TOTNES CASTLE MOTTE: ARCHAEOLOGICAL WATCHING BRIEF AND EVALUATION

by

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TOTNES CASTLE MOTTE - ARCHAEOLOGICAL WATCHING BRIEF AND EVALUATION DURING GEOTECHNICAL SITE INVESTIGATION, Aug 1999

By
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SUMMARY

In January 1999 a landslip occurred within the post-medieval terracing on the slopes of Totnes castle, Devon. A preliminary archaeological inspection of the area exposed by the landslip was undertaken by Stewart Brown Associates in February of that year. In order to inform a general survey of the terracing, a geotechnical investigation was carried out in July and August by Geotechnics Ltd. on behalf of Babtie group, consultant engineers to English Heritage. An archaeological watching brief and evaluation were undertaken during this project.

The geotechnical investigation provided valuable archaeological information concerning the structure and composition of the Norman motte, as well as evidence regarding the extent and nature of an underlying Saxo-Norman occupation layer. In addition, it provided an assessment of the degree to which post-medieval garden terracing has affected the motte sides.

Previous archaeological work and interpretation

Previous archaeological work on the motte investigated the summit area within the shell keep (Rigold 1954) and part of its western slope where affected by the 1999 landslip (Brown and Matthews February 1999). Further observations (non-intrusive) were made concerning the existing terrace walls as part of a combined archaeological and historical study of the post-medieval garden terracing (Brown and Matthews April 1999).

1/ THE PROJECT

Geotechnical Investigation

In response to the landslip, the geotechnical investigation was designed to obtain information on ground conditions in the area of the post-medieval terracing on the motte (Fig. 1; Babtie reference Drg BGE 019874/C/01). Structural detail of the existing retaining walls were also to be obtained.

The investigation involved the following exploratory methods:
1) Test Pits (TP) - to determine the depth and quality of founding strata of the retaining walls.
2) Window Sample (WS) - to: 1/ sample the material behind the retaining walls; and 2/ ascertain the characteristics of the ground forming the motte surface.
3) Surface Exposures (x) - to determine the thickness of the retaining walls at the top.
4) Deep Exploration Boreholes (DE) - to: 1/ investigate the material comprising the body of the motte; 2/ assess its capability to act as anchorage restraint; and 3/ measure the depth of any water table

encountered.

Archaeological Evaluation and Watching Brief

The watching brief was undertaken in order to record the archaeological deposits exposed during the geotechnical investigations. The principal aims of the exercise were outlined in a Project Design prepared beforehand:
1/ to examine and date the construction of the Norman motte;
2/ investigate the buried soil beneath the motte in more detail than was possible during the limited inspection undertaken following the landslip in early 1999;
3/ provide fresh information concerning the date and character of the post-medieval terraces situated on the slopes of the motte.

The evaluation of the archaeology is intended to inform the design and implementation of future engineering works, and to promote the general conservation of the monument.

As specified in the project design an archaeological presence was maintained during all sub-surface elements of the geotechnical investigation. A photographic record of all ground disturbance was produced on black and white film, with coverage in colour undertaken where appropriate (lodged in the site archive).

Cores produced by the window samples were examined and recorded on site. Due to recovery methods, samples provided by the deep exploration boreholes were not available for inspection on production. These cores were examined later at the Geotechnical Ltd laboratory.

In areas of suspected archaeological sensitivity the test pits were excavated archaeologically and recorded to the standards specified in the project design. Within the post-medieval terraces the presence of uniform deposits of a recent date resulted in the excavation of the relevant test pits by the Geotechnical Ltd team under archaeological supervision. These test pits were reduced in scale in response to the exposed material, and excavated to identify the base of the corresponding terrace wall and expose the surface of deposits related to the motte. Each were recorded as appropriate. Five test pits (nos 20, 21, 22, 24 and 25), placed within the area exposed by the landslip, required no additional excavation as existing exposure was sufficient for the needs of the geotechnical investigations. As the area of these test pits had previously been recorded archaeologically in February 1999 no further work was undertaken. An additional test pit (ATP) was excavated at the foot of the slope (Figs. 1, 4, 10) in order to provide environmental samples of the buried soil identified in the area of the landslip.

In order to determine the full width of the walls exposed by the surface scrapes it was decided to increase the depth of each excavation. This resulted in shallow trenches at each designated point. These were recorded as small test pits.

2/ RESULTS (Figs. 2-6)

1/ Test Pits and Surface exposures
The principal archaeological evidence recovered from the test pits and surface exposures is presented in Figures 2-6. Detailed descriptions of the deposits exposed in these small trenches are included in the site archive.

2/ Window Samples
Archaeological evidence from the window samples is presented in Figure 7. Details of the deposits are produced in appendix 1.

3/ Deep Boreholes
The archaeological deposits sampled by the deep exploration boreholes are illustrated in Figure 8. Due to the recovery methods, the change between layers can only be demonstrated to within the nearest 0.25m. Borehole 4 encountered a stone or brick-lined structure holding water imediately beneath the topsoil. Details of the deep borehole deposits are presented in appendix 1.

In all cases, an effort has been made to interpret the results and to set them in the context of the site's general development. Previous archaeological observations on the area of the 1999 landslip provided a basis for interpreting which type of deposits were associated with the Norman motte's construction and which were earlier or later in date. Post-medieval and modern deposits are generally distinguishable by their darker colour, organic content, looser texture, inclusions of mortar and other building waste, as well as coal fragments and recent ceramic finds. The Norman motte material was generally more compact, comprising clays, claysilts and stones in varying proportions. The Saxo-Norman buried soil underlying the motte material comprised mid or dark brown silty clay with small stones, charcoal, and occasional sea shell and animal bone fragments (occupation waste). The composition of this layer remained constant from sample to sample and closely resembles that of the buried soil exposed beneath the motte material in the area of the landslip. Immediately below the buried soil are clean clays derived from weathering of the bedrock, although in most samples these clays appear to have been disturbed or re-deposited.

3/ DISCUSSION

Prehistoric

Two prehistoric flints were recovered from Test Pit ATP (see Finds, below). One, a worked fragment of Portland chert dating from the Neolithic period, was recovered from Saxo-Norman layer 38b and must be residual in this context. The other, a Neolithic or Bronze Age flint fragment, possibly a notched tool, was also imported to the site from some distance. It was found in the fill of stake-hole 51 which was cut into the (possibly re-deposited) natural clays beneath the Saxo-Norman layer. The stake-hole contained no other finds so may be prehistoric in date, although this flint, like the Portland chert fragment, could also be a residual artefact.

Few prehistoric finds have been recorded from Totnes town (the Devon Sites and Monuments Register has only two entries, a looped and socketed bronze palstave, and a stone axe of greenstone), although flints are commonly found in the neighbouring area, sometimes in large numbers (eg at Dittisham Fruit Farm, further down the Dart valley). It is thought that a prehistoric ridgeway crossed the River Dart at Totnes (Slater 1991, 74-77), so it would not be surprising if more prehistoric finds are produced by future excavations in the locality.

The Saxo-Norman buried soil

Two borehole samples (1 and 2) and one window sample (3) encountered deposits closely resembling the Saxo-Norman buried soil first exposed at the foot of the motte following the 1999 landslip on its southwestern slope (Brown and Matthews February 1999, Fig. 2, layer 38). The deposits recorded at these four separate locations were all similar in colour, composition and texture (above). They also lie at about the same level OD (all within 1m of each other; three within 0.5m). The deposits have been interpreted as belonging to the same buried soil horizon. The two borehole samples showed the soil to be on average 0.5m thick, and to underlie stoney clays associated with the motte construction (below). In both borehole samples, the soil overlay what appeared to be re-deposited natural clays derived from weathering of the bedrock, the same type of material underlying layer 38. Window sample 3 located the top of the layer but was not sufficiently deep to locate its base or the deposits beneath.

The two boreholes were sited 18m apart on the south-west side of the motte, whilst the window sample 3 core was recovered more than 30m distant toward the bottom of the north-eastern slope. The layer therefore appears to be extensive, covering a considerable area beneath the Norman motte, quite possibly as illustrated in Figs. 9-11, although there is at present insufficient evidence to determine whether the layer is indeed continuous from one side to the other, or to show whether its level might vary beneath the motte interior. The samples from Borehole 4 showed that the centre of the motte comprises Norman motte material to a depth of at least 8m, so if the buried soil is also present here, it must lie lower down, closer to the level of the measured positions at the sides.

It would seem therefore that the topography of the site before the motte was constructed was level, or nearly so, providing a suitable site for Saxon and possibly earlier occupation, as well as the Norman castle.

Excavation of the buried soil (ATP) produced a few nodules of iron slag that provide evidence for early industry in the area. A more detailed report on the buried soil structure and the environmental evidence it contains is currently in preparation by Vanessa Straker (English Heritage, Bristol University) and colleagues.

Norman Motte

Construction and Materials

Figs. 9-11 show suggested archaeological profiles through the motte core built up from measured points taken from the recovered samples and previous archaeological records. The profiles illustrate the general form of the motte structure and the degree to which its sides have been affected by post-medieval terracing and erosion.

