

**THE CLWYD-POWYS ARCHAEOLOGICAL TRUST**

**FOUR CROSSES STW GROWTH**  
**ARCHAEOLOGICAL ASSESSMENT**



**CPAT Report No 851**

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**FOUR CROSSES STW GROWTH**  
**ARCHAEOLOGICAL ASSESSMENT**

By N W Jones  
April 2007

Report for Severn Trent Water Ltd

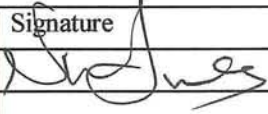
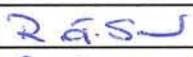
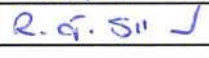
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## **1 INTRODUCTION**

- 1.1 In February 2007 the Field Services Section of the Clwyd-Powys Archaeological Trust (henceforth CPAT) were invited by Severn Trent Water Ltd to prepare a specification of works for undertaking an archaeological assessment in connection with proposals to install a new pipeline to the east of Four Crosses, in northern Powys. The Curatorial Section of the Clwyd-Powys Archaeological Trust, acting as archaeological advisors to the local planning authority, had determined that an archaeological assessment should be undertaken to assess the potential impact of the proposals on the archaeological resource, and a brief was prepared detailing the works required (INV 659).
- 1.2 CPAT received written instruction to proceed with the assessment in February 2007 and the work was undertaken during the following month.

## **2 LOCATION, TOPOGRAPHY AND GEOLOGY**

- 2.1 The proposals relate to the construction of a new 1.3km-long pipeline across land to the north-east and east of Four Crosses, between SJ 27681842 and SJ 27331969, within a 10m-wide working width (Fig. 1).
- 2.2 Four Crosses is situated on an outwash plain between the Severn and Vyrnwy which is composed of glacial or fluvioglacial deposits that form shallow depressions and low ridges overlying glacio-lacustrine alluvium. The ridges support well-drained brown earths, favourable to arable, dairy farming and beef farming. The soils to the north and south are unsuitable for arable production: to the north there is alluvium on the Vyrnwy floodplain and to the south are poorly-drained stagnogleys (Owen and Britnell 1989, 27).

## **3 HISTORICAL BACKGROUND**

- 3.1 The first stage of the assessment comprised a desk-based study of all the readily available primary and secondary documentary, cartographic, pictorial, and photographic sources at the following repositories: the County Historic Environment Record (HER), held by the Clwyd-Powys Archaeological Trust, Welshpool; the National Library of Wales (NLW), in Aberystwyth; and the National Monuments Record (NMR), in Aberystwyth.
- 3.2 A search of the HER identified a number of significant archaeological sites within the assessment area, all of which are elements of a complex of prehistoric monuments known from cropmark evidence and through a series of excavations during the 1980s (Warrilow *et al.* 1986; Owen and Britnell 1989). The cropmarks are generally sited in the area of a gravel ridge which runs west to east across the central part of the proposed route. It is the free-draining brown earths overlying the ridge, and the associated arable farming regime, which are most receptive to the formation of cropmarks, whereas the alluvial soils to the north and stagnogleys to the south are generally too wet for arable cultivation and resist cropmark formation. The known cropmarks are, therefore, likely to represent a window onto a much wider buried landscape.
- 3.3 The collection of oblique aerial photographs held by CPAT has enabled the identification of a number of features which have already been the subject of detailed analysis and plotting (see Fig. 1). Although this collection was re-examined as part of the present study, coupled with a search of vertical and oblique aerial photographs held by the NMR, the process failed to identify any previously unrecorded cropmarks.
- 3.4 Broadly speaking, the cropmarks identify three types of site within the assessment area, perhaps the most significant of which is a complex burial monument (PRN 3600) which was totally



- excavated in 1983. This large multiperiod ring ditch comprised three eccentric ditches, with a main central burial and later inhumation beneath a mound which had been completely levelled by ploughing. The earliest phase of the monument dated to the Middle to Late Neolithic, and comprised a ring ditch between 20.5 and 21.7m across, with an associated central burial, while later phases extending its use into the Early Bronze Age. A small satellite ring ditch (PRN 50562), 5-6m in diameter, was identified 20m to the south-east, the only find from which was a possible Mesolithic scraper (PRN 50561; Warrilow *et al.* 1986, 63-68).
- 3.5 The field to the south-west of the ring ditch contains cropmark evidence for a series of linear boundaries known as 'pit alignments' (PRNs 38104, 38107, 38126, and 50518), which are generally thought to be prehistoric field divisions, as well as two linear ditches (PRNs 38105 and 38127) which are probably much later field boundaries. Two sections of the pit alignments were excavated in 1983-4, revealing that the pits were generally 0.7m deep below the surface of the natural gravel, and varied between around 1.3m and 3.0m in length. It is generally assumed that the pits were quarries used to provide material to construct a continuous boundary bank (Owen and Britnell 1989).
  - 3.6 The field at the southern end of the proposed route contains a series of linear cropmarks (PRN 50522) which do not follow the same alignment as the present field boundaries and are likely to be part of an earlier, possibly prehistoric, field system. Possibly associated with this field system is what appears to be a small rectangular enclosure (PRN 7065) 32m across, although the southern part towards the stream is not visible as a cropmark.
  - 3.7 Although excavations elsewhere in Four Crosses have produced evidence for Romano-British activity, none is known within the area of the assessment. Similarly, there is evidence for early medieval activity further to the west, with Offa's Dyke running north to south around 600m from the proposed route. This 8<sup>th</sup>-century earthwork is generally accepted to have formed the western boundary of the kingdom of Mercia. The excavation of a prehistoric ring ditch in 1984 revealed a number of undated graves and an iron javelin and a spear, the closest parallels for which are from the 6<sup>th</sup> to 7<sup>th</sup> centuries (Barfoot *et al.* 1986).
  - 3.8 The earliest available cartographic source for the area is a map of the Manor of Deythur by John Rocque, dated 1747-8. This depicts much of the assessment area as unenclosed land, including Domgay Common. To the south of what is now Domgay Lane the proposed route runs through two enclosed fields, one of which appears to be divided into strips. The Enclosure Award of 1799 for the contiguous communities of Llandrinio, Llandysilio and Llansantffraid reveals further detail, indicating that parts of the common had already been enclosed and other fields reorganized, notably to the south of the Vyrnwy. Unfortunately, it is not possible to reproduce the map in this report because of copyright restrictions.
  - 3.9 The Tithe Survey for Llandysilio parish of 1842 and its earlier Apportionment (1839) show the area after enclosure, divided into fairly regular fields, under a mixture of arable and pasture. Recorded field names, however, offer no further insight into land use or tenure. The field pattern appears to be much as it is today.
  - 3.10 The first edition Ordnance Survey 25" map, surveyed in 1883 and published in 1886 (fig. 4), shows a similar situation to the Tithe Survey, with the addition of the Welshpool to Oswestry Railway (PRN 7763), opened in 1862.



## 4 FIELD ASSESSMENT

- 4.1 The route corridor was the subject of a systematic field survey, undertaken on 6 March 2007.
- 4.2 The recorded archaeological sites along the proposed route are all known from cropmark evidence and, unsurprisingly, the field survey failed to identify any surface traces. The only earthworks which were identified comprised a field of ridge and furrow (PRN 83853) towards the southern end of the route. Interestingly, this corresponds to a field depicted on the 1747-8 estate map in a manner which is suggestive of ridge and furrow, or strip fields.

