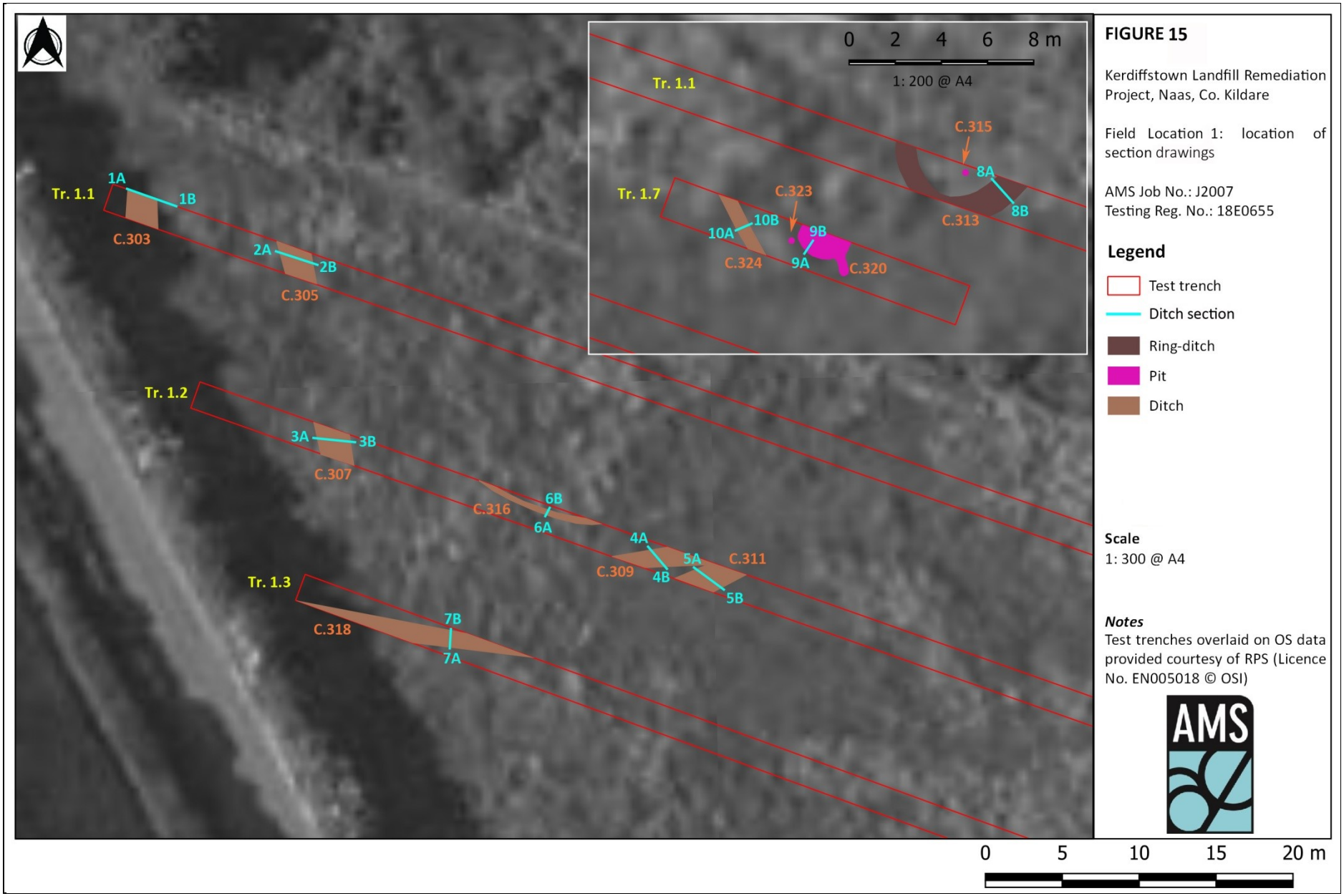

Figure 15: Field Location 1: location of section drawings

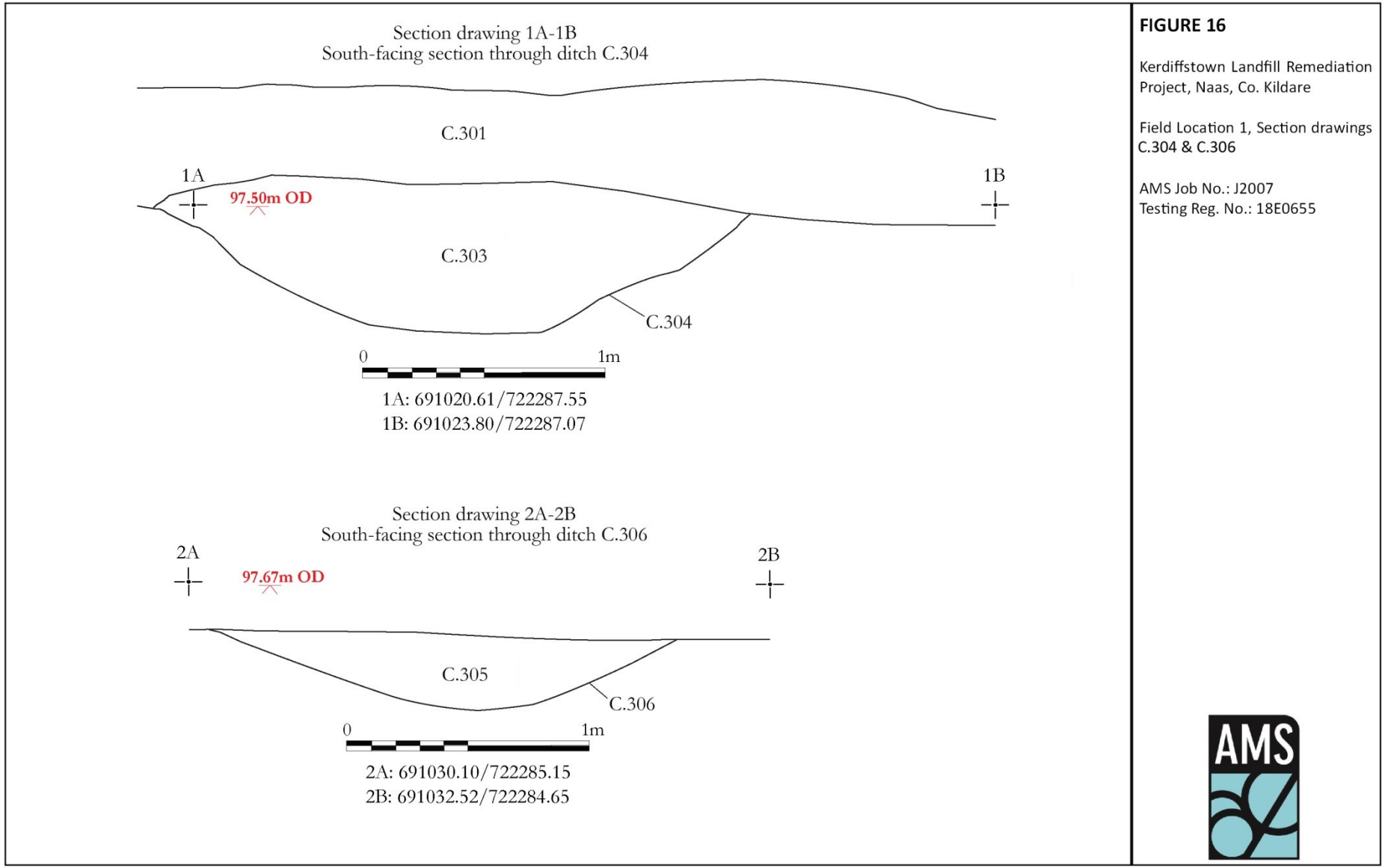

Figure 16: Field Location 1: section drawings C.304 and C.306

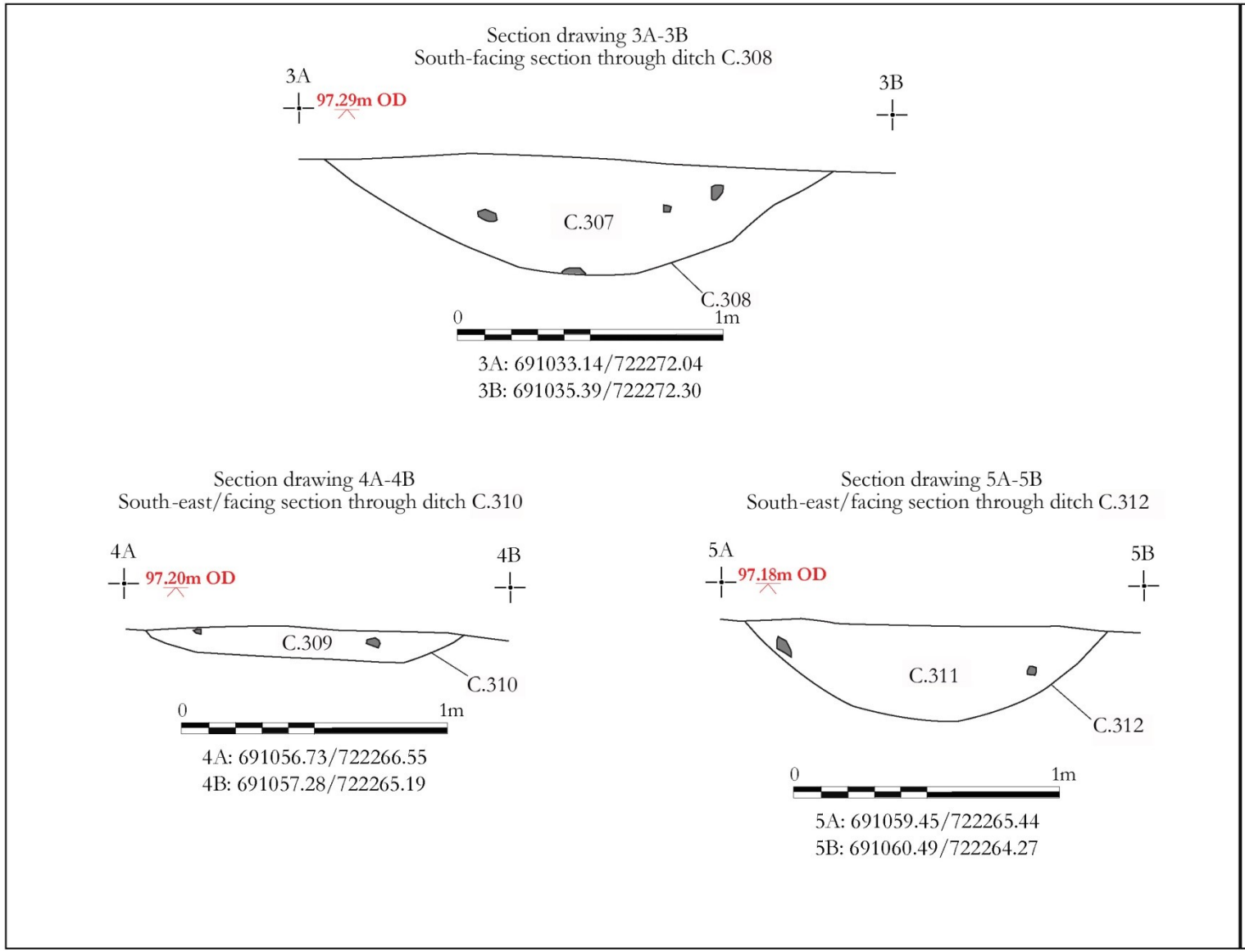

FIGURE 17

Kerdiffstown Landfill Remediation Project, Naas, Co. Kildare

Field Location 1, Section drawings **C.308, C.310** & C.312

AMS Job No.: J2007