The material making up core of the motte compises largely stoney clays and claysilts, individual layers consisting of mixed and interleaved material with no regular structure, as would be expected for dumped material. The proportion of clay is greater on the south side, many more stone fragments appearing toward the north. This variation presumably reflects different local sources of material used in the construction, some of which no doubt came from the excavation of the surrounding defensive ditch.

Excavation of Trial Pit ATP showed that the bottom stoney clay layer of the motte lies in an almost horizontal plane, at least for a short distance of 0.2m. This is scant evidence to suggest that the core of the motte comprises horizontal layers throughout, but taken

together with previous observations on the area of the landslip which indicate layered construction, it seems reasonable to propose that the core was indeed built up layer by layer from an almost level base.

Similar layered construction has also been noted at: Okehampton Castle, Devon; Baile, York; Carisbrooke, Isle of Wight, and Norwich (Higham and Barker 1992, 154-5). The Bayeux Tapestry portrays Hastings Castle motte as a layered mound.

Stone cladding

Trial Pit 17 (Fig. 3; Plates 1 and 3) was opened on the western slope of the motte, where no post-medieval terracing has taken place. The excavation removed only turf, topsoil and loose stones in order to temporarily expose whatever remained of the original motte surface without damaging it. Here, the present surface of the motte was shown to comprise stone rubble set in yellow clay which has suffered from some slippage due to erosion. The stone rubble had been laid horizontally and packed with clay. In places individual stones were observed to overlap others in a manner indicating stepped construction up the side of the motte. Similarly laid stone rubble survives in a small area on the southern slope affected by the landslip, where it appears to represent a remnant of a former stone cladding (Plate 2). The rubble comprising the cladding was continuous in construction with the clay layers of the motte, showing that the cladding is an original feature. The cladding would seem however to have slipped from the face of the motte elsewhere in the immediate vicinity. In both cases, the original outer facing of the stone cladding appears to have been lost, leaving behind only the stone and clay corework. However, in one place on the western slope of the motte, just below Trial Pit 17, there is a short run of large stones set side by side horizontally which may represent the last surviving part of the original stone facing (Plate 4).

Stone cladding would have shed water from the slopes of the motte and resisted erosion by the weather. It would seem that on the western slope, away from the post-medieval terracing, the original motte profile has survived more or less intact for more than 900 years, although the outer stone facework has largely fallen away. Elsewhere, other remnants of the stone cladding may possibly survive where the terracing did not affect them too severely.

The use of stone cladding on the sides of the mottes has been noted elsewhere. At Leskelen in Finistère, a secondary, 12th-century drystone cladding was investigated by excavation. In addition, it has been suggested that the pictorial representation of the motte at Rennes shown in the Bayeux Tapestry has a similar cladding (Higham and Barker 1992, 99-100 and 152).

<u>Post-medieval Garden Terraces</u>

The origin and development of the garden terraces from the late 16th century to the 1960's has already been discussed (Brown and Matthews April 1999). Deposits associated with the construction and use of the terraces were recorded in the recent test pits and core samples (above). In the area of the landslip it was noted that the terracing had caused considerable slippage and slumping on the surface of the motte material, resulting in the accumulation of clay and claysilt deposits lower down the slope, sometimes overlying post-medieval features. No doubt some of the uppermost clay deposits recorded in the

boreholes and window samples have a similar post-medieval origin, although precisely which is difficult to determine from such sampling procedures.

The present topsoil on the terraces contains numerous 19th- and 20th-century finds (discarded). The soil, together with quantities of recent building waste, was exposed in the sides of the trial pits. The building waste may have derived from the demolition of early terrace walls and/or structures on the motte side, although it could have been carried to the site in order to provide levelling material. The soil must have been imported from elsewhere to provide a good growing medium.

19th- or 20th-century water tank

Deep borehole DE4 encountered a 1.6m deep water-filled stone or brick water tank at a depth of 0.6m below the surface. The tank was probably associated with a brewery which occupied premises on nearby Castle Street in the 19th century.

4/ FINDS

*This pottery finds report was not prepared until 27/2/01.

Context	Category	Type	Quantity	Date
38 Saxo-Norman layer	pottery	chert-tempered coarseware mix of oxidised and reduced	7 sherds	C11th/12th
	iron slag		3 frags	
	bone	incl 2 teeth	23 frags	
39	bone		1 frag	
44 primary slump material overlying motte slope	pottery	Totnes type coarseware	1 sherd	1500+
		prehistoric granitic flat base, thick walls	3 frags (prob same sherd)	Iron Age
	iron slag	?furnace waste	1 frag	
51 post-hole	flint	prehistoric struck flake, mottled pale grey	1 frag	prehistoric
TP1 Lower layer	pottery	Totnes type coarseware	1 sherd	1500+
TP3 layer 2	pottery	malting floor tile	1 frag	late C19th
TP11	pottery	Nottingham Stoneware	1 sherd	1700-1750
TP17	pottery	Totnes type coarseware	2 sherds	post-med
	clay pipe	stem	1 frag	1600+

WS6	pottery	S. Somerset plain coarseware	1 sherd	C18th/early19th
	clay pipe	stem	1 frag	C18th/19th
+	pottery	Chinese porcelain	1 sherd	C18th
		Eng Delftware dish prob Bristol, with ceiling wax red painting	1 sherd	early C18th

NB 3 frags prob from same sherd of Iron Age pot from context 44 - primary slump material on motte slope - did not receive attention in this report since they had not been processed and identified in time. So, they are mentioned in the 2001 report alongside the scrap of same type from layer 38 slumped material.

<u>Pottery</u> (identification by John Allan 18/8/99)

Context	finds
38	2 small fragments of chert tempered coarseware (Exeter Fabric 20)
38A	5 sherds chert-tempered coarseware (Exeter Fabric 20), including one rim, all with one oxidised surface and one reduced surface. 2 fragments of burnt clay with one flat surface and a residue adhering to the other side in small pockets.
38B	4 sherds chert-tempered coarseware (Exeter Fabric 20), including one flat rim (which tend to disappear by the mid 12th century). 1 fragment of Portland chert with secondary working.
38C	5 sherds chert-tempered coarseware (Exeter Fabric 20). 3 small fragments of vesicular iron slag.

Note: work conducted earlier in 1999 on context 38 produced 3 sherds of chert-tempered coarseware (Exeter Fabric 20), one with oxidised surfaces.

Post-hole 50 1 fragment iron slag
Stake-hole 51 1 fragment flint.

Window sample 9 core (4m depth) 2 frags sherds chert-tempered coarseware (Exeter Fabric 20).

Dating for pottery group:

All chert-tempered coarseware, Exeter Fabric 20. As a group, the 19 sherds from context 38 are consistent with a date in the Late Saxon/ Early Norman period. So too are the two additional chert-tempered coarseware sherds from window sample 9, which were recovered from the clay core of the motte.

The group probably dates from earlier than the mid 12th century, when flat rims tend to disappear, glazed wares begin to appear, and coarse pottery tends to become entirely reduced (this group contains a good proportion of oxidised surfaces). There were no distinctive pottery types which allow further narrowing down of the date range.

Two prehistoric flints:

Two prehistoric flints were recovered from Test Pit ATP. One of these, a fragment of Portland chert, is probably Neolithic in date and shows signs of secondary working. The other dates from the Neolithic period or Bronze Age and was also imported to the site from some distance. The latter has a small groove broken into one of its edges so may represent a notched tool.

Iron slag

A few small nodules of iron slag were recovered from the Saxo-Norman buried soil. It is interesting to note that some of the stone fragments recovered from the motte core by the boreholes are iron rich, possibly providing a local source of ore for ironworking.

5/ BIBLIOGRAPHY AND REFERENCES

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APPENDIX 1
DETAILED DESCRIPTIONS OF WINDOW SAMPLES

Window sample 1

0-1m	Garden soil.
1-1.5m	No recovery.
1.5-3.5m	Layers of dirty brown clays, crushed slate and soils, each containing mortar fragments.
3.5-4m	Crushed dark orange sandstone in sandy clay matrix. Very occasional, very small charcoal fragments (motte material).

Window sample 2

0-1m	Stony topsoil.
1-1.6m	No recovery.
1.6-1.8m	Soil.
1.8-5.2m	Orange stony gritty sand (motte material).

Window sample 3

0-1.55m	Garden soil with occasional roof slate, mortar and bone fragments.
1.55-1.9m	Dirty sandy silt clay with sandstone.

1.9-1.95m	Crushed roof slate.
1.95-2.4m	As 1.55-1.9m.
2.4-3.6m	Clean loose sandstone in orange sandy silt clay (motte material).
3.6-4m	Dark grey brown humic clay silt, with abundant charcoal fragments and small stones (pre-motte buried soil).

Window sample 4

0-1m	Garden soil and modern demolition waste.
1-3.4m	Incomplete. Largely slightly dirty orange sandy clay silt and sandstone, with occasional deposits of soil and mortar.
3.4-4m	Crushed orange sandstone in orange sandy clay (motte material). 0.05m deep layer of brown humic clay silt with charcoal fragments at 3.55m.

Window sample 5

0-1.7m	Modern demolition waste.
1.7-2.1m	Clean yellow sand and sandstone, with very occasional mortar attached to stone (motte material).

