LAND NEAR PERRANWELL STATION

PERRANWELL

PERRANARWORTHAL

CORNWALL

Results of an Archaeological Evaluation



South West Archaeology Ltd. report no. 180607



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LAND NEAR PERRANWELL STATION, PERRANARWORTHWAL, CORNWALL RESULTS OF AN ARCHAEOLOGICAL EVALUATION

By P. Webb

Report Version: FINAL

7th June 2018

Work undertaken by SWARCH for Louisa Meek of CSA Architects
On behalf of Mr. H. Kneebone and Mr. G. Taberer

Summary

This report presents the results of an archaeological evaluation carried out by South West Archaeology Ltd. for land near Perranwell Station, Perranarworthwal, Cornwall. The site is located in an area with known archaeological potential, largely associated with the wider industrial landscape of the area and including a known mine shaft on the site. This work follows on from a previous archaeological assessment and geophysical survey.

The evaluation at Perranwell identified a total of 12 features reflecting the post-medieval and modern history of the site. These features include a series of post-medieval double-ditched field boundaries indicative of Cornish hedgebanks; a mine shaft likely associated with the 19th century Silver Hill Mine; a modern pit excavated for the removal and detonation of an unexploded World War II bomb; and a series of geotechnical pits relating to modern works on the site.

Given the results of the archaeological evaluation the archaeological potential for the site is low and it is not recommended that any further archaeological investigations are undertaken on this site.



June 2018

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1.0 Introduction

LOCATION: LAND NEAR PERRANWELL STATION

PARISH: PERRANARWORTHAL

COUNTY: CORNWALL

NGR: SW 77998 39659 **PLANNING NO.** PA17/00579

OASIS Ref. No: SOUTHWES1-315782

SWARCH REF. PSR18

1.1 PROJECT BACKGROUND

South West Archaeology Ltd. (SWARCH) was commissioned by Louisa Meek of CSA Architects (the Agent) on behalf of Mr H. Kneebone and Mr G. Taberer (the Clients) to undertake an archaeological evaluation on land near Perranwell Station, Perranarworthal, Cornwall, in advance of residential development of the land; this follows on from a previous stage of archaeological assessment, geophysical survey, and heritage impact appraisal (Bampton & Morris 2017). This work was undertaken in accordance with a Written Scheme of Investigation (Balmond 2018) drawn up in consultation with Charles Johns, Senior Development Officer, Historic Environment (SDOHE) Cornwall Council and in line with best practice and CIfA guidelines.

1.2 TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND

The site is located off Station Road, east of the village of Perranwell and south-west of the railway station. The site straddles two sub-rectangular fields on a south-south-east facing slope at an altitude of 15-35m AOD. To the south, beyond the limits of the site, is the bed of a silted-up creek; the stream flows eastwards into the River Kennal. The soils of this area are the well-drained fine loamy soils of the Denbigh 2 Association (SSEW 1983), which overlie the slates and siltstones of the Mylor Slate Formation (BGS 2017).

1.3 HISTORICAL & ARCHAEOLOGICAL BACKGROUND

A detailed historical and archaeological desk-based assessment has been carried out previously (Bampton & Morris 2017); the results of which are summarised below.

Perranwell lies within the parish of Perranarworthal, in the deanery and east division of the Hundred of Kerrier. The place-names Perranwell and Perranarworthal refer to Saint Piran, meaning 'well of St. Piran' and the Cornish *ar-gothel* meaning 'St. Piran in the marsh/watery ground' (Watts 2011). In the 1840s the fields subject to the development belonged to the tenement of *Vellingey*. Old shafts are shown on the site on historic Ordnance Survey (OS) maps, indicating historic mining activity in the area. In 1814 the Manor of Perranarworthal covered two-thirds of the parish, and the Basset family held five-sixths of the parish (Lysons 1814).

Very little archaeological investigation has taken place in this area, though a desk-based assessment, geophysical survey and heritage impact assessment were carried out for this site (Bampton & Morris 2017); and the site is also within the area studied as part of the archaeological assessment conducted on the *Mineral Tramway Project* (CAU 1990). That report states that the Carnon Valley, which includes Perranwell, was once heavily industrialised, with tin mining and chemical processing including of arsenic and sulphur; however, surviving remains are scarce. The

Cornwall and Scilly Historic Environment Record (HER) indicates human activity in the area dating back to prehistory with a Bronze Age barrow; medieval field-systems and settlements; and post-medieval mining and mineral processing. North-east of the site is a Grade II Listed 19th century building, Baytree Lodge.

Previous geophysical survey of the site identified relict field boundaries, a small number of pits and the Old Shaft shown on the historic OS maps. It also identified a faint north to south orientated anomaly that may relate to mining activity.

1.4 METHODOLOGY

The archaeological evaluation was conducted in accordance with a Written Scheme of Investigation (WSI) (Balmond 2018) drawn up in consultation with Charles Johns (SDOHE) and in line with best practice. Six trenches, each 1.50m wide and totalling c.210m in length, were laid out using Leica GPS and opened by mechanical excavator to the depth of weathered natural using a toothless grading bucket. Where large features representing possible mining features were identified a larger area around the feature was stripped and the feature excavated with additional monitoring by mining survey personnel. Three additional trenches, each 0.60m wide and totalling c.12m were excavated for geotechnical investigative purposes. Exposed archaeological deposits were excavated by hand and in accordance with the WSI and CIfA guidelines.

The evaluation was designed to establish the presence or absence, extent, depth, character and date of any *in situ* archaeological deposits within the site to inform any further planning decisions. The archaeological evaluation took place between 21st and 23rd May 2018.

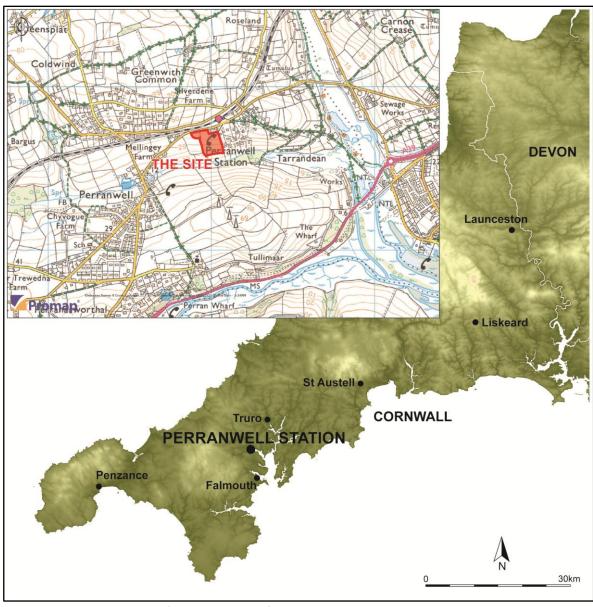


FIGURE 1: SITE LOCATION (THE SITE IS INDICATED).

2.0 RESULTS OF ARCHAEOLOGICAL EVALUATION

2.1 Introduction

Following a geophysical survey (Bampton & Morris 2017) archaeological evaluation trenching was undertaken by SWARCH in order to validate the results of the geophysical survey and investigate the character, date and significance of archaeological features and deposits in order to inform the need for future mitigation and investigation of the site.

