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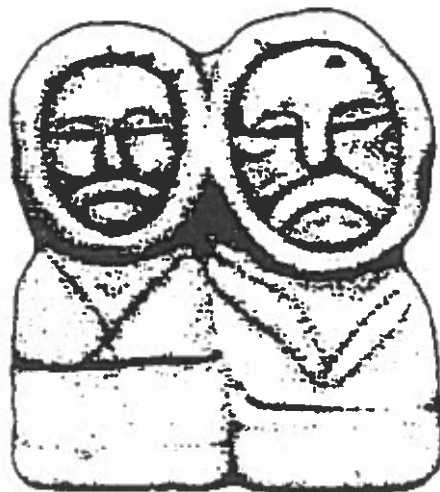


CAMBRIAN ARCHAEOLOGICAL PROJECTS LIMITED

**LAND ADJACENT TO 47, STATION ROAD, LETTERSTON,
PEMBROKESHIRE:**

Archaeological desk-based assessment and field evaluation

by Nick Tavener, BA, Dip Soil Science, MIFA



CAP Report No. 84

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Date:- March, 1999

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1. SUMMARY

1.1 Pembrokeshire County Council have received a planning application for the construction of seven new houses with their own access road on a green field site near the eastern end of Letterston. The pre-20th century settlement core of Letterston lies c. 500m to the west. In the main, it originated as a planted settlement led by a Flemming named Lettard in the 12th century. The planned layout of that planted settlement is still detectable in the layout of the village today.

1.2 Three mounds of Bronze Age date that lay 50-100m to the west of the proposed development area were excavated by Dr.H.N.Savory in 1948 and 1963. The presence of these and other known prehistoric monuments close to the proposed development area led to the placing of a requirement for both a desk-based assessment and programme of trial excavation. The three excavated mounds lay in a near straight line SW-NE. The northernmost of these mounds (SMR PRN 2380) produced four cremation burials placed in urns. The next mound to the south (PRN 2379) was apparently non-funerary. The largest mound, SMR PRN 2381, lay at the southern end of the group. It had been built over an earlier ring cairn and also a stone circle (comprising 20 standing stones) of probable Neolithic date.

1.3 Nearby, a fourth and larger circular site has been identified on aerial photographs (PRN 2393). This site lies to the north-east of the mounds, on the same general alignment and less than 50m north of the proposed housing development. Described as a cropmark on the Sites and Monuments Record, the monument is actually a low, circular earthwork some 60m in diameter. In 1806, the Pembrokeshire antiquarian, Richard Fenton, carried out his own excavations on the three mounds described above. Fenton also described another site in the area that comprised three (fallen) standing stones set in a stone pavement. The true location of this feature has so far eluded archaeologists, but during the course of this study a re-analysis of Fenton's description in conjunction with careful examination of map sources (*para 3.37*) have indicated that this feature may well have stood in the same field as PRN 2393, leading to the possibility that the circular earthwork represents the bank around a now disappeared stone circle or henge. The earthwork is by far the largest of the four sites on the alignment.

1.4 In addition, the county Sites and Monuments Record includes an entry for a standing stone (PRN 2398) lying actually within the south-east corner of the proposed development area. The believed existence of this stone was based entirely on part of Fenton's description of the area. Arguments are advanced (*para. 3.36 below*) that this stone has been confused with another nearby standing stone, namely PRN 2414. This latter lay some 200m to the south-east and although it has long since disappeared, was probably genuine.

1.5 Following the review of the documentary and map sources, a total of nine trial trenches were opened within the development area. In eight of the trenches there were no features of any antiquity. On the eastern side of the development area, the topsoil was

found to contain a concentration of largely contiguous quartz stones. Removal by hand of c.20 square metres of the quartz concentration produced neither finds which might allow the feature to be dated, nor any other diagnostic evidence that might indicate whether the concentration was man-made or natural in origin. The stones lay directly on the subsoil. Whilst this might normally be taken to indicate that the stones were natural in origin, topsoil stripping had taken place below two of the nearby barrow mounds prior to their construction in the Bronze Age. This type of activity, shown to have occurred nearby, would allow a distinct possibility that the quartz concentration was man-made.. A consideration of the geomorphology of the area indicates that there are equally plausible reasons why the quartz concentration could have been deposited naturally at the end of the last Ice Age. In view of the lack of any finds or other diagnostic evidence, the nature of the origin of the quartz concentration remains undecided.

2. INTRODUCTION

2.1 Pembrokeshire County Council Planning Authority have received an application for detail planning consent (No. 98/01908/PA) for residential development on a green field site located adjacent (to the west) of 47, Station Road, Letterston at N.G.R. SM 949 299 (*Fig. 1*). The scheme involves the construction of seven houses set around a new access road (*Fig. 2*).

2.2 Before the excavation of any trenches for footings or services, the northern part of the development area will be stripped of topsoil and the ground surface will then be raised with landfill (*compare levels on Figs 2 & 3*). The purpose of this exercise is to raise the general level of the development to allow for sufficient fall in the drainage system. Whilst the digging of trenches will largely be confined to the immediate vicinity of the houses and access road, there is some possibility of drainage works being carried out in the north east corner of the field at an (as yet) unspecified location (*Liam Siggins, pers. comm.*).

2.3 The proposed development lies close to the sites of several known important prehistoric monuments (*see section 2*). The local Planning Authority therefor attached a condition to the planning consent requiring that a programme of archaeological works be agreed before commencement of development on site. The purpose of the condition was to ensure that potentially important archaeological remains were investigated and recorded before their destruction (*Appendix 3, project brief para. 1.0*)

2.4 Archaeoleg Cambria Archaeology - Heritage Management, acting in their capacity as archaeological curators and advisors to the Pembrokeshire Planning Authority, issued a detailed project brief for the proposed archaeological works. The project brief (*Appendix 3, para. 3.3*) called for an initial phase of research of all available documentary evidence for the site followed by field evaluation excavation to assess the location, extent, depth, nature and condition of any surviving archaeological deposits on the site in order that a fully informed decision could be made in the review phase about a mitigation strategy should such prove necessary or desirable.

2.5 Mr. Liam Siggins, acting as agent for the landowner, commissioned Cambrian Archaeological Projects to undertake this preliminary phase of research and evaluation. This report details the results.

3. THE DESK-BASED ASSESSMENT

3A. Introduction

3.1 The development area lies close to the (original) sites of three round barrows or *tumuli* of Bronze Age date (PRN's 2379, 2380 and 2381 below). It is the proximity of the proposed development to these barrows or burial mounds that necessitated this archaeological evaluation.

3.2 The three round barrows have been known collectively in the past as the 'Pendre Tumuli'. The three barrows were sited at intervals of c. 60m in a well-nigh straight line running southwest-northeast.

3.3 It is now known that a fourth (and larger) circular monument (PRN 2393 below) lies on the same alignment to the north-east of the *tumuli*. This and the other sites in the area are reviewed in section 3C below.

3B. The physical environment

3.4 The three *tumuli* stood on what was formerly common land on the gentle northern slope of a patch of high ground, just above the 400' contour and connected with Sgeibir Mountain to the north-east (*Fig. 9*) by the watershed of two streams. The first of these, namely the Waun Yswyl (*O.S., 1889*), used to 'rise' c. 200m to the north of the study area and then flowed north-westwards past Ridge to join the Western Cleddau. The railway line subsequently followed part of this route and has obscured the southern part of this stream course (*compare Figs. 7 and 8*). The other stream rises at the south end of Letterston station and flows south-east to join the Afon Anghof and thence the Western Cleddau. Sgeibir Mountain itself, which rises to 232m, is a western outlier of the Preseli Mountains.

3.5 The study area lies at around N.G.R. SM 949 299 some 350m eastwards from the part of Letterston known as Pendre, through which the main road from Haverfordwest to Fishguard passes. The study area comprises an irregularly shaped field measuring approximately 110m north-south and between 40 and 80m east-west (*Fig. 1*), the total area amounting to approximately 0.7 ha.

3.6 The site was visited prior to research commencing. The minor road leading from the crossroad at Pendre (i.e., Letterston) to Little Newcastle forms the southern boundary of the field. On its western side, the field fronts onto the gardens of properties dating to the mid to late 20th century. To the north lies pasture land and the eastern boundary comprises various barns and properties dating to the early 20th century.

3.7 The development area was wet to the point of waterlogging owing to a very wet winter. The soil was obviously extremely poor and acid in nature, with free iron readily observable in all standing water. About one third of the field was occupied by large patches of scrub vegetation comprising gorse and brambles in roughly equal proportions with occasional heather. The intervening clearings were short grass grazed by a pair of Welsh Cob ponies. The overall impression was that the study area comprised a small patch of moorland soils and vegetation surrounded by recent housing and better grade pasture land (to the immediate north and south).

3.8 In view of the findings of the evaluation excavation, a brief review of the soils, parent materials and underlying solid geology is perhaps pertinent in order to clarify certain issues for discussion later (*section 5 below*).

3.9 Detailed geological information for the area is not available as the British Geological Survey has never published the 1 inch or 1:50,000 sheet (theoretically sheet 210). The most detailed geological map information for the immediate area is at scale

1:250,000 (*British Geological Survey/NERC, 1994*). This is at present only available in 'solid' edition, i.e., there is unfortunately no published 'drift' information available.

3.10 Other sources indicate that the development area (and its immediate surroundings) overlies glacial drift deposits. These drift deposits are the parent material for the soils on site and are thus of some importance. The Ordnance Survey 1:2500 map of 1889 (*Pembrokeshire sheet XVI.3*) indicates old gravel pits on the north east side of the cross-roads near Pendre at c. N.G.R. 944 298 (some 500m west of the study area). The excavator of the three *tumuli* lying just to the west of the study area encountered a sandy subsoil with a hard pan on top. Iron-panning and staining was common below all three mounds (*Savory, 1948 & 1963*). The barrow mounds were formed of either subsoil of sandy and clayey nature, or turves, all of which Savory concluded had been gathered locally. The Enclosure Act award map of c. 1865 shows three ponds in the field to the immediate east of the study area (*Fig. 6*); the given field name, Claypits Field, presumably indicates that these were clay workings.

3.11 There would thus seem to be a grading of the drift materials. Heavier, coarser materials seem to occur to the west near the Pendre crossroad. Sand and clay occur further eastwards; this probably implies water and/or wind sorting in the late glacial period. The fact that the materials have been quarried suggests that they are of some depth.

3.12 The subsoil on the study area proved to be a gritty, slightly sandy clay. There can be considerable localised differences in the glacial drift materials of northern Pembrokeshire. In the late glacial period, the materials typically emanated from a veritable 'suite' of volcanic, sedimentary and metamorphic rocks in the St. David's Head area. These 'short-travelled' deposits, derived from often fairly soft rocks, have typically provided much of the smaller texture drift. The presence of 'far-travelled' drift in the region is proved by the presence, in amongst the larger materials, of stones and large erratic boulders from Ireland and south-west Scotland. The most important point is that the materials are mainly acidic in nature.

ORDNANCE 3.13 The 1:250,000 scale map (*British Geological Survey/NERC, 1994*) shows that the development area lies over rocks of the Arenig Series whilst the fields of Longstone Farm (just to the south) lie over rocks of the Llanvirn Series. The junction between the two series runs east-west just to the south of the road along the southern edge of the study area. The rock Series can be followed c. 3km westwards where they are mapped in more detail (*British Geological Survey, 1990*). Both rock Series are largely sedimentary beds with some intervening beds of waterlain (i.e., glacially or fluvio-glacially transported and redeposited) volcanic materials. Arenig Series strata comprise mainly bluish grey, silty mudstones interspersed with bands of acid tuffs and keratophyres. The Llanvirn Series comprise dark grey mudstones with bands of acid tuffs as well as extrusive rhyolitic and dacitic lavas. Just to the west of Letterston, the bed Series dip to the north at c. 30 degrees so that the individual beds lie partly 'on edge' in long stripes running east-west beneath the drift deposits; this situation probably occurs below the study area.

3.14 The overlying drift materials across the entire area are almost certainly largely acidic in nature and may vary widely in natural drainage capability. Locally however, differences in underlying strata may have an important effect on overall 'through drainage' and may, in conjunction with local variations in soil texture and acidity, be sufficient to explain the settlement pattern, e.g. the existence of Longstone Farm by c. 1815 (*Fig. 4*) whilst the area immediately to the north, separated by the junction between the two geological Series, was a common land (*Fig. 4*) of apparently impoverished nature (*see below*).

3.15 The soils of the Letterston area have not been mapped in any fine detail. The only published information is again at scale 1:250,000 (*Soil Survey Staff, 1983*); at this scale, considerable generalisation is normal, with smaller areas of slightly different soils omitted in order to simplify the map. The soils in the Letterston area are mapped as typical brown podzolic soils (formerly 'acid brown earths').

3.16 The Soil Survey have defined such soils as:-

- i.) podzolic soils with a 'Bs' horizon overlying dark brown or ochrous subsoil.
- ii.) under semi natural vegetation (as at the study area) such soils can have a humose 'Ah'/Ea' horizon and an immediately underlying Bh horizon (Avery, 1980).

3.17 These soils should not contain a full-blown 'bleached' albic 'E' horizon (Soil Survey Staff, 1983 - Avery, 1980). In addition, brown podzolic soils *sensu strictu* should not have a peaty topsoil, nor iron pan, nor gleyed horizons, nor prominent 'Bh' horizon. The top layer is usually an unincorporated acid organic layer ('F' and 'H' or 'O' horizons) which can be up to 0.4m deep.

3.18 The soil profile actually encountered during the evaluation excavation was both very thin and fairly uniform across the entire area. The total profile from surface to subsoil ('C' horizon) was never more than 0.2m deep and generally 0.15m deep. A thin 'F' horizon overlay a thin 'Ah' (or more strictly 'Ap' horizon i.e. affected by ploughing - see next paragraph) that was usually c.0.1m deep. The bottom of the profile was a thin 'Bs' horizon c. 0.05m deep featuring (at the base) widespread iron staining and (locally) thin iron panning. Locally there was some signs of bleaching, i.e. this latter horizon may be transitional to an 'E' horizon.