Abandoned at 2.1m.

Window sample 6

0-1.15m	Garden soil with post-medieval pottery sherds and clay pipe stem.
1.15-1.85m	Dirty clay silt with roof slate, mortar and stone fragments.
1.85-3.6m	Yellow clay with small stone fragments (motte material). Stonier layer, 0.1m deep, at 2.9m.
3.6-3.75m	Slightly dirty, stony yellow clay (motte material).
3.75-4m	Clean yellow clay with small stone fragments (motte material).

Window sample 7

0-1.6m	Garden soil with coal and transfer decorated pottery.
1.6-2.3m	Dirty clay silts, including mortar and roof slate fragments.
2.3-4m	Yellow silty clay with small stones (motte material).

Window sample 8

0-1.25m	garden soil, including roof slate and bone fragments.
1.25-3.25m	Dirty and varied pinky grey and brown clay silt with small patches of soil, roof slate and mortar.
3.25-3.8m	Dirty yellow clay with small stones.
3.8-4m	Clean yellow clay with small stones (motte material).

Window sample 9

0-1.55m	Dark garden soil.
1.55-2m	Yellow clay with small stones, including mortar and slate fragments.
2-2.2m	Friable white mortar and grey clay.
2.2-2.5m	Light brown clay and stones, including white lime mortar, charcoal and slate fragments.
2.5-2.6m	Dark garden soil.
2.6-3m	Yellow stony clay with slate fragments.
3-3.2m	Light brown gritty humic clay silt, including ash mortar and stone.
3.2-3.5m	Yellow stiff clay.
3.5-3.8m	Orange stiff clay.
3.8-4m	Yellow and grey stony clay, including slate fragments and sherd of

Norman pottery.

Window sample 10

0-1m	Garden soil, including 1 sherd of Westerwald pottery.
1-1.4m	Grey and brown clays, with mortar, wood and stone fragments.
1.4-2.34m	Yellow and grey clays with small stone and slate fragments.
2.34-4m	Compacted yellow clays with stone fragments (motte material).

Detailed descriptions of deep exploration borehole samples:

Borehole 1

0-1m bag sample	Garden soil.
At 0.5m jar sample	Garden soil, including brick and mortar fragments.
At 1.0m jar sample	Gravely garden soil, with mortar fragments.
1-2m bag sample	Stiff brown and grey clays with stones, gravel and mortar fragments (post-medieval made ground).
at 1.5m jar sample	as above.
at 2m jar sample	change from same as above to stiff yellow silt clay with fine subangular gravel (Norman motte material).
2-3m bag sample	Stiff, compacted yellow and grey silty clay and gravel with large and small stones, including ironstone lumps and fragments which have stained the surrounding soil (Norman motte material).
at 2.5m jar sample	as above.
at 3m jar sample	Stiff, compacted yellow stony clay with gravel and occasional charcoal flecks (Norman motte material).
3-4m bag sample	as above.
at 3.5m jar sample	as above.
at 4m jar sample	as above, but more iron rich stones and colour is orange brown.
4-5m bag sample	as above.
at 4.5m jar sample	Stiff light brown clay with stones and charcoal (Norman motte material).
at 5m jar sample	as above.
5-6m bag sample	mixture of same as above and same as below
at 5.5m jar sample	mid brown silt clay with small stones, charcoal, and mussel shell fragments (Saxo-Norman occupation layer).
at 6.0m jar sample	Firm, friable orange brown silty clay with occasional fine-coarse subangular gravel (NB no charcoal flecks - probably natural clays derived from weathering of bedrock).
6-7m bag sample	as above.
at 6.5m jar sample	Firm friable orange-brown mottled yellow silty clay with occasional fine-coarse shale gravel and much iron staining (probably natural clays).
at 7.0m jar sample	changes from as above to weathered purple shale (natural)
7-7.5m bag sample	mixed - same as above and same as below.
at 7.5m jar sample	Weak purple shale, thinly laminated, with much iron staining and occasional quartz gravel from quartzitic veins.
at 7.75m jar sample	Small sample recovered as grey fine-coarse shale gravel and fragments of shale bedrock.

Borehole 2

0-1m bag sample	Garden soil and mixed yellow and brown clays, with stones, mortar

	and slate flecks (post-medieval).
0-5m jar sample	as above.
at 1m jar sample	changes from same as above (although slightly lighter colour) to firm, friable, grey silty clay with fine subangular shale gravel.
1-2m bag sample	as above.
at 1.5m jar sample	as above, but little or no mortar flecks.
at 2m jar sample	as above, but no mortar.
2-3m bag sample	large (?metamorphic shale) stone fragments in grey gravely clay.
at 2.5m jar sample	as above.
at 3m jar sample	Firm friable yellow and grey silty clays with occasional fine-medium subangular shale gravel (probably Norman motte material).
3-4m bag sample	mixture of same as above and same as below.
at 3.5m jar sample	Compacted yellow brown sitly clay with stones, shale fragments and iron staining (Norman motte material).
at 4m jar sample	as above, much shale.
4-5m bag sample	as above with large angular stone fragments.
at 4.5m jar sample	as 4m jar sample above with charcoal flecks.
at 5m jar sample	as above.
5-6m bag sample	as above, with some large angular stone fragments.
at 5.5m jar sample	as 5m jar sample, but not quite so much shale.
at 6m jar sample	as above but lighter yellow in colour and more gravel.
6-7m bag sample	changes from same as above to Saxo-Norman layer as below (sample taken for environmental analysis).
at 6.5m jar sample	changes form Norman motte material as 6m jar sample above to mid brown silty clay with stones, gravel, mussel shell fragments and numerous charcoal flecks (Saxo-Norman layer).
at 7m jar sample	Fine orange brown silty, slightly sandy clay with stones, and occasional fine-medium gravel (probably natural clays derived from weathering of bedrock).
7-8m bag sample	Friable orange brown mottled grey silty, slightly sandy clay with occasional fine-coarse subangular gravel (with no traces of charcoal or other occupation material - although possibly representing re-deposited natural deposits).
at 7.5m jar sample	as above.
at 8m jar sample	Purple shaley silty clay (weathered natural).
8-8.5m bag sample	mixture of same as above and same as below.
at 8.25m jar sample	Completely weathered purple mottled orange shale in firm, friable, slightly clayey sand with some fine-coarse subangular shale gravel and much iron staining (natural).
at 8.8m jar sample	as above.

Borehole 4a

0-0.6m bag sample	Garden soil with building waste, large stones, mortar and slate flecks.
2-3m bag sample	Almost all angular stone fragments, in wet brown sandy silty clay with coarse subangular gravel.
at 2m jar sample	no recovery due to water-filled water tank.
at 3m jar sample	Soft, wet, purple-brown slightly sandy silty clay with stones and some fine-coarse gravel.
3-4m bag sample	as above with many large stones and much coarse, shaley gravel.

at 4m jar sample	Yellow brown silty fine-coarse subangular gravel with stone fragments and some clay pockets (possibly Norman motte material).
4-5m bag sample	as above.
at 5m jar sample	as above, but a little darker brown in colour.
5-6m bag sample	as 4m jar sample above, but more gravel and large stones.
at 6m jar sample	Purple clays and weathered shale bedrock.
6-7m bag sample	Large angular stones in mid brown silty slightly clayey sandy gravel with firm clay pockets.
at 7m jar sample	as 6m jar sample above.
7-8m bag sample	as 6-7m bag sample above.
8m jar sample	as 6m jar sample above.