Testing Reg. No.: 18E0655

Figure 17: Field Location 1: section drawings C.308, C.310 and C.312

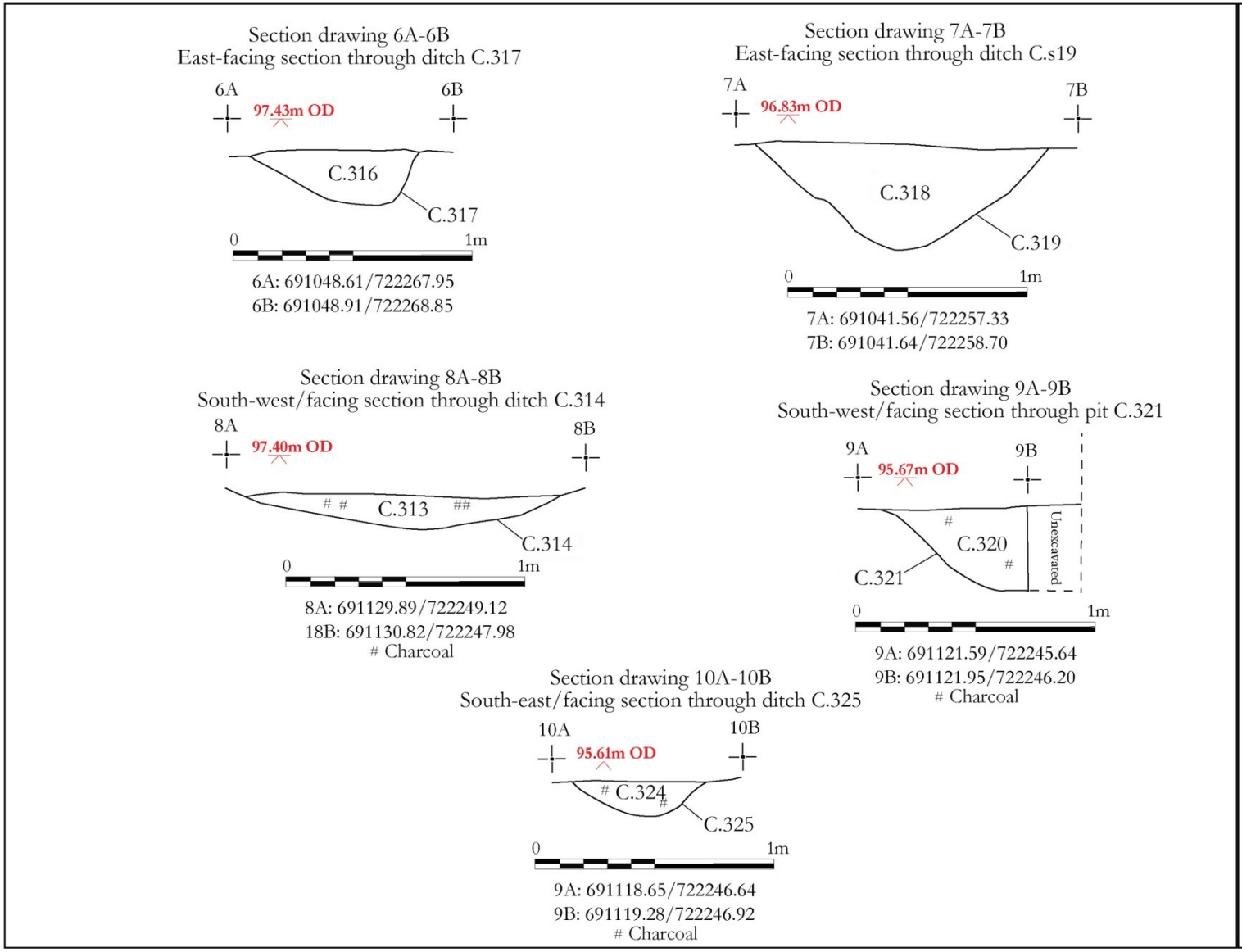

FIGURE 18

Kerdiffstown Landfill Remediation Project, Naas, Co. Kildare

Field Location 1, Section drawings C.314, C.317, C.319, C.321 & C.225

AMS Job No.: J2007
Testing Reg. No.: 18E0655

Figure 18: Field Location 1: section drawings C.314, C.317, C.319, C.321 and C.325

