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Abstract

An archaeological watching brief, commissioned by The National Trust, was undertaken during the excavation of a foul water separation provision at the Grade I listed building Knole House, Knole, Sevenoaks, Kent (NGR: 554005 154249). A total of 17 Archaeological Investigation pits and one grease trap were excavated within the perimeter of the main building and a further 7 Inspection Chambers and approximately 200m of trenching was excavated to the north east and west of the property. Depths of excavation varied across site from 500mm to 1.7m. This work was conducted between February and June 2010.

The site rests on the crest of a hill within 4km² of ancient parkland, 900m to the east of historic Sevenoaks town centre. The oldest phase of the house dates to the 1400's and comprises the buildings around Stone Court. This was then extended to encompass Green Court in the 1480 - 1530's and after this period served as a royal residency for both Henry VIII and Elizabeth I. The lease passed to Thomas Sackville who expanded the property between 1604 – 1608, creating the Stable Court and Brew House Court. The Orangery was added in 1823.

An archaeologist was present to monitor all intrusive groundworks, should any archaeological features or finds be exposed, with the wider remit to add where possible, to the historical knowledge of the house with particular reference to any previous manor house remains (pre 1456) and to the literary evidence of a moat or ditch around the exterior of the house.

During the excavations, a series of made ground deposits were exposed within the Brew House Court and the trenching around the exterior of Knole House. These may be attributed to 18th – 20th century levelling of the land using dumps of charred waste and building material such as ceramic building material and tile and disturbance from the installation of modern drainage routes over the last 30 years. Excavations within the Green Court were predominantly sterile aside from AI:C, which uncovered a brick wall of probable medieval date. This was underlying the main fabric of the house so could either represent an earlier construction, or be associated with the vaulted water reservoirs under Stone Court.

Trenching through the main entrance from Green Court to the driveway exposed a thick stone wall 500mm below ground surface at the outer wicket. The construction materials resembled the type used in the main fabric of the building and the thickness of the masonry (1.4m) suggests a previous structure potentially predating the existing gateway.

Figure 1: Site Location

Figure 2: Site Plan

Figure 3: Green Court: Trenches AI:01, AI:E and AI:02: Plans and sections

Figure 4: Green Court: Trench AI:C and extension: Plan, sections and photographs

Figure 5: Green Court: Trenches AI:D, AI:04 and AI:05: Plans and sections

Figure 6: Green Court: Trenches AI:06, AI:B, AI:A, AI: 07 and AI:08: Plans and sections

Figure 7: Brew House Court: Trenches AI:09, AI:10, AI:12 and AI:13: Plans and Sections

Figure 8: Main entrance: Plan, sections and photographs

Figure 9: The Lane and the Driveway: Plan, sections and photographs

Figure 10: The Lane, (detail): Plan, section and photograph

Figure 11: Working photographs

Table 1: Quantification of Site Archive

Table 2: List of Recorded Contexts

Table 3: Quantification of Finds

Table 4: Medieval Brick Fabric Descriptions

Table 5: Summary of Registered Finds

Table 6: NISP

Table 7: Metrical Data

Table 8: Residue and Quantification

Table 9: Flot Quantification

1.1 1.2 1.3 1.4 1.5 1.6

- 1.1 Archaeology South East (ASE), a division of University College London Field Archaeology Unit, was commissioned by The National Trust to conduct a watching brief during the intrusive groundworks associated with the installation of a foul water drainage system at Knole House, Knole Park, Sevenoaks (NGR: 554005 154249) hereafter referred to as 'the site'.
- 1.2 The site is located in parkland approximately 900m to the east of the historic core of Sevenoaks, in parkland (see Figure 1). The installation of the foul water drainage system to serve the west and north parts of the main complex required intrusive ground works in the Green Court, Brewhouse Court and along the Lane and Driveway to the north east and north west of the property. (see Figure 2). The National Trust's Territory Archaeologist, Caroline Thackray, consulted the Heritage Conservation Group at Kent County Council (KCC) prior to development and it was decided that the works be monitored under a watching brief condition, with view that further work may be necessary if significant remains are encountered (Heritage Conservation Group. Kent County Council, 2008).
- 1.3 The general objective of the archaeological work was to monitor the excavation of drainage trenches, man holes and test pits to ensure any artefacts or ecofacts of archaeological interest exposed would be recorded to an appropriate standard. This was to include the specific aim of observing and recording any archaeological deposits, finds or features associated with the development, expansion and history of Knole House.
- 1.4 The works examined included:
 - 12 test pits or archaeological investigation pits within the Green Court to locate existing drainage routes.
 - 5 test pits or archaeological investigation pits in the Brewhouse Court area to locate existing drains.
 - 1 grease trap in the Brewhouse Court.
 - Trenching for drainage within the Green Court, Brewhouse Court and along the Lane to the north east and the Driveway to the front of the property.
- 1.5 This document presents the results of a watching brief carried out at Knole House, Knole Park, Sevenoaks. The field work was undertaken by Liane Peyre (Archaeologist) and Sarah Porteus (Archaeologist) between 3rd February 2010 and 18th June 2010. The project was managed by Neil Griffin (Project Manager) and Jim Stevenson (Post Excavation Manager).
- 1.6 According to the British Geological Survey (Sheet 287) the site overlies Sandgate Beds to the south and Hythe Beds to the north.

- 2.1 Knole House is situated on the site of a preceding manor house dating from 1281, of which little is known. This earlier property was occupied by James Fiennes (Lord Say & Sele) who was later executed at the Tower of London after the Kentish peasants revolt led by Jack Cade. Knole House as it stands today and the surrounding land was bought in 1456 by Thomas Bouchier, Archbishop of Canterbury, for the sum of £266. Bouchier had royal connections; he was the great grandson of Edward III and his sister in law was related to the Duke of York. It was upon his purchase that Knole House developed from being a manor house to an Archbishop's palace. Initially the layout of the house consisted of the Stone Court, accessed by the turreted gatehouse known as 'Bouchier's Tower', which in keeping with the style at the time, resembled a defensive castle with features such as crenellations and machicolations.
- 2.2 After the death of Bouchier at the property in 1486 Knole House remained within the Diocese of Canterbury and underwent a series of expansion phases between 1486 - 1538, possibly under direction from Archbishop Morton or Archbishop Warham. This saw the creation of the Green Court to the front of Bouchier's tower, where curtain walls linked the existing face of the house to a grander gatehouse, which is now the current main entrance.
- 2.3 In 1538, Henry VIII acquired the property from Archbishop Cranmer and used Knole House intermittently for deer hunting, fishing and as a locale when visiting the area. The property then passed to Elizabeth I and was used as a royal residence. During this period very little changed in terms of the architecture.
- 2.4 In 1570 Thomas Sackville, a wealthy lawyer and cousin to the Queen, acquired the lease to Knole House. Between 1570 and 1604 he assigned the lease to the Lennard family, who resided at the property for 30 years before Sackville's retirement. In 1604 Sackville gained occupation of the property and over the following four years set about a large scale refurbishment and expansion project transforming the Tudor style property into a 'grand house'. Inspiration was taken from the Renaissance, seen in the Greek and Roman style columns, carvings and the notion of symmetry. The Stone Court was remodelled with the addition of a loggia in front of the Great Hall, the Green Court was expanded and further courtyards were added to the North East of the main building (currently the Stable Court and Brewhouse Court). The interior of the property was updated and re-decorated, but the original layouts of rooms were untouched.
- 2.5 Remaining within the Sackville family until present day, further additions of a colonnade in the Stone Court occurred in 1748 and the completion of the orangery in the Green Court in 1823.
- 2.6 In 1946 The National Trust was given the house and 43 acres of the surrounding land.

Quantification of site archive

- 3.1 The excavation of the investigation chambers, test pits and drainage trenches were undertaken by ground work contractors (Marchants) and monitored at all times by a member of ASE's staff. The ASE archaeologist was allowed reasonable time during these operations to enable a full record of any archaeological deposits, features or finds.
- 3.2 The objectives of the archaeological watching brief were to contribute to the knowledge of the development of Knole during various construction phases, to develop an understanding of the existing drainage systems and where possible, to contribute to existing knowledge of the surrounding area. This was accomplished through the cleaning and recording of any archaeological remains exposed as a result of excavations in connection with the service inspections. Particular attention was made to the character, height below ground level, condition, date and significance of the encountered deposits.
- 3.3 All encountered archaeological deposits, features and finds were recorded to accepted professional standards in accordance with the Specification using standard Archaeology South-East context record sheets. Deposit colours were verified by visual inspection and not by reference to a Munsell Colour chart.
- 3.4 The spoil from the excavations was inspected to recover any artefacts or ecofacts of archaeological interest.
- 3.5 Digital colour images of work in progress and archaeological features will be included in this report.
- 3.6 Levels and OD heights were ascertained from engineer's plans and onsite surveying during the excavations.