## 5 GEOPHYSICAL SURVEY (Figs 2-7)

- 5.1 The geophysical survey was undertaken by ArchaeoPhysica. This consisted of a magnetometer survey with resolution along traverses 0.5m apart varying between approximately 0.1m and 0.16m, but interpolated to 0.25m for analysis. Numbers in bold in the following text refer to individual anomalies depicted on Figs 3, 5 and 7, and listed in the catalogue in Appendix 2. The full survey report has been supplied to the client under separate cover (Roseveare 2007).
- 5.2 The Curatorial Brief originally requested magnetic scanning along the route but the quantity and nature of known features and the significant magnetic variation within the natural soils suggested to the specialists that this approach would be unreliable. As an alternative, a 20m-wide corridor of magnetometry was proposed, which was accepted by the Curator.
- 5.3 The survey corridor was centred on the pipeline route, although in two areas modern fencing and other metallic obstacles led to a repositioning of the survey. One area was to the rear of 'The Oaks', along Domgay Lane, and the other was at the southern end where a football pitch had to be excluded owing to the presence of existing services and structures which would interfere with the results. In addition, it was not possible to gain access to the northernmost field and this was therefore excluded from the survey.
- 5.4 To the north of Domgay Lane (Figs 2-3) the survey revealed the western side of the triple ring ditch **6** (PRN 3600) which was totally excavated in 1983, as well as a small pit **20** (Site 1). Three faint, parallel, linear anomalies **3-5** are likely to represent cultivation marks, possibly remnants of ridge and furrow cultivation, which are at a slightly different angle to the modern field boundaries.
- 5.5 To the south of the ring ditches is a series of pit alignments, two of which (PRNs 38107 and 38104) show clearly in the data as discrete magnetic anomalies **21-41** that correspond with individual pits identified as cropmarks. Interestingly, the southern extremity of the main alignment was not identified by the survey, although it is known from cropmarks. From measurement of the magnetic properties of the soils at Domgay Lane it has been suggested by ArchaeoPhysica that the magnetic component of these features is a lens of former topsoil present within the uppermost regions of the fill of each pit. Where the pit has not been truncated by ploughing this material will create a sizeable magnetic anomaly but truncated examples would probably not. The difference between magnetically visible and invisible pits in this area is probably therefore a measure of how severely they have been truncated by modern ploughing. Consequently, the absence of a magnetic anomaly should not be taken as an absence of features of archaeological interest.
- 5.6 There is also a scatter of small pit-type anomalies **42-48**, some of which may have a natural origin, although features **45** and **46** appear to coincide with the eastern end of a pit alignment (PRN 50518). There are also weak signs of possible ditches or gullies and further cultivation marks, although their identification is by no means certain.



- 5.7 To the south of Domgay Lane (Figs 4-5) the subsoil changes and a band of clay radically alters the texture of the magnetic data, replacing the sharply variable character over gravel with a smoothly variable, slightly mottled character typical of weakly susceptible materials. It is likely that archaeological features cut into this material will not be as magnetically visible as elsewhere, if at all.
- 5.8 Within the central section of the corridor the survey only identified two anomalies, both of which may be relatively modern. A strongly magnetic linear feature **10** (Site 2) may be modern debris or metal within a drain, for example, while a large magnetic object **9** associated with a slight hollow in the ground could be the site of a well (Site 3) which, from local accounts, may have been located in this field.
- 5.9 Within the southern section of the corridor (Figs 6-7) a cluster of features (Site 4) were identified in the corner of one field which may relate to one another. Two large anomalies, **49** and **50**, possibly pits, border an area of magnetic ground, **1**, that extends south-eastwards beyond the survey area. This in turn seems to be bounded by a linear low-susceptibility anomaly, **2**, typical of buried masonry or a void. There is no obvious archaeological interpretation for these and the presence of significant quantities of recent debris in the adjacent field to the south-west limits the detection of any extension of these features in that direction.
- 5.10 The area around the football pitch contains much disturbed ground and major interference from metal objects, and although various cropmark features are known, none is apparent in the magnetic data.

## 6 ARCHAEOLOGICAL SUMMARY

- 6.1 The assessment has included all sites within 200m of the proposed route, which are presented in the gazetteer which forms an appendix to this report. The location of sites are also depicted as point data on Fig. 1.
- 6.2 In accordance with the *Design Manual for Roads and Bridges* Volume 11 Section 3 Part 2, Section 13.5 (i) (1993), which considers assessments of the built heritage (as opposed to the cultural heritage) the following designations have been considered and/or identified:
  - i) Landscapes of Outstanding Historic Interest in Wales. None of the assessment area falls within a Landscape of Outstanding or Special Historic Interest, as defined in the *Register of Landscapes, Parks and Gardens of Special Historic Interest* (Cadw 1998 and 2001).
  - ii) Parks and Gardens of Special Historic Interest in Wales. No such parks or gardens have been recognized in the area of interest (as defined in Cadw 1995).
  - iii) Conservation Areas. There are no conservation areas within the assessment area.
  - iv) Scheduled Ancient Monuments (SAMs). None has been identified along the route corridor, although scheduled sections of Offa's Dyke (SAM Mg 033) lie 600m to the west.
  - v) Listed buildings. None has been identified within the route corridor, although two listed buildings, Nos 1-2 Domgay Hall Cottages, lie 470m to the east.
  - vi) National Trust inalienable land. No inalienable land is present in or adjacent to the route corridor.
- 6.3 Each site of archaeological interest identified during the desktop study, field survey, and geophysical survey which lies within the study area has been classified according to its perceived significance as it appears to us at present. Those sites which lie outside the corridor



are assumed to be unaffected by the scheme and have not been classified. The categories are those given in the Cadw draft *Archaeology and the Trunk Road Programme in Wales: a Manual of Best Practice* and have been adopted for the Environmental Assessment Significance Criteria of the present scheme. These categories are based in turn - with the exception of Category E - on those given in the Department of Environment, Transport and Regions' *Design Manual for Roads and Bridges* Volume 11 Section 3 Part 2 (1993). Category E (also termed category U in some classifications) has been introduced to cover archaeological sites and monuments whose existence went unacknowledged in the Design Manual. The descriptions of these are those given in the Scoping Report

- 6.4 *Category A: National Importance* Monuments that are scheduled and protected under the Ancient Monuments and Archaeological Areas Act (1979); those suitable for scheduling; and those considered by us using professional judgment to be of national importance but not covered by the Secretary of State's criteria for scheduling; many listed buildings; and parks and gardens identified in the Historic Parks and Gardens Register.
- 6.5 *Category B: Regional Importance* Sites listed in the Historic Environment Record (HER) or other sources which are of a reasonably well-defined extent, nature and date and are significant examples in the regional context; those listed buildings not in Category A; Conservation Areas; and National Trust gardens.
- 6.6 *Category C: Local Importance* Sites listed in the HER or other sources which are of lower potential importance; some landscapes and features designated as of historic or archaeological value in the Local Plan (Note: subject to their value, these may be of greater, regional or national importance).
- 6.7 *Category D: Minor Importance* Sites listed in the HER or other sources which are of minor interest or are so badly damaged that too little now remains to justify their inclusion in a higher grade.
- 6.8 *Category E* Sites whose importance cannot be assessed from fieldwork and desk-top study alone, and where further work will be required to establish their true nature and category.

#### **Category A Sites**

- 6.9 There are no category A sites within the corridor.