3.19 The field was ploughed for the present owner in 1981 and a crop of hay grown (Mr. Derek Jones, pers comm). The preparation included copious liming. A fairly good crop was obtained but the exercise was never repeated due to the difficulties encountered during ploughing arising from the shallowness of the profile. The Soil Survey have noted that brown podzolic soils that have been cultivated may once have been true podzols (Avery, 1980, p 49). It is likely that the ploughing and liming of such a thin soil was enough to temporarily reverse the situation here and that the weakly expressed 'E' horizon and iron panning/staining indicate that this soil may not be a true brown podzolic soil, but rather an improved / altered podzol currently in transition back towards a full blown podzol. Comparison of aerial photographs shows that a piece of ground on the other side of the northern boundary of the study area was of similar nature in 1955 (Plates 1) but had been converted to fairly good quality pasture by 1990 (Plates 2).

3C) Sites held on the Sites and Monuments Record (S.M.R.) and previous archaeological work in the near vicinity

PRN 2379 located at N.G.R. SM 9476 2981

3.20 A round barrow or *Tumulus* of Bronze Age date lying c. 100m to the WSW of the study area (Fig. 1). Partly excavated by the well known Pembrokeshire traveller and antiquarian, Richard Fenton around 1806. Re-excavated by Savory in 1946 as his 'Letterston I'. The mound was c. 23m across and up to 1.2m high. It had been constructed on top of the old ground surface (Savory, 1948, p. 74 Fig. 4). The barrow mound had originally been contained within a near circular wooden wall or fence c. 19m in diameter and comprised of near contiguous wooden posts set in a palisade or foundation trench c. 0.3m wide and 0.3m deep. There were no burials or finds in this mound but a pit, interpreted as a fire pit, was found beneath the mound near the centre. The mound was made largely of subsoil with patches of topsoil, but probably not turves. There was no surrounding ditch.

current status- now destroyed.

PRN 2380 located at N.G.R. SM 9479 2987 (Fig. 1)

3.21 A round barrow or *Tumulus* of Bronze Age date lying c. 60m to the west of the study area. Partly excavated by Fenton in 1806 (see SMR/NLW 15257D fol 2). More fully excavated by Savory in 1946 as 'Letterston II' (Savory, 1948). The mound was c. 20m in diameter and up to 1.8m high. It had been placed directly on the subsoil, i.e., the topsoil had been removed first (Savory, 1948, p.74 Fig. 4 and text). The primary burial was found in a pit below the mound slightly off-centre and comprised cremated bone in an urn of 'overhanging rim' type (typically mid Bronze Age). An area of burnt subsoil and charcoal in the vicinity was interpreted as the remains of the funeral pyre. A foundation

or 'palisade' trench c. 16m in diameter had then been dug to surround the burial and a wooden fence or wall of round posts constructed in the trench had then been used to contain the mound. At a slightly later date, three more individuals had been buried in the mound. All three were cremated, placed in urns of 'overhanging rim' type and the urns placed in crude cists formed from mudstone slabs. There was no surrounding ditch.

current status - now destroyed.

PRN 2381 *located at N.G.R. SM 9479 2987 (Fig. 1)*

3.22 A very large round barrow or *Tumulus* of Bronze Age date lying c. 150m to the south-east of the study area. Partly excavated by Richard Fenton around 1806 (*Savory, 1963*). Re-excavated by Savory in 1961 as his 'Letterston III'. Upon excavation it proved to be more complex than the two investigated in 1946. A shallow, outer ring kerb of quartzite blocks enclosed a circular area of c. 34m diameter (*Fig. 10*). The quartzite blocks rested directly on the subsoil (*Savory, 1963, p 315*) and it seems that the soil profile had been stripped before the kerb was constructed. This appears not to have been the case below parts of the inner area of quartz pavement (*see PRN 9036 below*). Concentrically within the outer ring kerb lay an inner cairn ring (in the shape of a thin 'ring-doughnut') and also composed entirely of quartzite blocks. The cairn ring had been constructed against the individual stones of a stone circle (*Fig. 10 and PRN 9036 below*). The stone circle and ring cairn(s) had been deliberately buried in the Bronze Age under a mound composed almost entirely of thick turves. The resulting mound was c. 36m in diameter and it survived to a maximum height of 1.6m. The only finds indicating a possible funerary function for this mound were a few fragments of cremated bone and a couple of fragments of 'overhanging rim' urn; these probably represented a robbed or disturbed secondary burial. There was no surrounding ditch. SEE PRN 9036.

Following Savory's excavation the barrow mound was restored and is a Scheduled Ancient Monument (SAM Pembrokeshire 062).

PRN 2414 *located at N.G.R. SM 9523 2975 (Fig. 9)*

3.23 The site of a Standing Stone (The Ketch) was recorded by the Ordnance Survey in the mid 19th century. The stone had been removed by 1889, i.e., before the construction of the railway (*see Fig. 7*).

PRN 2393 *centred at N.G.R. 9482 2996 (Fig. 1)*

3.24 Cropmark, located c. 30m to the north of the study area. Unknown type/date, but circular and 50-60m in diameter. Land ploughed since 1946 (*actually since 1955 - compare plates 1 and 2*). The Ordnance Survey record card noted possible traces of other cropmarks to east and north-east. See section 3E below for updated information.

PRN 2398 *located at N.G.R. 9493 2985*

3.25 Site of Standing Stone (Letterston Common) reputedly within the south-east corner of the development area. Probably Bronze Age. New evidence regarding this site is given in section 3E below.

PRN 9036 *located under PRN 2381 at N.G.R. 9473 2976*

3.26 A Neolithic Stone Circle or 'Henge' found below the largest round barrow (*PRN 2381 above*). Comprising 20 stones set out in a roughly ovoid arrangement (*Fig. 10*) circa 40 feet across. Typical of a type of monument common in Wales and known as embanked stone circles, its "type site" is "Druid's Circle" at Penmaenmawr, Caernarvon. At Letterston, the area between the standing stones had been paved with a thin spread of quartzite. The excavator noted a thin layer of milky clay beneath parts of the outer margins of the quartz pavement (*Fig. 10*) which he interpreted as a buried soil. On the other hand the more central areas of the paving rested directly on the subsoil and that author speculated that the pavement had been disturbed and the old soil profile removed prior to the construction of the overlying mound (i.e., SMR PRN 2381) (*Savory, 1963, p 315*).

The site is now part of scheduled ancient monument Pembrokeshire SAM 062.

PRN 2394 *located at N.G.R. 9375 2948 (Fig. 9)*

3.27 Earthwork. ?Bronze Age / ?medieval. Lying to south of Letterston village green, it is c. 100m in diameter and up to 1.2m high; there is some indication of an associated ditch surviving. Opinion is divided. The Pembrokeshire Archaeological Survey (1898)

considered it to be 'clearly a tumulus'. The Ordnance Survey have recorded it as a possible (Bronze Age) barrow. RCHMW have considered it to be a 'motte in the last stages of decay' (RCHMW, 1926). The field name on the 1844 Tithe map is "Parc Moat".

3D) More recent archaeological sites and map evidence

PRN 10472 (Good Hope) *located at N.G.R. 9541 2960*

3.28 A boundary ditch / boundary stone of believed medieval date are noted near the southern tip of Letterston Station. An examination of recent map evidence (Fig. 9) indicates an area of relic medieval strip fields to the north-east (around Garreg-Wen and The Ketch).

3.29 Until the early 20th century, the village of Letterston was largely confined to the area west of the crossroad at Pendre. The field layout around that part of the village indicates large-scale survival of a relic medieval strip field system. The present church contains a stone cross of possible 15th century date, but the existing building was erected in 1881, taking the place of one built about the year 1844 (RCHMW, 1926). The church of the vill of Lettard was granted to the Knights of St. John of Jerusalem of Slebech, by Ivo, the son of Lettard and is mentioned later in records of 1332 (RCHMW, 1926). The medieval church was probably sited about 1km to the west near Hen Eglwys Farm.

3.30 Recent research has thrown further light on the origins of medieval settlement at Letterston (Kissock, 1997). It is possible that the pre-Norman, or late Welsh village lay at the west end in the vicinity of Court Farm / Great Letterston Farm / Hen Eglwys. To the immediate east of this, a planned settlement comprising two carefully laid out rows of properties facing each other, was 'planted' in the early medieval period. This planned layout is still detectable today. Kissock's research has outlined the way in which such planted settlements were masterminded by a class of medieval entrepreneur, titled by him '*locatores*'.

3.31 The basic idea was that the *locatores*, working hand in glove with the fairly recently arrived Norman conquerors, would find prospective colonists and move them to a new settlement, acting in effect as recruitment agents for planned colonisation. The terms were relatively simple; land and relief/exemption from certain forms of tax and feudal duty, essentially a sort of medieval 'New Deal'. This type of activity was widespread throughout large areas of Europe. The downside was normally that the areas were relatively new conquests and probably not too safe, it being hoped that the colonists, in seeking to cling onto their new land, might act as unofficial (and unpaid) local defence force.

3.32 In Pembrokeshire, the activities of the *locatores* led to a mass influx of Flemings, probably initially resulting from problems connected with sea flooding in their own homeland. Locally, *locatores* such as Lettard (who founded medieval Letterston), Wizo and Tancard were probably Flemings themselves. Letterston was planted in the early 12th century and sits right on the Landsker. One can only visualise the occasional hasty retreats resulting from the various Welsh attempts to recoup lost ground. The new inhabitants only comfort might have been the presence of a 'motte and bailey' castle near the village green (PRN 2394), if that earthwork was a motte. As this village was right out on the front line, one can only speculate as to the wisdom of attempting to defend such a structure in the face of serious Welsh attack. This 'New Deal' was not for the faint hearted. Nonetheless, it seems to have worked and the new population of Letterston were apparently there to stay.

3.33 As noted by Kissock (1997), Letterston village has leapfrogged the main A40 in recent years (see Fig. 7). The map evidence shows that the study area lay towards the east end of the common land as depicted on map surveys of 1815 and 1844. There was partial enclosure of Letterston Common by Act of Parliament of 1865, but the study area was not part of this enclosure (see Fig. 6). The northern and southern boundaries had been created by 1907 but the field was never enclosed as such; it's present size and shape have been created by a process in which various boundaries of largely 20th century date have

encroached onto it from the east and west (*Figs. 7, 8 and 9*). The coming of the railway in the closing years of the last century led to the formation of a new settlement nucleus by the station (after the area was first mapped by the Ordnance Survey). Subsequently, sporadic housing grew along the road back towards Pendre before 1907 (*Fig. 8*). This process accelerated from 1950 onwards, resulting in a classic ribbon development (*Figs. 7 and 9*). None of the buildings now present around the periphery of the study area existed until after 1907. The currently proposed development represents further infill within the terms of the local plan.

3.34 The available aerial photographs (*plates 1 and 2*) show no definite features or sites of any interest on the development area, although one of the evaluation trenches was sited to investigate a vague circular 'bleached' area visible in 1955 (*Plate 1*). Two circular marks are visible to the north-east of PRN 2393 on oblique aerial photographs taken in 1990 (*marked as ?cropmark and ?earthwork on Plate 2*). These are small (possibly 5-8m in diameter) and should be treated with caution as they may be the result of modern farming, e.g., cattle feed troughs. The Ordnance Survey have noted other cropmarks to the east and north-east of PRN 2393 (*see para. 3.24 above*). This author can only assume that these were seen on photographic prints from reconnaissance sorties not available through the normal sources.

3E) The desk-based assessment - discussion

3.35 In general, the assessment has turned up no new information regarding the three barrows excavated by Dr. Savory. Re-examination of documentary sources which were, in the main, familiar to previous researchers, has allowed some re-interpretation of two of the prehistoric monuments in the vicinity, namely PRN 2398 and PRN 2393.

PRN 2398

3.36 The existence or otherwise of this standing stone is somewhat critical to this study as the location stated on the county Sites and Monuments Record places the monument at the south-east corner of the proposed development area. Evidence for this stone rests on a single source, namely Fenton (*Tour of Pembrokeshire, 1811, p 188*) who noted an upright stone at the 'south east extremity of Letterston Common which gives the name Longstone to the adjoining farm'. An Ordnance Survey record card states that Fenton recorded this stone separately 'from the other stones' (*but see the 'trilithon' in para. 3.27 below*). This has apparently been taken to mean that this stone was not the stone known as 'the Ketch' (i.e., PRN 2414), but a second standing stone. Two pertinent facts have emerged from this assessment:-

a) At the time that Fenton recorded the stone, the south-east corner of the Rhos Common lay some 200 metres to the east-south-east (down by the location of the railway station - *see Figs. 4 and 5A*). The corner of the common approached its current position as a result of the Enclosure Act of 1865 (*Fig. 6*).

b.i) In addition, Longstone Farm was apparently moved in the mid 19th century. As this building formed an integral part of Fenton's description of the location, then its true location, *circa* 1806 is of some importance.

b.ii) Examination of the Tithe Map and Schedule (*Figs. 5A and 5B*) shows that an un-named building (No. 295) existed at the location of Longstone Farm today. But Longstone Farm is specifically named on the Tithe schedule as occupying plot 277 (c. 200m to the south of PRN 2414). The house on plot 277, along with the house marked 286 (*Fig. 5A*) are not shown on the 1865 enclosure map nor on the Ordnance Survey 1:2500 of 1889, so were probably demolished.

b.iii) There is however one possible problem. Examination of a larger area of the Ordnance Survey drawings of c. 1814/5 (*part shown on Fig. 4*) shows that when putting in the lettering for individual farms, by convention, the draughtsmen either wrote rightwards away from the property or leftwards towards it. In either case, the lettering is level with the building, not underneath it (as would be the

case if 'Longstone Farm' were the same building as plot 295 in 1844). Examination of the lettering for 'Longstone' on Fig. 4 would seem to indicate that in c.1815, it was **not** the building at Tithe plot No. 277 (as it was in 1844) but rather the building shown later as Tithe No. 286 (Fig. 5A).

b.iv) Despite the possible confusion of location outlined in paras. b.ii) and b.iii) above, it is clear that the information in para. a) is reliable. The extreme south-east corner of the Rhos Common was by the [future] railway station and PRN's 2398 and 2414 are almost certainly one and the same stone, i.e., PRN 2398 is fictitious.