Number of Contexts	37
No. of files/paper record	1 File
Plan and sections sheets	3
Bulk Samples	2
Photographs	176 digital colour photographs
Bulk finds	10
Registered finds	3
Environmental flots/residue	2

Quantification of site archive

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4.0.1 A complete context list is Tabulated below. For clarity, however, the description has been subdivided into areas (Figure 2);

- The Green Court: Archaeological Investigation (AI) Pits and Test Pits
- The Brew House Court: Archaeological Investigation (AI) Pits, Grease Trap and trenches
- Main entrance: IC:07 – IC:10
- Trenching from IC:15 to IC:12 (the lane)
- Trenching from IC:12 to IC:10 (the driveway)

4.0.2 □□□□□□□□□□ □□□□□□

Context No.	Description	Length (mm)	Width (mm)	Depth (mm)
001	Turfed Topsoil/ Lawn/gravel path	-	-	100
002	Made Ground: Sandy Layer	-	-	2-300
003	Made Ground: Mixed Sand	-	-	300+
004	Concrete & Shingle Drain Covers	-	-	Max 500
005	Masonry: Footings to Knole House	-	-	-
006	Ceramic Drainage Pipe (modern)	-	-	-
007	Modern Brick covered Ceramic Pipe	-	-	-
008	Copper Lightning Rods	-	-	-
009	Tarmac	-	-	200
010	Crush Make Up	-	-	3-400
011	Made Ground under (010)	-	-	c. 800
012	Made Ground: Concrete w. Lead Pipe	-	-	300
013	Disturbed Clay Backfill	-	-	200
014	White Construction Sand	-	-	200
015	Disturbed post med layer	-	-	150
016	Disturbed post med layer	-	-	400
017	Pavement Slabs	-	-	50
018	Sand leveller under (017)	-	-	2-300
019	Disturbed ashy/ CBM deposit	-	-	150
020	Disturbed Natural	-	-	5-600
021	Red silt Natural	-	-	5-600
022	Natural	-	-	unknown
023	Disturbed backfill – chertstone	-	-	200
024	Cut for Masonry	600	1400	1300
025	Masonry Wall	600	1400	1300
026	Disturbed Natural in IC:10	-	-	50
027	Disturbed natural backfill	-	-	600
028	Mid brown disturbed natural	-	-	250
029	Brown disturbed natural	-	-	-
030	Greenish silt sand with chertstone	-	-	200
031	Black charcoal layer	-	-	100
032	Backfill of AI:11	-	-	-
033	Modern culvert	-	-	-
034	Red layer CBM rich	-	-	Unseen
035	Compact Chertstone	-	-	200
036	Red brick/ CBM layer	9	Unseen	500
037	Brick Wall	3800	400	400

□□□□ □□List of recorded contexts for The Green Court.

4.1 The Green Court area was excavated to investigate the depths and locations of previous drainage runs. This resulted in the trenches varying in depths and dimensions (see Figure 4). During the excavations within the Green Court, care was taken to identify any evidence of previous building phases, particularly those relating to the earlier manor house. To ensure consistent and methodical recording techniques, modern deposits were also assigned context numbers.

4.1.1 The AI pits and Test Pits (numbered 1, 2, 4-8 and lettered A – E) were situated within the Green Court to investigate the depths and locations of previous drainage runs. This resulted in the trenches varying in depths and dimensions (see Figure 4). During the excavations within the Green Court, care was taken to identify any evidence of previous building phases, particularly those relating to the earlier manor house. To ensure consistent and methodical recording techniques, modern deposits were also assigned context numbers.

4.1.2 The excavations within the Green Court area were undertaken by Marchants ground workers by hand with the aim to locate existing drainage routes. Once these were found, the excavation ceased. The stratigraphic sequence was generally consistent in the AI pits; topsoil and turf [001] or gravel path onto disturbed natural silty sands [002], in turn overlying darker, more mixed silty sand [003] with charcoal and ceramic building material (henceforth CBM) inclusions. Contexts [004], [006] and [007] relate to current drainage systems catering for the public toilets to the west of Stable Court and the kitchen facilities at the north east of Green Court.

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Only context [037], a red brick course with lime mortar, located in an extension to AI C was of a potentially earlier date. The dimensions and fabric of the brick were synonymous with a medieval type. The wall lay on a slightly different alignment to the present wall and ran beneath the structure, located at a height of 153.16m AOD, supporting the suggestion that it pre-dates 1456. Due to the narrow width of the trench only a small portion of the brickwork was exposed thus rendering it difficult to ascertain the exact function and extent of the remaining wall (Figure 4).

4.2 The Brew House Court was an addition to Knoles House in the 1600s. Five AI pits (AI: 9 – 13), a grease trap and trenching were excavated in this area. The test pits were dug to ascertain the locations of previous drainage (Figures 7 and 10), with the subsequent grease trap and trenching being dug to fit the new foul water system. As with The Green Court – all modern features or deposits were assigned context numbers.

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4.2.2 Various layers of disturbed ground and backfill ([010] – [016]) were identified in all of the archaeological investigation pits, the grease trap pit and the trenching. These are most likely associated with phases of development within the courtyard, notably the installation of the current drain runs from the kitchen café and public toilets. Whilst natural clay was encountered at a depth of 1.1m below ground in the grease trap pit (146.53m AOD), it was not reached in the trenching or investigation pits, which remained within modern backfill. A range of post medieval residual artefacts were recovered from

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deposit [015], approximately 0.7m below ground level in AI:13 (147.95m AOD). This included an 18th century glass bottle, 19th century iron key and hook, a 19-20th century bullet case and 20th century glass. Furthermore, pottery was recovered from contexts [010] and [011] with a spot date of 1850 – 1925.

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4.3.1 The main gatehouse from the current driveway to the Green Court was constructed c.1486 – 1536. The trenching connecting IC:07 to IC:10 required the current paved stone entrance be lifted, and as an excavation depth of 1.7m was necessary, an archaeologist was in attendance in case previous floor levels or track ways were exposed.

4.3.2 □□□ □ □□□

Natural was uncovered approximately 600mm below ground level (153.86m AOD). As the trench progressed towards the outer wicket (main entrance) a substantial stone wall [025] was encountered 500mm below ground level (153.93m AOD). This measured 1.4m in width and extended to the depth of the trench at 1.7m (152.73m AOD). The location of this wall appeared visually in line with the current front wall and consisted of the same building materials (Figure 8). Due to the width of the trench (500mm) only a small section of the wall was exposed, making it difficult to surmise the extent of the masonry or the function. The wall fitted tightly within the foundation cut [024], which cut through natural deposits [021] and [022].

The greensand stone rubble remains appear to be broadly coursed and blocky towards the base of the drainage trench, with more random rubble above, this may be due to consolidation at the bottom of the wall cut to provide a stable base for the structure. The sizable nature of the remains could indicate that these exposed foundations were intended to support a substantial structure, and the perceived alignment with the existing external wall of Green Court could indicate that there had been a continuation of the present wall later breached or modified to create the grand entrance. For the wall to have continued across the grand entrance, created when the property changed hands in the late 15th century, may indicate that the present wall or a predecessor had been in existence prior to the establishment of the formal layout of Green Court (M. Henderson pers. Comm.).

It is stated in Phillip's 'History of the Sackville's' (A. Gregory pers. Comm.) that 19th century workmen found masonry near the outer wicket, which is likely to be the same context. After full recording, The National Trust gave permission for the wall to be removed.

The wall was beneath a series of made-ground deposits [018] to [020] comprising three horizontal layers of either clean sand, disturbed natural or mixed chertstone with charcoal and CBM inclusions (Figure 8). There was no evidence of previous track ways or floor levels (none of the deposits were firm or consistent enough). These deposits were overlain by paving slabs [017].

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4.4.1 The drainage trenches running around the north and north west exterior of the property are linked intermittently by Investigation Chambers (IC). There is 16th century literary evidence that Knole House may have once had bridged access (A. Gregory pers. comm.) which led to the notion that some form of ring ditch enclosure or moat could have existed around the perimeter of the main building. Subsequently the entire route was monitored carefully, should any moat deposits arise, with sections and changes in geology being recorded duly. AI:11 had previously been excavated and backfilled in the first stage of test pit excavations in the Brew House Court.

4.4.2 □ □ □ □ □ □ □

The ground undulates heavily between IC:16 – IC:12, sloping downwards to the north west from IC:16, dipping, then rising slightly towards IC:12. The area is currently used as a lane for both pedestrians and motor vehicles. The stratigraphy in the trench sections varied, with no archaeological features uncovered, but a series of made ground layers were apparent. Some of these deposits were charcoal rich, and frequent inclusions of CBM and occasional post medieval glass and metal work were present.

A section of trench stretching 8m north west from IC:16, at a depth of 1.3m, displayed a series of made ground deposits [(027) – (031)] (cut by AI:11[032]) and a modern culvert [033] (Figures 9, 10). Overlying the more disturbed layers [029] – [031] was a 'dirty' mid brown yellow silt sand measuring approximately 600mm deep. The disturbed layers were generally the same consistency; coarse silt sand particles with chertstone inclusions varying in colour from mid brown [028], brown [029] to greenish yellow [030]. A seam of black, charcoal rich gritty sand [031] approximately 100mm in depth was exposed in IC:16 and continued, sometimes intermittently, the length of the trench to IC:13 (Figure 10). In areas this lay directly above a layer of crushed CBM and post medieval peg tile [034] or above [030]. Contexts [030] and [031] were sampled to identify and determine the nature of any charred botanical remains Context [031] most likely represents a dump of charred waste from fuel using activities rather than in situ burning (please see environmental report in 6.0).

As the trench neared IC:13 the depth decreased to 600mm and rose above the depth of context [031], rendering it impossible to determine the extent of the charred deposit. A further red CBM rich deposit [034] was identified (Figure 9) just below modern drain pipes.

At IC:13 the ground begins to slope upwards towards the main driveway area. At 2.10m from IC:13 towards IC:12, adjacent to the north corner of the Stable Court, a very compact chertstone layer [035] was encountered at 700mm depth (146.80m AOD) (Figure 9). This layer continued for 3.4m towards IC:12 before ending abruptly. The remainder of the trenching in this section consisted of disturbed natural backfill [027] onto natural [021].

There is historical evidence of workmen levelling the land or infilling depressions to the west of the property (A. Gregory pers comm.) which the depositional sequence supports. Concentrations of burnt material, CBM and other building materials are most likely to be 'dumps' made during the 18th-

19th century.

4.5.1 The drainage route continues along the north west facing main building, up the driveway and past Stable Court, to link with the gatehouse entrance at IC:10. This area was monitored continuously until it was proved beyond reasonable doubt that moat deposits were not present and the archaeology exposed was minimal to non-existent.