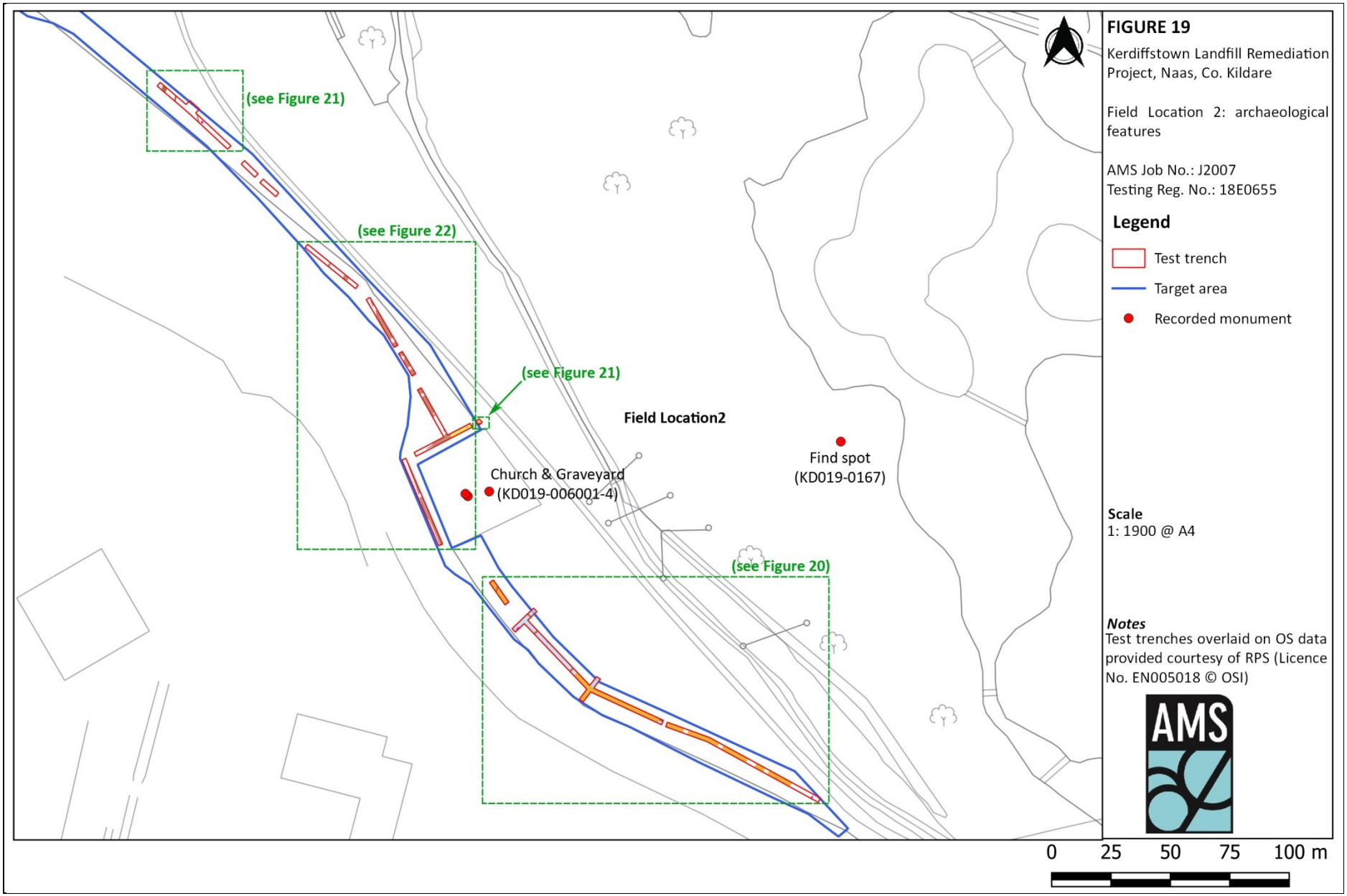

Figure 19: Field Location 2: archaeological features

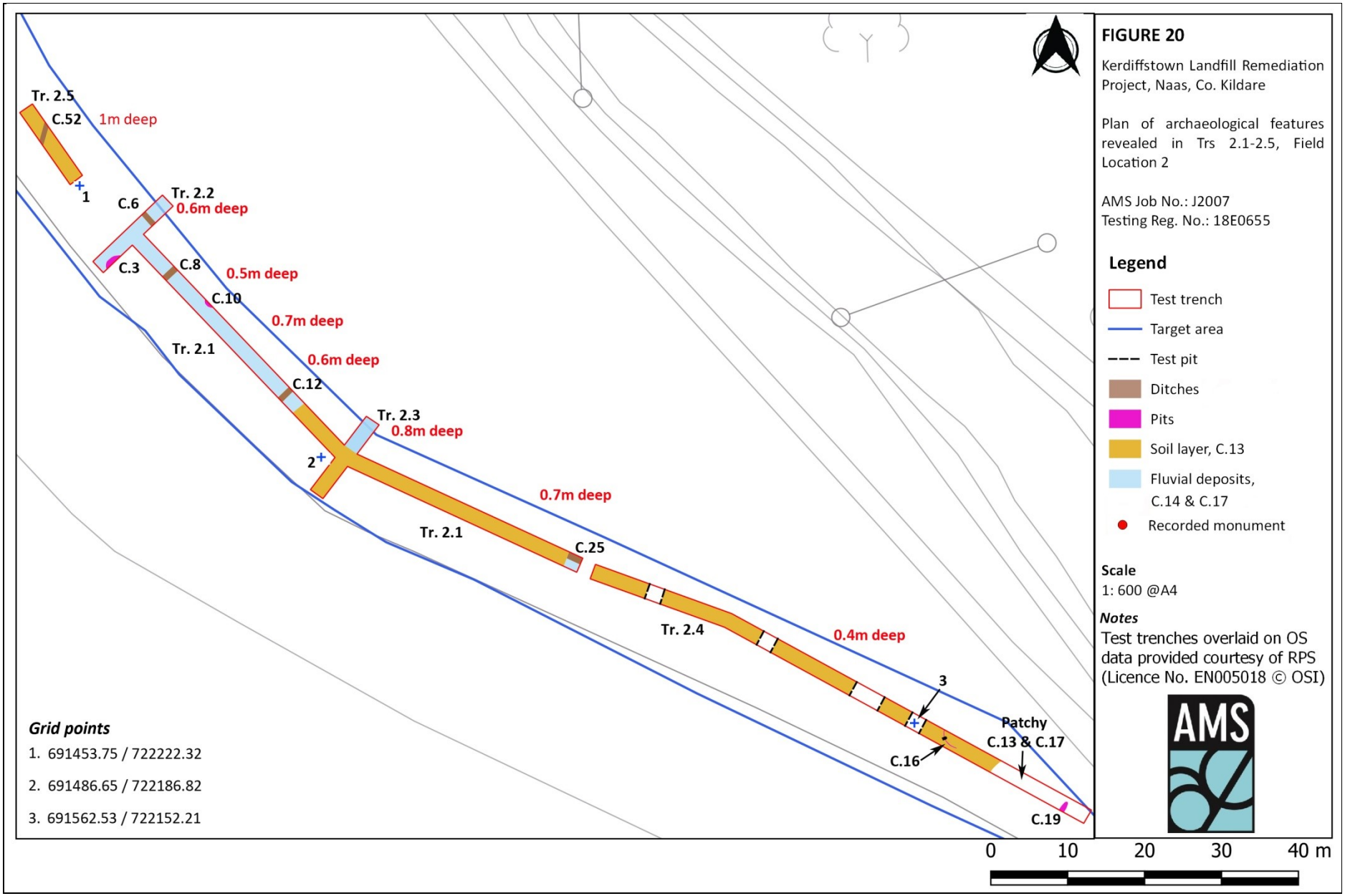

Figure 20: Field Location 2: plan of archaeological features revealed in Trenches 2.1–2.5