#### **Category B Sites**

- 6.10 The assessment has identified five sites which might be regarded as being of regional significance, all of which are pit alignments known from cropmark evidence and through excavation.

PRN	Name	Site type	Period	Condition	NGR
38104	Four Crosses pit alignments, Domgay alignment II	Pit alignment	Prehistoric	Damaged	SJ2756919121
38107	Four Crosses pit alignments, Domgay alignment I	Pit alignment	Prehistoric	Damaged	SJ2749319160
38109	Domgay Lane pit alignment III	Pit alignment	Prehistoric	Damaged	SJ2771319005
38126	Four Crosses pit alignments, Cae hen alignment IV	Pit alignment	Prehistoric	Damaged	SJ2747319004

50518	Four Crosses pit alignments, Cae hen alignment I	Pit alignment	Prehistoric	Damaged	SJ2737519031
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**PRN 38104 Four Crosses pit alignments, Domgay alignment II**

Cropmark pit alignment running SW-NE and visible for c. 53m, joining PRN 38107 at its western end. Its visible eastern end was partially excavated between 1981 and 1984.

**PRN 38107 Four Crosses pit alignments, Domgay alignment I**

Cropmark pit alignment running SSE-NNW and visible for c. 360m. It runs at right angles to PRN 50518, and may mark the end of that feature. To the south it is probably truncated by the modern road.

**PRN 38109 Domgay Lane pit alignment III**

Pit alignment running SW-NE and visible for c. 90m, cutting across linear cropmarks PRN 50520. The south-western end terminates on projected line of PRN 38107.

**PRN 38126 Four Crosses pit alignments, Cae hen alignment IV**

Cropmark pit alignment running SSE-NNW and visible for c. 78m, joining PRN 50518 at its northern end.

**PRN 50518 Four Crosses pit alignments, Cae hen alignment I**

Cropmark pit alignment visible for c. 400m running E-W.

**Category C Sites**

- 6.11 The assessment has identified one site which might be regarded as being of local significance.

PRN	Name	Site type	Period	Condition	NGR
83584	Rhos Common ridge and furrow	Ridge and furrow	Medieval ?	Damaged	SJ27731862

**PRN 83584 Rhos Common ridge and furrow**

A field of ridge and furrow aligned NE to SW which corresponds to a field depicted on a 1747-8 estate map by John Rocque in a manner which is suggestive of ridge and furrow, or strip fields.

**Category D Sites**

- 6.12 The assessment has identified three sites which are either damaged, or have been totally excavated.

PRN	Name	Site type	Period	Condition	NGR
3600	Four Crosses barrow cemetery, site 5	Round barrow	Multiperiod	Destroyed	SJ2753119192
6423	Four Crosses barrow cemetery, site 6	Multiple site	Multiperiod	Destroyed	SJ27631910
23523	Llandysilio argae II	Flood defence	Post Medieval	Damaged	SJ27251975



**PRN 3600 Four Crosses barrow cemetery, site 5**

Double concentric ring ditch 20m diameter with a third eccentric ring ditch forming complex multi-phase barrow dating from the mid-late Neolithic to the early Bronze Age. Excavated by CPAT in 1983 (Warrilow *et al* 1986, 53-87).

**PRN 6423 Four Crosses barrow cemetery, site 6**

Multi-period site revealed by excavation in 1983 comprising a small Bronze Age ring ditch (an outlier to PRN 3600) with finds of possible Mesolithic material, presumably indicating associated activity in the area (Warrilow *et al* 1986, 53-87).

**PRN 23523 Llandysilio argae II**

Argae south of the River Vyrnwy, comprising a bank 6.5m wide and 0.5-0.7m high.

**Category E Sites**

- 6.13 The assessment has identified eight sites whose importance cannot be assessed from existing information, and where further work may be required.

PRN	Name	Site type	Period	Condition	NGR
2499	Four Crosses field system, Domgay	Field system ?	Prehistoric ?	Unknown	SJ27501950
6075	Four Crosses Barrow Cemetery, Domgay Lane ring ditch 5	Ring ditch ?	Bronze Age	Unknown	SJ27391915
7065	Lower House enclosure	Defended enclosure ?	Prehistoric	Unknown	SJ2767818443
7531	Lower House enclosure II	Defended enclosure ?	Roman ?	Unknown	SJ2776718448
38105	Domgay Lane Linear Cropmark	Field boundary ?	Post Medieval ?	Unknown	SJ2748119073
38127	Domgay Lane Linear Cropmark II	Field boundary ?	Post Medieval ?	Unknown	SJ2742219059
50520	Four Crosses field system, Domgay Lane	Field system	Prehistoric	Unknown	SJ2776018990
50522	Four Crosses field system, Lower House	Field system ?	Prehistoric	Unknown	SJ2768418525
Site 1	Domgay Lane possible pit	Pit ?	Unknown	Unknown	SJ2750619202
Site 2	Lower House drain ?	Drain ?	Unknown	Unknown	SJ2761218850
Site 3	Lower House well ?	Well ?	Post-medieval	Unknown	SJ2761618800
Site 4	Rhos Common pit/structure	Pit/Structure	Unknown	Unknown	SJ2767118628

**PRN 2499 Four Crosses field system, Domgay**

A linear cropmark, possibly a ditch, has been identified running north to south for a distance of approx 180m. Probably part of a field system of uncertain date.

**PRN 6075 Four Crosses Barrow Cemetery, Domgay Lane ring ditch 5**

A poorly defined circular cropmark has been identified which is suggestive of a Bronze Age ring ditch, although this is uncertain.

**PRN 7065      Lower House enclosure**

A possible sub-rectangular enclosure has been identified from cropmarks, together with an adjoining field system. The enclosure measures 35m east to west and the southern side is obscured by a field boundary.

**PRN 7531      Lower House enclosure II**

Cropmarks have revealed the eastern corner of a possible sub-rectangular enclosure.

**PRN 38105      Domgay Lane Linear Cropmark**

Cropmarks have revealed a linear features running which is assumed to be a former field boundary. It crosses one of the pit alignments (PRN 50518), although the relationship is not clear.

**PRN 38127      Domgay Lane Linear Cropmark II**

A linear cropmark has been identified which may be part of a field system.

**PRN 50520      Four Crosses field system, Domgay Lane**

A series of intersecting ditches have been identified from cropmark evidence, although some of them may be periglacial features. Pit alignment PRN 38109 cuts across system but its relationship is not clear.

**PRN 50522      Four Crosses field system, Lower House**

A series of linear cropmarks suggests a former field system of possible prehistoric date, which may be associated with the nearby enclosure.

**Site 1      Domgay Lane possible pit**

A possible pit was identified by the geophysical survey.

**Site 2      Lower House drain ?**

A possible drain was identified by the geophysical survey.

**Site 3      Lower House well ?**

A possible well was identified by the geophysical survey.

**Site 4      Rhos Common pit/structure**

A group of features was identified by the geophysical survey, including two possible pits and a linear anomaly.



## 7 POTENTIAL IMPACTS

- 7.1 The potential impact of the proposed pipeline has been considered for those sites identified during the assessment within 200m of its centre line.
- 7.2 The potential of an archaeological site can be based on its perceived nature and appearance, its topography and the distribution and nature of other recorded archaeological features in the locality. It is measured on the basis of **High, Medium, Low** and **Negligible**.
- 7.3 The potential impact is based on the preferred route for the pipeline depicted in Fig. 1. Any modifications to this route could result in changes to the potential impact. It should also be noted that the geophysical survey generally covered an area of 10m to either side of the route and any significant changes to the alignment may therefore include areas not covered by the survey.