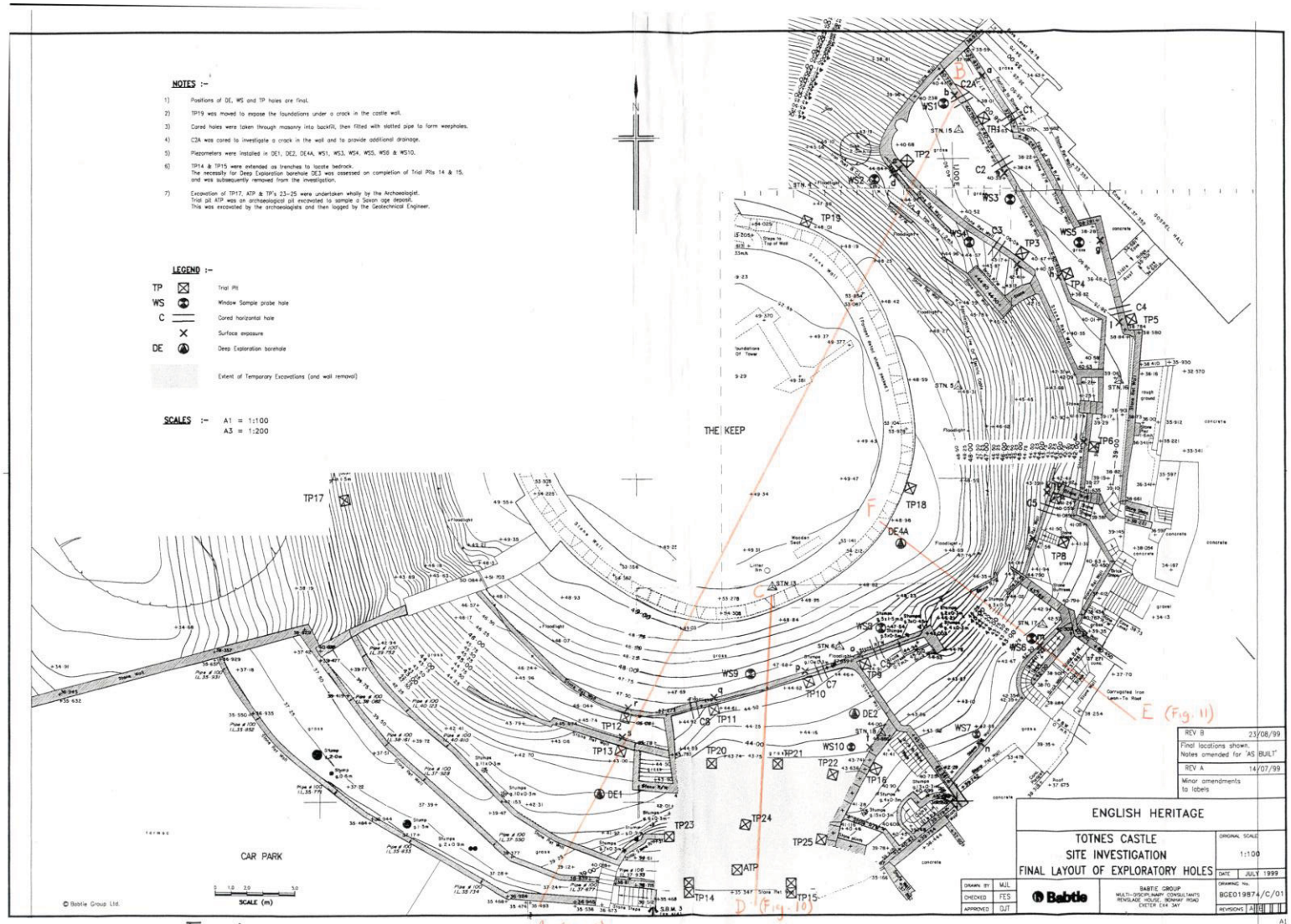
NOTES :-
1) Positions of DE, WS and TP holes are final.
2) TP19 was moved to expose the foundations under a crack in the castle wall.
3) Cored holes were taken through masonry into backfill, then fitted with slotted pipe to form weepholes.
4) C2A was cored to investigate a crack in the wall and to provide additional drainage.
5) Piezometers were installed in DE1, DE2, DE4A, WS1, WS3, WS4, WS5, WS6 & WS10.
6) TP14 & TP15 were extended as trenches to locate bedrock.
The necessity for Deep Exploration borehole DE3 was assessed on completion of Trial Pits 14 & 15, and was subsequently removed from the investigation.
7) Excavation of TP17, ATP & TP's 23-25 were undertaken wholly by the Archaeologist.
Trial pit ATP was an archaeological pit excavated to sample a Saxon age deposit.
This was excavated by the archaeologists and then logged by the Geotechnical Engineer.
LEGEND :-
TP Trial Pit
WS Window Sample probe hole
C Cored horizontal hole
Surface exposure
DE Deep Exploration borehole
Extent of Temporary Excavations (and wall removal)
SCALES :- A1 = 1:100
A3 = 1:200
N
THE KEEP
CAR PARK
SCALE (m)
© Babtie Group Ltd.
A (Fig. 9)
B (Fig. 10)
E (Fig. 11)
REV B 23/08/99
Final locations shown. Notes amended for 'AS BUILT'
REV A 14/07/99
Minor amendments to labels
ENGLISH HERITAGE
TOTNES CASTLE
SITE INVESTIGATION
FINAL LAYOUT OF EXPLORATORY HOLES
ORIGINAL SCALE 1:100
DATE JULY 1999
DRAWN BY MJL
CHECKED FES
APPROVED DJT
Babtie
BABTIE GROUP
MULTI-DISCIPLINARY CONSULTANTS
RENGLADE HOUSE, BONHAY ROAD
EXETER EX4 3AY
DRAWING No. BGE019874/C/01
REVISIONS A
A1