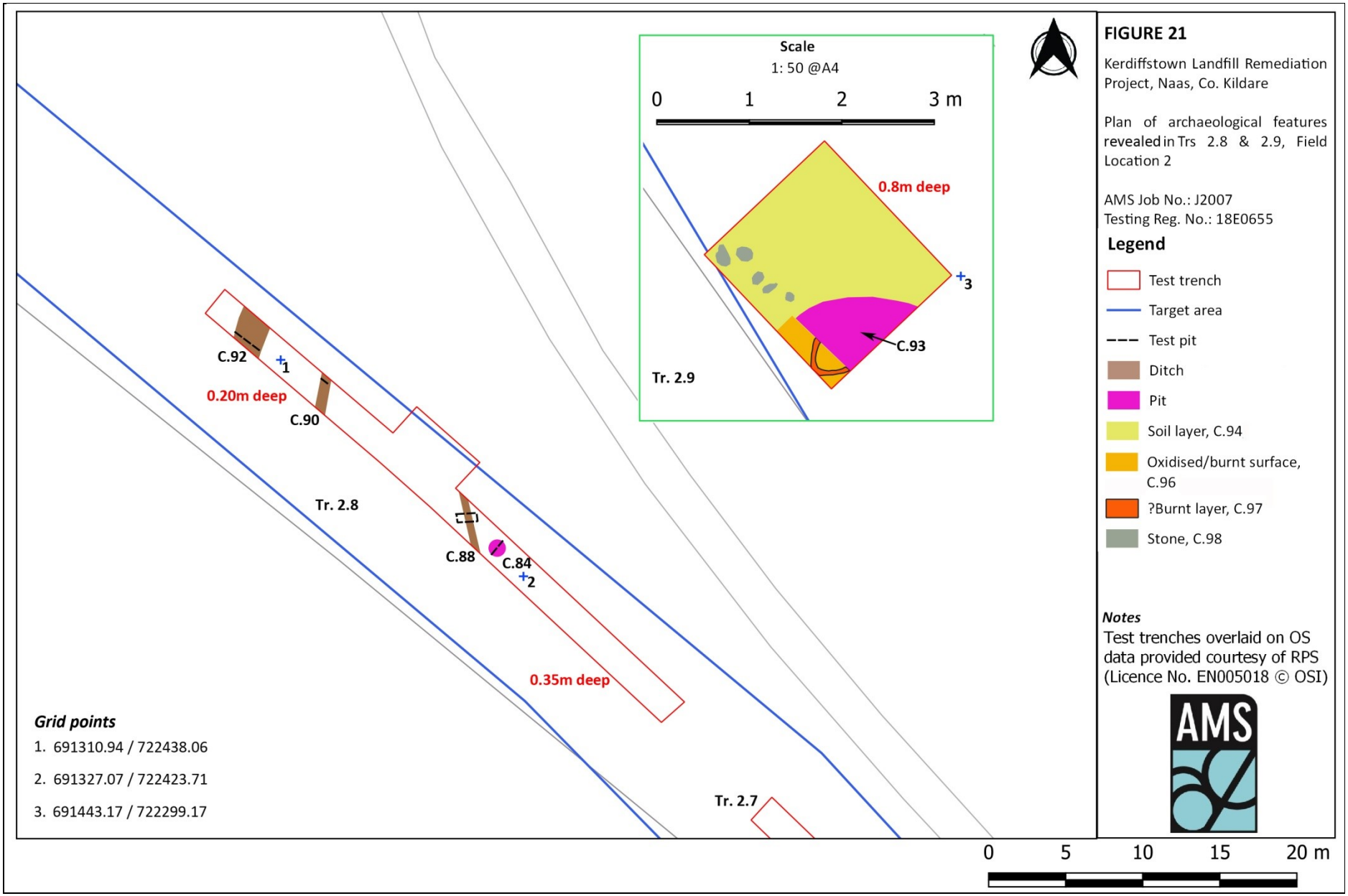

Figure 21: Field Location 2: plan of archaeological features revealed in Trenches 2.8 and 2.9

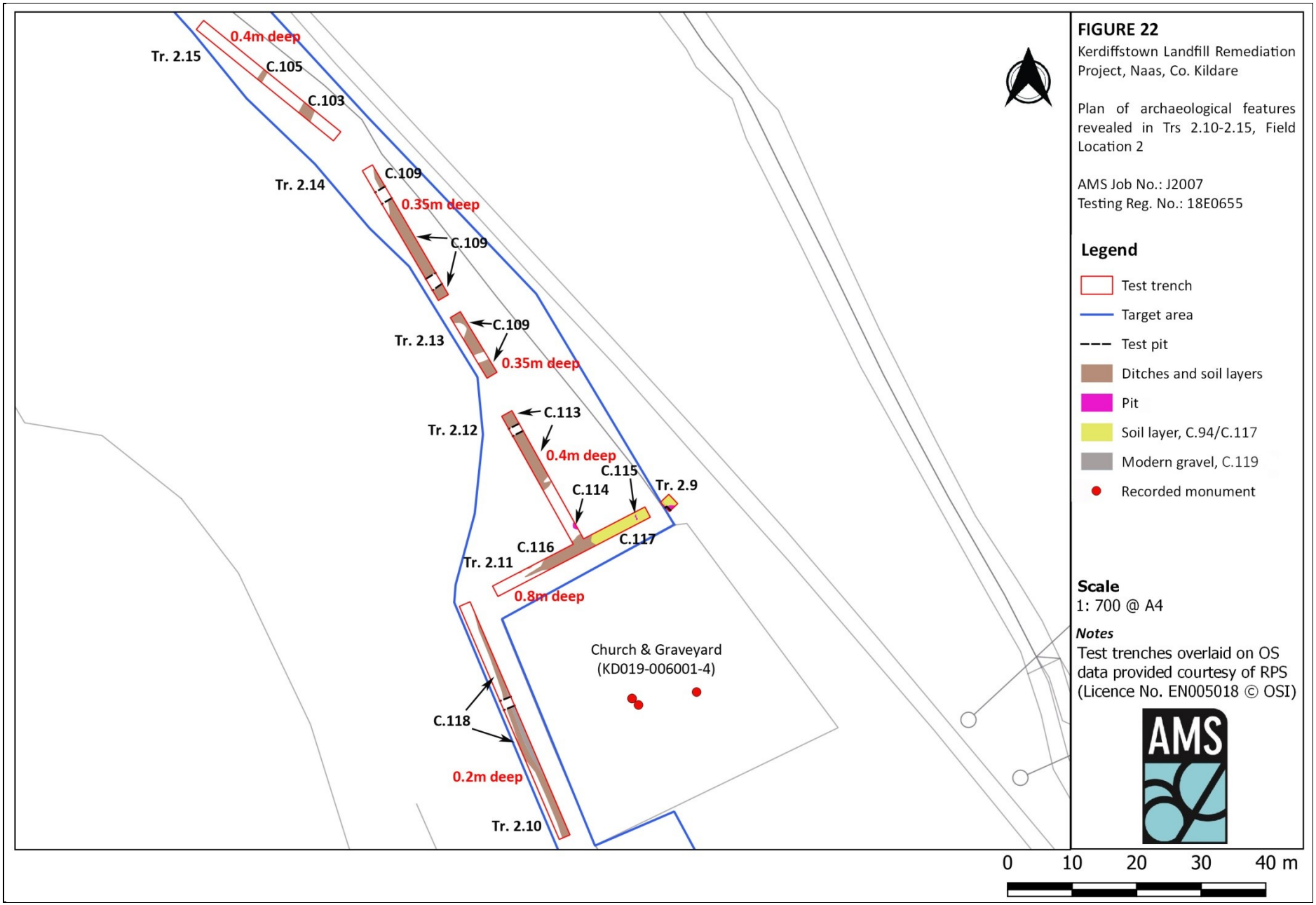

Figure 22: Field Location 2: plan of archaeological features revealed in Trenches 2.10–2.15