PRN 2393

3.37 The 'cropmark' was discovered on aerial photographs (*see plates 1 and 2*). The Sites and Monuments Record seems to lack some useful pieces of information, namely:-

a) This site survives as a standing earthwork in recently improved pasture land; it is not a true cropmark. From the lane to the east, it can be seen that the eastern side of the monument comprises a grassed bank c. 0.5m high. There is possibly an external ditch (this would require closer inspection).

b.i) In the entry in the Pembrokeshire Inventory for the Pendre Tumuli (RCHMW, 1926), it was noted that Richard Fenton referred to three upright stones set in an area of stone paving (*Tour, 1811, p. 340*). The Royal Commission thought that this triple stone feature was probably about 600 yards east of the barrows (RCHMW, 1926, p.145). They later postulated that the three stones were a *Trilithon* similar to others noted as outlyers to Irish/Ulster stone circles and also known in Wales, e.g., Llanfechel, Anglesey (*O.S. record card held at S.M.R.*). Savory suggested that this 'trilithon' feature may have been no further than 50 yards from his Barrow III (1963, p. 325).

b.ii) Savory and others have experienced difficulties in placing some of Fenton's sites as he was often not terribly precise in his description of location. It is probably worth reproducing Fenton's original description here for it does throw some light on the matter.

'On an open common, skirting the road exactly opposite to this village, there are two tumuli, and another, the largest, just within an enclosure, on the edge of it to the right; on the left side of the common there were, till within these few years, in an enclosed field, three upright stones (meini hirion) placed triangularly, and bedded in a pavement, perhaps with reference to the three neighbouring tumuli, as if it were here the heroes interred in them might have fallen. One of the stones has been removed for a gate-post, and the other two overturned, the largest about 10 feet long.'

b.iii) Both Savory and the Royal Commission author used the Tithe Survey map of 1844 in their attempts to unravel the mystery. Neither author appears to have seen the unpublished Ordnance Survey drawing of c. 1815 (Fig. 4). This is a useful starting point because it at least confirms that the extent and shape of the common had not changed between 1815 and 1844, i.e. the tithe map almost certainly shows the common pretty much as it would have been in Fenton's day.

b.iv) Firstly, the issue of compass direction, i.e., is Fenton's 'left' actually north or *vica versa*. Here, the tumuli come in handy. He stated that two were on the common. The third barrow lay in an enclosed field "on the edge of it (i.e. the common) to the right". There was a small portion of the common to the immediate west of Savory's barrow III (Fig. 4) in 1815 and 1844. Most importantly, Fenton stated that it was the largest; it must therefore be Savory's barrow III (PRN 2381). The other two ("on the common") must be Savory's barrows I and II (PRN 2379 and 2380). This means that his 'right' was south and his 'left' north, i.e., he is describing locations as though looking eastwards from the cross-roads at Pendre; this would be entirely logical. As the three stones lay to

the left of the common, then they must have been to the north of the track or road. This would also argue against Savory's interpretation that the stones were 50 yards or less from his barrow III (PRN 2381) as nowhere that close to that barrow could fairly be described as being on the 'left' or north side of the common.

b.v) Dis-assembling the rest of Fenton's description, it can be seen that it obviously places the stones somewhere in the vicinity of the three *tumuli* excavated by Savory. The term 'neighbouring' is vague but probably dismisses the Royal Commission author's attempt to place the stones 600 yards eastwards (presumably in the region of PRN 2414, the Ketch).

b.vi) Fenton specifically stated that the stones were in an enclosed field on the left side of the common. This indicates that they were definitely not on the Rhos Common. It could be taken to imply that the said 'enclosed field' was either adjacent to or at least close to the common on the north side.

b.vii) Interestingly enough, the probable explanation was probably contained in the original Royal Commission entry (of 1926) all along. Here, they noted that "the field immediately to the north of the tumuli is called in the Tithe Schedule (No. 574), 'Parc cerrig hirion' or 'Park of the long stones' (RCHMW, 1926, p. 145). Indeed it is (*Figs. 5A, 5B & then Fig. 6 for location of PRN 2393*). The above arguments may fall short of absolute proof that the three stones lay in this field, but hopefully demonstrate that this field is certainly a likely candidate for their location.

b.viii) Neither the Royal Commission field surveyors nor Savory had sight of the Meridian Airmaps aerial photographs (taken in 1955) otherwise this site would have been 'flagged up' long ago. Perhaps more curious is that the earthwork, which is easily visible at ground level, remained undetected until spotted on aerial photographs.

b.ix) There would seem to be several possible interpretations for this monument, depending on the precise original location of the (now disappeared) stones. 1) PRN 2393 is a henge and the 'trilithon' and paving represent part of a stone circle within the surviving earthwork (see PRN 9036 for immediately local parallel for the paving and also an 'embanked' stone circle). 2) PRN 2393 is a henge and the trilithon was an outlier as postulated by the Royal Commission. 3) In the 'worst case scenario', PRN 2393 is not a henge at all and the stones were not actually in this field.

b.x) Assuming, for a moment, that PRN 2393 is a henge and the three stones were part of a stone circle within it, then as the circular earthwork is roughly 65 metres in diameter (measured from aerial photographs) and the stones possibly stood nearly 3m high (*Fenton, para. b.ii above*), this would have been an impressive monument, probably the main ritual monument or centre in the area. The excavated stone circle (PRN 9036) may have been contemporary with this earthwork or perhaps have pre-dated it; if not PRN 9036 would have been merely a satellite to it. The burial mounds would, according to known typologies and chronologies, be later additions to the complex.

3F. The desk-based assessment - conclusions

3.38 An important complex of ritual/ceremonial and burial sites dating to the late Neolithic and/or Bronze Age lies 50-100m to the west of the study area. Three of the four components of the complex have been excavated. It should be noted that despite the importance of this complex, the only artefacts recovered from the (largely complete) excavations of three barrows were four intact Bronze Age urns and their associated cremations from Barrow II and remnants of a similar burial at barrow III. Grave goods were rare and 'non-funerary' material notable by its absence.

3.39 For reasons outlined in section 3A above, it is likely that the most desirable areas for settlement and agriculture have always lain further away around the areas occupied later by the medieval fields of the main village c. 500m to the west and also around 'Ketch Farm' c. 500m to the east of the study area. Map evidence indicates that the Rhos Common existed before 1815 and the podzolised and 'acidic' nature of the soils indicate that, as moorland, it may be of much greater age. Evidence of turf and soil stripping for construction of the local burial mounds in the Bronze Age indicate that this was poor, perhaps even 'scrap' land as early as the prehistoric period. Nonetheless, it has probably always been a useful resource as rough grazing.

3.40 None of the documentary sources, maps or aerial photographs examined revealed any new sites on the development area or indeed any entirely new (i.e. unknown) sites in the immediate vicinity.

4. THE FIELD EVALUATION

4A. Methodology

4.1 Cambrian Archaeological Projects first submitted a formal project design for approval by the curatorial service (Archaeolog Cambria Archaeology - Heritage Management). A provisional agreement was reached between the curatorial service and Cambrian Archaeological Projects that 6 trenches, each measuring 2m by 20m, would be excavated within the main part of the development area. This would represent approximately a 5% sample of the total area.

4.2 One of the terms of this provisional agreement was that the final location of the individual trenches within the development area was to be agreed with the curatorial service after completion of the documentary research. This approach allowed for a more informed decision to be made concerning the best locations for the trenches. In the event, a revised scheme using nine trenches was proposed by this author on behalf of Cambrian Archaeological Projects and accepted by Archaeolog Cambria Archaeology - Heritage Management. The new scheme gave a slightly increased overall trench area and a better coverage of the development area. The trench layout was deliberately biased to give slightly better coverage on the western side of the study area, i.e., the area closest to the known prehistoric monuments. Trench dimensions and sizes are given in section 4B below.

4.3 In accordance with the project brief, context records were kept for all significant contexts (i.e. layers and features); numbers in brackets in this report refer to context numbers allocated during the excavation and correspond to the same layers etc. shown in Figs. 11 - 13.

4.4 The provisional agreement allowed for the removal of topsoil and other overburden by machine. The trenches were stripped using a JCB with 3 foot toothless ditching bucket.

4.5 Following the removal of topsoil by machine, the trenches were cleaned and photographed (colour slide, colour print and monochrome print). The more relevant features within each trench were photographed.

4.6 Where appropriate, accurate plans were made of features and layers at a scale of 1:20 (*Fig. 12*); it should be noted that trenches that contained either no significant features or no features at all (i.e. trenches 1 - 7) were planned at scale 1:50 and have largely not been reproduced here. A trench location plan was drawn at 1:250. The trench sections were largely uninformative and thus drawn at scale 1:50. A small selection of these sections are reproduced here to give a representation of the soil profile encountered.

4.7 The only artefacts consisted of sherds of pottery and pieces of bottle dating to the late 19th or early 20th century; these were not kept. No contexts were observed that would have yielded any useful dating or environmental samples; no samples were taken.

4.8 The fieldwork was undertaken between the 17th and 24th of February 1999. The site code was 37104 (an ACA-HM Project No. in compliance with the project brief). The site archive will be held at the Pembrokeshire Museum (Scolton Manor).

4B. The archaeological features

4.9 The following soil profile was removed by machine from trenches 1-7. To avoid needless repetition for each trench it will be described only here. The topsoil (01) comprised a litter ('F') horizon c. 0.02-0.05m deep below which lay an 'Ah' or 'Ap' horizon of dark grey-brown, gritty, sandy, loamy clay between 0.08 and 0.10m deep. This had a fairly sharp boundary downwards to a thin 'Bs' horizon (sometimes a weak 'E' horizon -

see paras. 3.18 and 3.19) up to 0.05m deep and usually with iron staining at its base to the underlying 'C' horizon (03). This latter was invariably a reddish-yellow, gritty, sandy clay featuring c. 10% small pieces of abraded (and disintegrating) mudstones, siltstones and shales (i.e., highly weathered drift). Larger stones of these rock types (up to 0.1m in size) occurred locally but were rare. Most notably, subsoil (03) typically contained c. 2% small, sub-angular quartzite varying from 0.02m-0.12m in size. Larger pieces of quartzite occurred in nearly all trenches but were rare.

Trench 1 *dimensions:- 20m SE-NW by 2m E-W*

4.10 With the topsoil profile (01) / (02) removed, the following features were exposed. A linear cut (04) c. 2.5m wide and 0.4m deep ran parallel to the hedgerow at the south end of the trench (Fig. 12). The upper fill was (01) below which the cut was filled with mid-grey, silty clay (05). This lower fill produced numerous modern finds, especially from just above the subsoil(03). The feature was beyond doubt associated with the hedgerow and in use in the earlier part of the present century.

4.11 Slightly to the north lay a complex of intersecting pits, all containing fairly modern pottery and glass. On the west side of the trench, a small shallow, pit (08) that was c. 0.7m in diameter and 0.2m deep and filled with light grey-brown sandy clay (07) was cut by a larger (and slightly deeper) pit (06) lying mainly just to the east (and containing a similar fill). Another, larger pit, (09), cut both features and extended for some 3m further northwards; it was likewise filled with light grey-brown sandy clay (10).

4.12 Further northwards, a large patch of very light grey sandy clay (12) with occasional patches of charcoal flecking lay within an 'outline' of thin, hard, iron-pan (11). This proved to be no more than 0.1m deep and had almost certainly been created by gorse burning, the heat precipitating alteration and leaching of iron - in effect a patch of man-made 'E' horizon. Further northwards, two similar patches of very light grey "subsoil" (contexts (14) and (16), see Fig. 12), were likewise surrounded by thin iron-pans (contexts (13) and (15) respectively) and were almost certainly produced by the same agency. There were no other features.

Trench 2 *dimensions:- 10.5m N-S by 2m E-W*

4.13 A group of three small patches of light grey sandy clay (17) located towards the north end of the trench proved to be very shallow and almost certainly similar in type to those described in para. 4.12 above. There were no finds and no other features.

Trench 3 *dimensions:- 10m N-S by 2m E-W*

4.14 A very narrow linear feature (18) located at the south end of the trench was investigated but produced no finds. The fill (19) was essentially the same as the overlying 'Ah' horizon. This was undoubtedly a plough furrow created by machine cultivation in 1981. There were no finds and no other features.

Trench 4 *dimensions:- 19m NW-SE by 2m*

4.15 A strip of bright yellow subsoil (20), that was fairly uniformly 1m wide, crossed the trench towards the south-east end. A small section placed across the strip showed it to be merely a cleaner, more sterile area of subsoil. The feature ran in the direction of the slightly lower ground to the north-east and the most likely explanation was that it had been a shallow run-off channel in the late glacial period which had subsequently filled up with other drift material not long after the channel had being formed. Elsewhere in the

trench a few small patches of grey sandy clay proved to be very shallow pockets of 'E' horizon (similar to (17) - see para. 4.13). There were no finds and no other features.

Trench 5 *dimensions:- 21m NW-SE by 2m*

4.16 The only man-made feature was a shallow cut (21) c. 2.5m wide that ran parallel to the hedgerow that formed the northern boundary of the field. The uppermost 0.1m of fill was (01) below which was a light grey sandy clay (22) also c. 0.1m deep. There were no finds from this feature, but the similarities in position, orientation, width and depth to ditch (04) in trench 1 (para. 4.10) probably indicate that this was likewise a ditch dug alongside the hedge in the early 20th century (probably partly to provide material for the hedge bank).