4.5.2

The majority of the stretch of drainage route rendered no archaeology and the stratigraphy was limited to grass or tarmac onto disturbed natural [026] overlying clean natural silts [021]. However, 15m along from IC:11 extending to 24m (towards IC:10) below modern piping was a 500mm thick CBM and post medieval tile rich deposit [036] 250mm below ground level (149.98m AOD) (Figure 9). Medieval to early post medieval glass was also recovered from [034] but this is most likely to have been residual.

Table 3: Quantification of the Finds

5.1.1 A small assemblage of finds, summarized in Tables 3 and 5, was recovered during the archaeological work. Finds were all washed and dried or air dried as appropriate. They were counted, weighed and bagged by material. A number of finds were assigned unique registered finds numbers (RF <00>) and were bagged individually. None of the finds require further conservation or X-ray.

Find ID	Material	Count	Weight (g)	Material	Count	Weight (g)	Material	Count	Weight (g)	Material	Count	Weight (g)	Material	Count	Weight (g)	Material	Count	Weight (g)	Material	Count	Weight (g)
AI: 09 (10)	4	188			1	8					6	302			1	122					
AI: 09 (13)			4	546													1	6			
AI: 13 (11)	11	162																			
AI: 13 (15)	4	116	1	10	15	606					2	156	1	4	3	98	1	6	1	4	
19			3	82																	
23			2	34					3	184											
25									2	1432											
30			1	1346																	
31					21	6948	1	6						1	8						
36			4	552	4	236			1	44				1	<2						
3			4	3434																	
37			2	1208																	
Total	19	466	21	7212	41	7798	1	6	6	1660	8	458	1	4	6	228	2	12	1	4	

Table 5: Quantification of the Finds

5.1.2 Pottery recovered by Luke Barber

The archaeological work recovered 19 sherds of late post-medieval pottery from three individually numbered contexts. All of the sherds are quite fresh and do not appear to have been reworked to any extent. All can be placed between 1850 to 1925, although nothing need be prior to 1875. Context [10] produced four sherds (187g) of Ironstone china one piece of which, possibly from a plant pot holder, has a polychrome floral transfer-print around its rim. Context [11] produced four sherds (98g) from a Sunderland-type slipware bowl and seven sherds (64g) from refined white earthenware plates. One of these is decorated with blue and gold gilt bands around the rim. Context [15] produced a further four sherds (115g) of plain bowls and plates in the same ware.

5.1.3 Fragments of CBM recovered by Sarah Porteus

Fragments of CBM were recovered from nine contexts. The material is of later medieval and post-medieval date. Samples of the fabrics and items of note have been retained as part of the archive and a complete record of the material has been recorded on pro-forma sheets and transferred to an Excel spreadsheet.

Brick fragments of probable medieval date were recovered from contexts [3], [13], [30], [36] and [37]. In all but contexts [37] and [3] the material is likely to be residual. Made ground context [3] probably represents the demolition of earlier structures which may have stood on the site. *In situ* wall [37] is made of brick in fabric B1 (Table 4). The brick is unfrogged with an indented margin and mortared with a soft cream sandy lime mortar with coarse lime chunks. The brick measures 120mm in breadth by 56mm thickness, no complete length was available. Thicknesses of brick recovered from [3] ranged from 55 to 63mm and included one cut down brick. These dimensions and form are consistent with medieval brickwork. The fabrics of the medieval brick appear to be two slight variants of the same sandy fabric (table 4) both are likely to have been produced close to the site.

Fabric	description	Date range
B1	Orange sandy fabric with abundant poorly sorted rose quartz with sparse black iron rich inclusions and red sandstone inclusions	C15th-C16th
B2	Orange sandy fabric with moderate fine to medium poorly sorted quartz and sparse to moderate black iron rich inclusions. May be variant of B1	C15th-C16th

Table 4 Medieval brick fabric descriptions.

Post-medieval peg tile was recovered from contexts [13], [15], [19], [23], [30], [31] and [36]. Peg tile in two different fabrics were noted both of which are of probable 18th to 19th century date and probably represent two different roofing events. Peg tile fabric T1 is a brown-orange fabric with fine calcareous inclusions and sparse medium sized voids and sparse red iron rich inclusions, and fabric T2 is a pinkish orange with abundant fine calcareous inclusions and fine voids. The calcareous inclusions are typical of Kentish peg tile.

5.1.4 Glass by Elke Raemen

A small assemblage of glass was recovered from four individually numbered contexts. The earliest piece is a fragment of badly deteriorated, clear window glass of medieval to early post-medieval date, recovered from [36]. Other earlier fragments include a green glass bottle body sherd of 18th-century date (Al: 13 [15]) and a wine bottle fragment dating to the mid 18th to mid 19th century ([31]).

All other fragments are of late 19th- to 20th-century date. A complete, clear glass cylindrical bottle (H 112.7mm) with external screw thread was found in Al: 09 [10]. Context Al: 13 [15] contained two fragments from an oval, amber Burgoyne empire wine bottle with vulcanite screw top. The latter is embossed "REG^d BURGOYNE 62529". The same number is embossed on the base. The bottle is of early 20th-century date.

5.1.5 Iron by Elke Raemen

Three objects were assigned a unique registered finds number (Table 5). All are likely to be of 19th-century date. Included is an iron key fragment (RF <1>) consisting of part of the solid stem and the bit. An iron suspension hook was recovered from the same context. In addition, eleven cast iron fragments, some conjoining, from a tripod cauldron with handle and concentric ribs around the external surface were recovered from the topsoil.

Context	RF	Description	Material	PMED	Count	Notes
Al: 13 (15)	1	KEY	IRON	PMED	64	Incomplete
Al: 13 (15)	2	HOOK	IRON	PMED	24	Incomplete
IC: 16 - IC: 13 unstrat	3	VESS	IRON	PMED	1418	Incomplete

Table 5. Summary of the Registered Finds.

5.1.6 Nails by Elke Raemen

Nails were recovered from Al: 09 [10] and Al: 13 [15]. The former contained two general purpose nail fragments as well as three heavy duty nail fragments, whereas the latter contained a large heavy duty nail. Nails are of post-medieval date. In addition, an iron circular lid (di 96.4mm) of 19th- to early 20th-century date was recovered from Al: 09 [10]. Al: 13 [15] contained a wire fragment of similar date.

5.1.7 Stone by Luke Barber

A small collection of stone was recovered from the site all of which appears to have derived from the nearby Lower Greensand Beds. Two variants of glauconitic Lower Greensand are present both almost certainly used for walling though none shows signs of facing. The coarser type was recovered from [23] (3/180g), [30] (1/223g) and [36] (1/43g) though it is quite likely to have derived from the same quarry as the finer version. The latter is typical

Kentish Ragstone and was only recovered from [25] (2/1,424g). The other stone types consist of Lower Greensand chert (context [30]: 2/193g and [31]: 1/3g), medium-grained sandstone (context [30]: 1/55g) and ferruginous carstone (context [31]: 1/1g).

5.1.8 Animal bone assemblage

The assemblage contains 35 fragments of animal bone from contexts [15], [31] and [36]. The bone was hand-collected. Environmental samples were taken but no animal bone was recovered. The assemblage was recovered from post-medieval deposits to the north and north west of Knole House. Deposit [15] was identified in the Brew House Court where substantial drainage work has been fitted to accommodate the public toilets and café kitchen – therefore the animal bone maybe residual.

Wherever possible bone fragments have been identified to species and the skeletal element represented. The bone was identified using the in-house reference collection and Schmidt (1972). Elements that could not be confidently identified to species, such as long-bone and vertebrae fragments, have been recorded according to their size. The larger fragments are recorded as cattle-sized and the smaller fragments as sheep-sized. In an attempt to avoid the distortion caused by differing fragmentation rates, the elements have been recorded according to the part and proportion of the bone present. The state of fusion has been noted and each fragment has been studied for signs of butchery, burning, gnawing and pathology. Tooth wear data was not available as no mandibles were recovered.

Sheep and goat bones have been differentiated using Prummel and Frisch (1986) and fallow deer have been identified using Lister (1996). Where measurements were possible they have been taken using methods outlined by Von Den Driesch (1976). Digital callipers have been used for the smaller fragments and an osteometric board for complete long bones.

The assemblage contains cattle, sheep, fallow deer and chicken. The NISP (Number of Identified Specimens) is shown in Table 6.

Species	NISP
CATTLE	19
SHEEP	5
HORSE	1
FALLOW DEER	7
CHICKEN	1
BIRD	2

Animal bone assemblage NISP

The assemblage is in a fairly good condition and contains a number of complete bones. The bone surface shows some sign of erosion having flaked off in areas. The assemblage includes fragments of long-bone and is dominated by metapoidals. A number of measurements have been taken and

are shown in Table 7.

Species	Bone	Side	Length	Width	Thickness	Weight
SHEEP	Metatarsal		148	26.8	23	13
FALLOW DEER	Metacarpal	R	194	27.7	27.2	16.9
FALLOW DEER	Metacarpal	L	181	25.7	24.6	13.2
FALLOW DEER	Metatarsal	R	198	26.8	24.9	13.6
FALLOW DEER	Metatarsal	R	214	29.8	28	16
FALLOW DEER	Metatarsal	L	224	30	27	17
FALLOW DEER	Metatarsal	L	218	28.8	26.4	15.2

Table 7. Metrical data.

No evidence of butchery, burning or pathology has been noted. Rodent gnawing was evident on a bird long-bone fragment. The fragment could not be identified to species though derives from a medium to large specimen.

5.1.9 Finds by Elke Raemen

A fragment of a lower valve from an oyster shell was recovered from [31]. Other pieces include plastic of late 20th-century date (AI: 13 [15]) and a fragment of square sectioned wood (c. 15 by 15mm), again of 20th-century date (AI:09 [13]). A copper-alloy .360 calibre pistol bullet case (fired; Eley no. 5) was recovered from AI: 13 [15] and is of late 19th- to early 20th-century date (Justin Russell pers. comm.).