Fig. 1

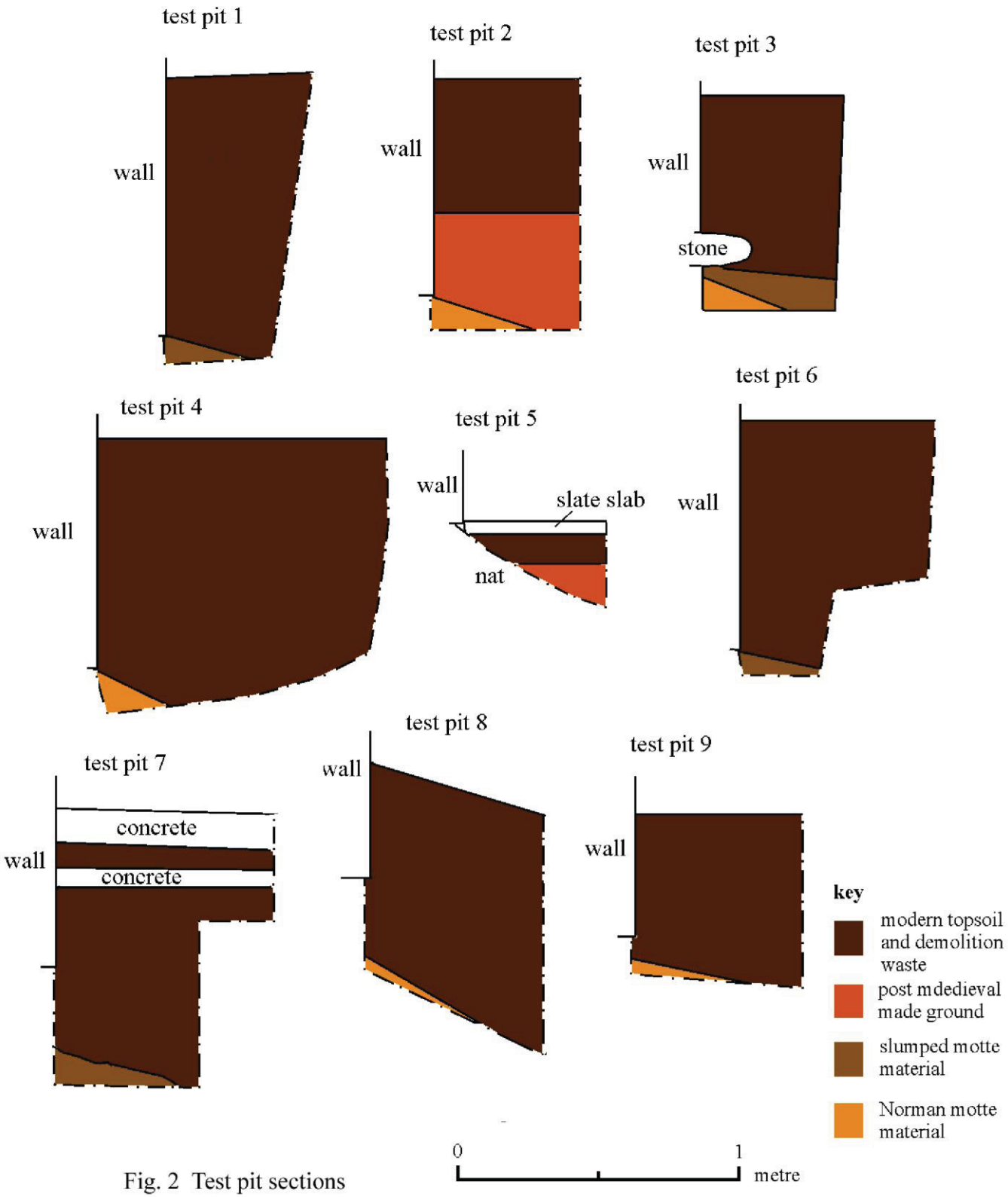

Fig. 2 Test pit sections

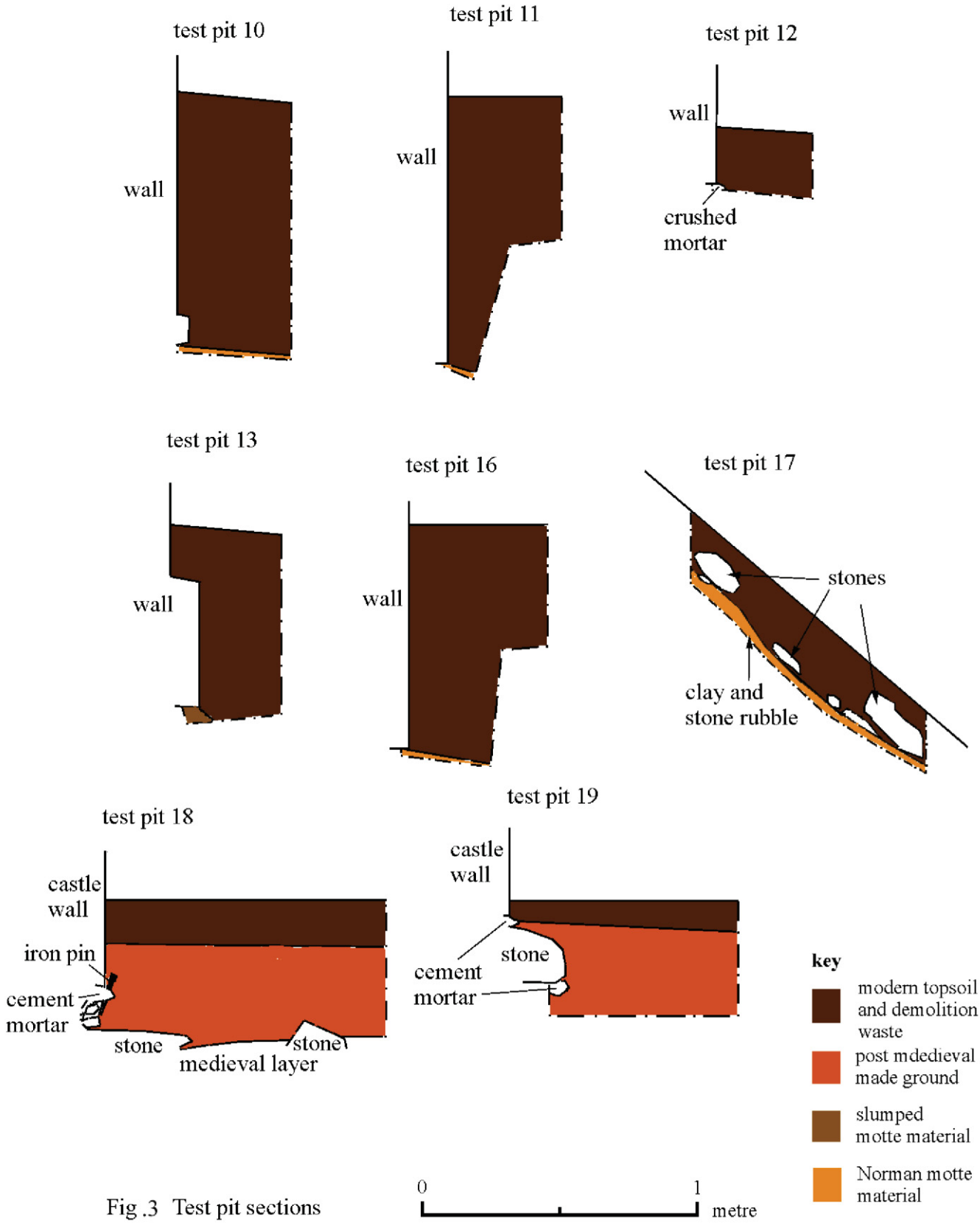

Fig .3 Test pit sections

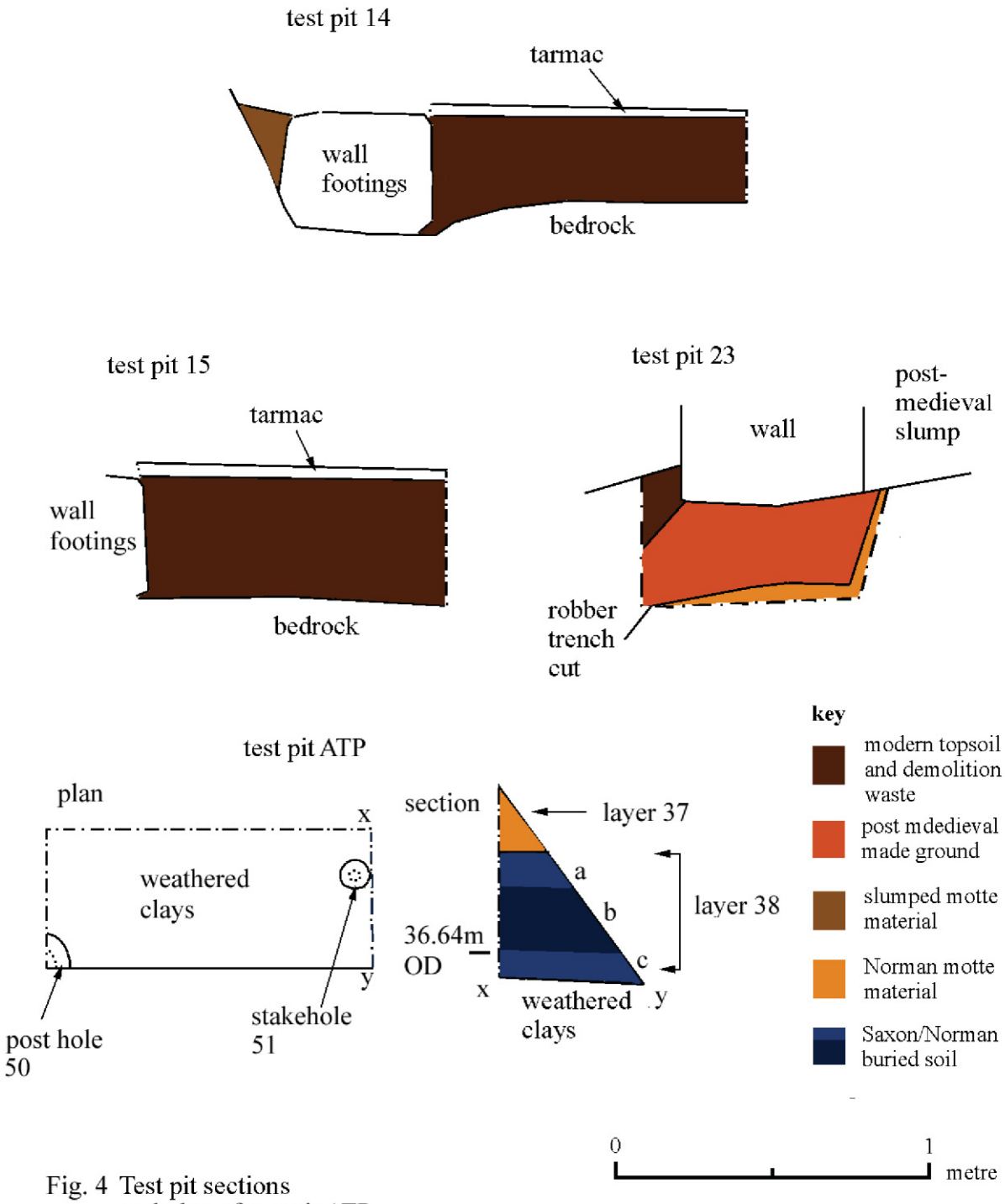

Fig. 4 Test pit sections
and plan of test pit ATP