Trench 6 *dimensions:- 20m N-S by 2m E-W*

4.17 Examination of the aerial photographs had revealed only one anomaly worth investigating. This trench was placed across the location of a roughly circular parchmark c. 10-15m in diameter and visible on aerial photographs taken c. 1955 (Plate 1).

4.18 The only man-made feature was a shallow scoop or pit (23) that was c. 1.5m across and 0.1m deep. The fill (24) was a light grey-brown sandy clay (24). This contained numerous pieces of rusty iron, probably all nails and bolts of fairly modern date. There were no other finds.

Trench 7 *dimensions:- 10m E-W by 2m N-S*

4.19 A large quartzite boulder c. 0.5m wide, 0.55m deep and 0.8m long lay in the eastern half of the trench. Unfortunately this had not been visible on the surface and was ripped out by the machine. Examination of the resultant 'socket' showed that the stone had lain flat and was set c. 0.4m into the subsoil (i.e., was 'subsoil-fast' and not set in a man-made cut) thus indicating that it was a natural glacial erratic.

4.20 Examination of the same socket also indicated that the gritty orange/reddish-yellow sandy clay subsoil (03) encountered in all of the trenches was 0.35m deep at this location and contained small quartz stones throughout its profile. Below this, the subsoil was bright yellow clay (28) with c. 10% small stones; worthy of note is that the stones in this lower subsoil did not appear to include quartz, i.e., the source of the drift materials was probably different.

4.21 A small shallow 'cut' or depression (26) c. 0.4m across and located by the north-east corner of the erratic boulder was filled with dark brown 'Ah' horizon type material (27). This feature was probably a tree stump hole (or, more likely, gorse stump). There were no finds and no other features.

Trench 8 *dimensions:- 10m E-W by 2m N-S*

4.22 Beneath the 'F' or litter horizon (at a depth of c. 0.05m) the 'Ah' horizon (29) contained frequent small quartz, perhaps 20% by volume, although this proportion thinned gradually towards the west end of the trench where quartz was virtually absent. In the light of what had been encountered in trench 9, it was felt that this spread of quartz might be man-made and so the trench was initially machined down onto the top of the quartz 'spread'. A strip, 1m wide and adjacent to the north trench edge, was subsequently machined to the subsoil. There were no finds and no features were found either cutting or sealed below layer (29).

4.23 Part of a small linear feature was exposed at the extreme north-west corner of the trench. The trench was extended by hand to investigate this (*Fig. 12*). It proved to be the southernmost of three shallow, parallel, linear gullies varying from 0.35-0.5m in width. The gullies were c. 0.05m deep and filled with 'Ah' horizon type topsoil (31) and separated by very narrow ridges of subsoil (03). The features were almost certainly modern plough marks.

Trench 9 dimensions:- 14m E-W by 2m N-S and extension 0.8m wide for 10m to north (*Fig. 12*).

4.24 This trench contained the only feature that might have been prehistoric. Machining began at the east end of the trench and straight away revealed a hard packed layer of concentrated quartz (32) in a matrix of dark grey-brown sandy clayey 'Ah' horizon. The top of quartz layer (32) was immediately below the modern ground surface at a depth of no more than 0.03m. The machining then followed the top of this layer westwards. The quartz thinned visibly towards the west, petering out altogether some 4m short of the western end of the trench.

4.25 In order to assess the extent of the quartz spread, the top of layer (32) was exposed by machine in a narrow trench running for 10.5m northwards from the east end of the original trench. The thickest concentration of quartz lay at the south. From about 2m northwards the quartz thinned visibly, petering out about 2m from the northern end of the trench. Outside of the trench, there were indications on the ground surface that the quartz extended for c. 10m to both the south and east of the trench. It would thus appear that the quartz spread was either circular or sub-square in plan and c. 20m across in each direction. (*see Fig. 11*). This observation is somewhat tentative and should be taken as a provisional estimate.

4.26 A section line was placed E-W down the centre of the main E-W trench and the quartz layer was removed by hand from the area to the north of the section line. This revealed that layer (32) was about 0.05m deep at the eastern end of the trench and lay on top of a very thin layer of greyish sandy clay (33), the light colour probably resulting from leaching. Below lay another layer of quartz (34), again in a matrix of 'Ah' horizon type material (*Fig. 13*). Layer (34) was pressed onto (but not into) the top of the subsoil (03); at this location, the subsoil contained very little quartz. The overall profile though the quartz spread down to the top of the subsoil was no deeper than the soil profile in any of the other trenches.

4.27 To the west, the quartz thinned (becoming layer (35) on *Fig. 12*). The junction between layers (32)/(34) and (35) was somewhat vague but appeared to occur at around the same location as a scattered trail of slightly larger quartz stones (40). At first it was thought that these might be a kerb, but upon investigation they proved to be the packing stones of a posthole (36) that was cut through layer (32). A section placed across posthole (36) proved it to be 0.4m in diameter and 0.4m deep (*Fig. 13*). The bottom layer was dirty subsoil (37). Above, a layer of very peaty, brown sandy clay (38) lay around the edge in the form of a steep bowl containing bright yellow clayey redeposited subsoil (39). The quartz stones (40) lying on top of this appeared to be packing partly buried below more redeposited subsoil (41). Stones (40) had probably been dragged by the ploughing of the field in 1981. There were no finds, but a possible indication of the date of posthole (36) was provided c. 7m to the east of trench 9 where another posthole (42) was clearly visible on the ground surface. It comprised an air void c. 0.15m square and 0.3m deep surrounded by bright yellow redeposited clayey subsoil. The air void indicates that it was a very recent feature (*see also para. 5.15.C*). Posthole (36) may have had its rotting cone deliberately backfilled with stones and subsoil, i.e., contexts (40)/(41).

4.28 The remainder of the main E-W arm of the trench was subsequently entirely stripped by hand to the top of the subsoil (03). There were no finds and no other features although a small group of 'subsoil-fast' quartz stones was revealed below (35) near the middle of the trench and a single, larger piece of quartz near the west end. All were undoubtedly natural 'erratics'.

4.29 Over much of layer (32), the quartz pieces, ranging in size from 0.02m (large gravel) to 0.1m, were virtually contiguous when *in situ*. A simple experiment was devised to test the relative proportions of quartz to soil in the more densely concentrated area at the east end of the trench. A single bucket sample of layers (32) and (34) was quickly washed clean of soil matrix. The quartz was then placed back in the bucket and the bucket filled with water. The water was then poured off into another bucket of identical size where it could be seen from the water level that the soil would have occupied c. 60% of the layers by volume (and the quartz thus c. 40%).

5. DISCUSSION

5.1 A standing stone (PRN 2398) was believed to have stood within the development area but analysis of documentary sources undertaken in the course of this study indicate that this stone probably never existed (*para. 3.36*). Archaeological excavations in 1948 and 1963 of three mounds just to the west of study area proved them to be round barrows of Bronze Age date; a stone circle of probable late Neolithic date lay beneath the southernmost barrow. A fourth site lying to the north-east was first recognised on aerial photographs. A re-examination of the documentary and map sources conducted as part of this study has found some indications that this fourth monument may be a larger, but as yet unproved, ritual monument of late Neolithic date lying a mere 20-30 metres north of the development area (*para. 3.37*). If this identification were to prove correct, then the elements of this prehistoric complex already proven by excavation may well have been merely satellites to the fourth site.

5.2 Excavations at and around similar prehistoric sites both in Wales (*e.g. Briggs, S. forthcoming, Williams, G. 1989*) and further afield in Britain have shown that stone circles, henges, standing stones and barrows were commonly focal centres around which all sorts of other activity took place, such activity commonly involving ancillary structures, burials and deposition of other materials in pits. This activity, probably largely 'ritual' in nature, can be extensive *e.g. Balfarg, Fife* where large-scale area excavations found such activity extending for several hundreds of metres away from the main sites (*Barclay and Russell-White, 1993*).

5.3 The most surprising result of the current evaluation is therefor the apparent lack of any sign of such activity within the study area. There was not a single feature of provable prehistoric date; the occasional patches of charcoal flecked subsoil could be seen to have resulted from gorse burning of probably recent date. It should be stressed that the area sampled by the evaluation trenches comprised no more than 5% of the total study area. There were no stray finds (*e.g. of flint waste or tools*) recovered from any of the nine trenches, but then Savory's extensive excavations of the barrows to the west produced almost no artefacts apart from the cremation burials and their associated grave goods; the lack of stray prehistoric artefacts on the study area is therefor not necessarily a reliable indicator of absence of activity.

5.4 The very thin and impoverished nature of the soil profile on the study area makes it likely that any large ditches or pits filled with topsoil type material would show as darker stains on aerial photographs even though the field has never been photographed whilst under crop, no definite features show on the aerial photographic coverage available for study.

5.5 The only feature encountered of any note was a shallow quartz spread (32)/(34)/(35) in trench 9. A less concentrated variant (29) was found some 30m to the north in trench 8. These quartz spreads yielded no finds which would allow them to be dated nor indeed any indication as to whether they were man made or natural; their interpretation is crucial to the objectives of this study. The remainder of this discussion will therefor attempt to examine criteria that might allow interpretation one way or the other.

- 1) *The quartz spreads:-*
- A) *reflect typical Bronze Age activity*
 - B) *are natural because they sit directly on the subsoil.*

5.6 Stone spreads commonly feature as areas of cobbling and paving at stone circles (*Burl, 1976, p. 252*) and other prehistoric sites, locally for example around a standing stone at Stackpole Warren (*Current Archaeology, 82, 1982 p.337 -80*). One thing is certain. These spreads cannot be the remnants of the pavement associated with the 'trilithon' feature (*para. 3.37 above*) as Fenton stated that this lay within an enclosed field.

5.7 The vast majority of Bronze Age barrows sit on top of a buried soil profile, i.e. were built straight on top of the existing ground surface. The quartz spreads in trenches 8 and 9 did not bury an old ground surface but lay within the existing (top) soil profile and sat directly on top of the subsoil. There was no deepening of the topsoil profile at either location that might indicate that significant quantities of material had been imported.

5.8 In many areas of Britain, this might allow us to dismiss these quartz spreads as natural features but a minority of excavated barrows have been found to have been built directly on top of the subsoil, the old soil profile having been removed first. This form of activity, being entirely destructive, generally tended to take place on land of poorer quality probably around the periphery of settlements. The poor nature of the soils found on the study area would certainly conform with this idea. In addition, the thin and impoverished nature of the buried profiles found to the west by Savory below a) barrow I and b) the paving around the stone circle PRN 9036 indicate that the soils in the area were probably virtually useless by the early Bronze Age.

5.9 Two of the best known examples of this practice of topsoil stripping occurred less than 100m to the west of the study area; a brief review of the evidence may be in order:-

PRN 2379 - Savory's Barrow I - built of subsoil (not turves). Buried soil profile intact below (*para. 3.20 above*).

PRN 2380 - Savory's Barrow II- built of turves. Topsoil profile removed prior to construction (*para. 3.21 above*).

PRN 9036 - Barrow III ?Neolithic phase - stone circle. The inner quartzite paved area was apparently laid over the original soil profile (*para. 3.22 above*).

PRN 2381 - Barrow III - Bronze Age phase - outer ring cairn built entirely of 'selected' quartzite; the old soil profile was removed first. The central part of the area of quartzite paving from PRN 9036 was ?lifted and the original soil profile removed from there as well. The overlying large barrow mound was entirely built from turves (*para. 3.26 above*).

5.10 Savory concluded that quite a sizeable area was stripped of turf/topsoil to provide construction materials for Barrow II; this area may have included the current study area.

2) The quartz spreads contain no other rock types and indicate deliberate selection of materials by man.

5.11 There seems to have been deliberate selection of quartz as a construction material at PRN's 2381 and 9036. Savory noted that "*the deliberate selection of white quartz for the construction at least of the surface layers of cairns is a well known feature of the early Bronze Age in Wales and no doubt arises from the effect produced from a distance by the gleaming white stones*" (1963, p 314). Excavations elsewhere in the years since that statement was made have found numerous other examples of such selectivity, with quartz being used fairly widely across Britain. In areas where quartz is rare, its presence can be taken to mean that some effort has been put into sourcing and transporting it. At Letterston, for reasons outlined below, this would not apply.

3) The quartz spreads are entirely natural in origin

5.12 Quartz/quartzite occurs naturally in the local drift at a proportion of c. 2%. Thus, we can be sure that the quartz need not have been transported very far if spreads (32) etc. were man-made. Stones of other lithologies occur naturally in the local drift but are rare (*paras. 3.9-3.14 and 4.9 above*). The quartz undoubtedly predominates due to its hardness which would have allowed it to survive harsh treatment in the ice flows and also because of its relative chemical inertness in comparison to e.g., the local mudstones. The main problem is finding an explanation for the greatly increased concentration of the

quartz in trench 9 and to a lesser extent in trench 8. The processes involved in the deposition of the local drift give rise to likely natural explanations.

5.13 There is some evidence for a measure of re-working or water-sorting of the glacial drift deposits in the area (*paras. 3.10 and 3.11*). This is hardly surprising as over much of Britain, the last deposits laid tend to have been late glacial and typically fluvio-glacial or peri-glacial. Waterlain deposits from the late glacial period tend to have some degree of sorting of 'particle size' produced by differential speed of water flow.

5.14 At Letterston the vast bulk of the subsoil (03) comprised c. 20% small and abraded mudstone/siltstone fragments in a matrix of c. 80% gritty sandy clay. The presence in subsoil (03) of c. 2% natural quartz materials in the size range 0.01-2.0kg, occasional quartz of c. 5kg and most importantly a single erratic of c. 400kg (context (25)) indicate that all this material was probably dumped either on site (or very close to it) by retreating ice; if subsoil (03) had originated as a waterlain deposit, the speed of water runoff that would be necessary to move that large erratic would probably have blasted the sand and clay materials straight off into the nearest water courses. Subsequent water run-off activity on the study area is attested to by the presence of a probable run-off channel (context (20)) in trench 4. It is not too difficult to foresee that such water run-off across the area may have removed material of the finer particle sizes, perhaps in considerable quantities, leaving slightly larger materials either in situ, or perhaps moving them slightly and forming banks of stony material, in this area typically quartz, in the process.