6.1 Archaeological work at Knole House

6.1 Archaeological work at Knole House by Lucy Allott

Two samples were taken during archaeological work at Knole House from contexts [30] and [31] both of which contained post medieval peg tile of 18th to 19th Century date. Sampling aimed to recover environmental remains such as wood charcoal, charred botanicals, fauna and mollusca and to help establish the nature of these deposits.

The samples were processed in their entirety in a flotation tank and the residues and flots were retained on 500 and 250µm meshes respectively and were air dried prior to sorting. The residues were passed through graded geological sieves (4 and 2mm) and the contents of each fraction sorted and recorded in Table 8. Flots were scanned under a stereozoom microscope at x7-45 magnifications and an overview of their contents was recorded (Table 9). Macrobotanical remains and charcoal have been identified using modern comparative material held at the Institute of Archaeology, University College London and in reference texts (Cappers *et al.* 2006, Jacomet 2006, NIAB 2004, Hather 2000, Schweingruber 1990, Schoch *et al.* 2004) and their abundance and preservation has been recorded. Nomenclature and habitat information used follows Stace (1997).

6.1.1 Context [30]








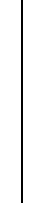
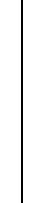
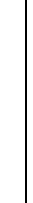

Sample <1> from context [30] contained very small flecks of charcoal and building material remains only. Uncharred seeds that are likely to be intrusive were present in sample 2 which was taken from context [31] a black layer overlying context [30]. Infrequent charred grass (*Poaceae*) and knotweed/docks (*Polygonum/Rumex* sp.) were recorded in this sample however no cereals or other crop remains were evident. The sample also produced a small amount of charcoal including some fragments of birch (*Betula* sp.) roundwood, beech (*Fagus sylvatica*) and possible hazel (*Corylus avellana*). No other environmental remains were recorded.



6.1.2 Context [31]

Sampling has confirmed the presence of environmental remains and the presence of charcoal and charred botanicals suggests that the deposits derive from fuel using activities. Deposit [31] was described on site as a black layer and charcoal fragments in this deposit support this observation however this blackening cannot necessarily be attributed to *in situ* burning but more likely represents a dump of charring waste.



Grasses and knotweed/dock taxa grow in several different habitats. They are common arable weeds but are also common to disturbed ground and grassland vegetation. The woody taxa, birch, beech and hazel can grow in several habitats and in this instance probably derive from managed sources. These trees were almost certainly sourced for fuel but the assemblages are too limited to indicate the nature of these fuel using activities, whether industrial or domestic or to provide further information about the vegetation environment or managed woodland from which they derive. Given that both

contexts have post medieval dates the charcoal assemblage provides no potential to further refine the dating of these deposits.

										
1	30	deposit	10	10			*		1	Masonry*/ 476g CBM*/ 62g
2	31	black deposit	10	10	**	6	***	<i>Betula</i> sp. (8 - 2rw), cf. <i>Corylus avellana</i> (1), <i>Fagus sylvatica</i> (1)	6	CBM*/ 22g

  Residue quantification (* = 0-10, ** = 11-50, *** = 51 – 250, **** = >250) and weights (in grams).

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  Flot quantification (* = 0-10, ** = 11-50, *** = 51 – 250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good).

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- 7.1 The majority of excavated AI pits within the Green Court did not reach depths below post medieval disturbance (most likely to be associated with the drain runs which were fitted as recently as the 1970's) however, in the extension of AI: C, a red brick wall was exposed. The CBM analysis suggested a medieval date and due to the location of the brickwork underneath the main fabric of Knole House, it was deemed likely to be either a structure pre dating 1456 or brick work associated with the underground vaulted water reservoir. The wall also appeared to have the top visible course collapsed at an angle to the lower course indicating possible demolition. Made ground deposit [03] contained bricks of the same fabric perhaps suggestive of the levelling of an earlier structure during the construction of the 1456 gatehouse, or later raising of the ground level to form a flat courtyard during the 1538 construction of the walls enclosing the present day Green Court. Unfortunately the limited excavation area made it difficult to conclude definitively the purpose of the brick structure.
- 7.2 The current layout of Knole broadly shows a block-like development, with the earliest parts of the house (to the rear of Stone Court) encompassed by later construction. Green Court added later, gives the impression of a planned sequence of development. However, the formalised appearance may have removed or altered structures associated with earlier phases of occupation related to the medieval core of the property. The substantial masonry remains recorded through the main entranceway (between IC:07 and IC:10) could be a remnant of an earlier structure or boundary wall. It is the location of the remains that suggest a continuation of the current outer wall line prior to remodelling carried out to create a grand entrance opening onto Green Court (M. Henderson pers. Comm.).
- 7.3 Investigations in the Brew House Court resulted in exposing various phases of post medieval deposits. This area has been heavily disturbed when fitting modern drainage and many of the finds are likely to be residual, with the earliest being an 18th century bottle.
- 7.4 The trenching running down the Lane and across the Driveway to IC:10 contained deposits of made ground. Charred waste, CBM, peg tile and chertstone dominated the backfill and provided reliable dating evidence. Throughout this section of the watching brief care was taken to identify any possible evidence of a moat or ditch, of which there was none. However, undisturbed natural deposits were only encountered at the front of Knole House, along the Driveway to the north west of IC:13. To the south east, towards IC:16, the total depth of the made ground deposits or what lays beneath them, was not determined.
- 7.5 The natural geology across site is consistent apart from small changes in colour (from strong brown yellow in the Green Court, to red brown, to greenish yellow outside Stable Court). Deposits directly above the natural tended to be versions of disturbed natural with or without intrusive artefact inclusions. The landscape itself undulates heavily and Knole house sits upon the crest of a hill. These factors would suggest against there being a water filled moat but may explain the 18th and 19th century made ground deposits, which have made use of refuse and redundant building materials.

□□□□□□□□□□

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Site Code	KNO10					
Identification Name and Address	Knole House, Sevenoaks					
County, District &/or Borough	Sevenoaks, Kent					
OS Grid Refs.	554005 154249					
Geology	Sandgate Beds and Hythe Beds					
Project Number	4150					
Type of Fieldwork	Eval.	Excav.	Watching Brief ✓	Standing Structure	Survey	Other
Type of Site	Green Field ✓	Shallow Urban	Deep Urban	Other		
Dates of Fieldwork	Eval.	Excav.	WB. Feb – June 2010	Other		
Sponsor/Client	The National Trust.					
Project Manager	Neil Griffin/Jim Stevenson					
Project Supervisor	Liane Peyre					
Period Summary	Palaeo.	Meso.	Neo.	BA	IA	RB
	AS	MED	PM ✓	Other		
<p>100 Word Summary.</p> <p><i>An archaeological watching brief, commissioned by The National Trust, was undertaken during the excavation of a foul water separation provision at the Grade I listed building Knole House, Knole, Sevenoaks, Kent. During the excavations, a series of backfilled deposits were exposed within the Brew House Court and the trenching around the exterior of Knole House. These are likely to be attributed to 18th – 20th century levelling of the land using dumps of charred waste and building material such as ceramic building material and tile and disturbance from the installation of modern drainage routes over the last 30 years.</i></p> <p><i>Excavations within the Green Court uncovered a brick wall of probable medieval date. This was underlying the main fabric of the house so could either represent an earlier construction, or be associated with the vaulted water reservoirs under Stone Court. Trenching through the main entrance exposed a thick stone wall 500mm below ground surface. The construction materials resembled the type used in the main fabric of the building and the thickness of the masonry (1.4m) suggests a previous structure potentially predating the existing gateway.</i></p>						