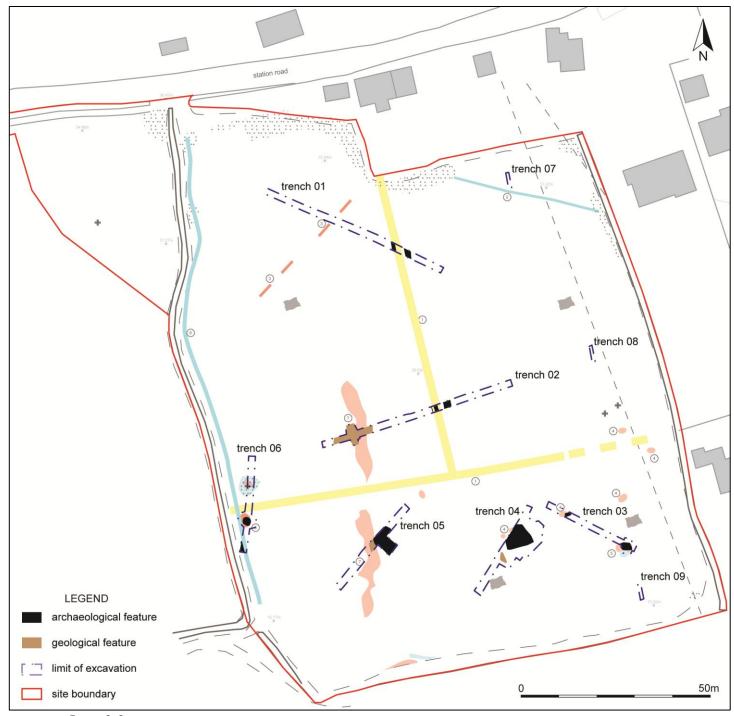
The archaeological evaluation was carried out between 21st and 23rd May 2018; and comprised the excavation of six trenches, each 1.50m wide and totalling *c*.210m in length. These were laid out using Leica GPS and opened by mechanical excavator to the depth of weathered natural using a toothless grading bucket. Where large features representing possible mining features were identified a larger area around the feature was stripped and the feature excavated with additional monitoring by mining survey personnel. Three additional trenches, each 0.60m wide and totalling *c*.12m were excavated for geotechnical investigative purposes and monitored by archaeological personnel. Exposed archaeological deposits were excavated by hand and in accordance with the WSI and CIfA guidelines.

The evaluation trenching broadly validated the results of the geophysical survey, the majority of responses being identified within the trenches as either archaeological features or variations in the natural geology.

A total of 12 features were identified in the six evaluation trenches, including: five ditches; three geotechnical investigation pits; one gully; one mine shaft; and one pit (Figure 2). What follows is a summary of each trench with finds noted where they occur; see Appendix 1 for detailed context descriptions; Appendix 2 for full finds concordance; and Appendix 3 for a set of baseline photographs.

2.2 DEPOSIT MODEL

The stratigraphy of the site was fairly consistent across the whole area. A friable mid brown silt topsoil/turf overlay a friable mid orange-brown silt lower topsoil; and soft brown-orange silt-clay plough horizon subsoil. This sealed a mid brown-yellow soft silt-clay weathered natural with stone banding. The thickness of these soils varied across the site from 0.30m in Trench 01 to 0.82m in Trench 09, with the greatest depth of material towards the south-east of the site, at the bottom of the slope.



FIGURE~2: SITE~PLAN~SHOWING~LOCATION~OF~THE~TRENCHES~AND~ARCHAEOLOGICAL~FEATURES~OVER~GEOPHYSICAL~SURVEY~DATA.

2.3 TRENCH 01

Trench 01 was located towards the north-western corner of the site on an approximate north-west to south-east orientation and measured 50.80m×1.50m; the topsoils were 0.26m thick and the subsoil 0.08-0.24m thick. It was located to target geophysical anomalies identified as a historic field boundary and a possible linear feature of unknown date. The trench uncovered two linear ditches (Figure 3) in the position of the historic boundary; slight variations in the natural or an ephemeral/intermittent feature within the topsoils being responsible for the other anomaly.

Ditch [104] was a linear feature orientated approximately north to south located towards the south-eastern end of the trench. It measured 1.58m wide and 0.20m deep with moderate sloping sides and stepped concave base. It contained two fills: upper fill (106), dark brown-grey soft silt; and lower fill (105), mid-light brown firm clay-silt, containing post-medieval pottery and clay pipe stem. To the west, linear ditch [107] followed the same alignment and measured 1.02m wide and 0.16m deep with moderate sloping sides and concave base. It contained a single fill: (108), mid brown firm clay-silt, containing post-medieval pottery. Together ditches [104] and [107] form the flanking ditches to a removed central hedgebank forming one of the historic boundaries of the field system depicted on the 1840 tithe map.

2.4 Trench 02

Trench 02 was located across the centre of the site on an approximate north-east to south-west orientation. It measured 52.60m×1.50m; the topsoils were c.0.32m thick and the subsoil was up to 0.22m thick, though was only intermittently present. It was located to target geophysical anomalies identified as a historic field boundary and an amorphous anomaly indicative of geological variation, but given its proximity to suspected mining activity, may indicate sub-surface mineral extraction close to the surface. The trench revealed two ditches (Figure 4) in the position of the historic boundary; a shallow gully running alongside these ditches; and an area of variation in the natural within the area of the amorphous anomaly. The trench was widened to c.5.50m, and excavated a depth of c.1m under mining survey personnel supervision across the area of the amorphous anomaly to confirm that it was natural variation. Finds recovered from this trench included post-medieval clay pipe stem and modern bottle glass from lower topsoil (201).

Ditch [204] was a linear feature orientated approximately north to south located just east of centre of the trench. It measured 2.08m wide and 0.22m deep with moderate sloping sides and concave base. It contained three fills: upper fill (206), mid-dark grey-brown friable clay-silt, containing post-medieval pottery, slag and mineral ore; mid fill (205), mid-light orange-brown friable clay-silt, containing post-medieval pottery and slag; and lower fill (209), dark brown-grey friable clay-silt, containing slag. To the west, linear ditch [207] followed the same approximate north to south alignment and measured 1.10m wide and 0.20m deep with moderate to steep sloping sides and concave base. It contained a single fill: (208), mid orange-brown friable clay-silt, with finds including post-medieval pottery and iron fragments. Both of these ditches could be seen to form a continuation of ditches [104] and [107] identified within trench 01 and represent the removed historic boundary depicted on the 1840 tithe map.

Located along the western edge of ditch [207], gully [210] followed the same north to south alignment and measured 0.20m wide and 0.06m deep with steep sides and concave base. It contained a single fill: (211), mid orange-brown friable clay-silt. It is unclear what function this gully had, though it is likely to have been associated with the historic boundary.