<i>PRN</i>	<i>Name</i>	<i>Site type</i>	<i>Category</i>	<i>Potential</i>	<i>Impact</i>
2499	Four Crosses field system, Domgay	Field system ?	E	Low	None
3600	Four Crosses barrow cemetery, site 5	Round barrow	D	Negligible	None
6075	Four Crosses Barrow Cemetery, Domgay Lane ring ditch 5	Ring ditch ?	E	High	None
6423	Four Crosses barrow cemetery, site 6	Multiple site	D	Low	None
7065	Lower House enclosure	Defended enclosure ?	E	High	Potential damage
7531	Lower House enclosure II	Defended enclosure ?	E	High	None
23523	Llandysilio argae II	Flood defence	D	Low	Partial loss
38104	Four Crosses pit alignments, Domgay alignment II	Pit alignment	B	High	Partial loss
38105	Domgay Lane Linear Cropmark	Field boundary ?	E	Medium	None
38107	Four Crosses pit alignments, Domgay alignment I	Pit alignment	B	High	Partial loss
38109	Domgay Lane pit alignment III	Pit alignment	B	High	None
38126	Four Crosses pit alignments, Cae hen alignment IV	Pit alignment	B	High	None
38127	Domgay Lane Linear Cropmark II	Field boundary ?	E	Medium	None
50518	Four Crosses pit alignments, Cae hen alignment I	Pit alignment	B	High	Partial loss
50520	Four Crosses field system, Domgay Lane	Field system	E	Medium	None
50522	Four Crosses field system, Lower House	Field system ?	E	High	Partial loss

83584	Rhos Common ridge and furrow	Ridge and furrow	C	Low	Minor damage
Site 1	Domgay Lane possible pit	Pit ?	E	Medium	Potential loss
Site 2	Lower House drain ?	Drain ?	E	Low	Potential loss
Site 3	Lower House well ?	Well ?	E	Medium	Potential loss
Site 4	Rhos Common pit/structure	Pit/Structure	E	Medium	Potential loss

- 7.4 In summary, the results indicate that a number of sites may suffer potential loss or partial loss, and of particular note are the five sites where the potential is regarded as High, comprising three prehistoric pit alignments north of Domgay Lane and a possible enclosure and field system at the southern end of the route.

## 8 CONCLUSIONS

- 8.1 The combination of detailed desk-based study and field survey and geophysical survey provides a thorough assessment of the potential of the archaeological resource, together with the likely impacts of the development.
- 8.2 A small number of sites has been identified which may be impacted on by the proposed development. The majority of these were previously known sites, many of which were originally identified from cropmark evidence. In general the geophysical survey confirmed the presence of these features, although it was noticeable that some features were not evident within the geophysical survey data, possibly due to truncation by ploughing. In addition, the survey results appeared to be most reliable in areas where the subsoil is composed of river gravel, while areas of clay were generally far less responsive. This implies that in these areas an absence of geophysical anomalies does not necessarily mean an absence of archaeological features. The survey was successful, however, in identifying a small number of potentially significant features.
- 8.3 The main features which are likely to be affected by the construction of the pipeline are elements of three pit alignments of presumed prehistoric date which lie in the field north of Domgay Lane (PRNs 38107, 38104 and 50518). The linear nature and extent of these features means that avoidance may not be a practical option. In addition, a series of cropmarks at the southern end of the route suggest a possible prehistoric enclosure (PRN 7065) and field system (PRN 50522). Unfortunately, it was not possible to undertake the geophysical survey within this area.
- 8.4 Four other features were identified by the geophysical survey which may also be affected by the pipeline. In addition, there is always the possibility for previously unrecorded, buried, archaeological remains. This is particularly true for the area south of Domgay Lane where the clay subsoil may have limited the effectiveness of the geophysical survey.

## 9 ACKNOWLEDGEMENTS

- 9.1 The writer would like to thank the following people for their assistance during the project: Fiona Grant, CPAT; Anne and Martin Roseveare, ArchaeoPhysica Ltd; the staff of the National Library of Wales, Aberystwyth; and the staff of the National Monuments Record, Aberystwyth.



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1842 Tithe Survey and Apportionment (1839) for Llandysilio parish

1886 Ordnance Survey 1st edition 25", Montgomery 11.9, surveyed 1883

1983 Soil Survey of England and Wales map (Sheet 2 - Wales) and Legend (1:250,000 scale)

1994 British Geological Survey map of Wales (Solid edition at 1:250,000 scale)

## APPENDIX 1

## CATALOGUE OF GEOPHYSICAL ANOMALIES

Label	Type	Description
1	Magnetic Ground	An area of ground exhibiting strong magnetic variations, perhaps due to numerous small features or burning. It seems to be associated with two adjacent pit fill-type anomalies
2	Low Susceptibility Ground	A strongly less magnetic strip of ground, perhaps a stone culvert or base of a wall
3	Cultivation Marks	Faint cultivation mark, potentially a relict furrow
4	Cultivation Marks	Faint cultivation mark, potentially a relict furrow
5	Cultivation Marks	Faint cultivation mark, potentially a relict furrow
6	Ring Ditches	Known and excavated ring ditch complex. Note it is located about 6m north of plotted cropmark position
7	Linear Fill	Possible fill of small ditch, angled to survey traverses but lacking obvious context and function
8	Linear Fill	Weak possible ditch fill
9	Disturbance	Large buried steel object. This may be the site of a well described by locals as having been found somewhere in this area, in which case the magnetic anomaly could be from rubbish dumped into it. An alternative explanation might be a steel cover across it
10	Disturbance	Buried metal item, perhaps a pipe or fence wire
11	Disturbance	Area of modern fill
12	Disturbance	Possible modern fill, else surface debris, e.g. brick and steel
13	Disturbance	Debris in fill above concrete drainage pipe
14	Disturbance	Possible modern fill, else surface debris, e.g. brick and steel
15	Disturbance	Area of strong magnetic disturbance from various modern sources
16	Disturbance	Area of strong magnetic disturbance from various modern sources
17	Disturbance	Disturbance from steel railing around football pitch
18	Disturbance	Possible modern fill, else surface debris, e.g. brick and steel
19	Disturbance	Disturbed ground near buried services
20	Discrete Fill	Small pit-type anomaly
21	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
22	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
23	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
24	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
25	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
26	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
27	Discrete Fill	Small pit-type anomaly near known pit alignment 1
28	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
29	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
30	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
31	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
32	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
33	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1



Label	Type	Description
34	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
35	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
36	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
37	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
38	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
39	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 2. Note about 3m North of plotted cropmark
40	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 2. Note about 3m North of plotted cropmark
41	Discrete Fill	Fill or magnetic relict soil within known pit of pit alignment 1
42	Discrete Fill	Pit-type anomalies in vicinity of known but apparently magnetically invisible pit alignments 3 & 4
43	Discrete Fill	Pit-type anomalies in vicinity of known but apparently magnetically invisible pit alignments 3 & 4
44	Discrete Fill	Pit-type anomalies in vicinity of known but apparently magnetically invisible pit alignments 3 & 4
45	Discrete Fill	Pit-type anomalies in vicinity of known but apparently magnetically invisible pit alignments 3 & 4
46	Discrete Fill	Pit-type anomalies in vicinity of known but apparently magnetically invisible pit alignments 3 & 4
47	Discrete Fill	Pit-type anomalies in vicinity of known but apparently magnetically invisible pit alignments 3 & 4
48	Discrete Fill	Possible pit fill, may however be natural silt pocket in gravel
49	Discrete Fill	Pit-type anomaly, possibly marking a large feature. May be one of a group
50	Discrete Fill	Pit-type anomaly, possibly marking a large feature. May be one of a group