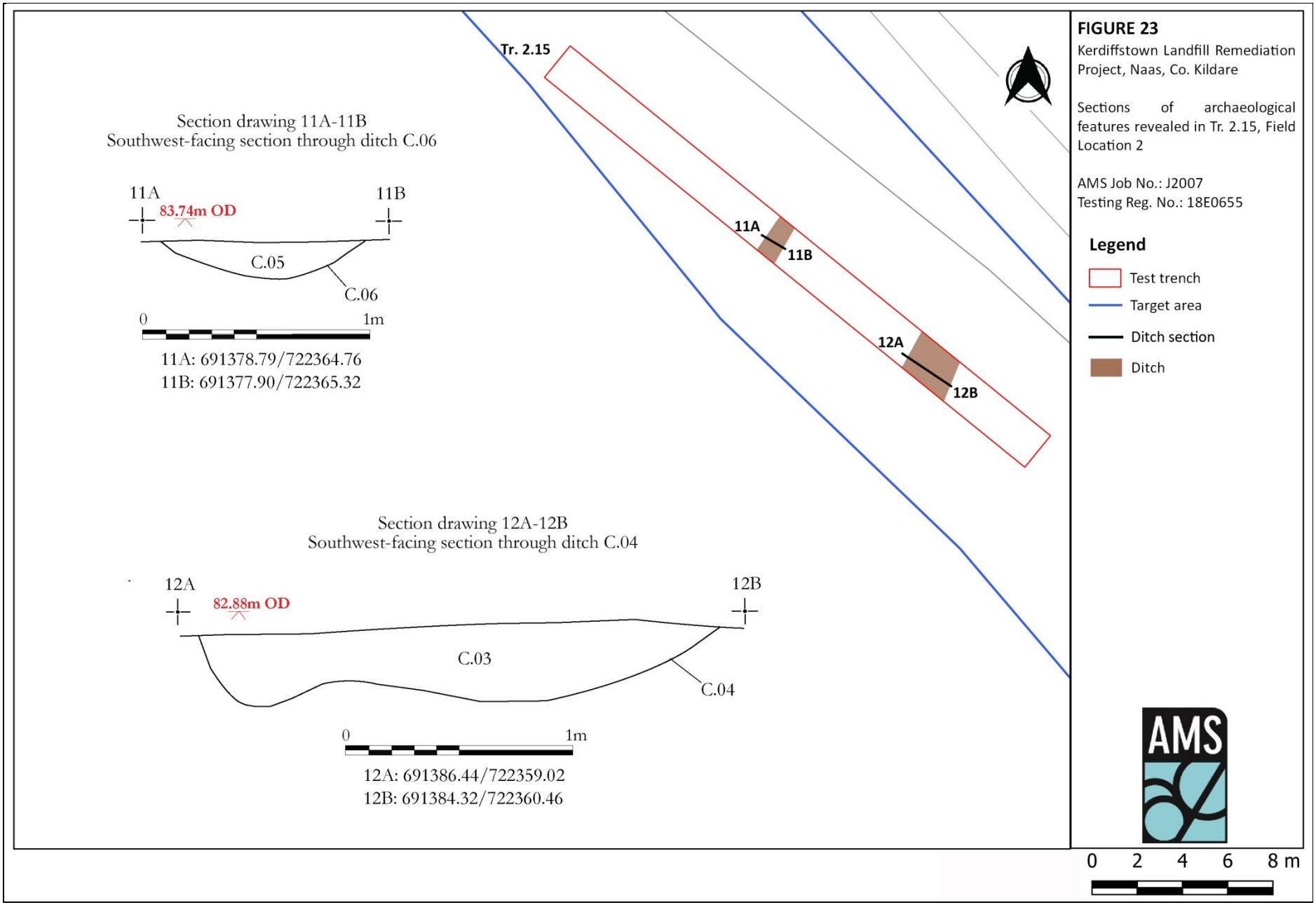

Figure 23: Field Location 2: sections of archaeological features revealed in Trench 2.15