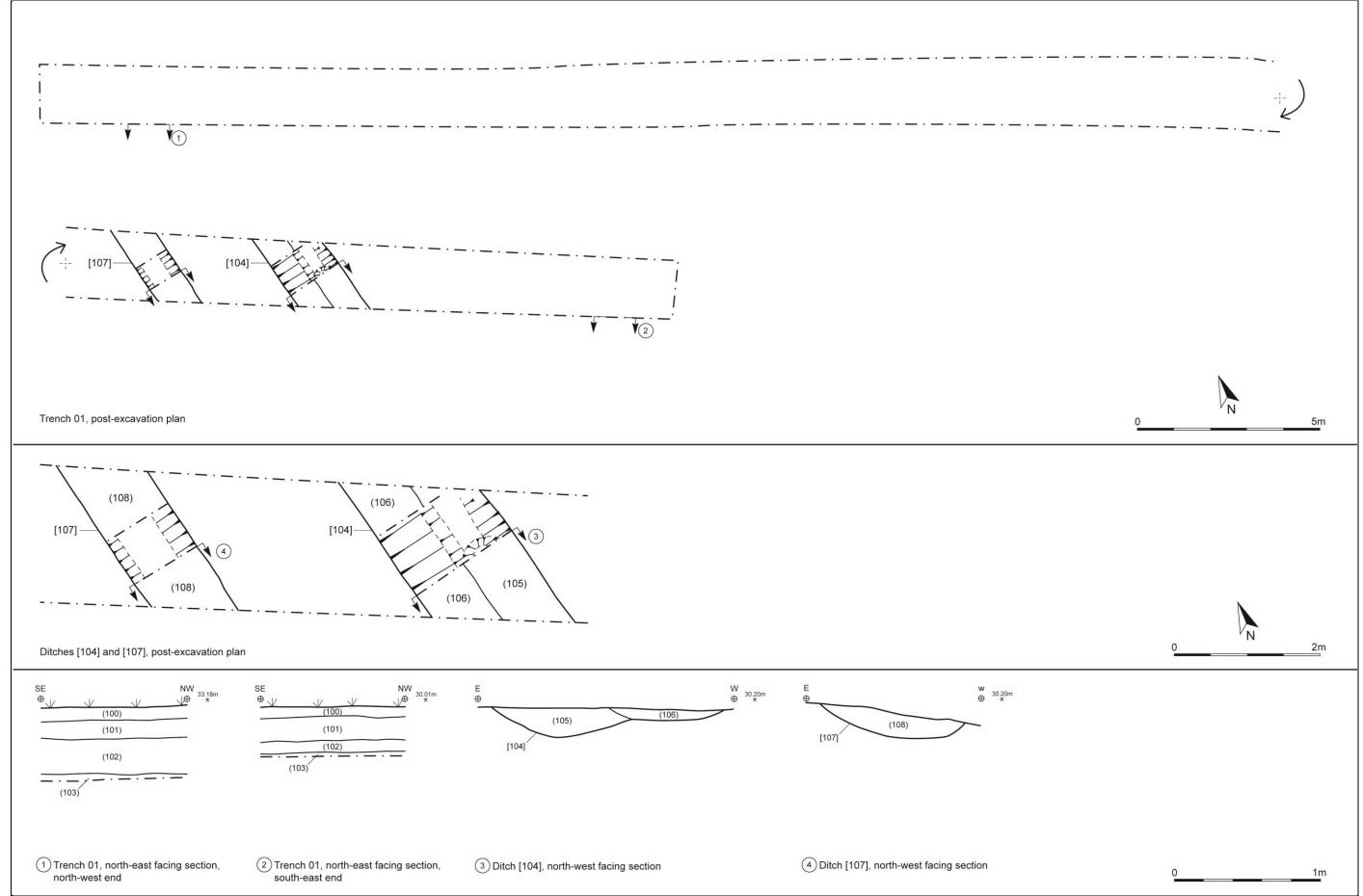


FIGURE 3: TRENCH 01; PLANS AND SECTIONS. HEIGHTS AOD.

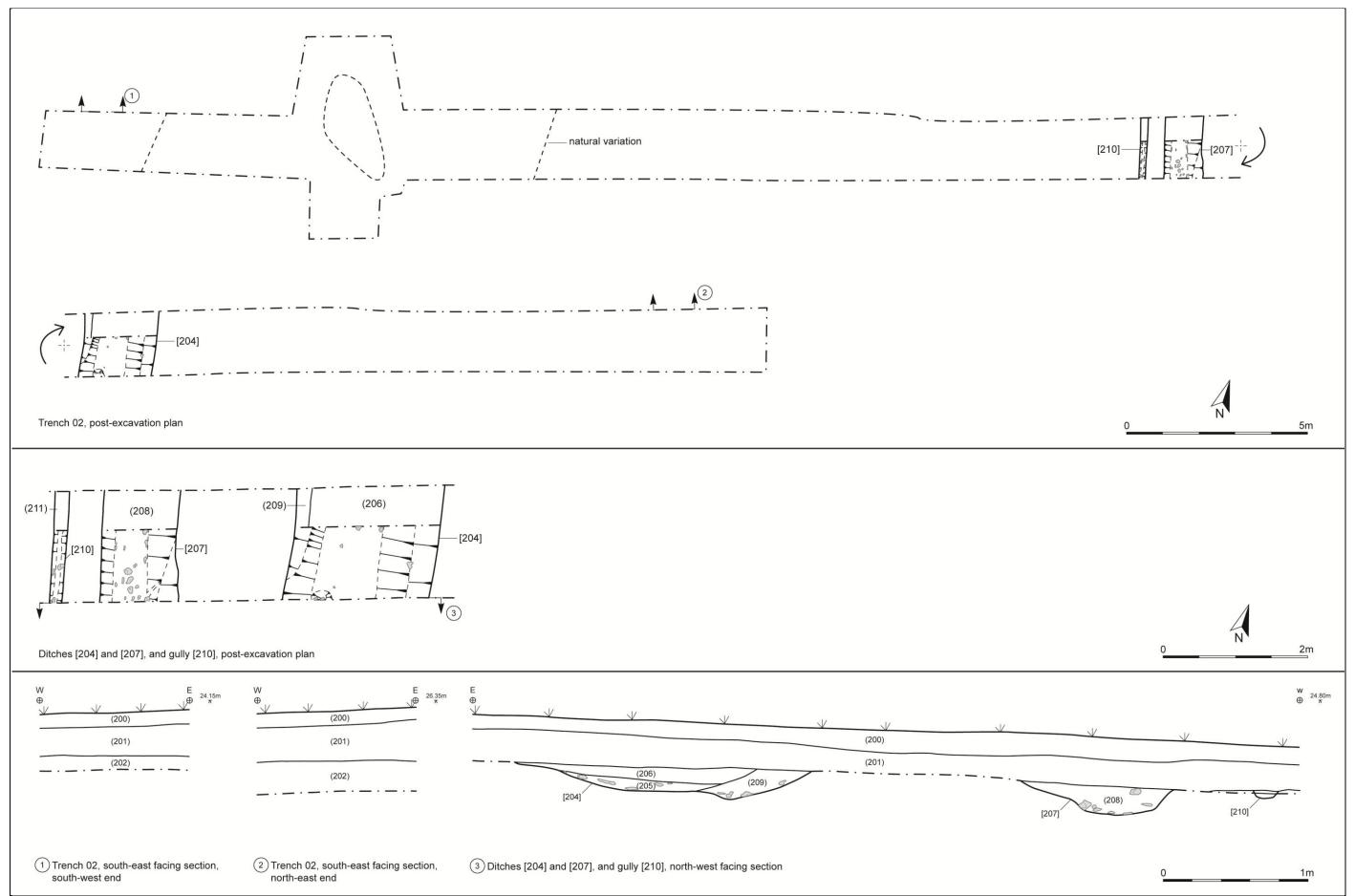


FIGURE 4: TRENCH 02; PLANS AND SECTIONS. HEIGHTS AOD.



FIGURE 5: DITCHES [204] AND [207], POST-EXCAVATION; VIEWED FROM THE NORTH (2M SCALE).

2.5 Trench 03

Trench 03 was located in the south-east corner of the site on an approximate north-west to south-east orientation. It measured $26.15m\times1.50m$; the topsoils were up to 0.60m thick and the subsoil 0.20m thick. It was located to target a pair of geophysical anomalies interpreted as being possible pits, including from geotechnical investigations, though which have the potential for being associated with mining activity. The trench revealed two geotechnical pits (Figure 6) in the positions of the geophysical anomalies. The trench was widened to c.5m, and excavated to a depth of c.2.40m under mining survey personnel supervision across the southern of the geophysical anomalies.

Pit [304] was located towards the north-western end of the trench and was sub-rectangular in plan, orientated approximately north-east to south-west. It measured 1.70m×1m×0.55+m deep with near vertical sides, but was not fully excavated. It contained two fills: upper fill (305), mid brown and orange-brown friable silt mixed re-deposited topsoil and subsoil; and (306), light brown-yellow soft clay re-deposited natural. This feature appears to be a shallow geotechnical investigation pit for soil analysis.

Pit [307] was located at the south-eastern end of the trench and was sub-rectangular in plan, orientated approximately east to west. It measured 2.70m×1.90m×1.60m deep with moderate to steep sloping sides and concave base. It contained three fills: upper fill (308), sub-angular slate-stone within compacted mid brown-yellow clay re-deposited natural; (309), mid brown friable silt re-deposited topsoil; and lower fill (310), mid brown-orange soft slightly silt-clay re-deposited subsoil. This feature appears to be a relatively deep geotechnical investigation pit establishing the depth of solid bedrock.