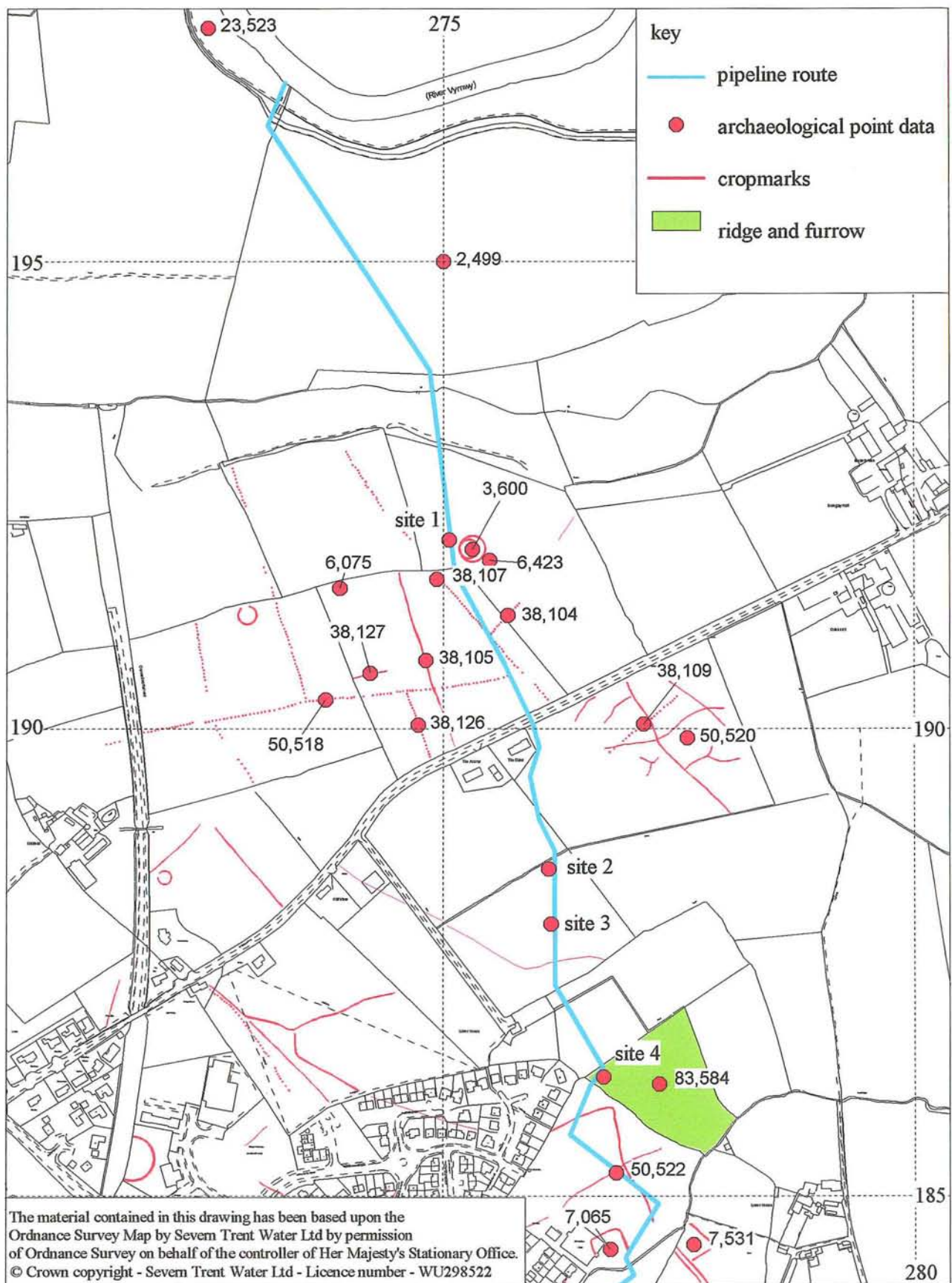
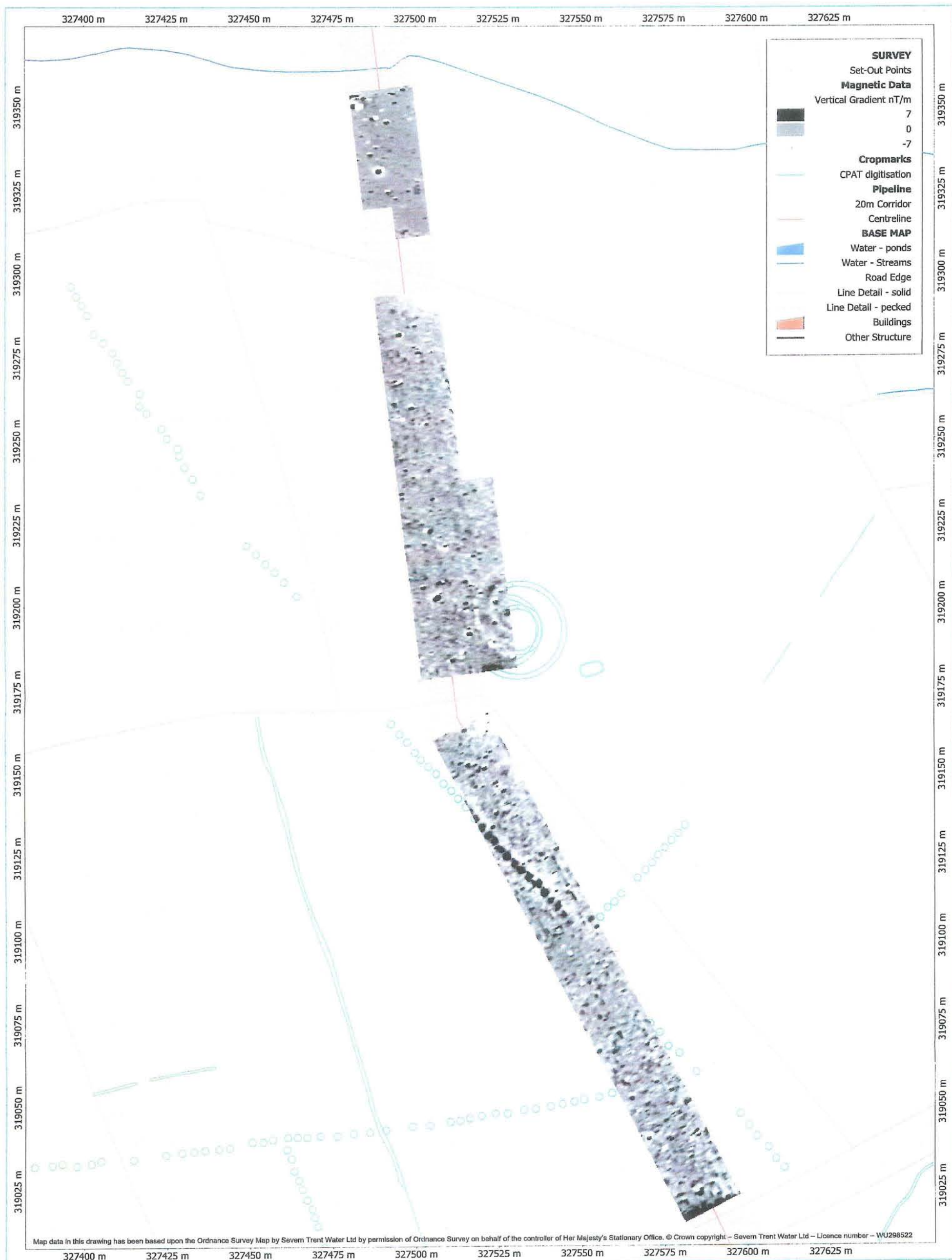