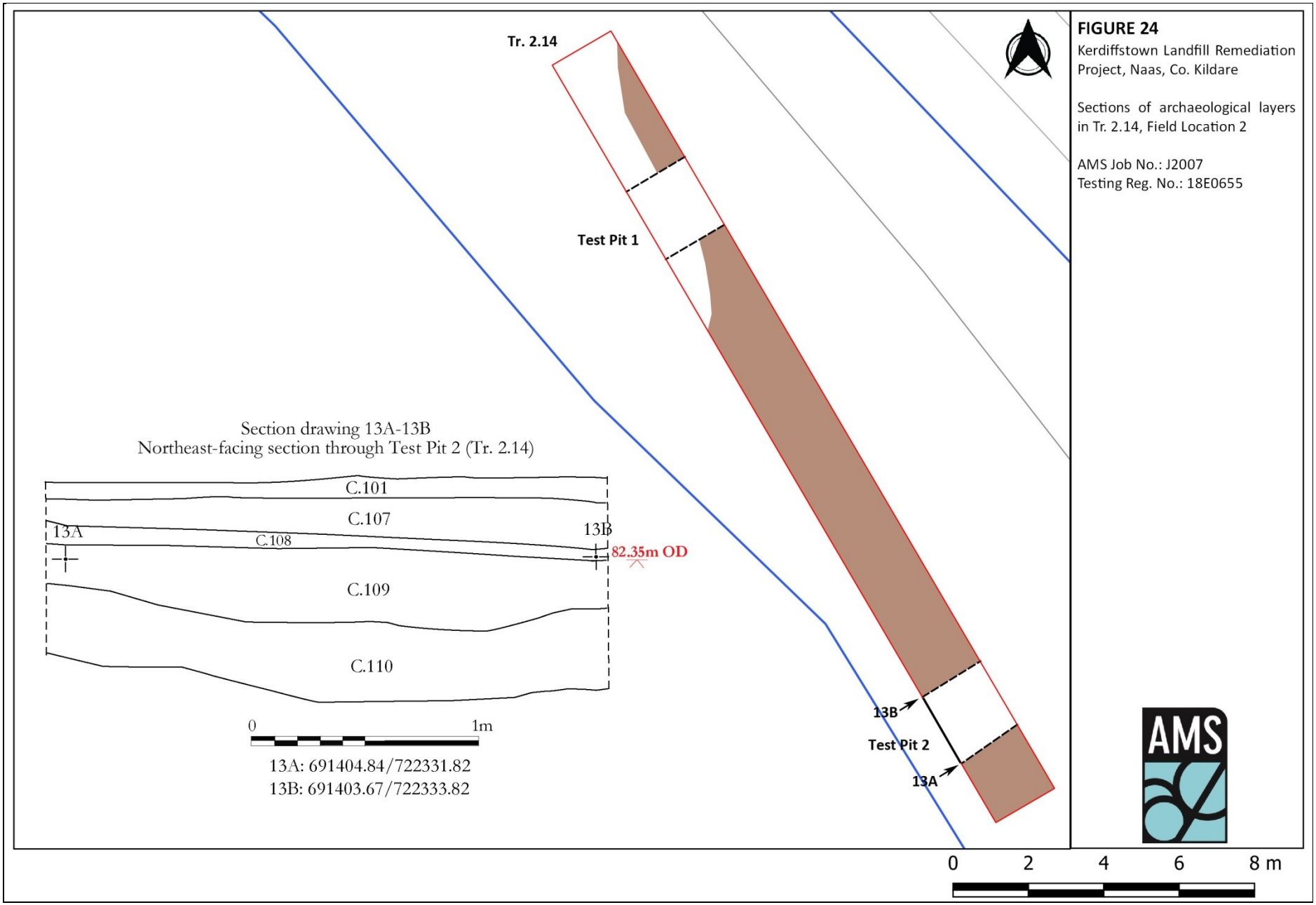

Figure 24: Field Location 2: section of archaeological layers revealed in Trench 2.14