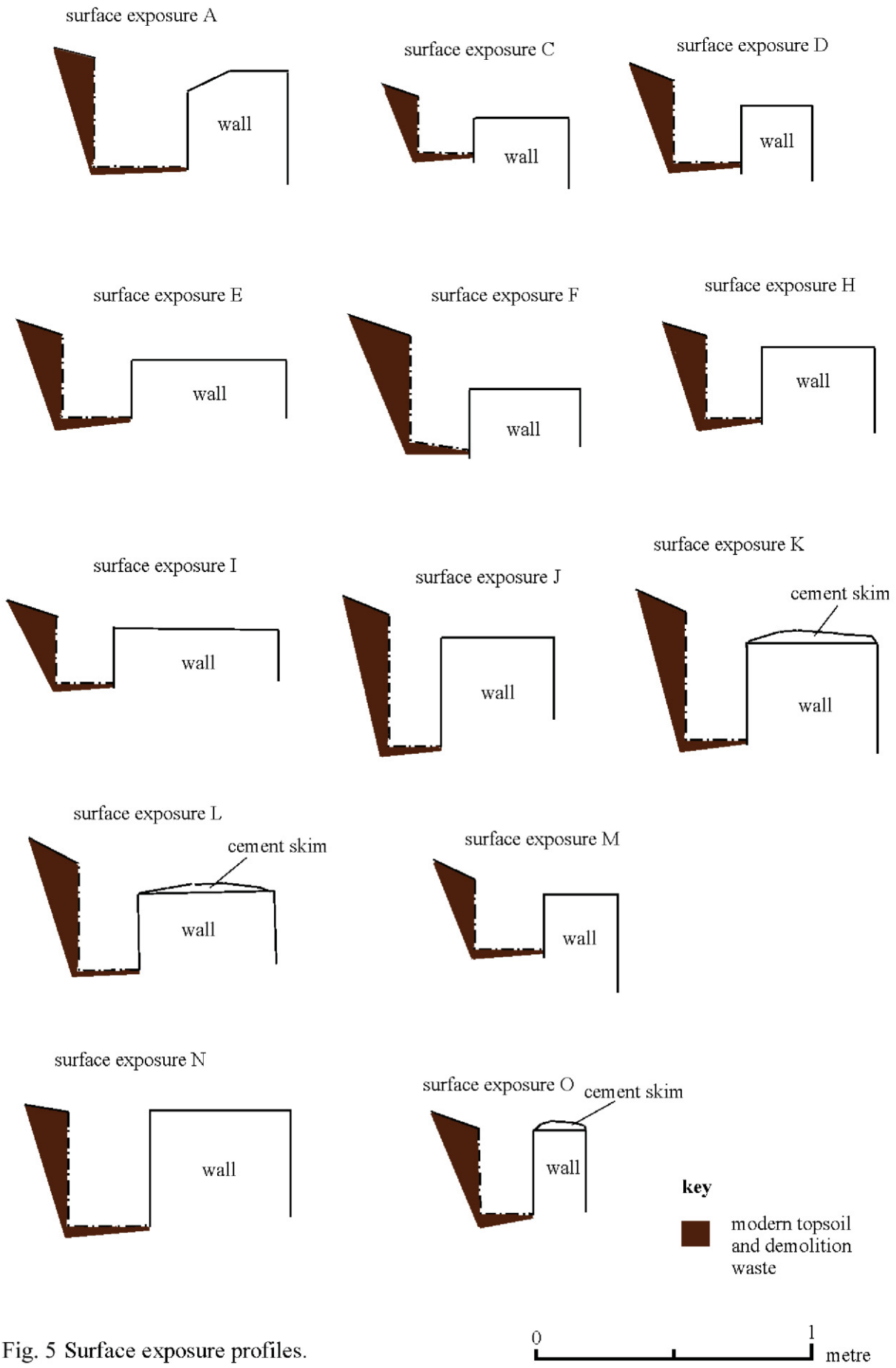

Fig. 5 Surface exposure profiles.

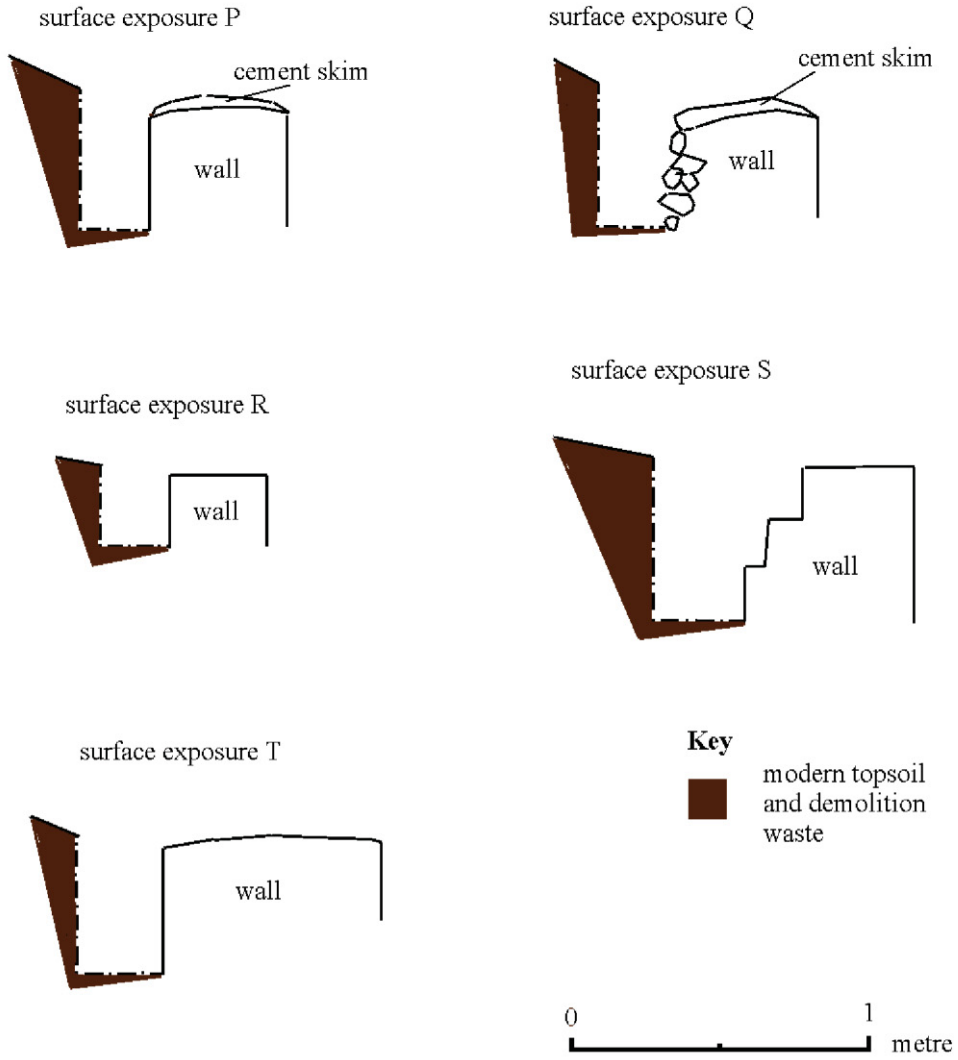

Fig. 6 Surface exposure profiles.

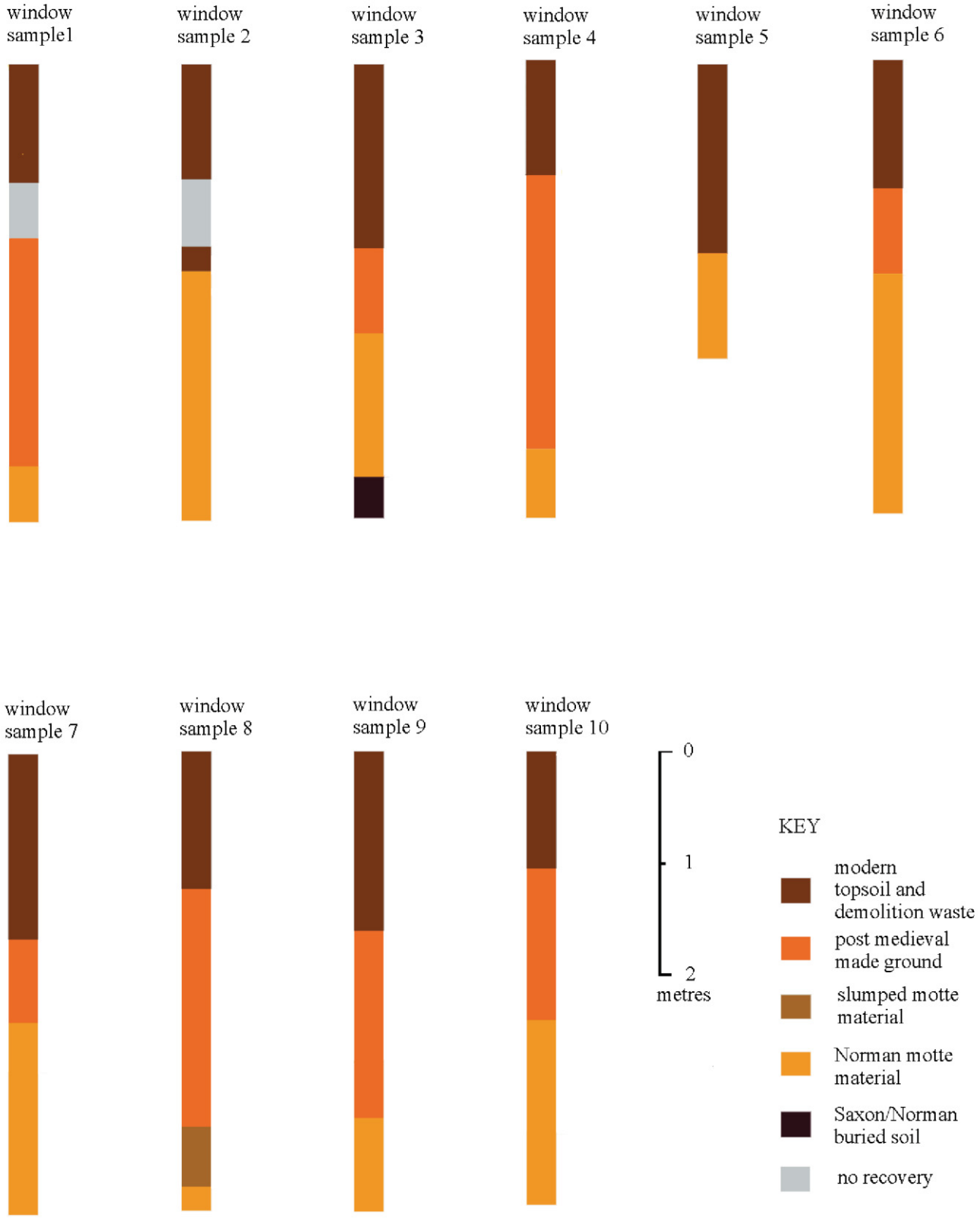

Fig. 7 Schematic representation of window sample results.