OASIS ID: archaeol6-80988

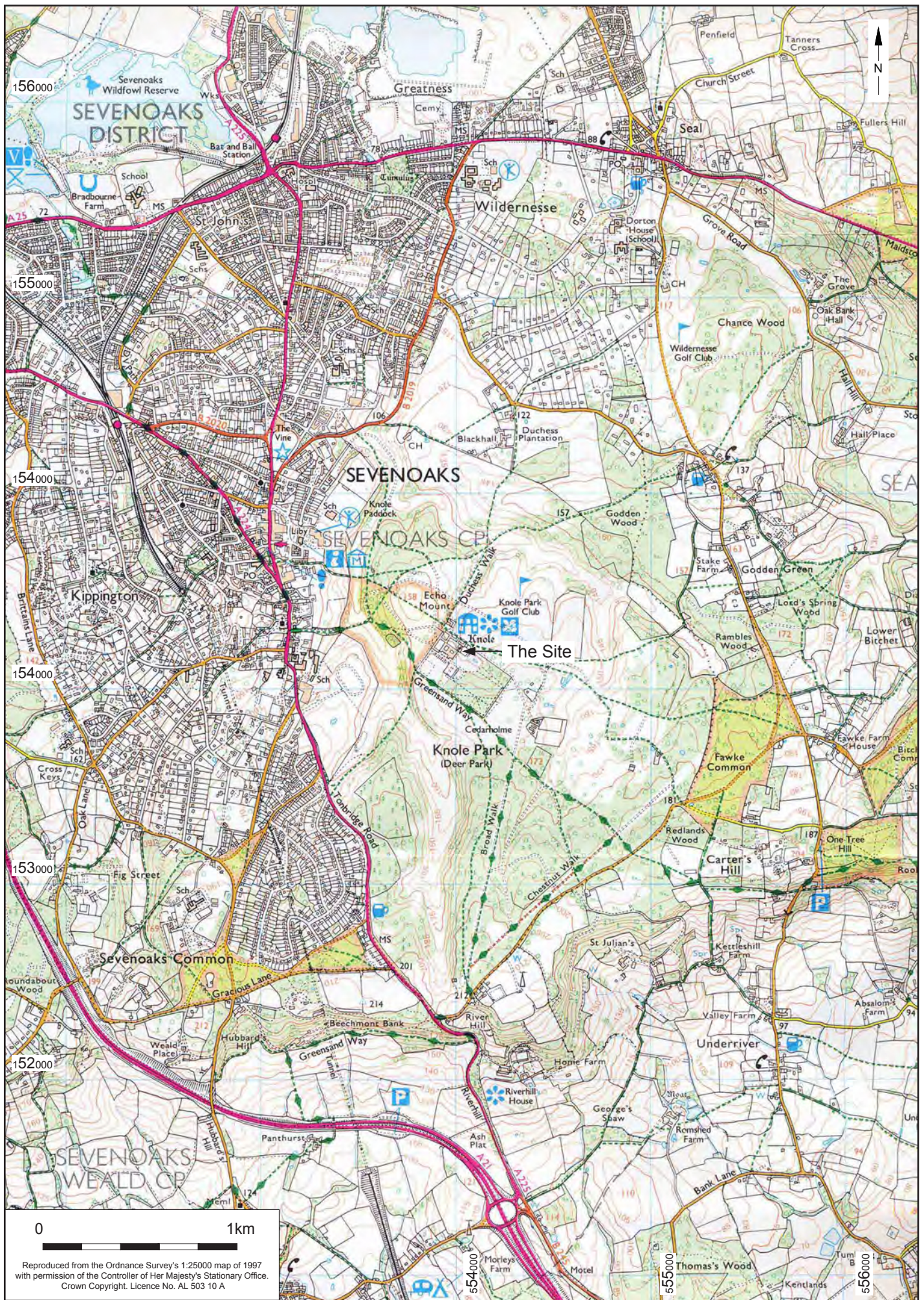


Project name	An Archaeological Watching Brief at Knole House, Sevenoaks, During Groundworks for Foul Water Separation Provision
Short description of the project	A Watching Brief at the Grade I National Trust property, Knole House, monitoring all intrusive groundworks for drainage re route and chambers. Work occurred in both the Green Court, Brew House Court and the NE and NW exterior. Post medieval deposits were encountered in the areas outside of the property, a potentially medieval wall was located in the Green Court and a foundation masonry wall was exposed in the trenching through the entranceway.
Project dates	Start: 03-02-2010 End: 18-06-2010
Previous/future work	Yes / Not known
Any associated project reference codes	2335 - Sitecode
Any associated project reference codes	2722 - Sitecode
Any associated project reference codes	4105 - Sitecode
Type of project	Field evaluation
Site status	National Trust land
Current Land use	Other 2 - In use as a building
Monument type	N/A None
Monument type	N/A None
Significant Finds	BRICK WALL Medieval

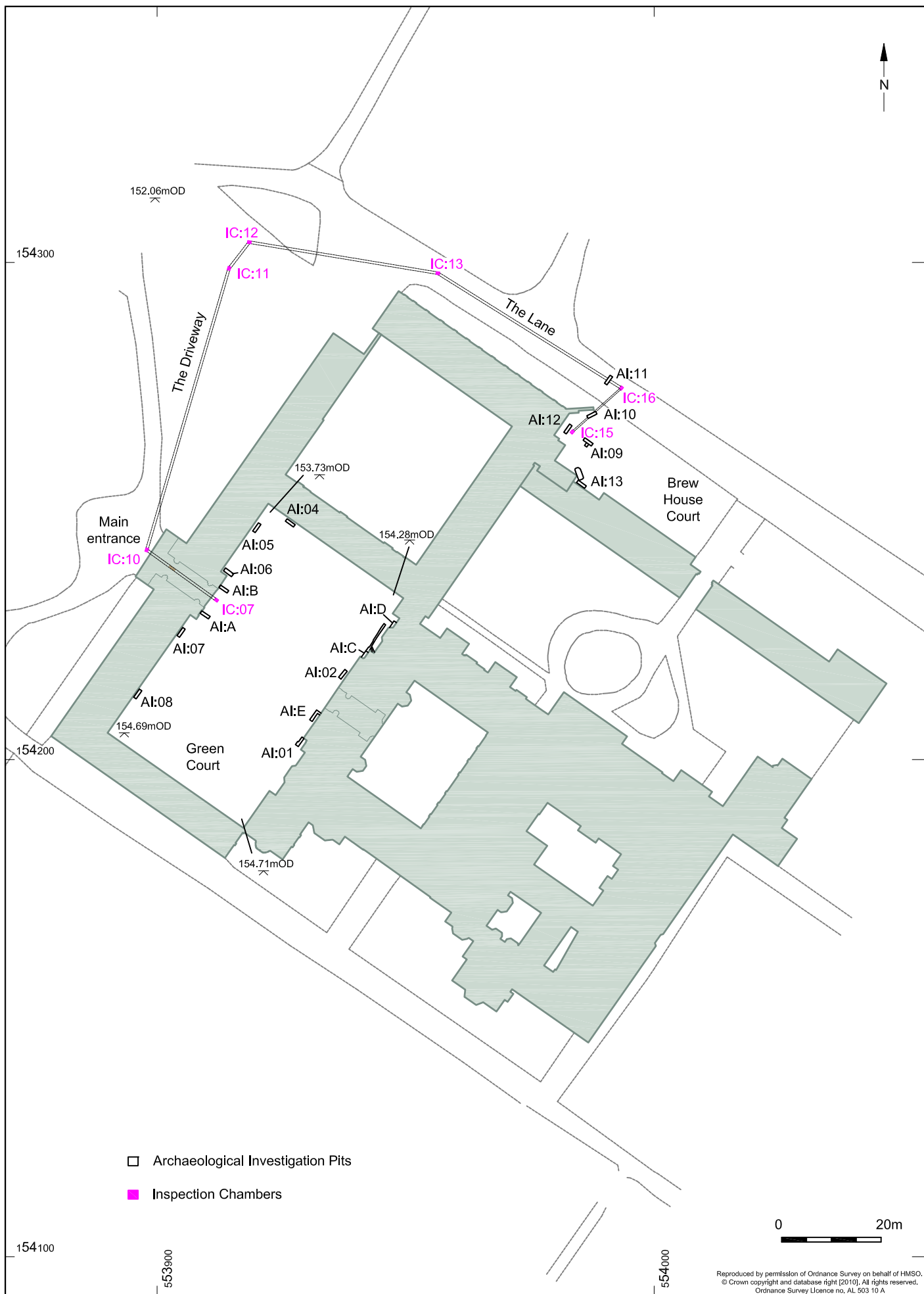
Type of sponsor/funding body	National Trust
Government	0
Local authority	0
Private company	0
Charity	0
Academic	0
Other	0
None	0