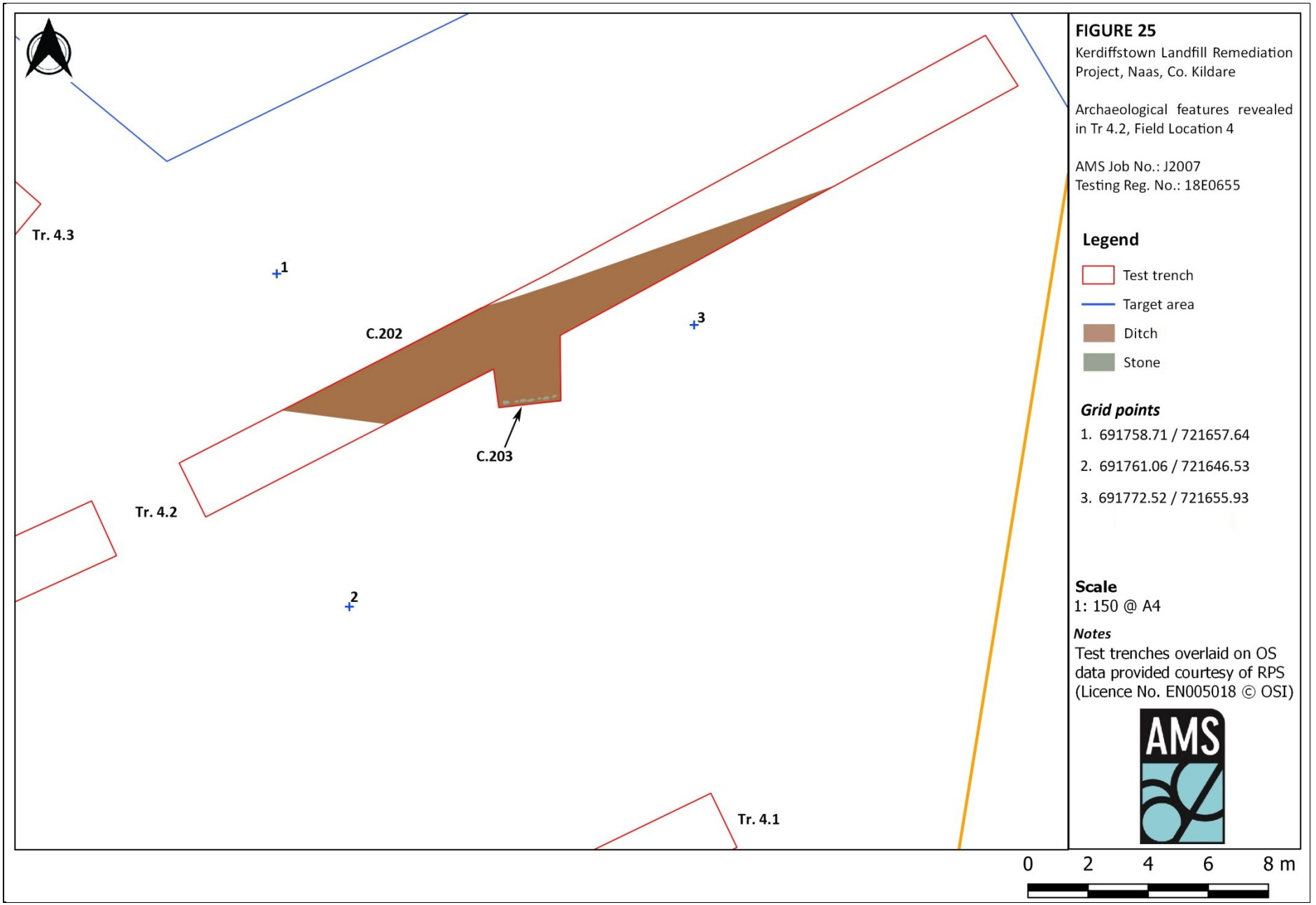

Figure 25: Field Location 4: archaeological features revealed in Trench 4.2

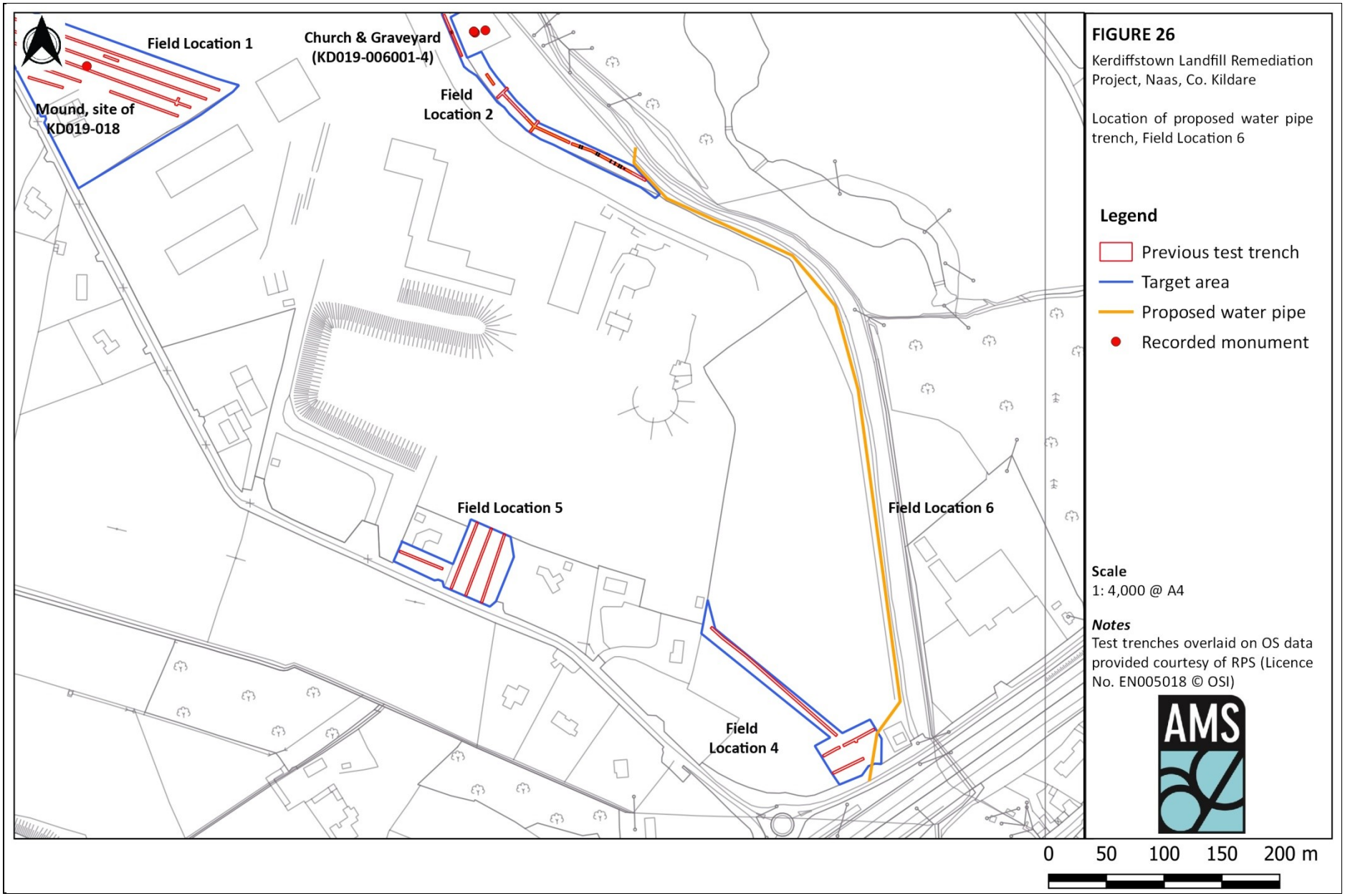

Figure 26: Route of proposed water pipe, Field Location 6