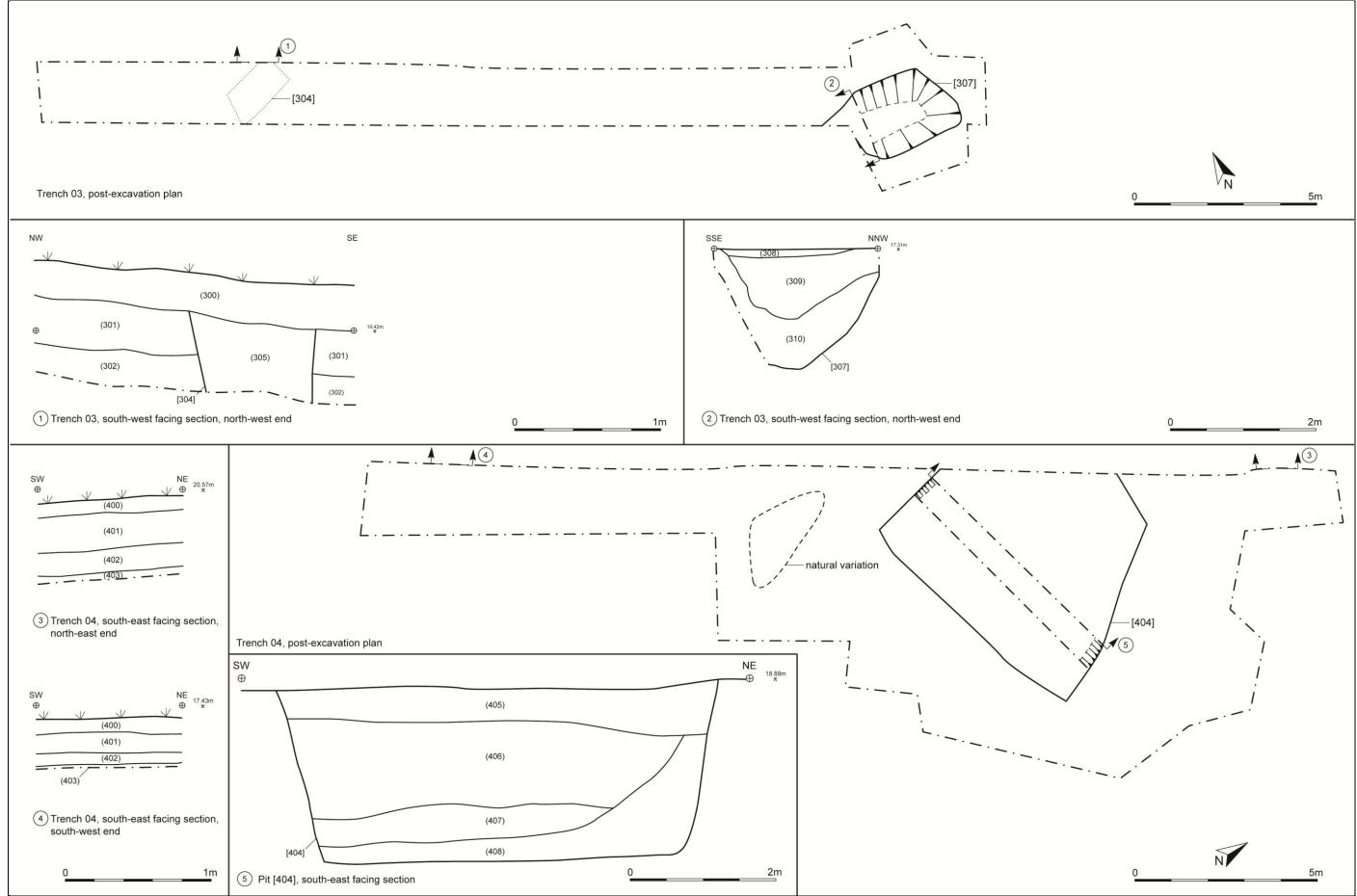


FIGURE 6: TRENCHES 03 AND 04; PLANS AND SECTIONS. HEIGHTS AOD.

2.6 Trench 04

Trench 04 was located centrally towards the southern boundary of the site and was aligned approximately north-west to south-east. It measured $26.35m\times1.50m$; the topsoils were up to 0.35m thick and the subsoil 0.15m thick. It was located to target a series of five geophysical anomalies interpreted as a possible pits. The trench revealed a single large sub-rectangular pit in the position of the geophysical anomalies (Figure 6). An area of natural variation was also identified to the south-west of the pit. The trench was widened to c.8.70m to fully expose the feature, and a narrow trench machine excavated across the feature under mining survey personnel supervision.

Pit [404] was located towards the north-eastern end of the trench and was sub-rectangular in plan. It was orientated approximately east-north-east to west-south-west and measured up to 6.40m×5.60m×2.40m deep with near vertical sides and flat base. It contained four fills: upper fill (405), mid brown friable silt; (406), sub-angular slate-stone within compacted mid brown-yellow clay re-deposited natural, with modern plastic inclusions; (407), yellow loose sand with hessian sacking and lenses of black silt and a modern waterproof jacket; and lower fill (408), sub-angular slate-stone within compacted mid brown-yellow clay re-deposited natural. The position of this feature corresponds with the series of pits identified on the geophysical survey and it is likely that they represent more compacted and stony infilling of the pit rather than individual discrete features. This feature was seemingly excavated for the removal and detonation of an unexploded Second World War bomb.

2.7 Trench 05

Trench 05 was located towards the south-western corner of the site and was aligned approximately north-east to south-west. It measured $27.90m\times1.50m$; the topsoils were 0.30m thick and the subsoil 0.02m thick. It was located to target a possible pit and amorphous anomaly identified on the geophysical survey and interpreted as a possible geotechnical pit and likely natural variation, though both with the potential of being associated with mining activity. The trench identified a single large sub-rectangular pit in the position of the pit anomaly, and an area of natural variation along the line of the amorphous anomaly (Figure 7). The trench was widened to c.6m and excavated to a depth of c.2.30m under mining survey personnel supervision across the area of the pit.

Pit [504] was located towards the centre of the trench and was sub-rectangular in plan. It was orientated approximately north-west to south-east and measured 5.30m×4m×2m deep with near vertical sides and flat base, the top of the pit was formed of a wider shallow scoop. It contained two fills: upper fill (505), mid brown friable silt; and lower fill (506), sub-angular slate-stone within mid brown-yellow soft clay re-deposited natural. This feature is likely to represent a large geotechnical investigation pit establishing the depth of solid bedrock, though may be a mining prospection pit.