Paper Media available	'Context sheet','Correspondence','Diary','Drawing','Notebook - Excavation',' Research',' General Notes','Photograph','Plan','Report','Section','Unpublished Text'
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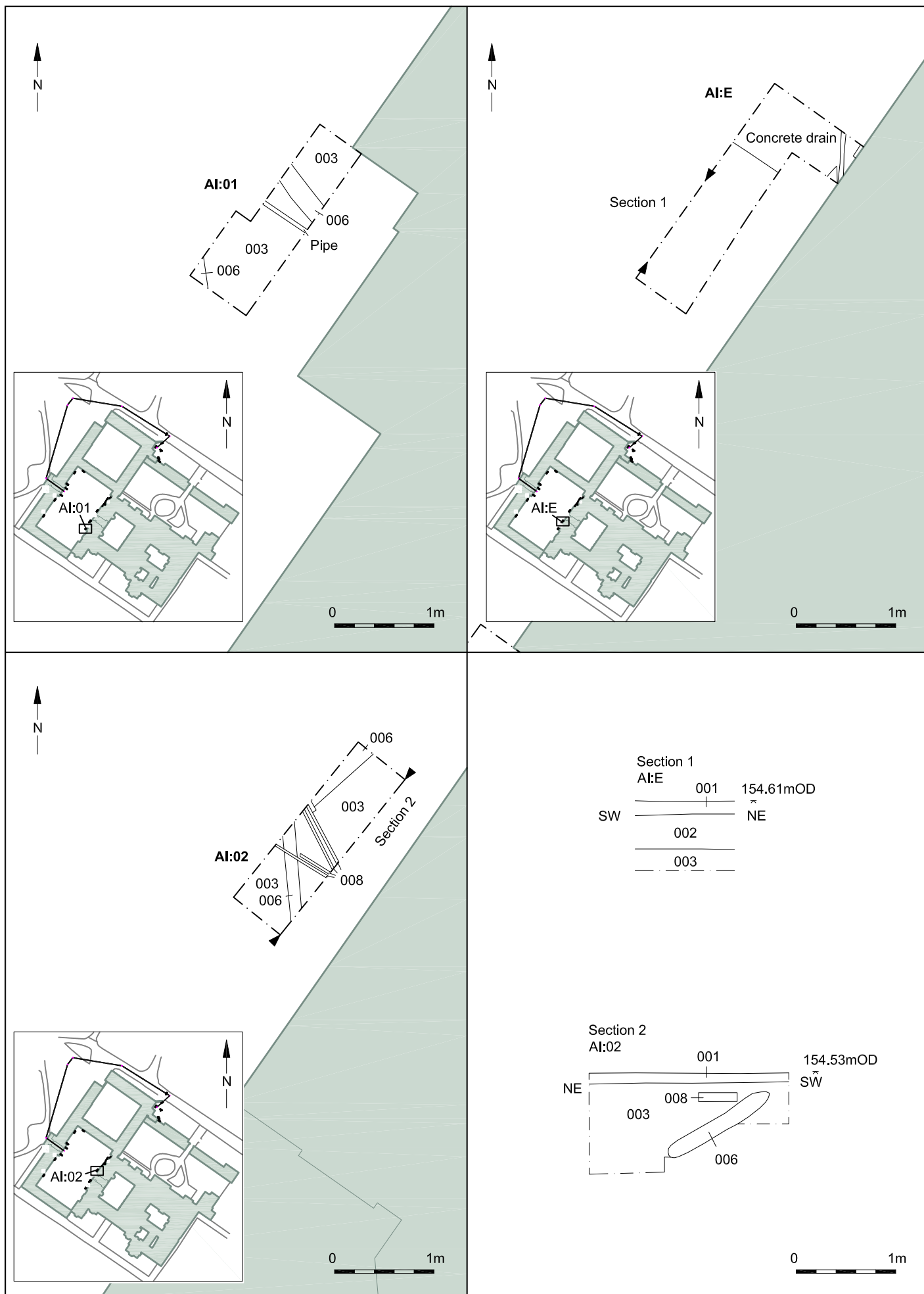
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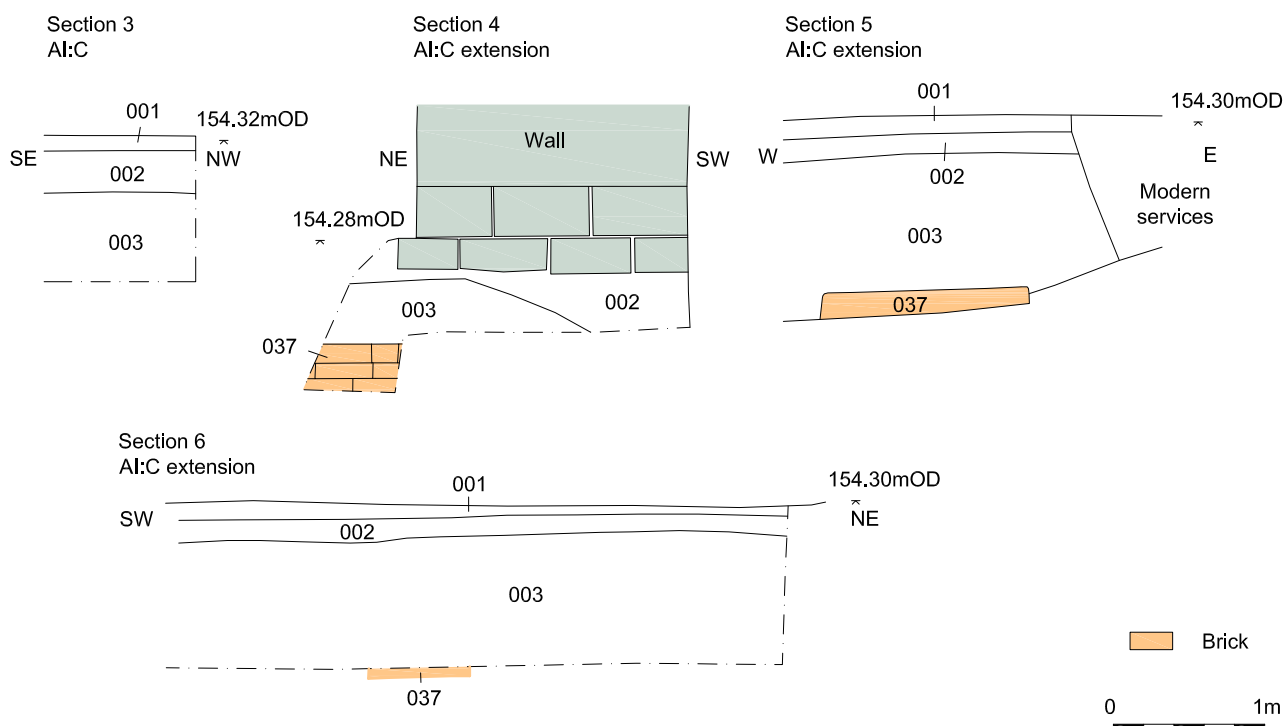
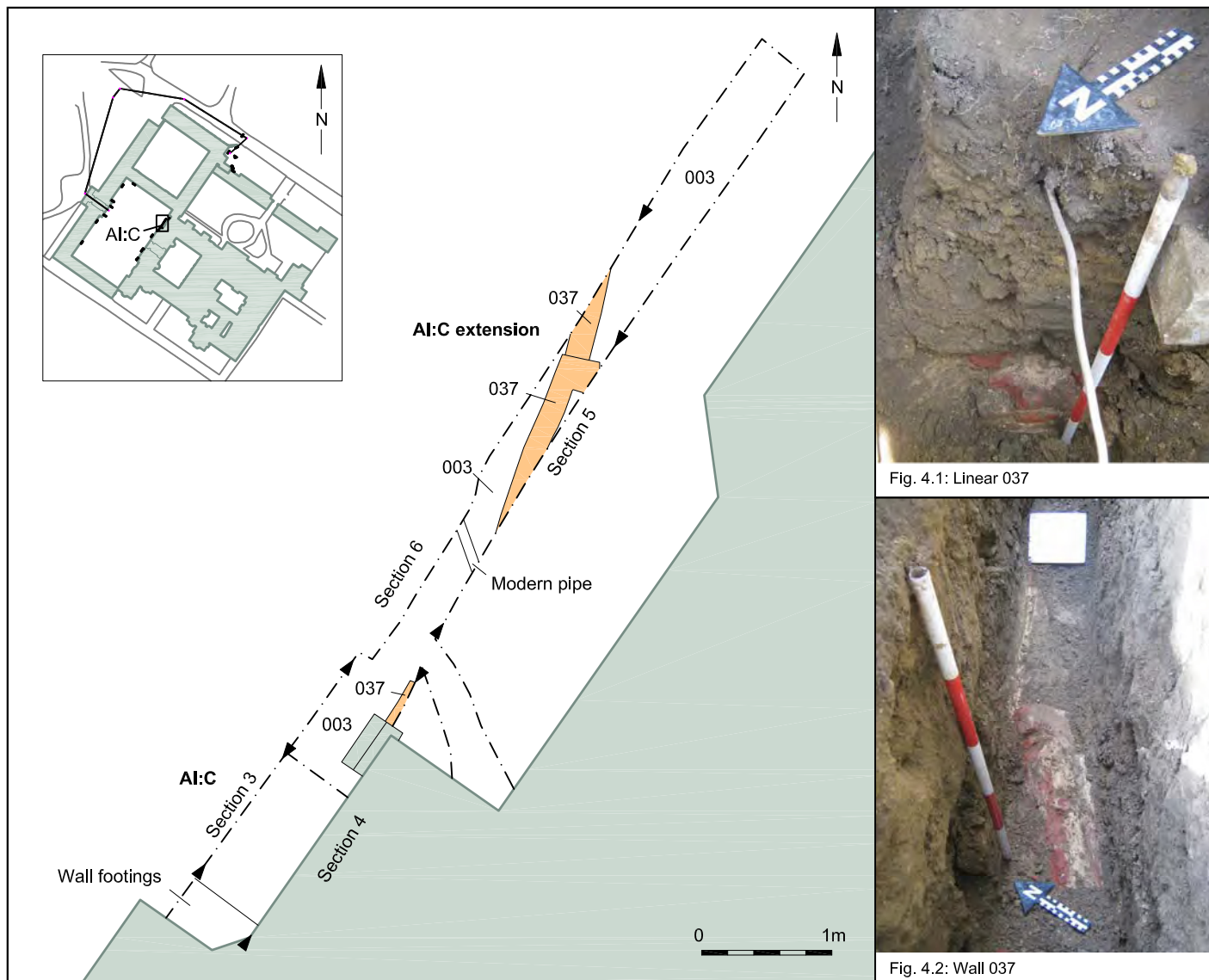


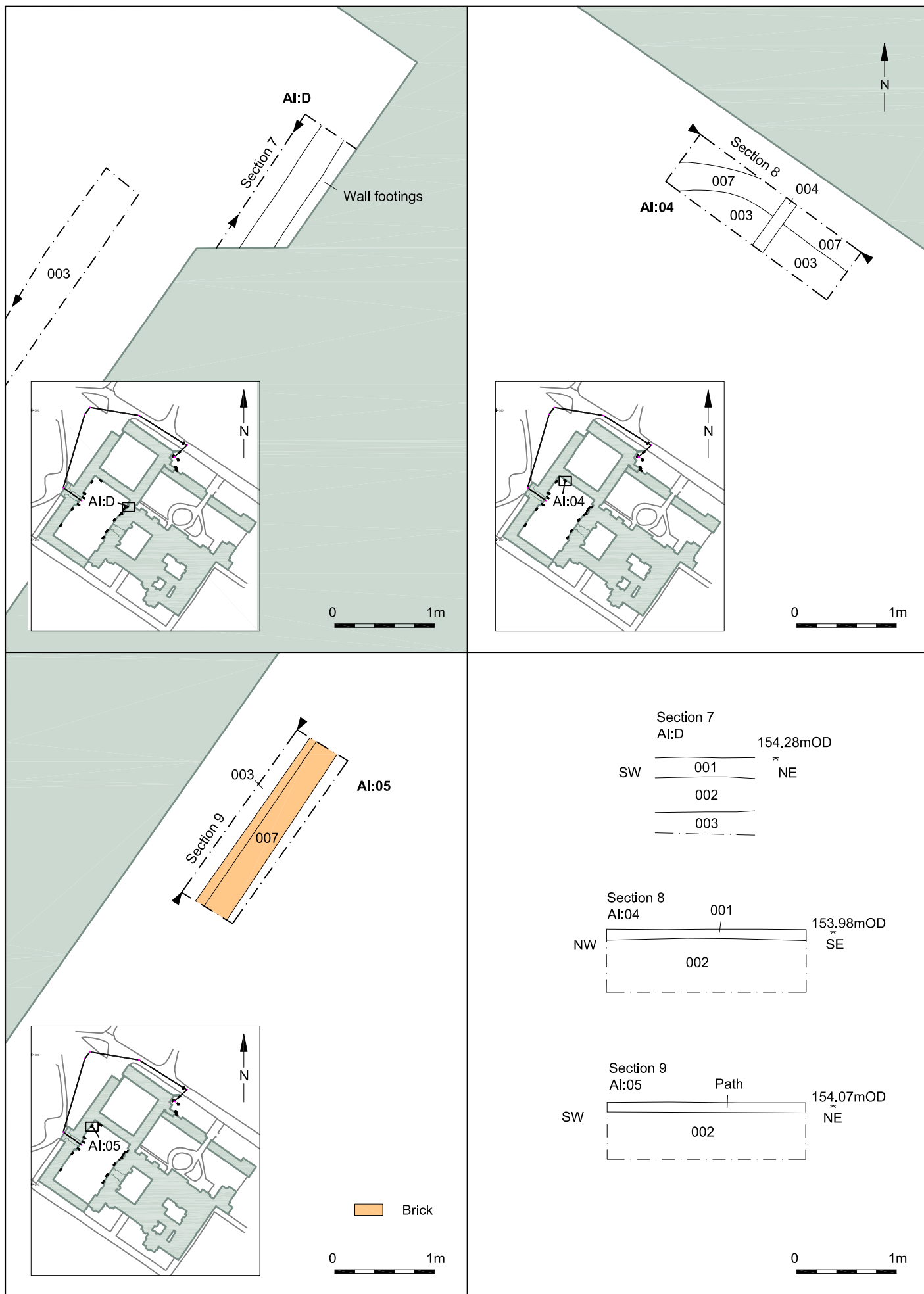
© [Copyright Symbol]		Knole House	Fig. 1
Project Ref: 4150	Sept 2010	Site location	
Report Ref: 2010121	Drawn by: JLR		