4) *The spreads were a modern hard-core surface*

5.15 This possibility cannot be entirely discounted, but certain factors argue against it.

a) There are no indications of any structure at this location on any of published maps.

b) It is highly unlikely that anyone wanting to hard-core the area in more recent times would have gone to the effort of selecting and gathering such a large quantity of small quartz when there were stone and gravel quarries in the area.

c) There is some indication on aerial photographs taken in 1990 (*Plate 2*) that there was a fence-line or hedged boundary projecting westwards for perhaps 20m from the north-west corner of the old barn (*marked on Fig. 11*) then turning directly southwards. The line of this 'fence' largely shows as a difference in vegetation. It is not marked on maps and did not exist in c. 1955 (*Plate 1*). This fence almost certainly explains the presence of post holes (36) and (42). Quartz spread (32)/(34)/(35) was cut by posts (36) and (42). Equally importantly, the quartz spread in trench 9 extended for c. 10 m to both north and south of this probable fence-line and would thus seem to be utterly unrelated to the fence.

6. IMPLICATIONS OF THE PROPOSED DEVELOPMENT

6.1 Excavation of a 5% sample of the total area has indicated that the only area of any possible archaeological interest in the study area lies around trench 9 where a spread of quartz, lying on the subsoil, could either have resulted from human activity or have been of entirely natural origin. Arguments outlined in section 5 show that there are factors which would support either interpretation but all fall short of conclusive proof.

6.2 There were some indications on the ground surface of the extent of the quartz spread; this is marked on Fig. 11 but should be viewed as provisional. The *apparent* area of the quartz spread will be affected by the groundwork for two of the houses forming part of the new development and also part of the roadway (Fig. 11).

6.3 The quartz spread lies c. 0.03m below the ground surface. Removal of the turfline by machine is possible. Cleaning the exposed quartz by trowel is difficult as there is a great tendency for the smaller pieces of quartz to be removed.

7. ACKNOWLEDGEMENTS

The fieldwork was supervised by Nick Tavener who was assisted by Phil Evans and Jason Frankland. The text and illustrations for this report were prepared by Nick Tavener. The author would like to thank both Liam Siggins and the landowner, Derek Jones for help and information. The hoof prints visible on the excavation photographs were kindly provided by Dolly and Paddy.

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7. OTHER SOURCES EXAMINED

Ordnance Survey, c. 1814/5 unpublished surveyors drawings at scale 2":1mile

Tithe map 1844, Letterston Parish (and schedule)

Enclosure Act, 19-20 Victoria. c.106. (order 1856 : award 1864) - Letterston Common, map and schedule

Ordnance Survey, 1889, 1st edition 1:2500 sheets Pemb. XVI.3 and XVI.7 - surveyed 1888.

Ordnance Survey, 1907, 2nd edition 1:2500 sheets Pemb. XVI.3 and XVI.7 - surveyed 1906

Ordnance Survey, 1955, provisional edition 1:10,560 Sheet Pemb. XVI.NE

Aerial Photographs

a) vertical

Meridian Airmaps	190/230/frame 10616 (flown c. 1955)
Meridian Airmaps	190/230/frame 10525 (flown c. 1955)
RAF	106G/UK/1472/ frames 4190/4189 (flown 4/5/1946)

b) obliques

Dyfed Arch. Trust	AP93-12.47 (flown 8/3/1993)
Dyfed Arch. Trust	AP90-59.17 (flown 1990)
	AP90-59.18 (flown 1990)

APPENDIX 1: Summary of contexts

- (01) topsoil - 'F' and 'Ah' horizon up to 0.12m deep.
- (02) lower part of soil profile - thin 'Bs' or weak 'E' horizon up to 0.05m deep with iron staining at base.
- (03) Subsoil - 'C' horizon. Yellow red gritty sandy clay with generally c. 2% small sub-angular quartzite.
- (04) cut - shallow boundary ditch at S end of trench 1
- (05) lower fill of (04) - mid-grey, silty clay with frequent modern finds.
- (06) cut - small modern pit to north of (04) in trench 1
- (07) fill of (06). Light brown sandy clay with modern finds.
- (08) cut - small modern pit to east of (06) in trench 1. Fill was (10)
- (09) cut - large modern pit to N of (06) in trench 1
- (10) fill of (08) and (09). Light brown sandy clay with numerous modern finds.
- (11) outline of iron-pan - surrounding light grey subsoil with occasional patches of charcoal flecking. Gorse burning. In trench 1.
- (12) fill of (11) - very light grey sandy clay. Man made pocket of 'E' horizon.
- (13) outline of iron-pan - surrounding light grey subsoil with occasional patches of charcoal flecking. Gorse burning. In trench 1.
- (14) fill of (13) - very light grey sandy clay. Man made pocket of 'E' horizon.
- (15) outline of iron pan - surrounding light grey subsoil with occasional patches of charcoal flecking. Gorse burning. In trench 1.
- (16) fill of (15) - same as (12) and (14) in nature.
- (17) light grey patches - in trench 2. Same type as (12), (14) and (16).
- (18) cut - very modern plough furrow in trench 3
- (19) fill of 18 - dark brown 'Ah' horizon
- (20) strip of bright yellow subsoil crossing trench 4 towards SE end of trench. Shallow late glacial run-off channel.
- (21) cut - boundary ditch alongside hedge in trench 5
- (22) lower fill of (21) - light grey sandy clay
- (23) cut - large shallow modern pit in trench 6
- (24) fill of (23) - light grey silty clay with frequent modern rusty iron nails etc.
- (25) large natural boulder - quartzite erratic in trench 7
- (26) cut - small modern pit or depression at NE corner of (25)
- (27) fill of (26) - dark brown 'Ah' horizon type material
- (28) subsoil below (25) - bright yellow stony clay (but no quartz)
- (29) layer - quartz and soil spread in trench 8
- (30) modern ploughmarks - at NW corner of trench 8
- (31) fills of (31) - modern 'Ah' type material
- (32) layer - uppermost quartz spread at east end of trench 9
- (33) layer - thin grey clayey soil below (32)
- (34) layer - bottom layer of quartz spread in trench 9. Below (33).
- (35) layer - soil with less quartz to west of (32) in trench 9
- (36) cut - post hole cut through (32) in trench 9
- (37) deposit - bottom fill of (36) - orangy yellow redeposited subsoil
- (38) deposit - dark peaty soil down sides of cut (36) - probably rotted post
- (39) deposit - bright yellow subsoil - redeposited to fill in rotted post in (36)
- (40) deposit - collapsed packing stones in (36)
- (41) deposit - bright yellow redeposited subsoil over (40)
- (42) unexcavated feature - definitely modern posthole 7m to east of trench 9

APPENDIX 2: Contents of the site archive

Archive database/cover sheet

Site Name	47 Station Road, Letterstone, Pembrokeshire
Site Code	N/A
PRN	N/A
NPRN	N/A
SAM	N/A
Other Ref No	CAP Project No 143
NGR	SM 949 299
Site Type	Possible Prehistoric ritual site
Project Type	Evaluation excavation trenches
Project Officer	Nick Tavener
Project Dates	18-25 February 1999
Categories Present	N/A
Location of Original Archive	Scolton Manor
Location of duplicate Archives	N/A
Number of Finds Boxes	N/A
Location of Finds	N/A
Museum Reference	N/A
Copyright	CAP Ltd
Restrictions to access	None

LETTERSTON C

948

949

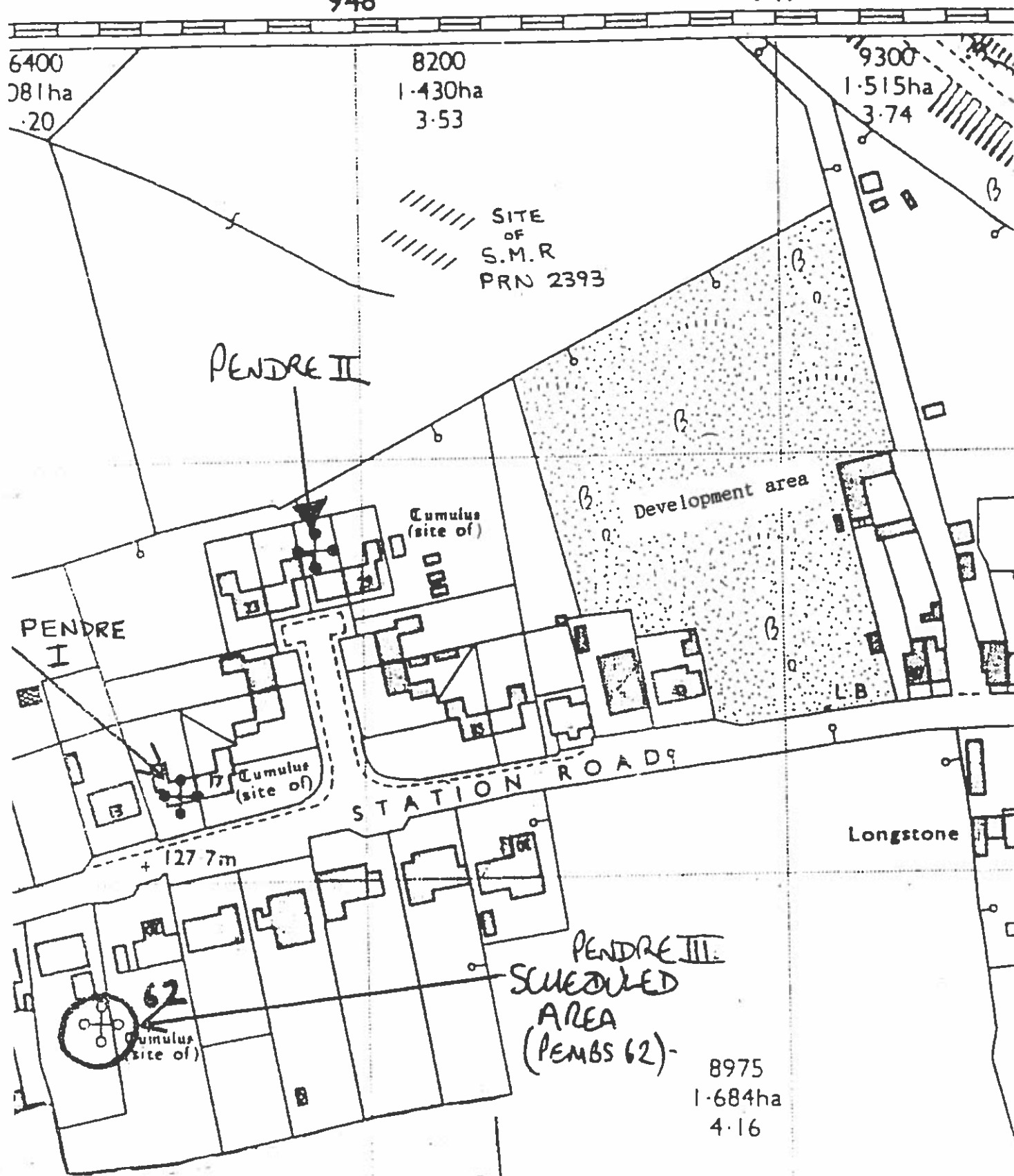


Fig. 1 site location plan, also showing adjacent archaeological sites (Ordnance Survey 1:2500, c. 1976, enlarged to scale 1: 1250)

EXISTING SITE LEVELS

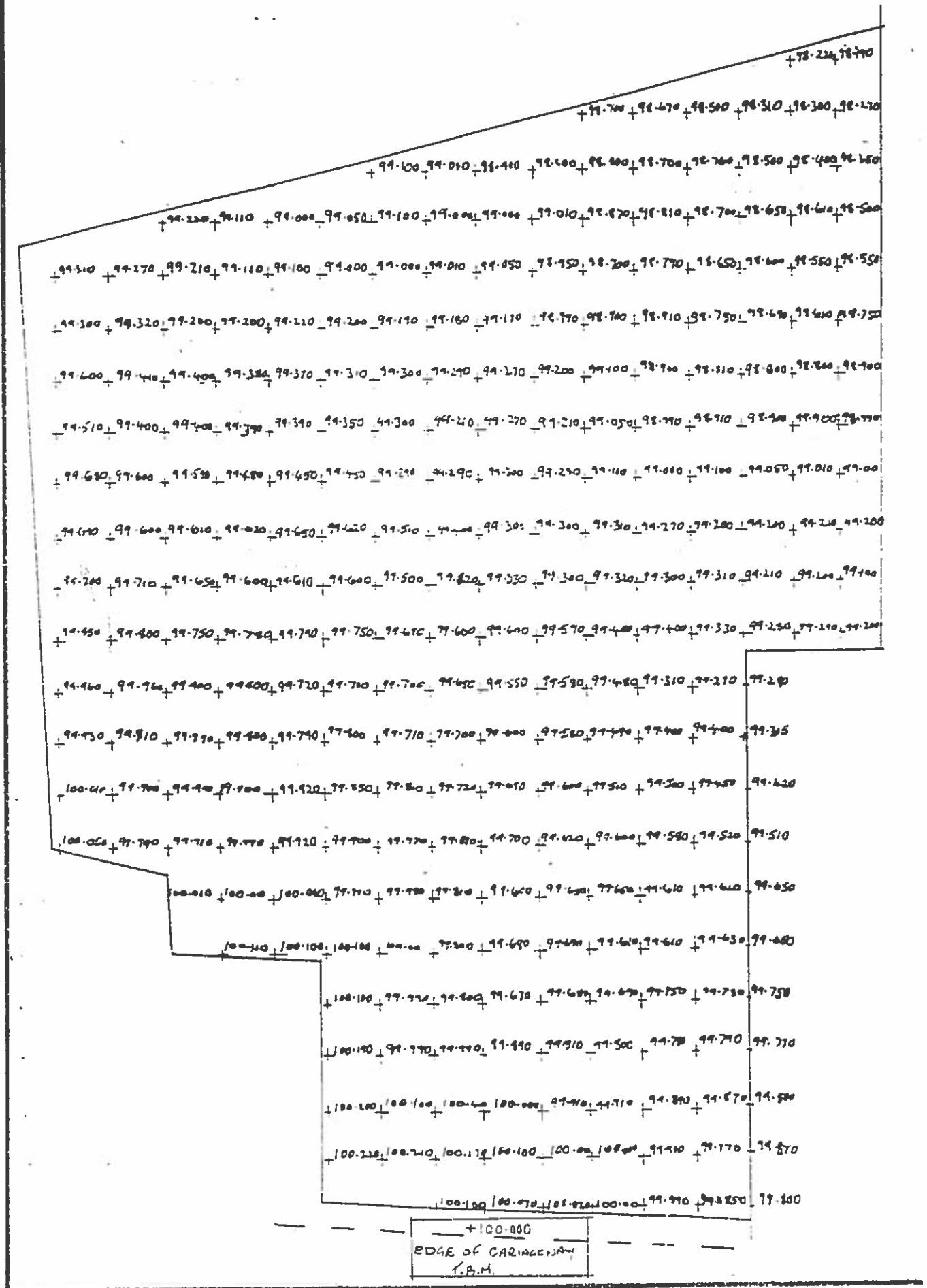


Fig. 3 relative levels for the ground surface across development area (add 26.13m to all heights for true O.D. height)