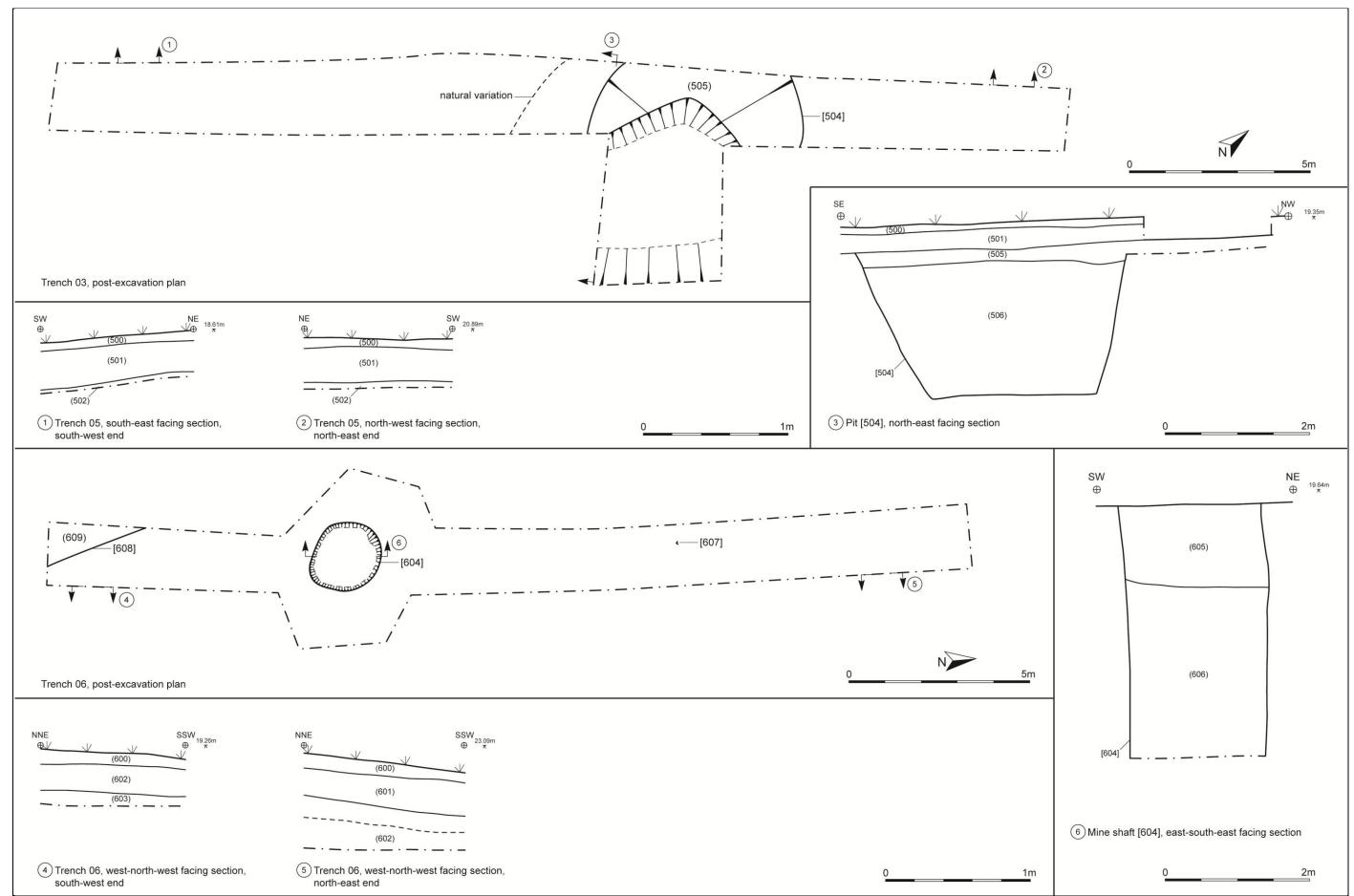


FIGURE 7: TRENCHES 05 AND 06; PLANS AND SECTIONS. HEIGHTS AOD.

2.8 Trench 06

Trench 06 was located towards the south-western corner of the site and was aligned approximately north-north-east to south-south-west. It measured 25.60m×1.50m; the topsoils were 0.30m thick and the subsoil up to 0.34m thick. It was located to target a series of linear, pit and disturbance anomalies identified on the geophysical survey as a possible trackway; a historic boundary, a mine shaft and an area of disturbance. The trench identified a linear ditch, a mine shaft and a metal post in the positions of the geophysical anomalies (Figure 7). The historic boundary was not identified. The trench was widened to a width of *c*.5.25m over the mine shaft, and the feature excavated by machine under the supervision of mining survey personnel.

Ditch [608] was located in the south-western corner of the trench and was orientated approximately north-west to south-east. It measured 0.85+m wide, and was not excavated having only been partially exposed within the trench. It contained an upper fill (609), mid brown friable silt and is likely to represent a historic field boundary ditch to the side of a track depicted on historic mapping.

Mine shaft [604] was located towards the south-western end of the trench and was sub-circular in plan, measuring c.2m in diameter and 3.50+m deep with vertical sides (Figures 8-9). The base was not reached. It contained two fills: upper fill (605), mid brown friable silt; and lower fill (606), sub-angular slate-stone within light yellow-brown soft clay re-deposited natural. This feature is the mine shaft identified on the historic mapping and of likely post-medieval date.

Post [607] was a triangular iron post measuring 0.06m×0.03m which had been driven into the ground. This feature represents the strong magnetic response identified on the geophysical survey, and was set within an area of geological variation.



FIGURE 8: MINE SHAFT [604], PRE-EXCAVATION; VIEWED FROM THE NORTH-EAST (1M &2M SCALES).



FIGURE 9: MINE SHAFT [604], POST-EXCAVATION; VIEWED FROM THE SOUTH-WEST (2M SCALE).

2.9 Trench 07

Trench 07 was located towards the north-eastern corner of the site and was aligned approximately north to south. It measured 3.90m×0.60m and was excavated to a depth of 2m (Figure 10); the topsoils were 0.35m thick and the subsoil up to 0.17m thick. It was located as a geotechnical pit to test the depth of solid bedrock in this corner of the site and for soil analysis. No archaeological features were identified within this trench.

2.10 TRENCH 08

Trench 08 was located centrally towards the eastern site boundary and was aligned approximately north to south. It measured 4.50m×0.60m and was excavated to a depth of 1.30m (Figure 10); the topsoils were 0.35m thick and the subsoil up to 0.15m thick. It was located as a geotechnical pit for soil analysis. No archaeological features were identified within this trench.

2.11 Trench 09

Trench 09 was located towards the south-eastern corner of the site and was aligned approximately north to south. It measured 4.20m×0.60m and was excavated to a depth of 2.15m (Figure 10); the topsoils were 0.32m thick and the subsoil up to 0.50m thick. It was located as a geotechnical pit to test the depth of solid bedrock in this corner of the site and for soil analysis. No archaeological features were identified within this trench.

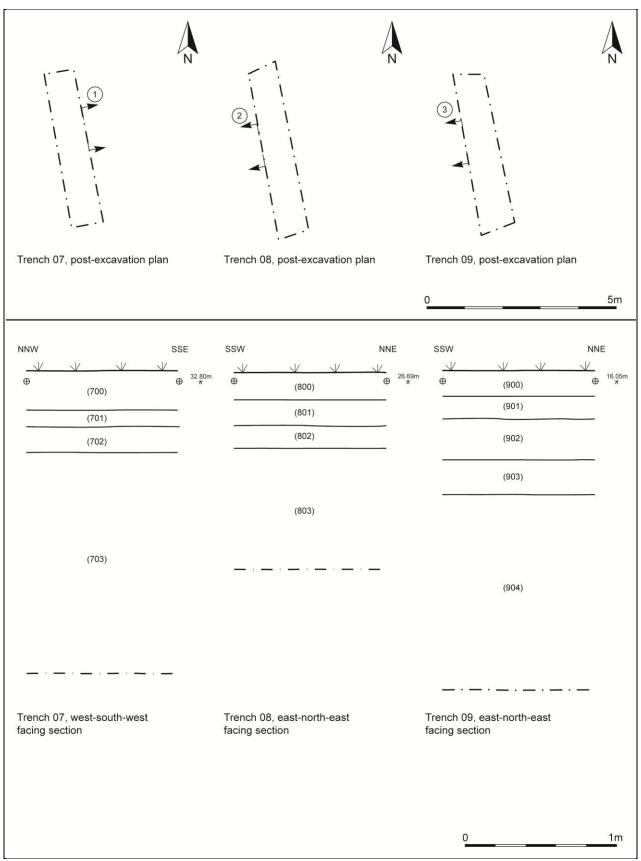


FIGURE 10: TRENCHES 07, 08 AND 09; PLANS AND SECTIONS. HEIGHTS AOD.

2.12 FINDS

Only a very small quantity of finds were recovered during the evaluation, all post-medieval or later in date and including clay pipe, glass and pottery, as well as slag waste from industrial processes. Two clay pipe stems (7g); one fragment of bottle glass (4g); five fragments of metalwork (146g); nine sherds (23g) of post-medieval pottery, including a mix of industrial and white-refined wares; multiple fragments of hessian sack (602g); and three fragments of slag (5g) were recovered from across the site. A complete finds concordance can be found in Appendix 2.

2.13 DISCUSSION

The trenches were located to target a series of features identified in a geophysical survey, including: a series of linear features interpreted as historic field boundaries and a metalled track; a mine shaft; a series of pits, some of which were suggested as likely geotechnical investigation pits; and areas of likely natural variation, but which given the proximity of known mining features may be associated with mining activity.

The evaluation broadly validated the results of the geophysical survey, the majority of the features being identified on the ground; and the amorphous anomalies suggested as being variation in the natural being confirmed as such. Only the east to west historic boundary and an intermittent linear anomaly towards the north-west corner of the site were not identified, likely reflecting their poor survival at the location of the trenches.

The remaining linear anomalies were identified as shallow linear ditches which would have formed the internal field drainage ditches to either side of a removed hedgebank and which would have formed the historic boundaries depicted on historic mapping.

The series of pits targeted by trench 04 were in fact a single large pit excavated from the removal and detonation of an unexploded World War II bomb in 1999 (H. Kneebone *pers.comm.*), the anomalies identified by the geophysical survey reflecting patches of more compacted and stony fill.