© Archaeology South-East		Knole House	Fig. 2
Project Ref: 4150	Sept 2010	Site plan	
Report Ref: 2010121	Drawn by: JLR		

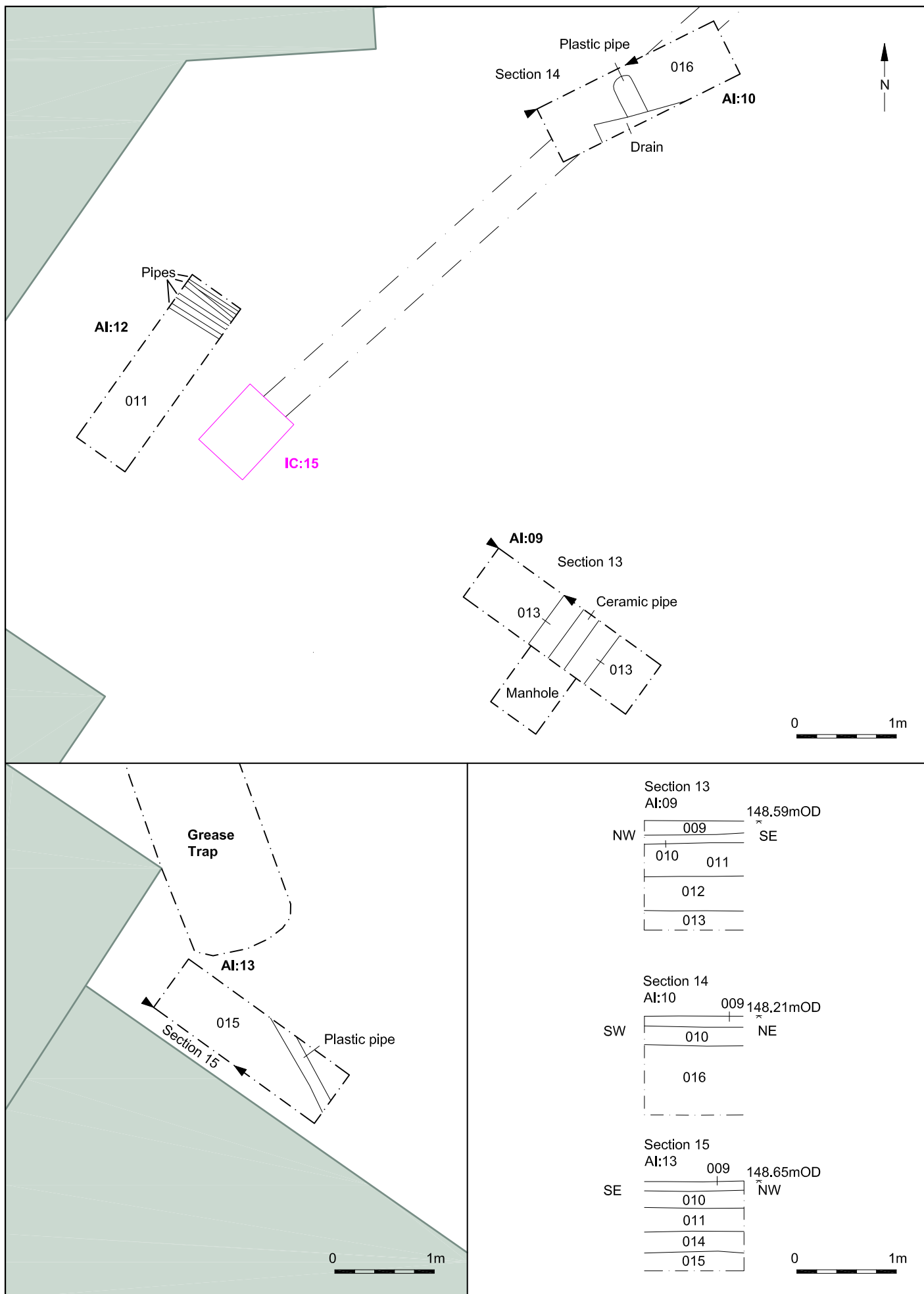








© Archaeology South-East		Knole House	Fig. 6
Project Ref: 4150	Sept 2010	Green Court, Trenches AI:06, AI:B, AI:A, AI:07 and AI:08: Plans and sections	
Report Ref: 2010121	Drawn by: JLR		