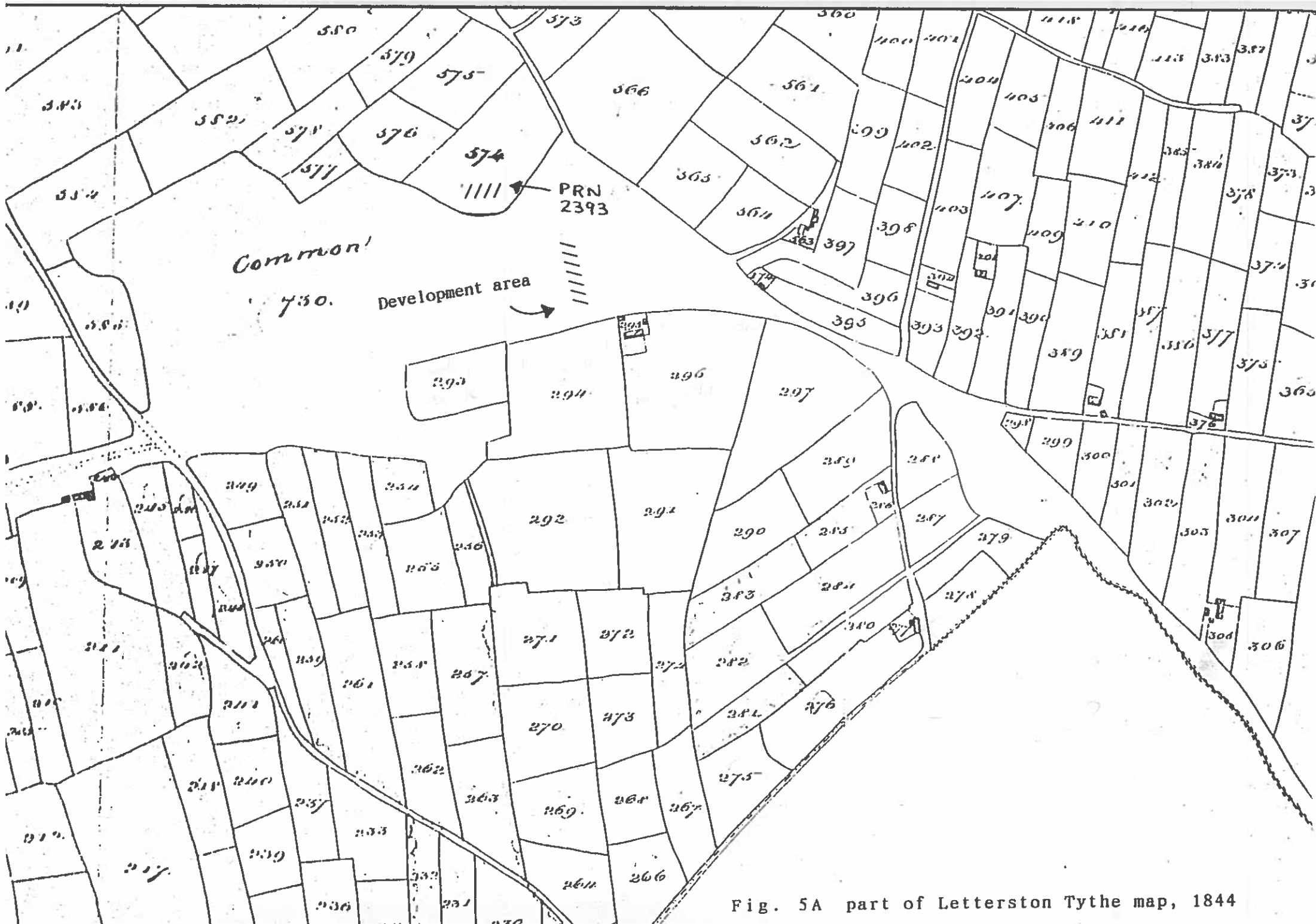


Fig. 5A part of Letterston Tythe map, 1844

A) Farm name unknown :- note Welsh field names

Tythe No.	Name	notes
293	Park Y Bank	[Bank = earth bank / hedge]
294	Park Y Ffynt	[Ffynt = ?untranslatable]
295	House etc	
296	Park Yr Ydlan	[Ydlan = rickyard]
297	Park Y Dig	[Dig = anger (<i>Jones, 1688</i>)]

B) Farm name Longstone :- note all fieldnames in English and unhelpful

Owner:-John Hill Occupier:- James Williams

Tythe No.	Name	Acres, Rods, Perches
275	Upper Field	1, 2, 4
276	Field around House	2, 0, 36
277	House and Garden	0, 0, 28
278	Field below Land	1, 0, 16
279	Field below Land	1, 0, 12
280	Small Field	1, 0, 10
370	'Field'	1, 0, 16
371	"	1, 0, 30
372	"	0, 3, 2
373	"	0, 2, 36
374	"	1, 0, 8
375	"	1, 1, 32
428	"	1, 2, 30
429	"	2, 0, 38
430	"	2, 1, 12
431	'Hang'	2, 1, 29

C) Farm name unknown

Tythe No.	Name	notes
574	Parc Cerrig Hirion	[Cerrig Hirion = long stones]

Fig. 5B *Selected field names for Fig. 5A*

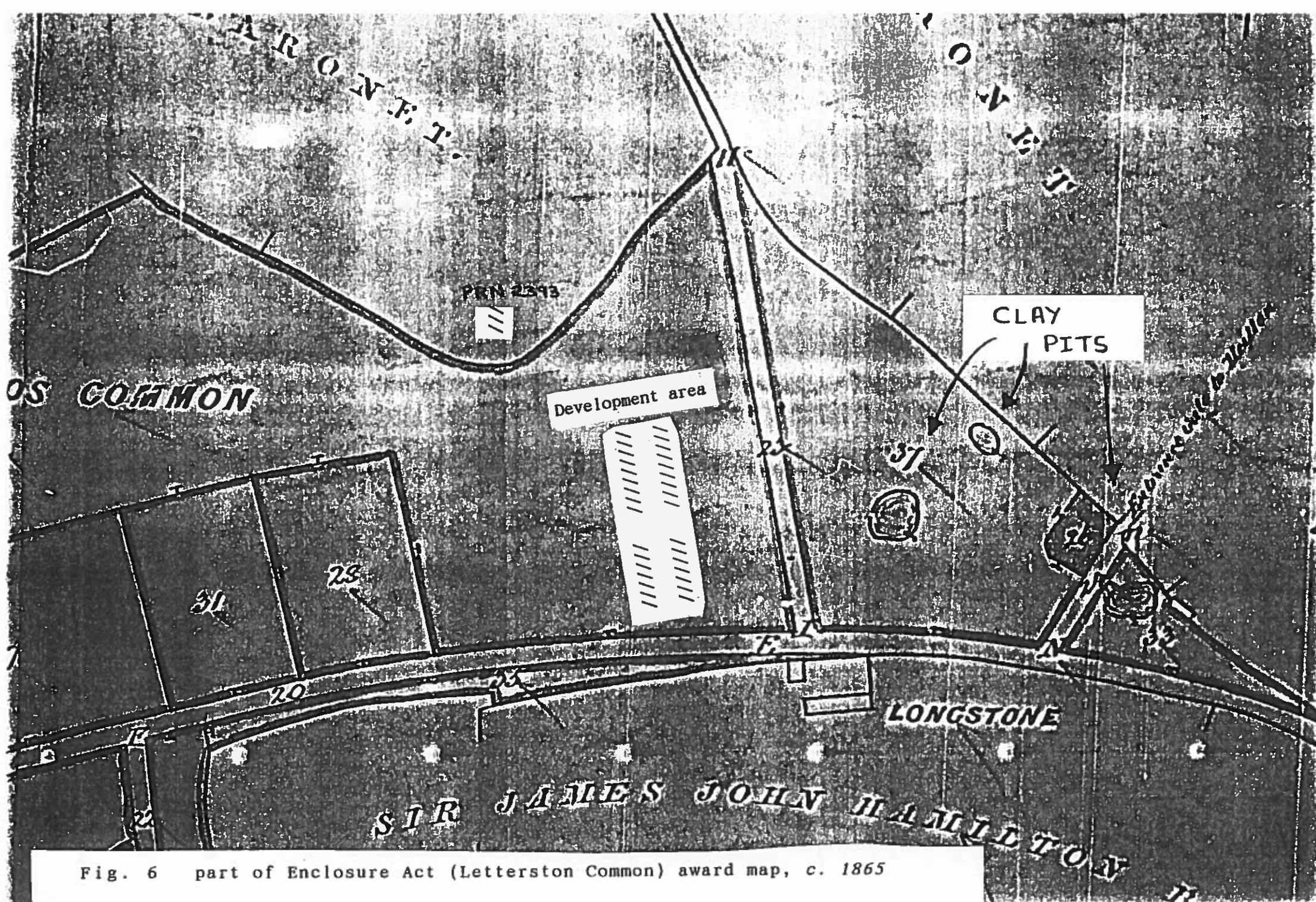


Fig. 6 part of Enclosure Act (Letterston Common) award map, c. 1865

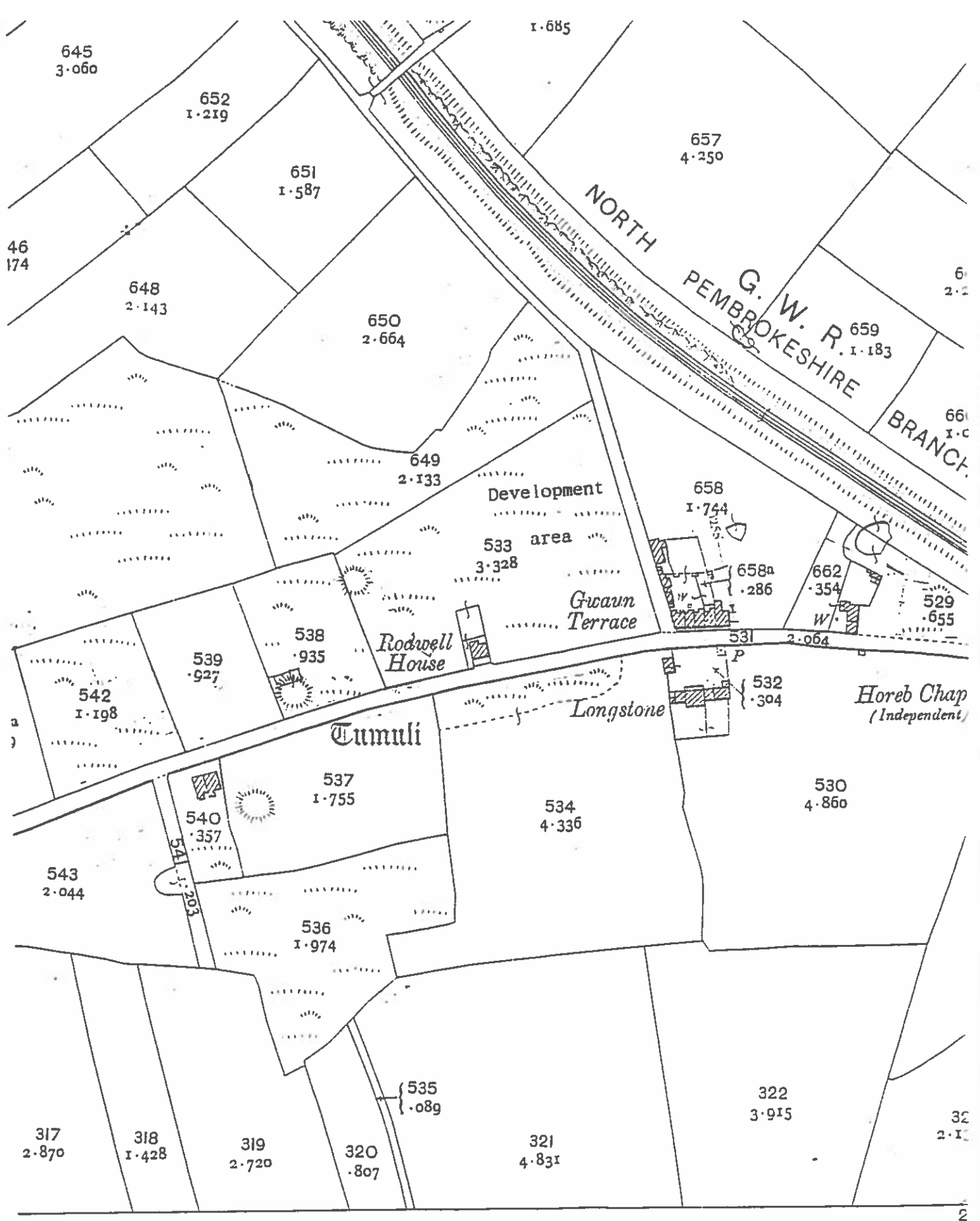


Fig. 8 Ordnance Survey, 2nd edition 1:2500, 1901
(part of sheet Pembroke XVI.3)