Fig. 1 Pipeline route and known archaeological sites within 200m



Fig. 2 Geophysical survey: Northern section, processed data



Project Name: Four Crosses. Project Code: FCS071. Client: Clwyd Powys Archaeological Trust for Severn Trent Water

Orthographic Scale: 1:1000  
 Centre X: 327519.39 m File: GIS 1  
 Centre Y: 319190.77 m Printed: 12/4/2007 from ACER-2  
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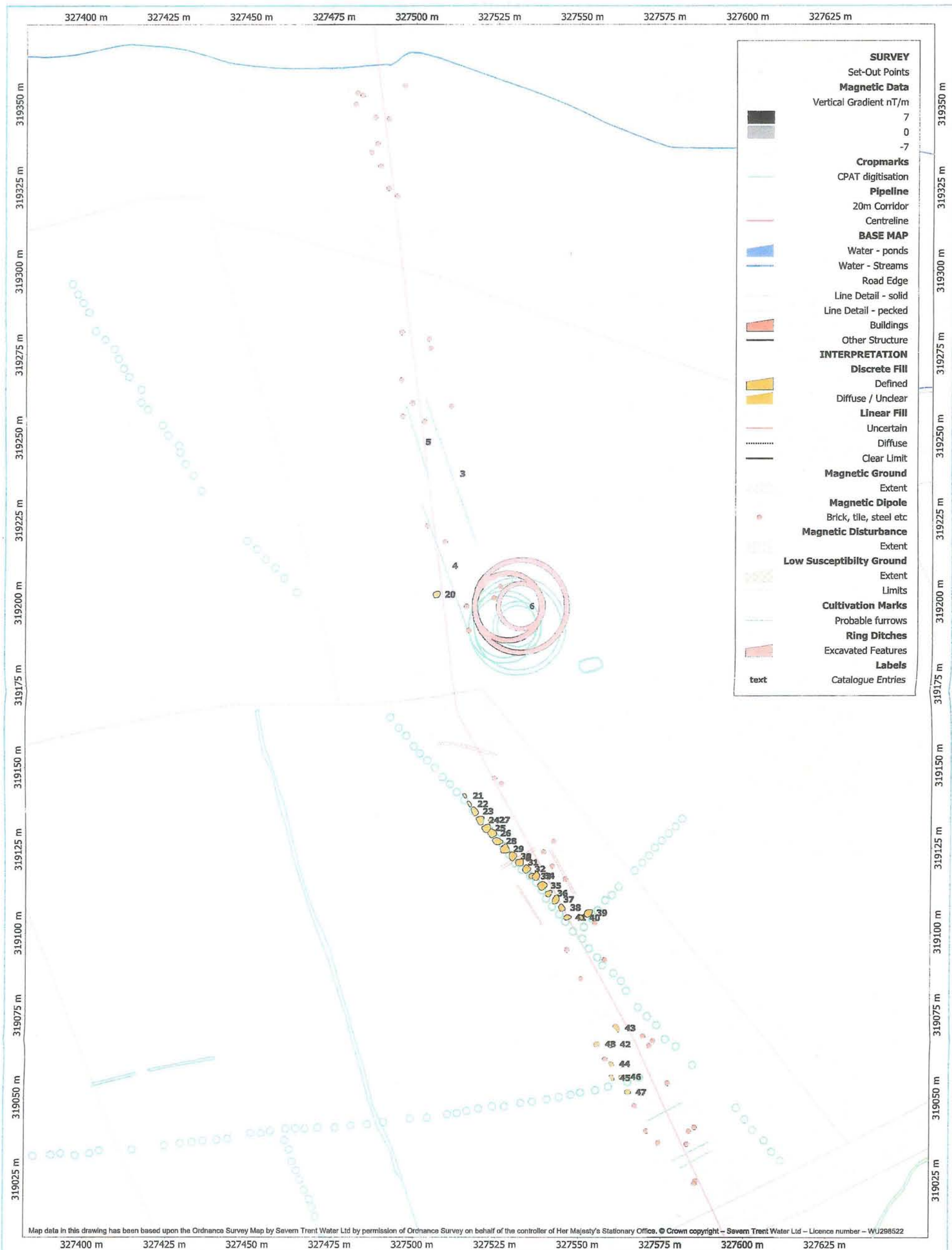
Total Field Vertical Magnetic Gradient

DWG 01: Northern Section



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Fig. 3 Geophysical survey: Northern section, interpretation



Project Name: Four Crosses. Project Code: FCS071. Client: Clwyd Powys Archaeological Trust for Severn Trent Water

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Centre X: 327519.39 m File: GIS 1  
Centre Y: 319190.77 m Printed: 12/4/2007 from ACER-2  
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Interpretation