The remaining pits were all identified as likely geotechnical survey pits, appearing machine excavated to the depth of solid bedrock and backfilled with re-deposited natural.

Very few of the excavated features contained dating evidence, but all of the stratified material that was recovered was post-medieval or modern in date and the remaining features can be dated by association and analogy with historic evidence. The finds show the field boundaries as being post-medieval in date, whilst the mine shaft was recorded as an 'old shaft' on the late 19th century Ordnance Survey mapping and are likely to be associated with the 19th century Silver Hill Mine workings (Jenkin 1961).

The remaining features are all likely modern in date and reflect various stages of geotechnical investigation of the site, most being cut through the topsoil. Of these pits, [504] was less steep sided and it is possible that it was mining prospection pits, though the similarity in the fills with the geotechnical pits suggests that it is more likely of this type.

3.0 CONCLUSION

The evaluation at Perranwell identified a total of 12 features reflecting the post-medieval and modern history of the area. These features include a series of post-medieval double-ditched field boundaries indicative of Cornish hedgebanks; a mine shaft likely associated with the 19th century Silver Hill Mine; a modern pit excavated for the removal and detonation of an unexploded World War II bomb; and a series of geotechnical pits relating to modern land investigations on the site.

Given the results of the archaeological evaluation the archaeological potential for the site is low and it is not recommended that any further archaeological investigations are undertaken in relation to this site.

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APPENDIX 1: CONTEXT DESCRIPTIONS

Context	Туре	Description	Relationships	Depth/thickness (m)	Spot date					
	Trench 01									
(100)	Layer	Topsoil/turf – mid-dark brown soft-friable silt.	Overlies (101)	0.08m thick	Modern					
(101)	Layer	Lower topsoil – mid-dark brown soft-friable silt.	Overlain by (100); overlies (106), (108)	0.16m thick	Modern					
(102)	Layer	Subsoil – mid-dark brown-orange soft silt-clay.	Cut by [104], [107]	0.08-0.24m thick	-					
(103)	Natural	Natural – light-mid yellow-brown soft silt-clay with frequent bands of subangular stone.	Overlain by (102)	-	-					
[104]	Cut	Historic boundary – linear ditch orientated approximately north to south. Measures 1.58m×0.20m deep with moderate sloping sides and stepped concave base.	Filled by (105), (106); cuts (102)	0.20m deep	Post-medieval					
(105)	Fill	Lower fill of [104] – mid-light brown firm clay-silt with occasional sub-angular stone inclusions, generally towards base.	Overlain by (106); fill of [104]	0.20m thick	Post-medieval					
(106)	Fill	Upper fill of [104] – dark brown-grey soft silt.	Overlain by (101);		Post-medieval					
[107]	Cut	Historic boundary – linear ditch orientated approximately north to south. Measures 1.02m×0.16m deep with moderate sloping sides and concave base.	Filled by (108); cuts (102)	0.16m deep	Post-medieval					
(108)	Fill	Fill of [107] – mid brown firm clay-silt with occasional sub-angular stone, generally towards base.	Overlain by (101); fill of [107]	0.16m thick	Post-medieval					
		Trench 02			•					
(200)	Layer	Topsoil/turf – mid brown-grey friable clay-silt with occasional sub-angular stone.	Overlies (201)	0.08-0.12m thick	Modern					
(201)	Layer	ower topsoil – mid orange-brown friable clay-silt with moderate sub-angular tone inclusions. Overlain by (200); overlies (206), (208), (211)		0.22m thick	Modern					
(202)	Layer	Subsoil – mid brown-orange soft silt-clay with moderate sub-angular stone. Intermittent layer.	Cut by [210]; overlies (203)	Up to 0.22m thick	-					
(203)	Natural	Natural – light brown-yellow soft clay with occasional sub-angular stone. Includes wider band of stonier natural towards south-western end.	Overlain by (202)	in by (202) -						
[204]	Cut	Historic boundary – linear ditch orientated approximately north to south. Measures 2.08m×0.22m deep with moderate sloping sides and concave base.	Filled by (205), (206), (209); cuts (203)	0.22m deep	Post-medieval					

(205)	Fill	Mid fill of [204] – mid-light orange-brown friable clay-silt with frequent subangular and angular stone.	Overlain by (206); overlies (209); fill of [204]	0.09m thick	Post-medieval
(206)	Fill	Upper fill of [204] – mid grey-brown friable clay-silt with occasional sub-angular stone.	Overlain by (201); overlies (205); fill of [204]	0.10m thick	Post-medieval
[207]	Cut	Historic boundary – linear ditch orientated approximately north to south. Measures 1.10m×0.20m deep with moderate to steep sloping sides and concave base.	Filled by (208); cuts (203)	0.20m deep	Post-medieval
(208)	Fill	Fill of [207] – mid orange-brown friable clay-silt with moderate to frequent sub- angular and angular stone.	Overlain by (201); fill of [207]	0.20m thick	Post-medieval
(209)	Fill	Lower fill of [204] – dark brown-grey friable clay-silt with occasional sub-angular stone.	Overlain by (205); fill of [204]	0.16m thick	Post-medieval
[210]	Cut	Linear gully – orientated approximately north to south. Measures 0.20m×0.06m deep with steep sides and concave base.	Filled by (211); cuts (202)	0.06m deep	Post-medieval?
(211)	Fill	Fill of [210] – mid orange-brown friable clay-silt.	Overlain by (201); fill of [210]	0.06m thick	Post-medieval?
		Trench 03			
(300)	Layer	Topsoil/turf – mid brown friable silt with occasional-rare sub-angular stone.	Overlies (305), (308)	0.20-0.25m thick	Modern
(301)	Layer	Lower topsoil – mid slightly orange-brown friable silt with occasional-rare subangular stone.	Cut by [304], [307]; overlies (302)	0.30-0.35m thick	Modern
(302)	Layer	Subsoil – mid brown-orange soft slightly silt-clay.	Overlain by (301); overlies (303)	0.20m thick	-
(303)	Natural	Natural – light brown-yellow soft clay with occasional sub-angular stone blocks.	Overlain by (302)	-	-
[304]	Cut	Geotechnical pit – sub-rectangular pit orientated approximately north-east to south-west. Measures 1.70m×1m×0.55+m with near vertical sides. Not fully excavated.	Filled by (305), (306); cuts (301)	0.55+m deep	Modern
(305)	Fill	Upper fill of [304] – mixed mid brown and slightly orange-brown friable silt. Redeposited topsoil and subsoil deposits.	Overlain by (300); overlies (306); fill of [304]	0.53m thick	Modern
(306)	Fill	Lower fill of [304] – light brown-yellow soft clay. Re-deposited natural.	Overlain by (305); fill of [304]	0.02+m thick	Modern
[307]	Cut	Geotechnical pit – sub-rectangular pit orientated approximately east to west. Measures 2.70m×1.90m×1.60m deep with steep sloping sides and concave base.	Filled by (308), (309), (310); cuts (301)		Modern
(308)	Fill	Upper fill of [307] – sub-angular stone within compacted brown-yellow clay. Redeposited natural.	Overlain by (300); overlies (309); fill of	Up to 0.30m thick	Modern