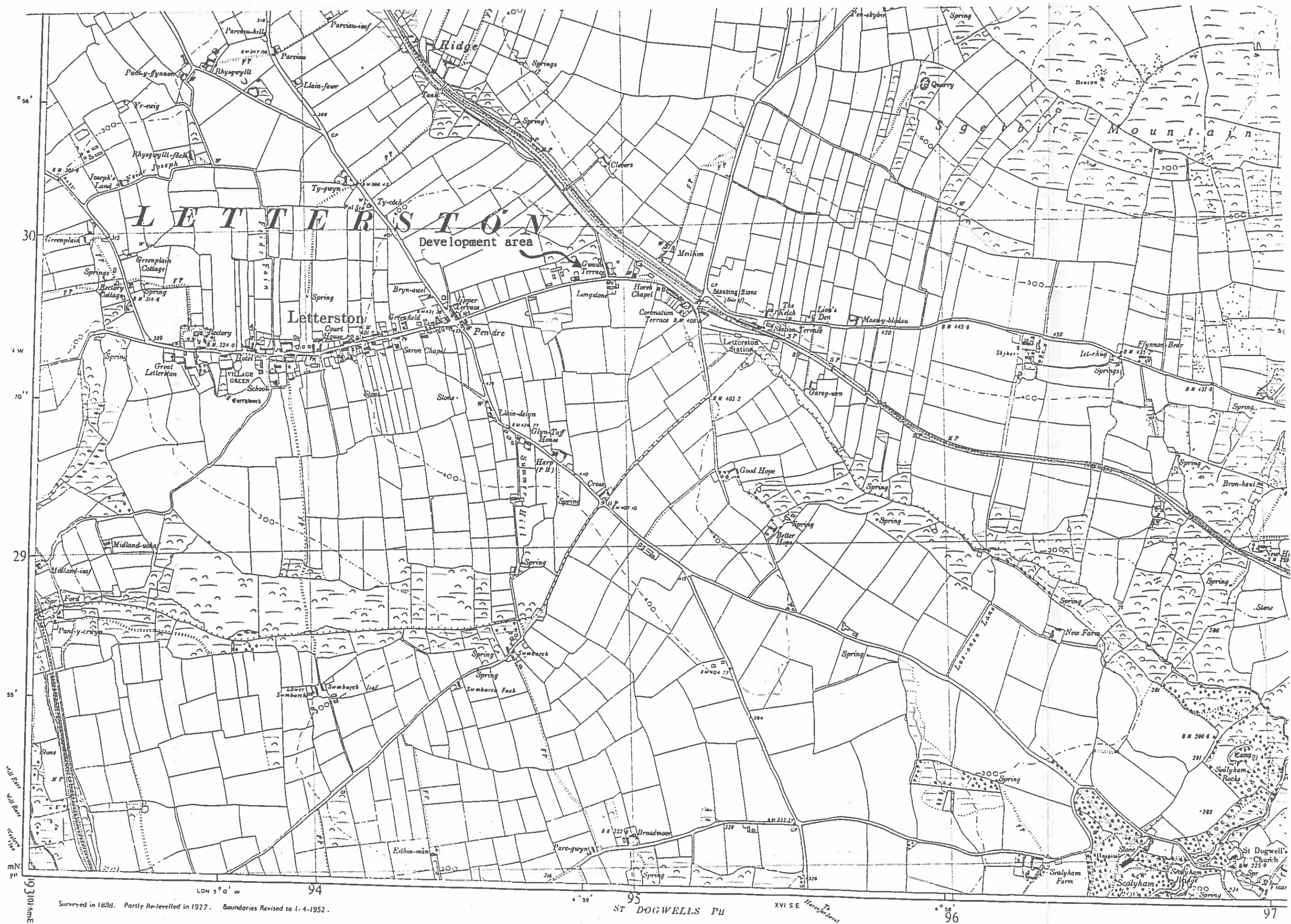


Fig. 9 Ordnance Survey, provisional edition 1:10,560, 1955
(part of sheet Pembrokeshire XVI.NE)

W

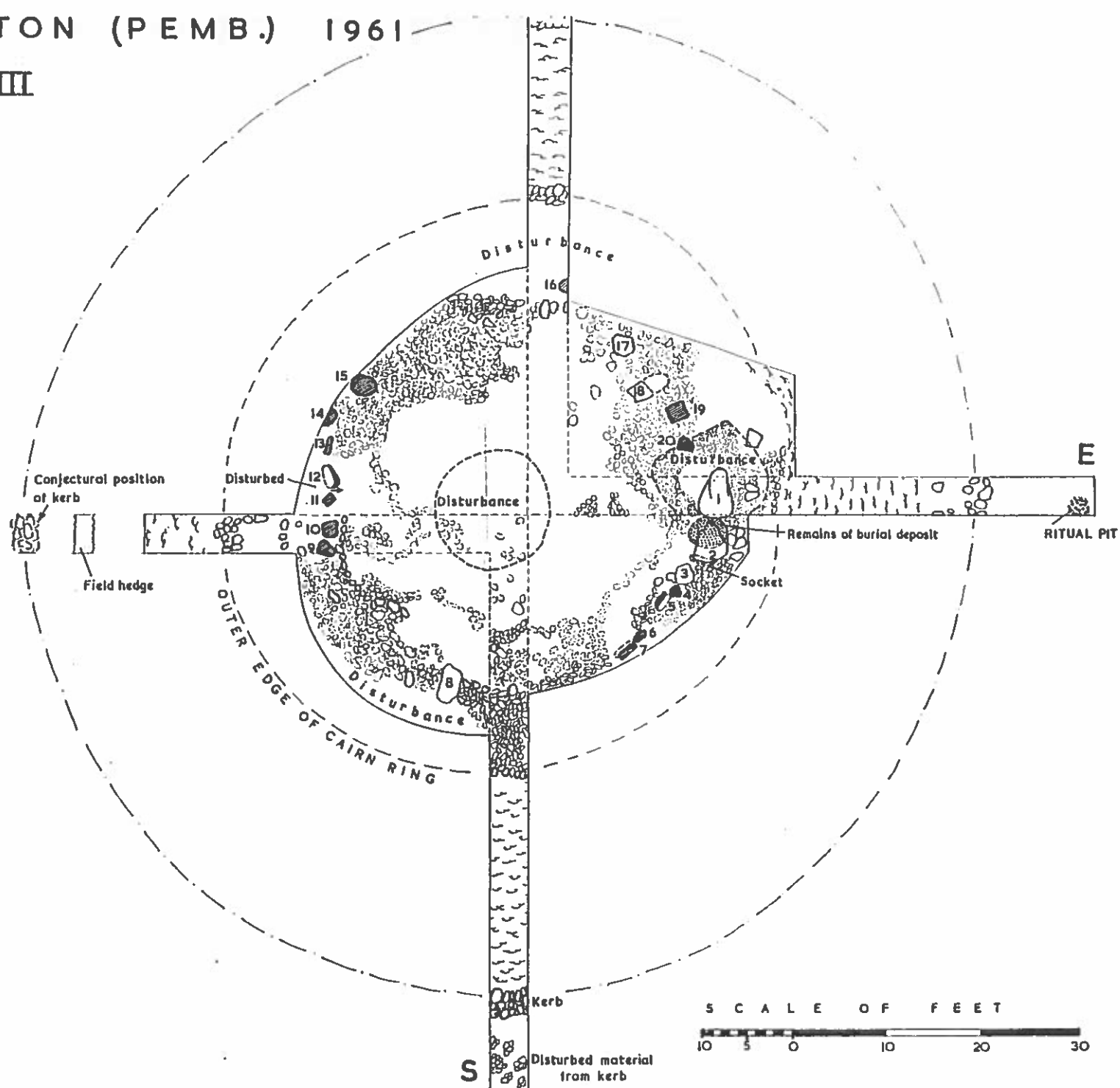


Fig. 10 plan of the excavated stone circle (PRN 9036) and ring cairn (PRN 2381). Reproduced from Savory, 1963.