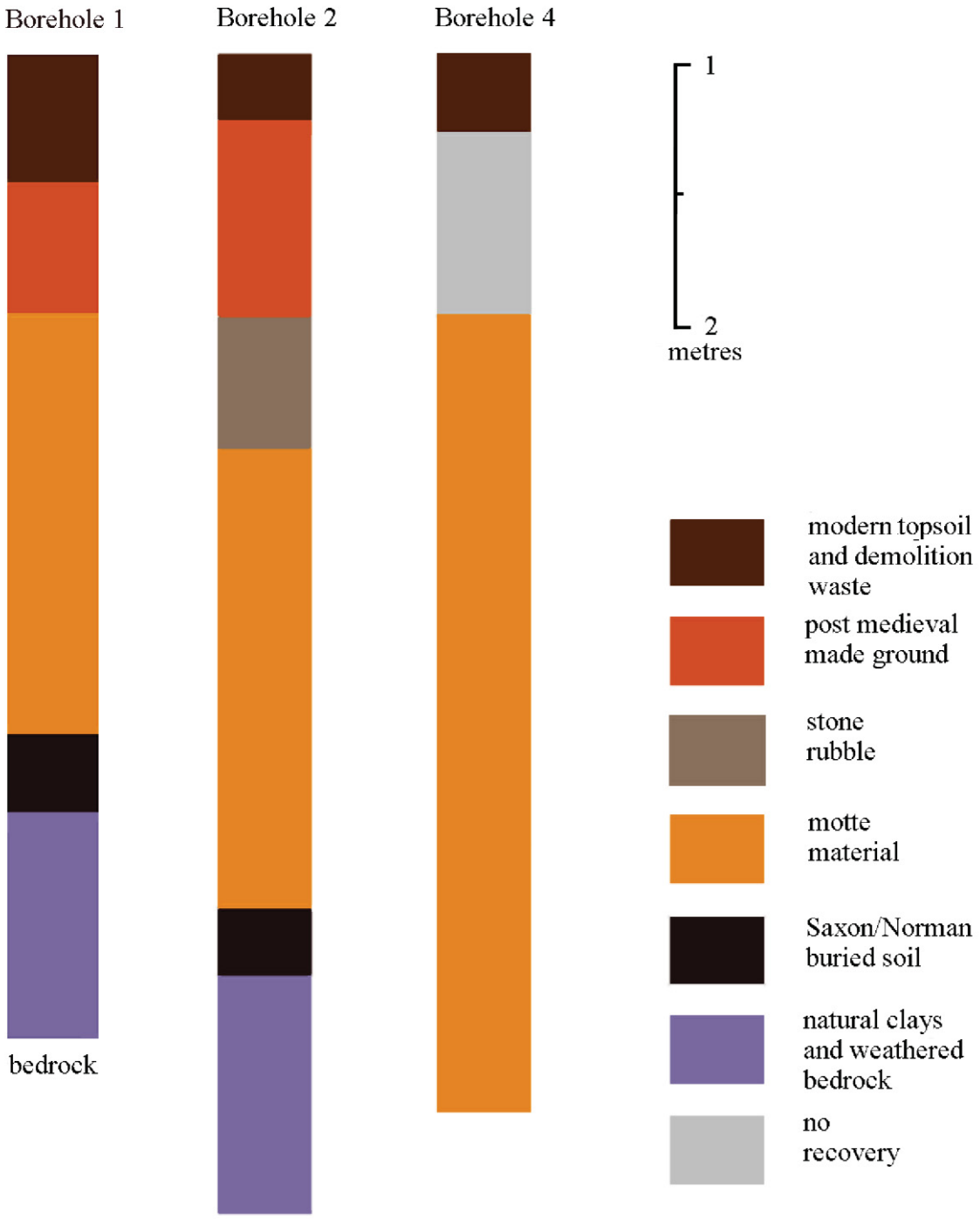

Fig. 8 Schematic representation of deep borehole results. (due to recovery methods an error of up to c.0.25m may be present in the position of layer changes).

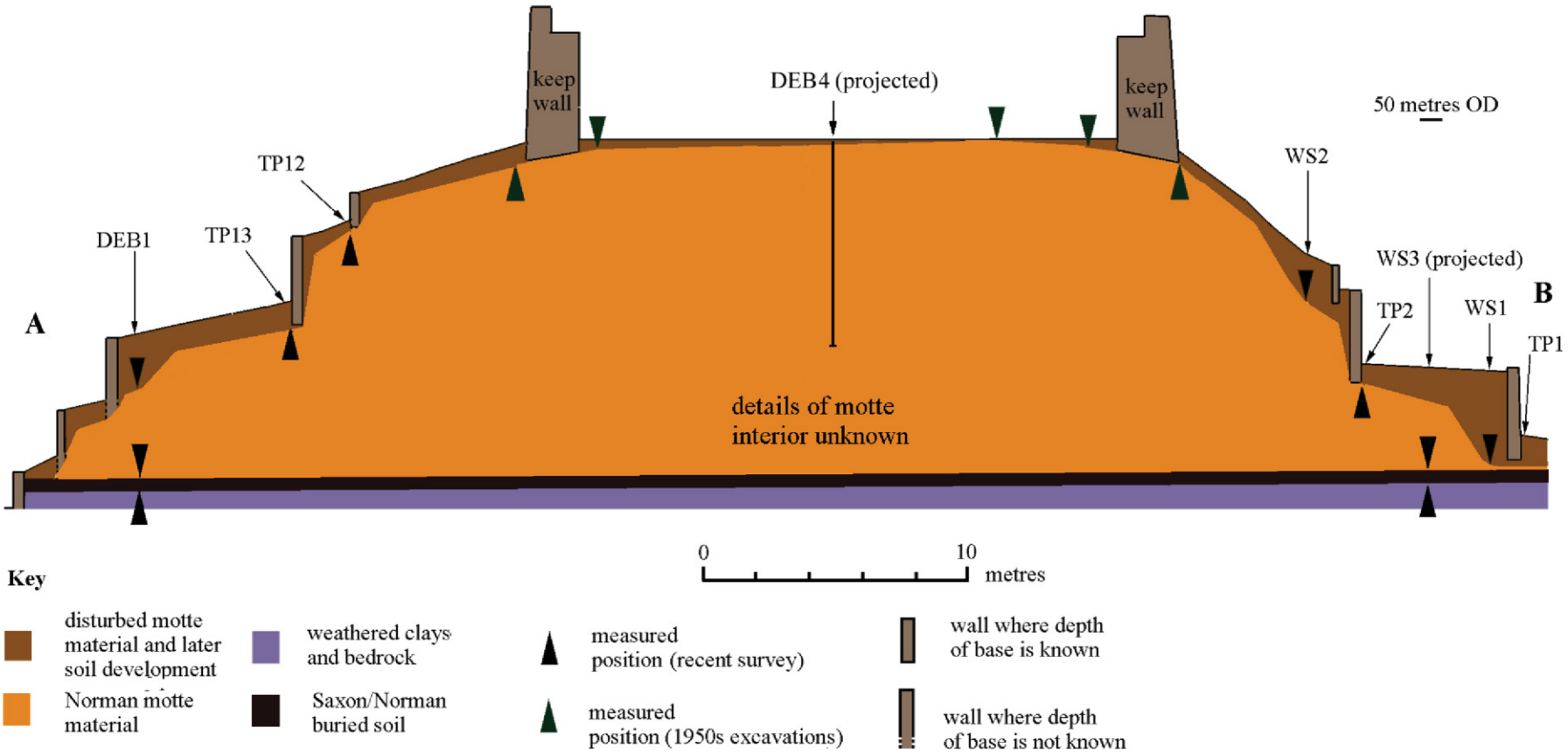

Fig. 9 Suggested archaeological profile of the motte, projected from measured points.