			[307]		
(309)	Fill	Fill of [307] – mid brown friable silt. Re-deposited topsoil. Overlain by (308); overlies (310); fill of [307]		Up to 1m thick	Modern
(310)	Fill	Lower fill of [307] – mid brown-orange soft slightly silt-clay. Re-deposited subsoil.	Overlain by (309); fill of [307]	Up to 0.75m thick	Modern
		Trench 04		•	
(400)	Layer	Topsoil/turf – mid brown friable silt with occasional-rare sub-angular stone.	Overlies (401)	0.10m thick	Modern
(401)	Layer	Lower topsoil – mid slightly orange-brown friable silt with occasional-rare subangular stone.	Overlain by (400); overlies (405)	0.24m thick	Modern
(402)	Layer	Subsoil – mid brown-orange soft slightly silt-clay.	Cut by [404]; overlies (403)	0.15m thick	-
(403)	Natural	Natural – light brown-yellow soft clay with frequent sub-angular stone.	Overlain by (402)	-	-
[404]	Cut	Pit – sub-rectangular pit orientated approximately east-north-east to west-south-west. Measures 6.40m×5.60m×2.40m with near vertical sides and flat base. Excavated for removal of WWII bomb.	Filled by (405), (406), (407), (408); cuts (402)	2.40m deep	Modern
(405)	Fill	Upper fill of [404] – mid brown friable silt.	Overlain by (401); overlies (406); fill of [404]	0.70m thick	Modern
(406)	Fill	Fill of [404] – sub-angular stone within compacted mid brown-yellow clay. Redeposited natural.	Overlain by (405); overlies (407); fill of [404]	1.30m thick	Modern
(407)	Fill	Fill of [404] – mid yellow loose sand with lenses of black silt. Covering layer for the detonation/burning of explosive material from WWII bomb.	Overlain by (406); overlies (408); fill of [404]	0.50m thick	Modern
(408)	Fill	Lower fill of [404] – sub-angular stone within compacted mid brown-yellow clay. Re-deposited natural.	Overlain by (407); fill of [404]	Up to 1.50m thick	Modern
		Trench 05			
(500)	Layer	Topsoil/turf – mid brown friable silt with rare sub-angular stone.	Overlies (501)	0.08m thick	Modern
(501)	Layer	Lower topsoil – mid slightly orange-brown friable silt with occasional sub- angular stone. Overlain by (500); overlies (507)		0.22m thick	Modern
(502)	Layer	Subsoil – mid brown-orange soft slightly silt-clay.	Cut by [504]; overlies (503)	0.04m thick -	
(503)	Natural	Natural – light brown-yellow soft clay with frequent sub-angular stone, including bands of more stony material. Overlain by (502)		-	-
[504]	Cut	Geotechnical pit – sub-rectangular pit orientated approximately north-west to south-east. Measures 5.30m×4m×2m deep with near vertical sides and flat	cal pit – sub-rectangular pit orientated approximately north-west to Filled by (505), (506),		Modern?

LAND NEAR PERRANWELL STATION, PERRANARWORTHWAL, CORNWALL

		base.			
(505)	Fill	Fill of [504] – mid brown friable silt. Re-deposited topsoil. Ove [504]		0.30m thick	Modern?
(506)	Fill	Lower fill of [504] – sub-angular stone within mid brown-yellow soft clay. Redeposited natural.	Overlain by (505); fill of [504]	1.70m thick	Modern?
(507)	Fill	Upper fill of [504] – sub-angular stone within mid brown-yellow soft clay. Redeposited natural.	Overlain by (501); overlies (505); fill of [504]	Up to 0.50m thick	Modern?
	•	Trench 06			•
(600)	Layer	Topsoil/turf – mid brown friable silt with common sub-angular stone.	Overlies (601)	0.10m thick	Modern
(601)	Layer	stone. overlies (605), (609)		0.20m thick	Modern
(602)	Layer	Subsoil – mid brown-orange soft slightly silt-clay.	Cut by [604], [607], [608]; overlies (603)	Up to 0.34m thick	-
(603)	Natural	Natural – light brown-yellow soft clay with common sub-angular stone. Less stone to the north.	Overlain by (602)	-	-
[604]	Cut	Mine shaft – sub-circular feature measuring 2m in diameter ×3.50+m deep (base not reached) with near vertical sides.	Filled by (605), (606); cuts (602)	3.50+m deep	Post-medieval 19 th century?
(605)	Fill	Upper fill of [604] – mid brown friable silt.	Overlain by (601); overlies (606); fill of [604]	c.1.15m thick	Post-medieval 19 th century?
(606)	Fill	Fill of [604] – sub-angular stone within light yellow-brown soft clay. Redeposited natural.	Overlain by (605); fill of [604]	2.35+m thick	Post-medieval 19 th century?
[607]	Post	Metal post – triangular iron post measuring 0.06m×0.03m which had been driven into the ground.	Cuts (603)	-	Modern? Post- medieval?
[608]	Cut	Historic boundary – linear ditch orientated approximately north-west to southeast. Measures 0.85+m wide. Only partially revealed in trench. Not excavated.	Filled by (609); cuts (602)	-	Post-medieval
(609)	Fill	Fill of [608] – mid brown friable silt.	Overlain by (601); fill of [608]	-	Post-medieval
		Trench 07			_
(700)	Layer	Topsoil/turf – mid brown friable silt with occasional sub-angular stone.	Overlies (701)	0.25m thick	Modern
(701)	Layer	Lower topsoil – mid slightly orange-brown friable silt. Overlain by (700); overlies (702) 0.10m thick		0.10m thick	Modern
(702)	Layer	Subsoil – mid orange-brown to brown-orange soft slightly silt-clay.	Overlain by (701); overlies (703)	0.17m thick	-
(703)	Natural	Natural – light brown-yellow soft clay with common sub-angular stone.	Overlain by (702)	-	-

LAND NEAR PERRANWELL STATION, PERRANARWORTHWAL, CORNWALL

		Becomes solid bedrock lower.			
		Trench 08			
(800)	Layer	Topsoil/turf – mid brown friable silt with occasional sub-angular stone.	Overlies (801)	0.18m thick	Modern
(801)	Layer	Lower topsoil – mid slightly orange-brown friable silt. Overlain by (800); overlies (802)		0.17m thick	Modern
(802)	Layer	Subsoil – mid brown-orange soft slightly silt-clay.	Overlain by (801); overlies (803)	0.15m thick	-
(803)	Natural	Natural – light brown-yellow soft clay with common-abundant sub-angular stone. Overlain by (802)		-	-
		Trench 09			
(900)	Layer	Topsoil/turf – mid brown friable silt.	Overlies (901)	0.17m thick	Modern
(901)	Layer	Lower topsoil – mid slightly orange-brown friable silt.	Overlain by (900); overlies (902)	0.15m thick	Modern
(902)	Layer	Subsoil – mid brown-orange-yellow soft slightly silt-clay. Colluvial build-up towards bottom of slope.	Overlain by (901); overlies (903)	Up to 0.50m thick	-
(903)	Natural	Natural – light brown-yellow soft clay with common-abundant sub-angular stone. Becomes solid bedrock lower.	Overlain by (902)	-	-

APPENDIX 2: FINDS CONCORDANCE

			POTTERY	OTHER			DATE
Context	Sherds	Wgt. (g)	Notes	Frags.	Wgt. (g)	Notes	
(105)	1	1	Earthenware, post-medieval	1	5	Clay pipe stem	Post-medieval
(108)	1	2	Industrial ware, post-medieval				
				1	1	Clay pipe stem	Post-medieval
(201)				1	4	Glass – green bottle glass	Post-medieval / modern
(205)	1	1	White refined earthenware, post-medieval	1	3	Slag	
(206)	2	1	White refined earthenware,	1	1	Slag	
(206)	2	1	post-medieval	1	4	Mineral ore?	
(208)	2	1 1	Industrial ware, post-medieval	5	146	Metal (iron) fragments	
	2	7	Earthenware, post-medieval	1	1	Slag	
(406)				1	8g	Plastic sheet fragment	Modern
(407)				Several	602	Hessian? Sack	Modern

APPENDIX 3: EVALUATION SUPPORTING PHOTOGRAPHS



1. VIEW ACROSS THE DEVELOPMENT SITE TOWARDS THE OPPOSITE VALLEY PRE-EXCAVATION; VIEWED FROM THE NORTH-WEST (NO SCALE).



2. VIEW ACROSS THE DEVELOPMENT SITE TOWARDS THE MAIN SETTLEMENT OF PERRANWELL PRE-EXCAVATION; VIEWED FROM THE NORTH-EAST (NO SCALE).



3. VIEW ACROSS THE DEVELOPMENT SITE TOWARDS THE HOUSES ON STATION ROAD PRE-EXCAVATION; VIEWED FROM THE SOUTH-EAST (NO SCALE).



4. VIEW ACROSS THE DEVELOPMENT SITE TOWARDS THE HOUSES ON STATION ROAD PRE-EXCAVATION; VIEWED FROM THE SOUTH-WEST (NO SCALE).