scale: 1:500

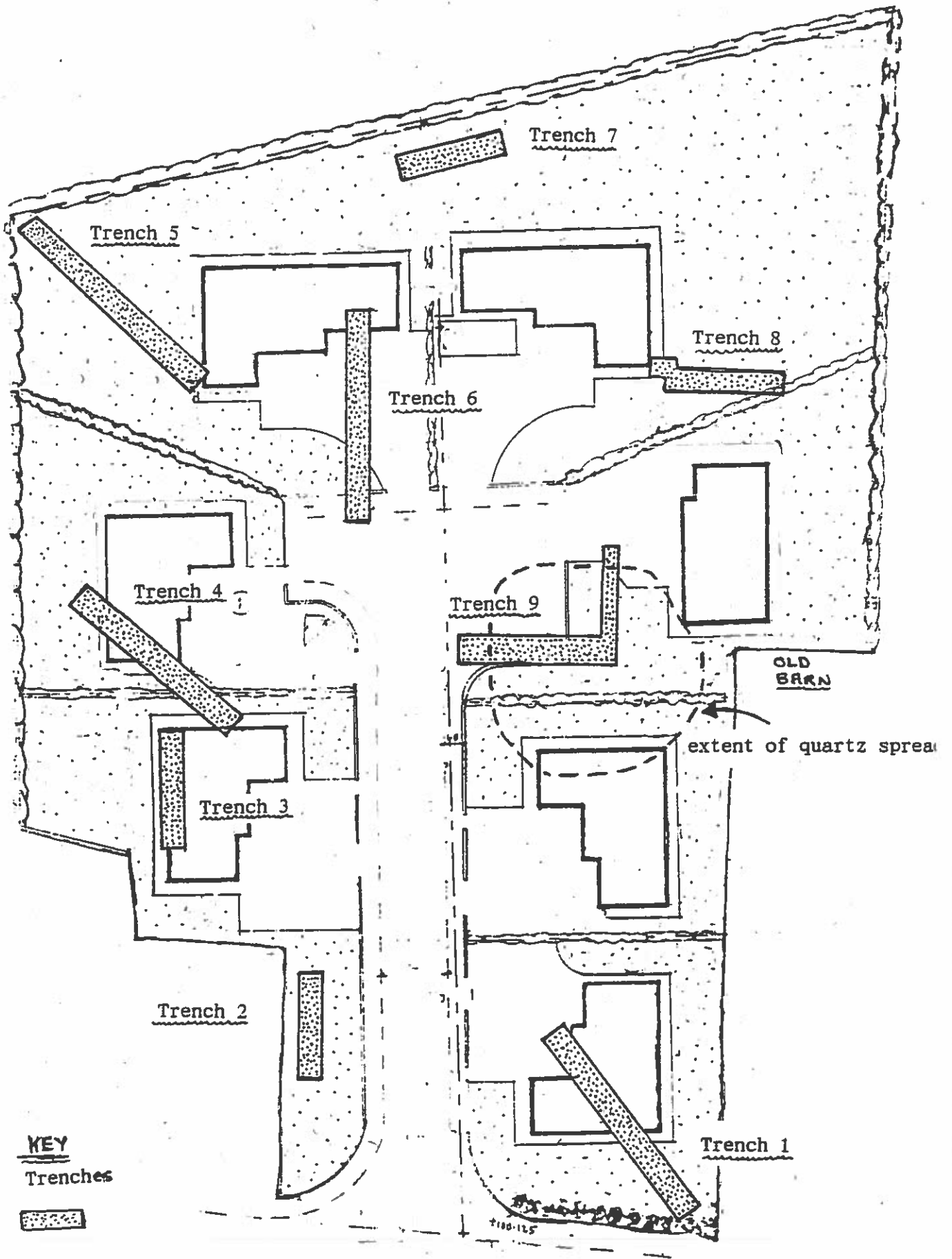


Fig. 11 plan - location of excavated trenches

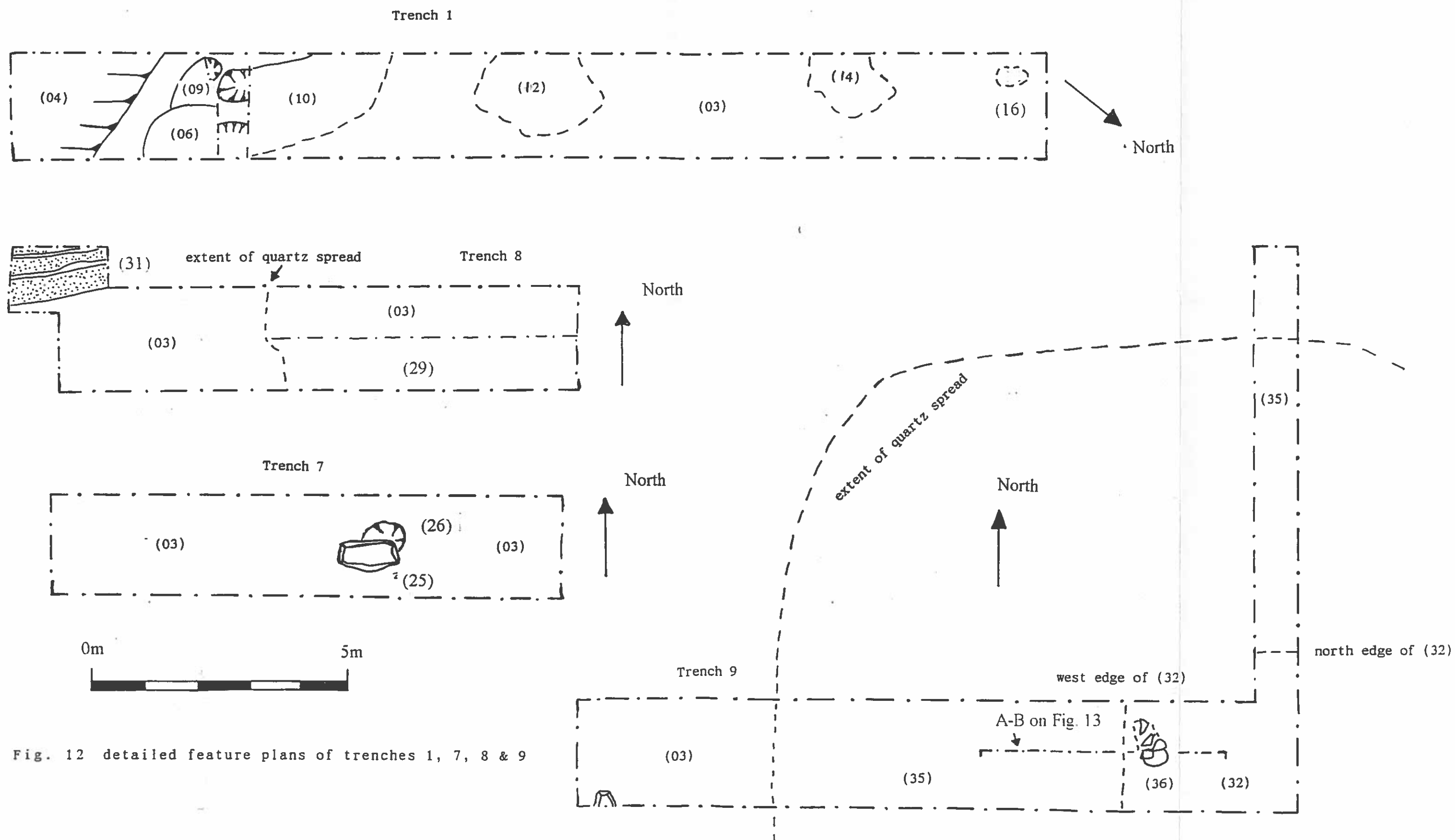


Fig. 12 detailed feature plans of trenches 1, 7, 8 & 9

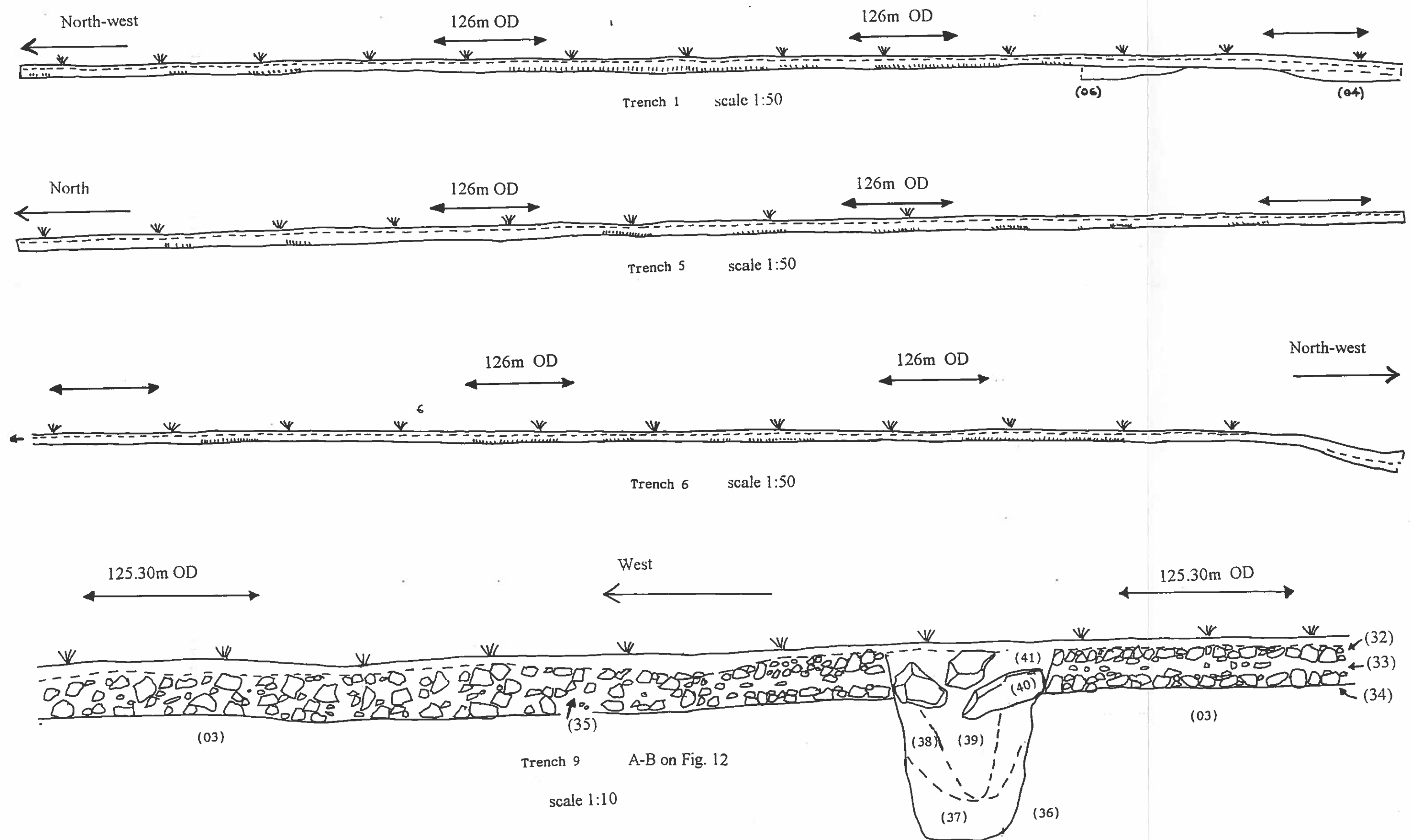


Fig. 13 section drawings, trenches 1, 5, 6 & 9

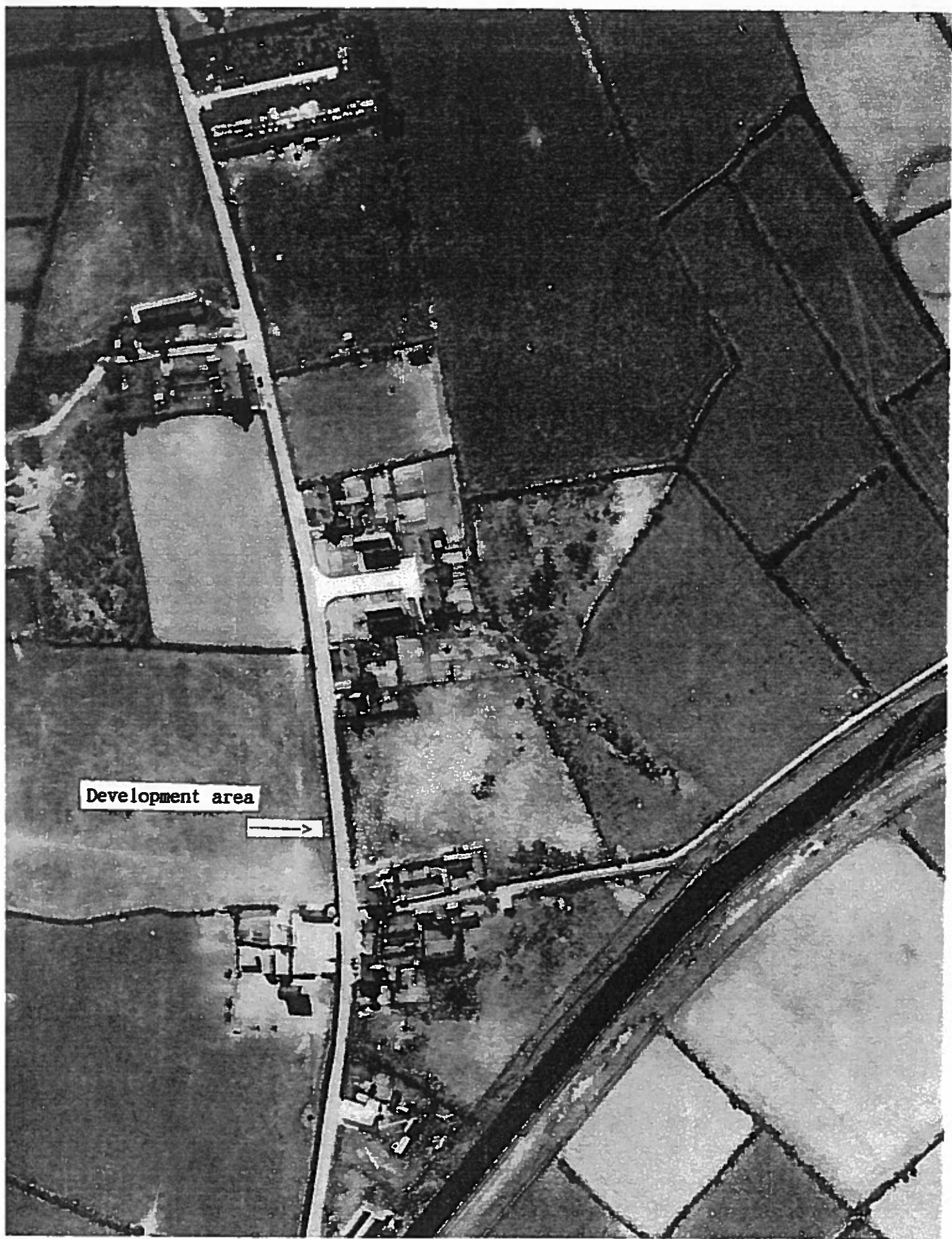


Plate 1 aerial photograph (vertical) - Meridian air maps, 1955

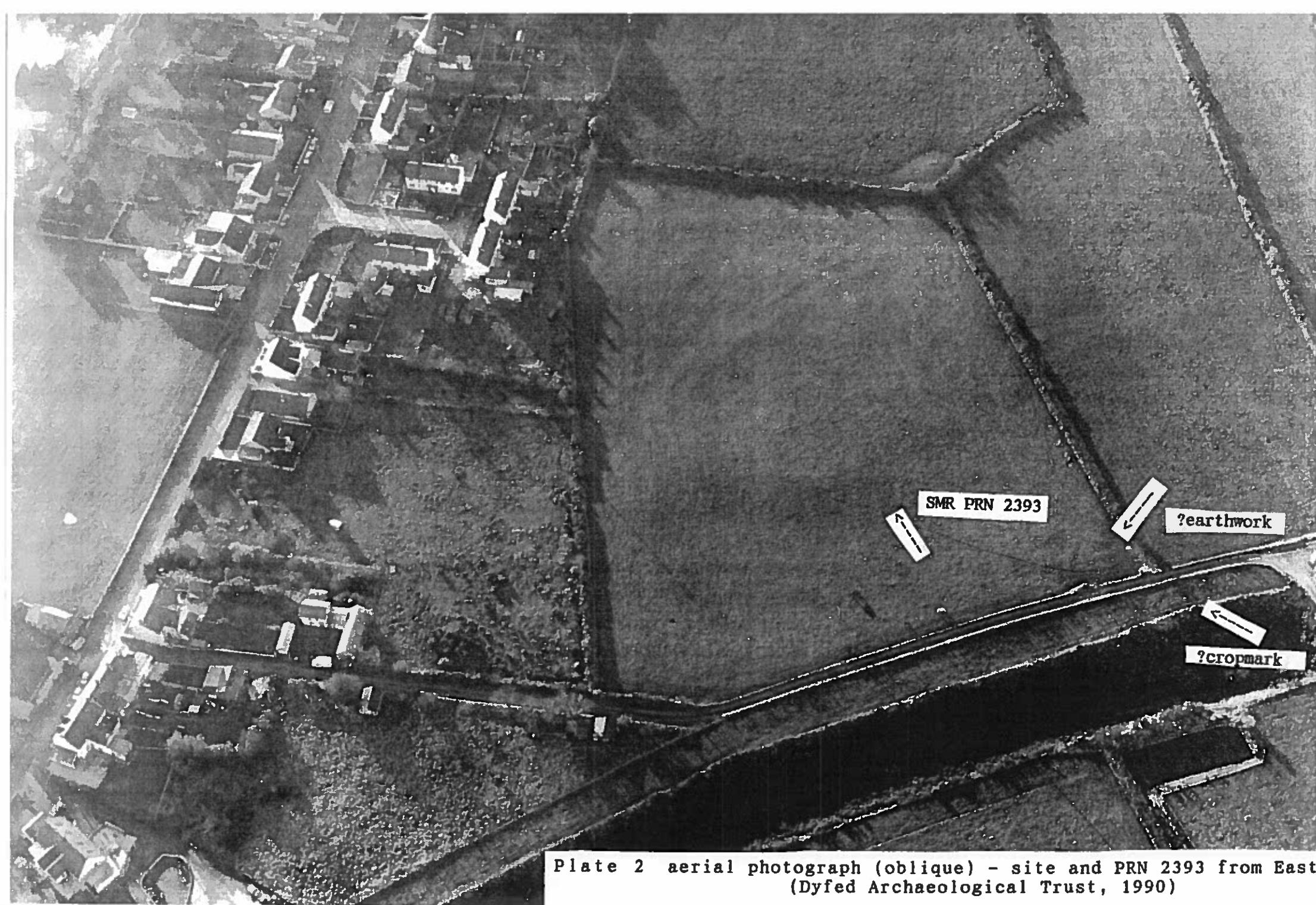


Plate 2 aerial photograph (oblique) - site and PRN 2393 from East
(Dyfed Archaeological Trust, 1990)