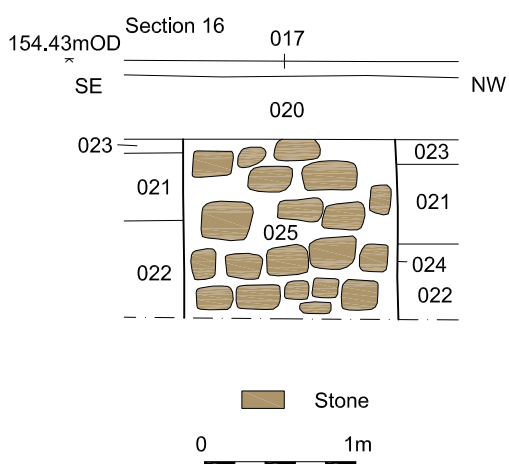


Fig. 8.1: Levelling deposits section 18



Fig. 8.2: Wall 025 elevation

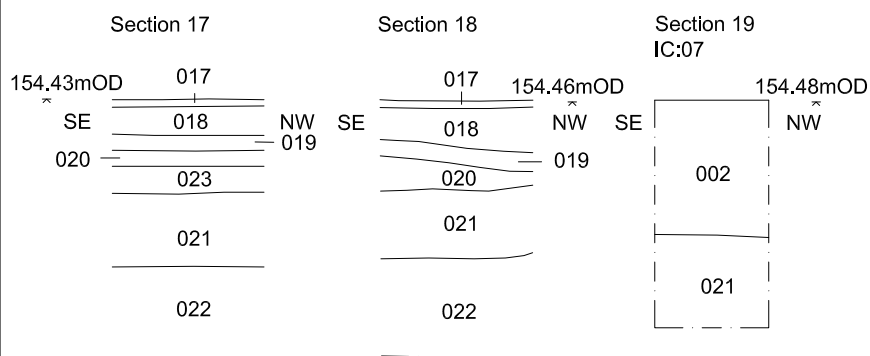


Fig. 8.3: Wall 025 plan

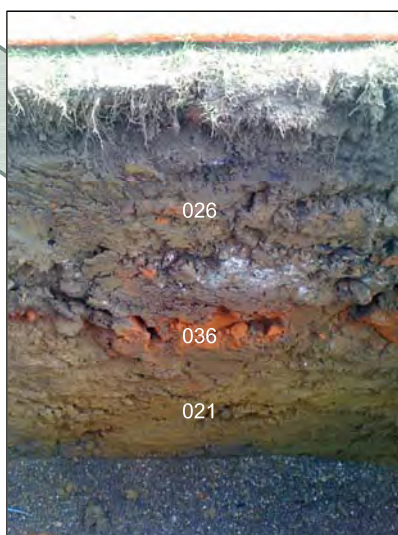
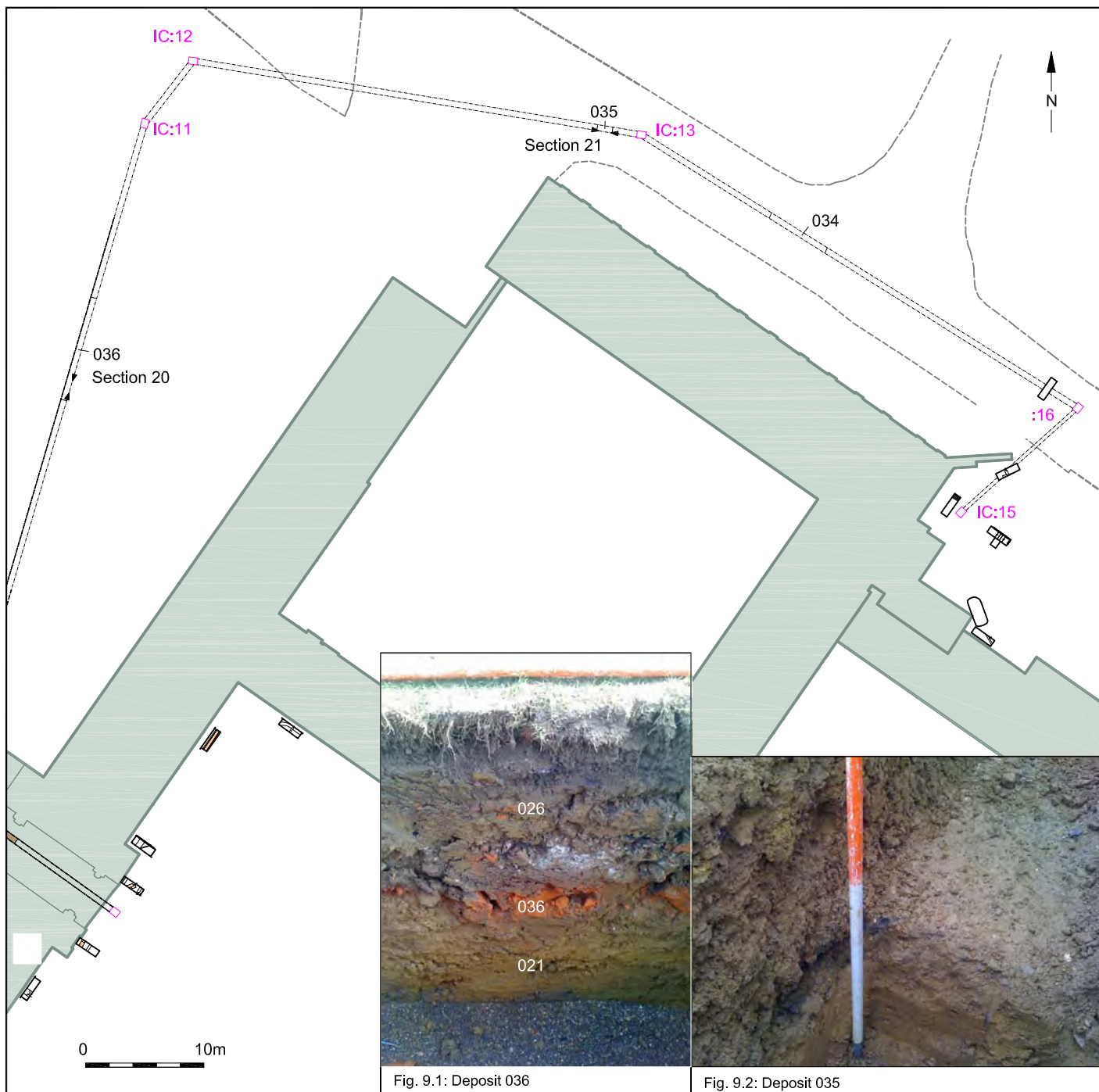
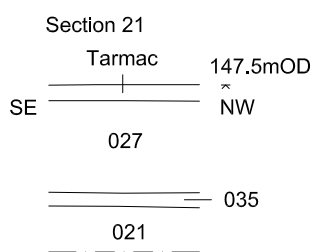
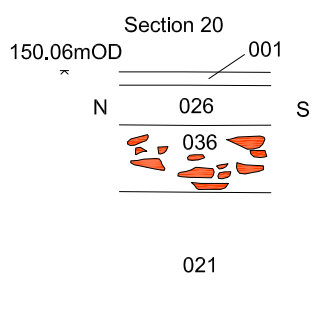


Fig. 9.1: Deposit 036



Fig. 9.2: Deposit 035



Tile

0 1m



Fig. 9.3: Deposit 034

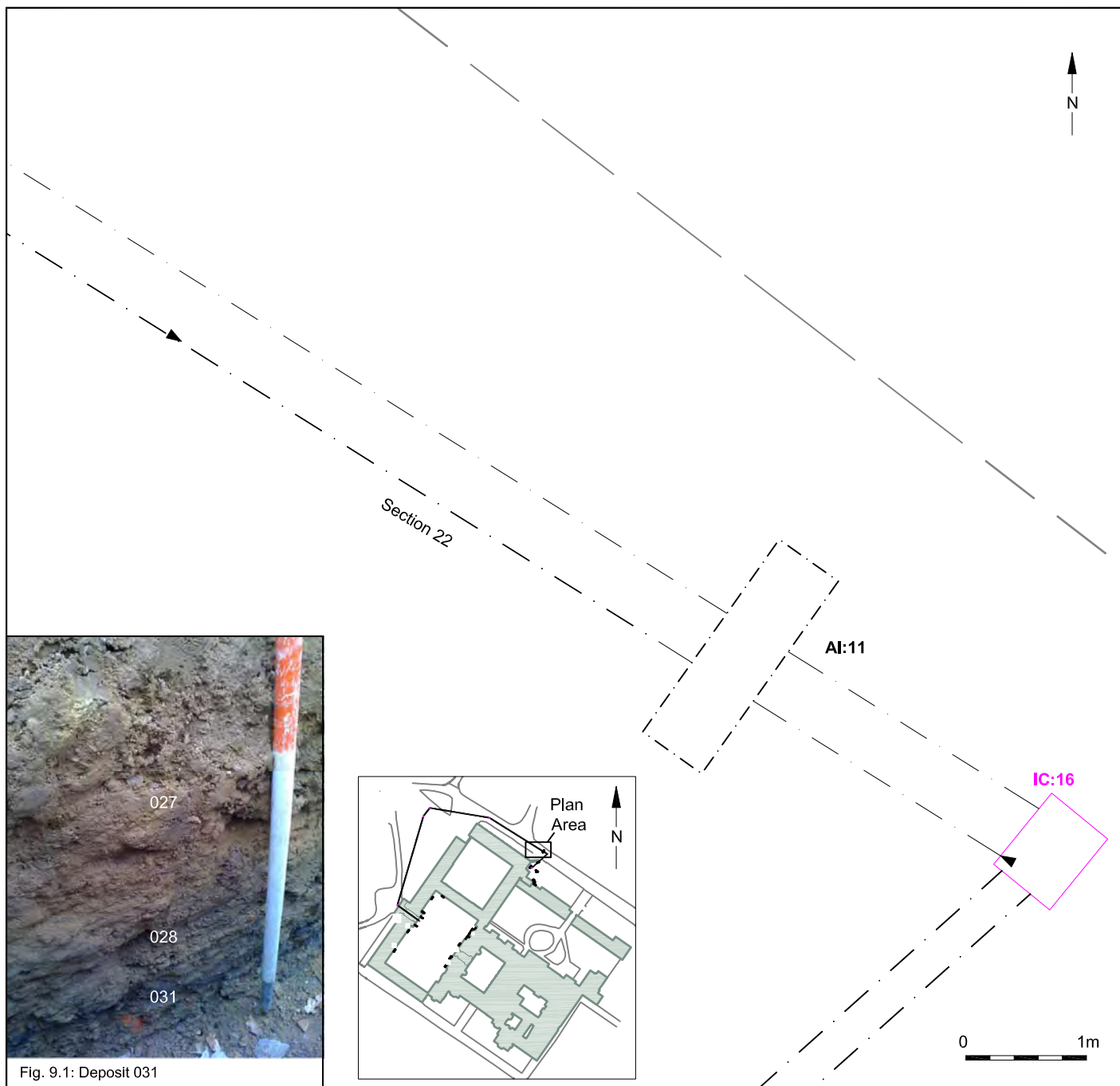


Fig. 9.1: Deposit 031

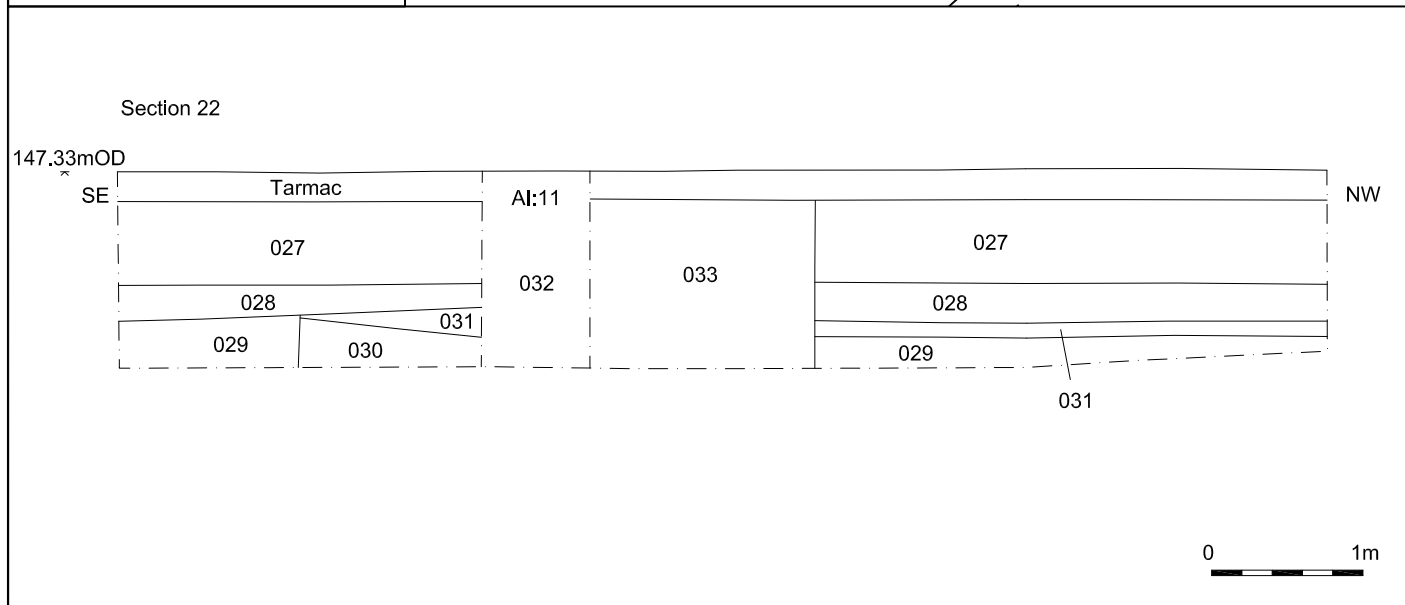




Fig. 11.1: Workmen in main entrance



Fig. 11.2: View westwards from IC:11 to Knole House

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