5. VIEW ACROSS THE SITE POST-EXCAVATION; VIEWED FROM THE NORTH-EAST (NO SCALE).



6. Trench 01 post-excavation; viewed from the south-east (1m & 2m scales).



7. Trench 01 post-excavation; viewed from the north-west (1m & 2m scales).



8. Trench 01 north-east facing sample section, south-east end; viewed from the north-east (1m scale).



9. TRENCH 01 NORTH-EAST FACING SAMPLE SECTION, NORTH-WEST END; VIEWED FROM THE NORTH-EAST (1M SCALE).



10. DITCH [104] POST-EXCAVATION PLAN; VIEWED FROM THE EAST (1M SCALE).



11. DITCH [104] NORTH FACING SECTION; VIEWED FROM THE NORTH (1M SCALE).



12. DITCH [107] POST-EXCAVATION PLAN; VIEWED FROM THE EAST (1M SCALE).



13. DITCH [107] NORTH FACING SECTION; VIEWED FROM THE NORTH (1M SCALE).



14. Trench 02 post-excavation; viewed from the north-east (1m & 2m scales).



15. Trench 02 post-excavation; viewed from the south-west (1m & 2m scales).



16. Trench 02 south facing sample section, east end; viewed from the south (1m scale).



17. Trench 02 south facing sample section, west end; viewed from the south (1m scale).



18. DITCH [204] NORTH FACING SECTION; VIEWED FROM THE NORTH (1M SCALE).



19. DITCH [204] SOUTH FACING SECTION; VIEWED FROM THE SOUTH (1M SCALE).



20. DITCH [207] POST-EXCAVATION; VIEWED FROM THE NORTH (1M SCALE).



21. DITCH [207] NORTH FACING SECTION; VIEWED FROM THE NORTH (1M SCALE).



22. DITCH [207] AND GULLY [210] SOUTH FACING SECTION; VIEWED FROM THE SOUTH (1M SCALE).



23. DITCHES [204] AND [207] POST-EXCAVATION; VIEWED FROM THE SOUTH (2M SCALE).



24. DITCHES [204] AND [207] POST-EXCAVATION; VIEWED FROM THE SOUTH-WEST (2M SCALE).



25. Trench 02, variation in the natural in the position of the amorphous geophysical anomaly; viewed from the north (1m & 2m scales).



26. Trench 02, detail of the variation in the natural in the position of the amorphous geophysical anomaly; viewed from the north-west (1m & 2m scales).



27. Trench 02, variation in the natural post-excavation; viewed from the north-east (1m scale).



 $28.\, Trench\, 03$ post-excavation; viewed from the north-west (1m $\&\, 2m$ scales).



29. Trench 03 post-excavation with pit [307] in the foreground; viewed from the south-east (1m & 2m scales).



30. TRENCH 03, SOUTH-WEST FACING SAMPLE SECTION WITH GEOTECHNICAL PIT [304]; VIEWED FROM THE SOUTH-WEST (2M SCALE).



31. PIT [304] PRE-EXCAVATION; VIEWED FROM THE SOUTH-WEST (1M SCALE).



32. PIT [307] PRE-EXCAVATION; VIEWED FROM THE NORTH-EAST (1M SCALE).



33. GEOTECHNICAL PIT [307] SOUTH-EAST FACING SECTION; VIEWED FROM THE SOUTH-EAST (2M SCALE).



34. Trench 04 post-excavation; viewed from the north-east (1m & 2m scales).



35. Trench 04 post-excavation; viewed from the south-west (1m & 2m scales).



36. Trench 04 North-West facing sample section, south-west end; viewed from the North-West (1m scale).



37. TRENCH 04 SOUTH-EAST FACING SAMPLE SECTION, NORTH-EAST END; VIEWED FROM THE SOUTH-EAST (1M SCALE).



38. PIT [404] PRE-EXCAVATION; VIEWED FROM THE NORTH (1M & 2M SCALES).



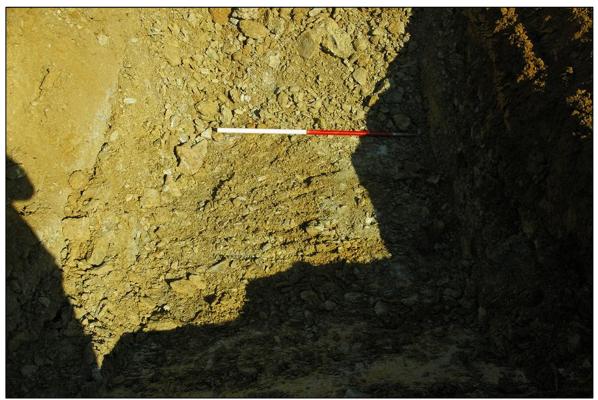
40. PIT [404] PRE-EXCAVATION FOLLOWING WIDER TRENCH STRIP; VIEWED FROM THE NORTH-WEST (1M & 2M SCALES).



41. PIT [404] POST-EXCAVATION; VIEWED FROM THE WEST (2M SCALE).



42. PIT [404] SOUTH-WEST FACING SECTION; VIEWED FROM THE SOUTH-WEST (2M SCALE).



43. TRENCH 04, VARIATION IN THE NATURAL GEOLOGY POST-EXCAVATION; VIEWED FROM THE SOUTH-EAST (1M SCALE).



44. Trench 05 post-excavation; viewed from the north-east (1m & 2m scales).



45. Trench 05 post-excavation; viewed from the south-west (1m $\&\,$ 2m scales).



46. Trench 05 North-West facing sample section, North-East end; viewed from the North-West (1m scale).



47. TRENCH 05 NORTH-WEST FACING SAMPLE SECTION, SOUTH-WEST END; VIEWED FROM THE NORTH-WEST (1M SCALE).



48. PIT [504] PRE-EXCAVATION; VIEWED FROM THE NORTH (1M & 2M SCALES).



49. PIT [504] PRE-EXCAVATION FOLLOWING WIDER TRENCH STRIP; VIEWED FROM THE SOUTH-WEST (1M & 2M SCALES).



50. PIT [504] POST-EXCAVATION; VIEWED FROM THE NORTH-NORTH-EAST (2M SCALE).



51. PIT [504] NORTH-EAST FACING SECTION; VIEWED FROM THE NORTH-EAST (2M SCALE).



52. Trench 06 post-excavation; viewed from the south-west (1 m & 2 m scales).



53. Trench 06 post-excavation; viewed from the north-east (1m & 2m scales).



54. Trench 06 North-West facing sample section, south end; viewed from the North-West (1m scale).



55. Trench 06 North-West facing sample section, north end; viewed from the North-West (1m scale).



56. Mine shaft [604] pre-excavation; viewed from the south-west (1m & 2m scales).



57. Working shot – excavation of mine shaft [604]; viewed from the west (no scale).



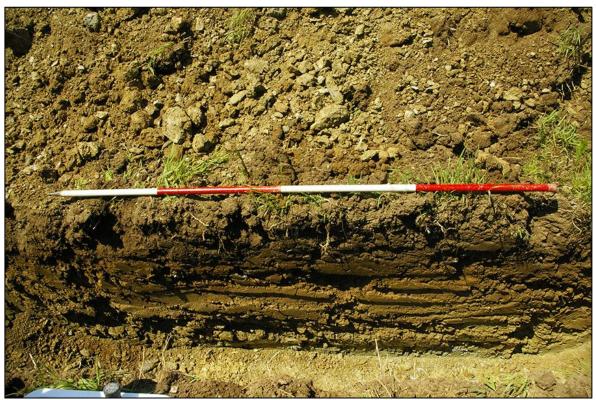
58. MINE SHAFT [604] POST-EXCAVATION; VIEWED FROM THE SOUTH-WEST (2M SCALE).



59. IRON POST [607]; VIEWED FROM THE SOUTH (1M SCALE).



60. TRENCH 07 WEST FACING SECTION; VIEWED FROM THE WEST (2M SCALE).



 $61.\,\text{Trench}\,08\,\text{east}$ facing section; viewed from the east (2m scale).



62. TRENCH 09 EAST FACING SECTION; VIEWED FROM THE EAST (2M SCALE).



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