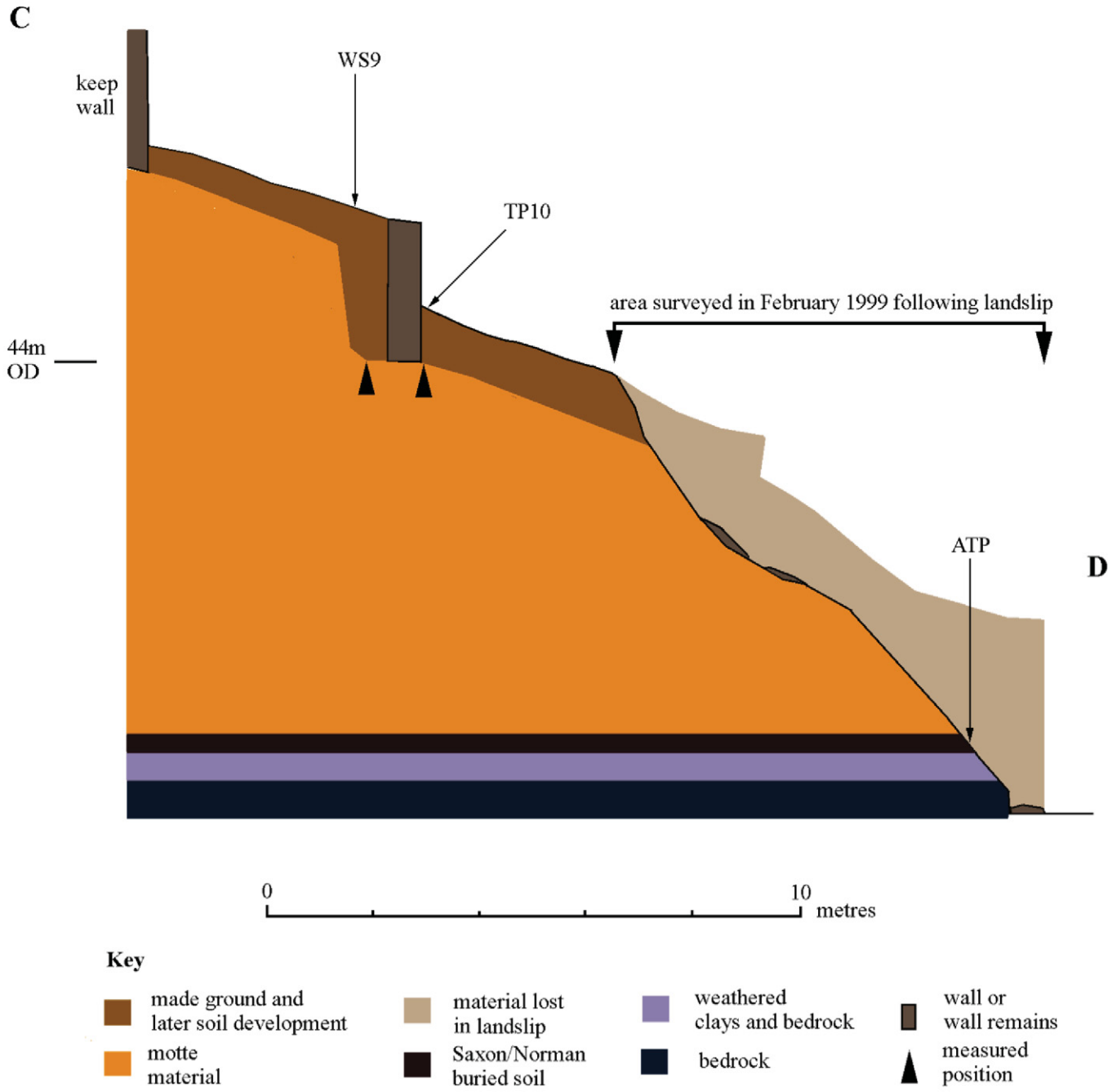

Fig. 10 Suggested archeaological profile of the motte, projected from measured points.

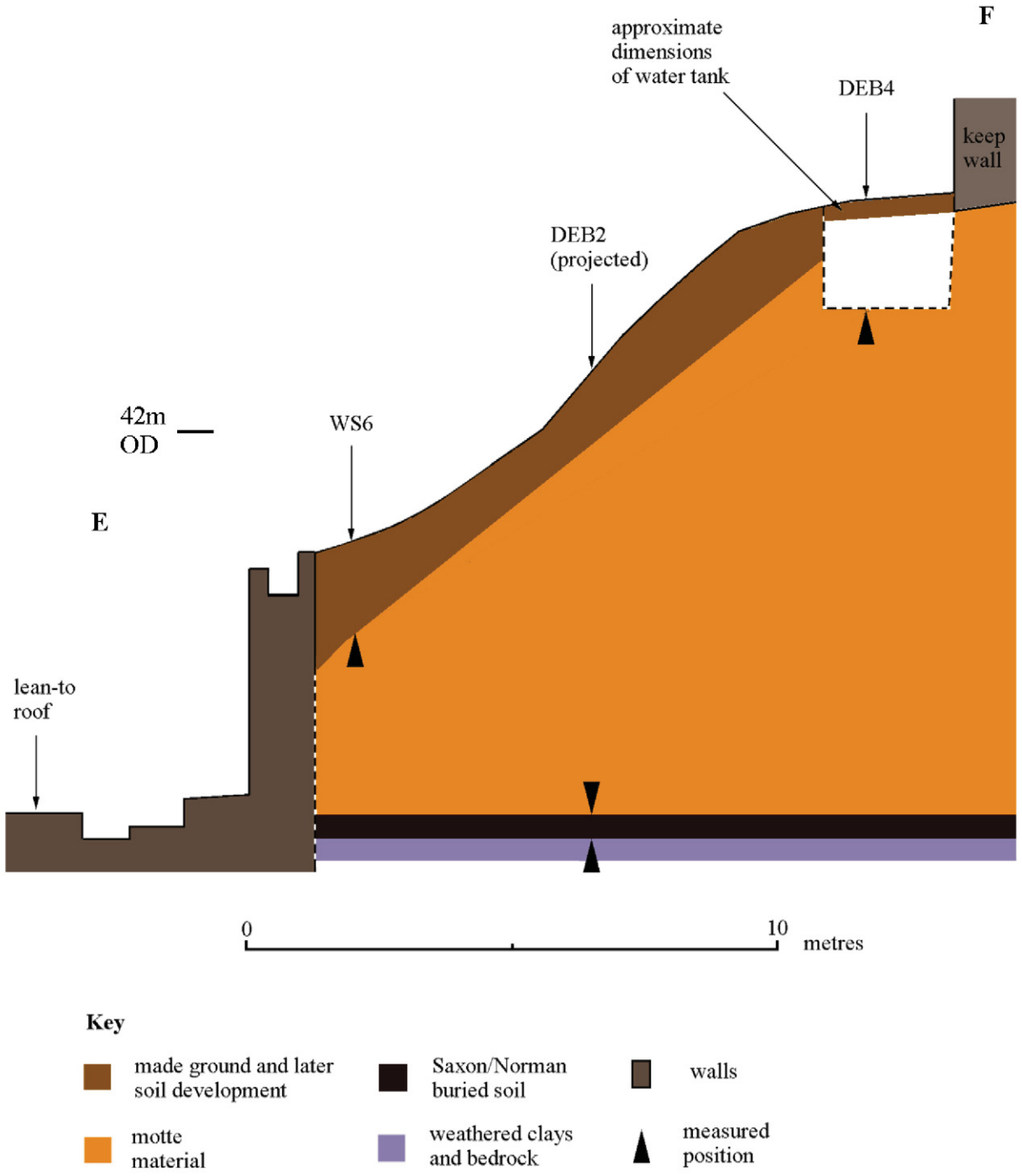

Fig. 11 Suggested archaeological profile of the motte, projected from measured points.

Plate 1. Trial Pit 17 on western slope of motte showing stone rubble in clay.

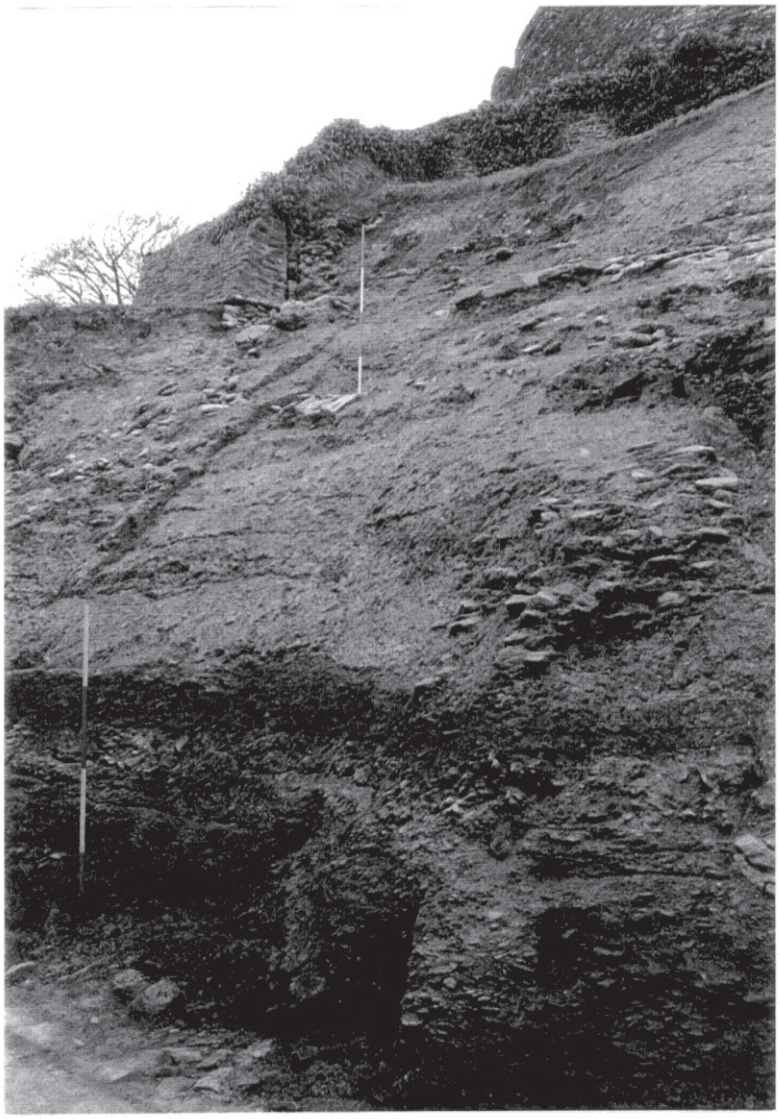

Plate 2. Area of landslip showing remnant of rubble cladding.

Plate 3. Western slope of motte showing location of Trial Pit 17.

Plate 4. Probable surviving part of original stone facing.