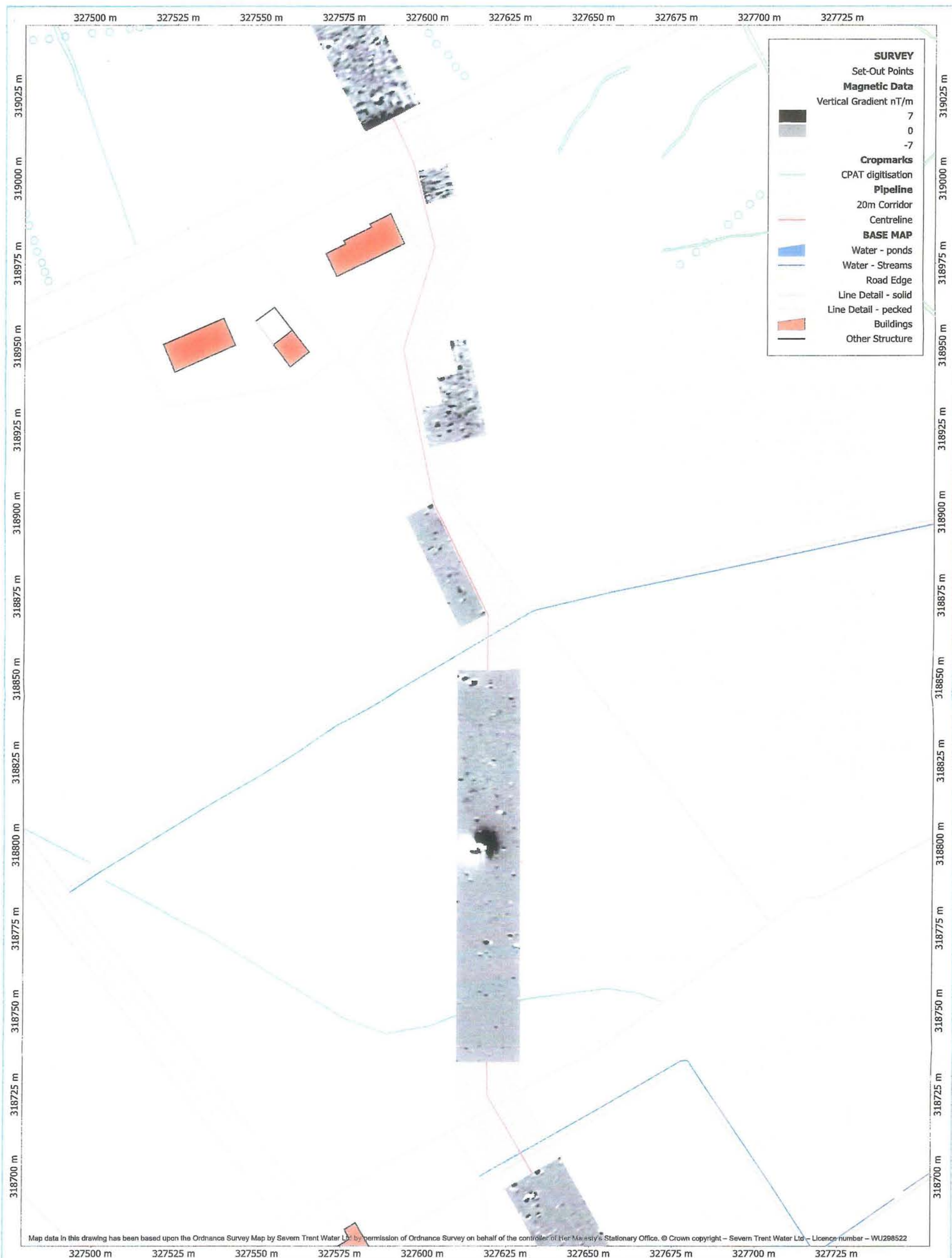
DWG 04: Northern Section



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Fig. 4 Geophysical survey: Central section, processed data



Project Name: Four Crosses. Project Code: FCS071. Client: Clwyd Powys Archaeological Trust for Severn Trent Water

Orthographic Scale: 1:1000  
Centre X: 327616.23 m File: G10 1  
Centre Y: 318862.69 m Printed: 12/4/2007 from ACER-2  
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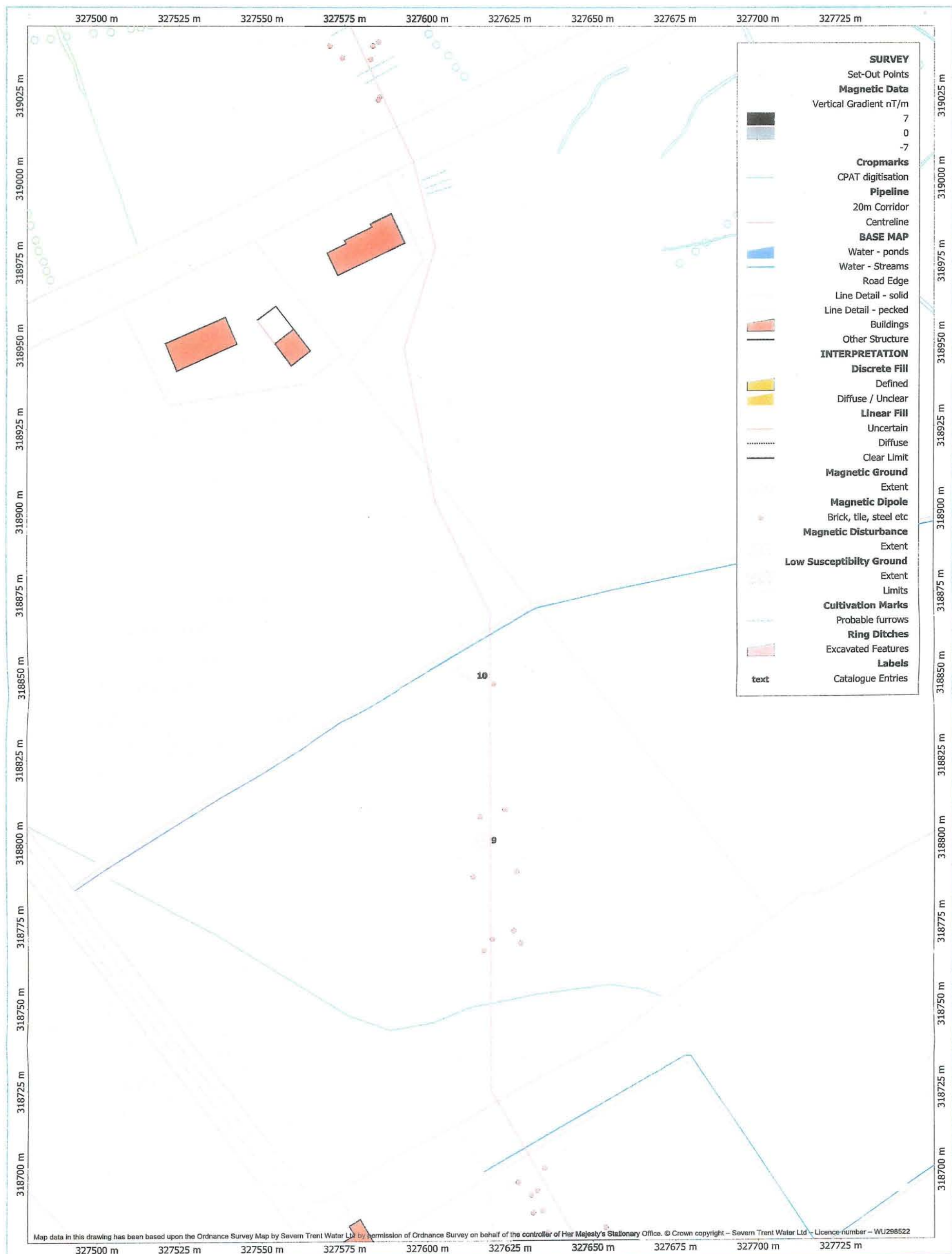
Total Field Vertical Magnetic Gradient

DWG 02: Central Section



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Fig. 5 Geophysical survey: Central section, interpretation



Project Name: Four Crosses. Project Code: FCS071. Client: Clwyd Powys Archaeological Trust for Severn Trent Water

Orthographic  
Centre X: 327616.23 m File: GIS 1  
Centre Y: 318862.69 m Printed: 12/4/2007 from ACER-2  
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Interpretation