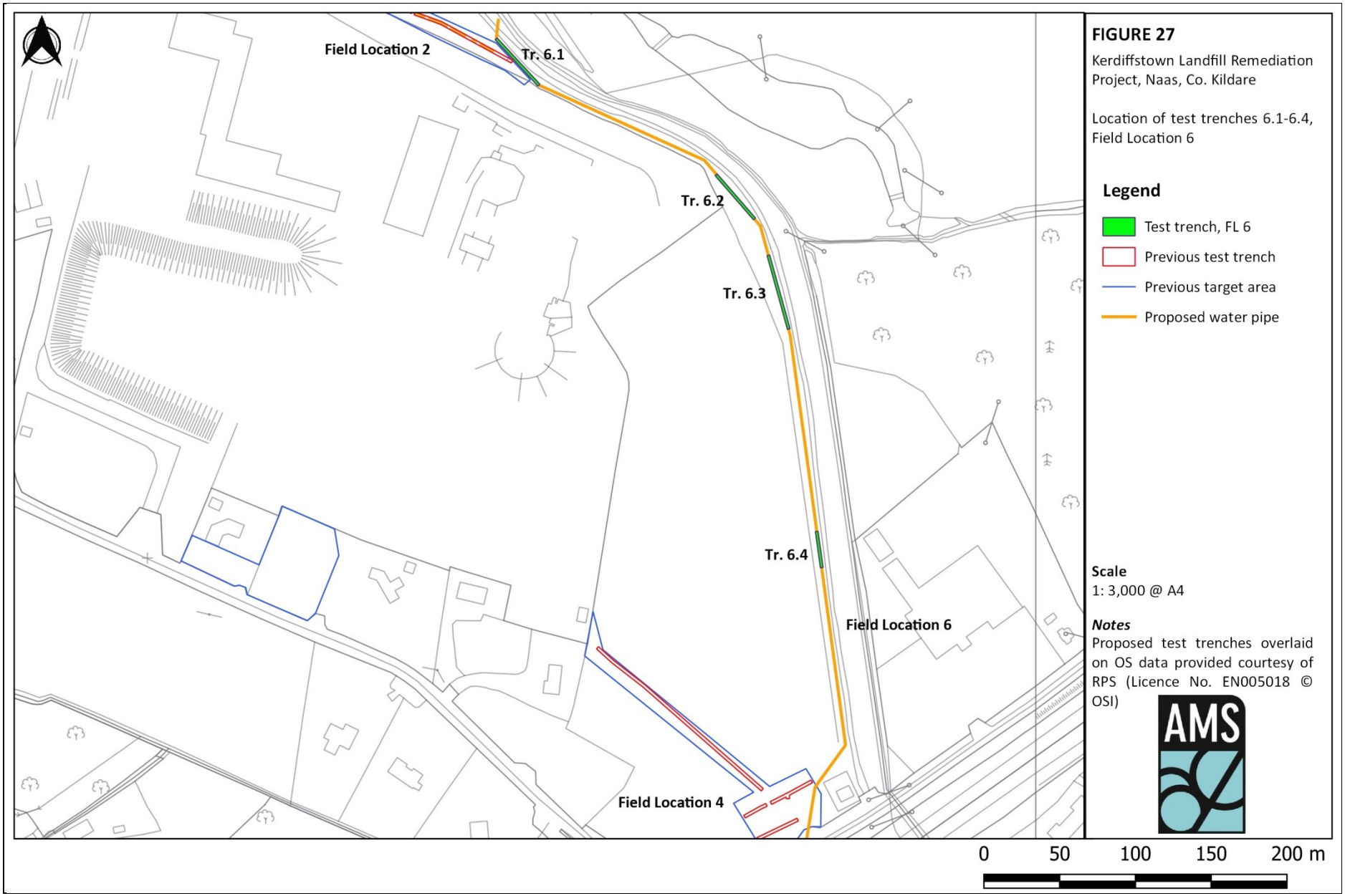

Figure 27: Location of test trenches 6.1–6.4, Field Location 6

Plates

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