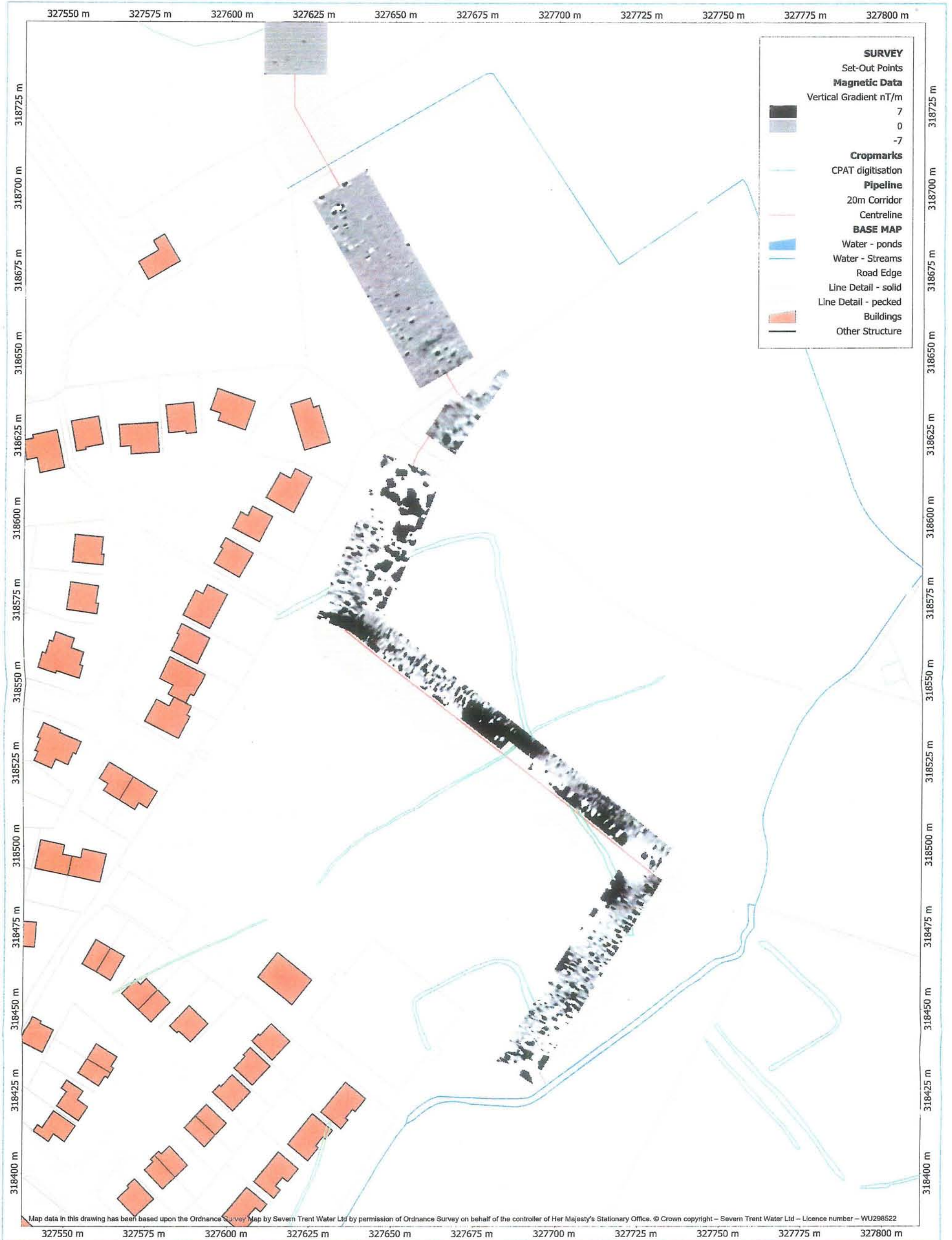
DWG 05: Central Section



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Fig. 6 Geophysical survey: Southern section, processed data



Project Name: Four Crosses. Project Code: FCS071. Client: Clwyd Powys Archaeological Trust for Severn Trent Water

Orthographic  
Centre X: 327674.44 m File: GIS 1  
Centre Y: 318567.15 m Printed: 12/4/2007 from ACER-2  
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Total Field Vertical Magnetic Gradient

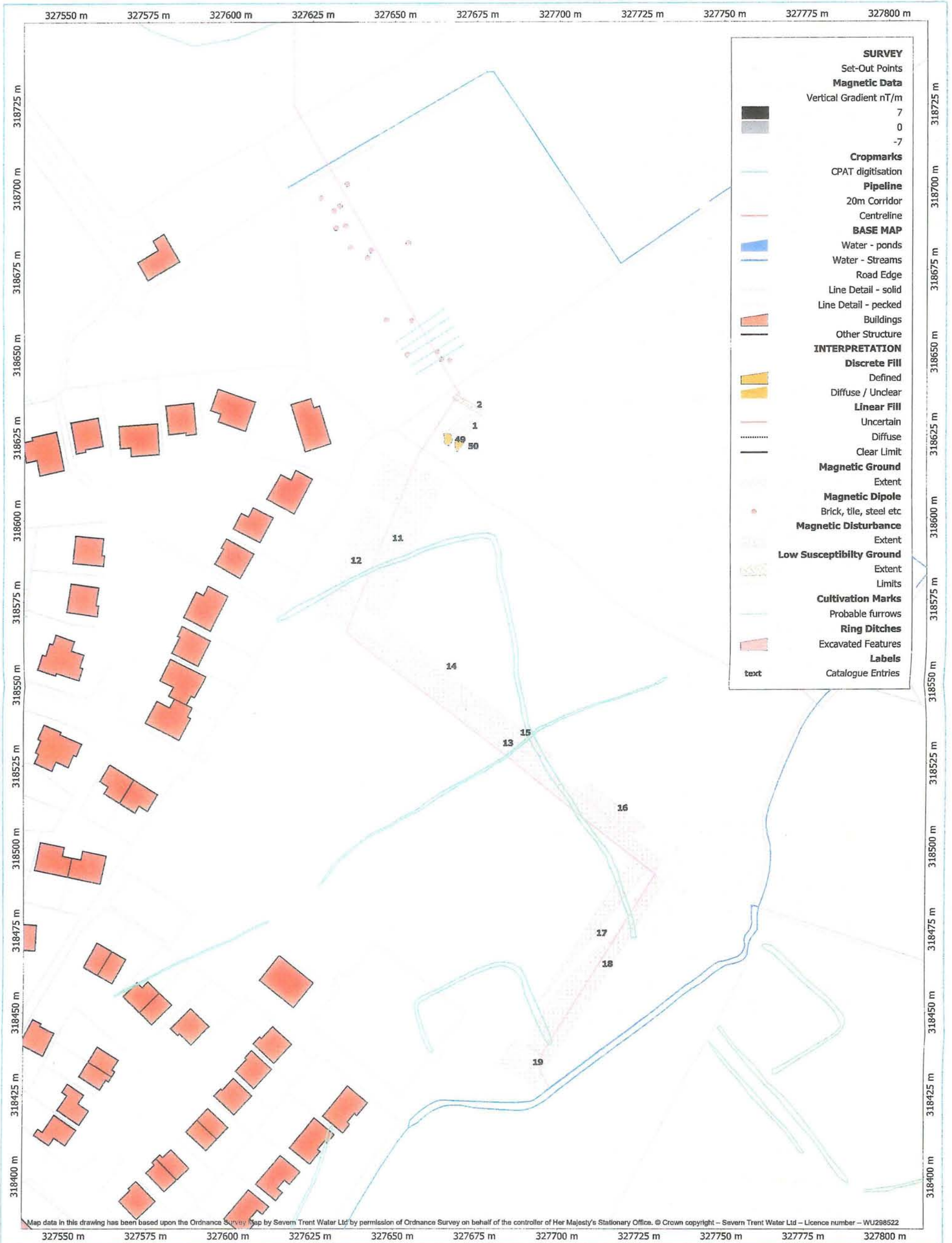
DWG 03: Southern Section



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Fig. 7 Geophysical survey: Southern section, interpretation



Project Name: Four Crosses. Project Code: FCS071. Client: Clwyd Powys Archaeological Trust for Severn Trent Water

Orthographic Scale:  
 Centre X: 327674.44 m File: GIS 1  
 Centre Y: 318567.15 m Printed: 12/4/2007 from ACER-2  
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Interpretation  
 DWG 06: Southern Section



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