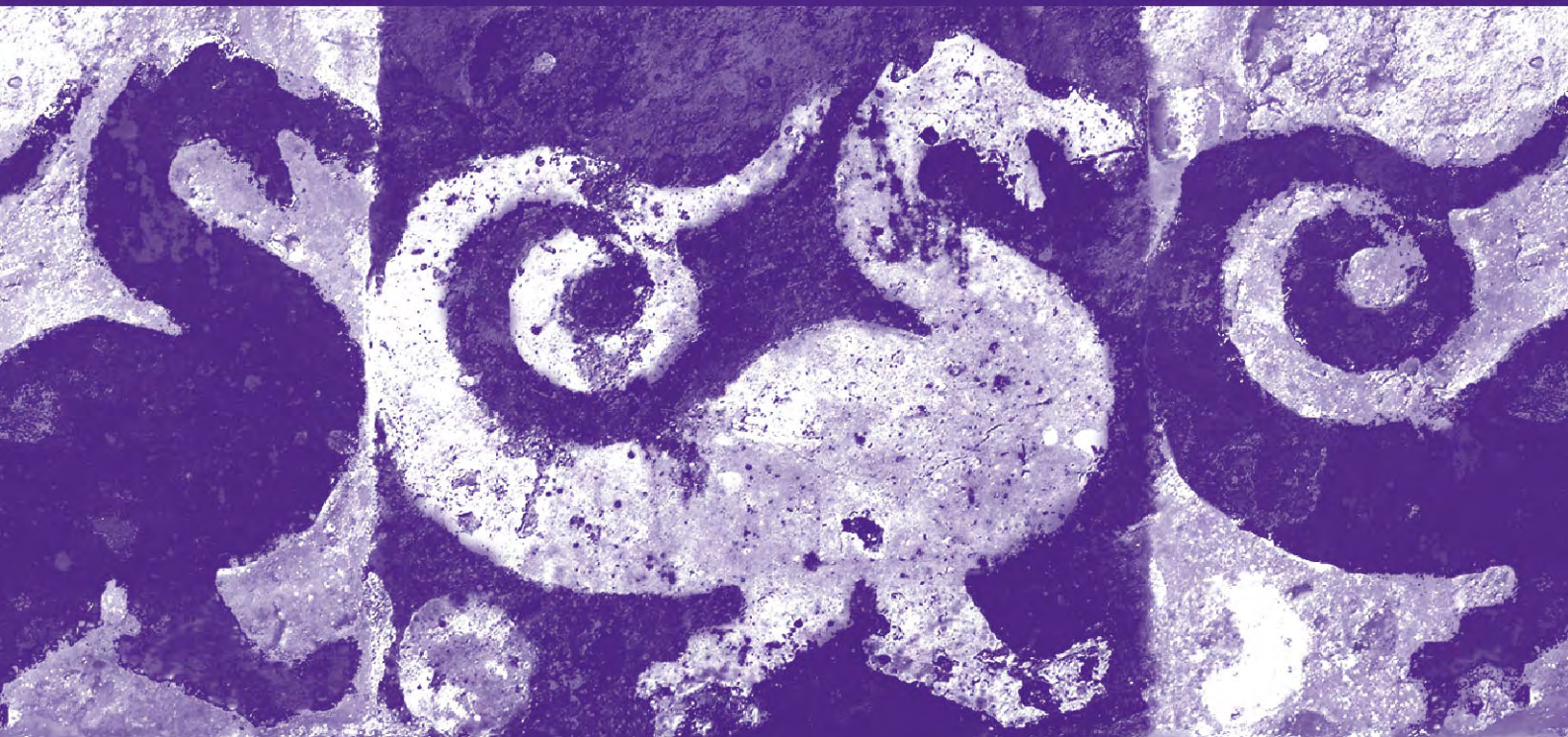


**COSMIC+ RISK ASSESSMENT  
OF SIX SCHEDULED ANCIENT  
MONUMENTS IN SOUTH-EAST  
WORCESTERSHIRE  
(WT 212, 215, 217, 220,  
287 and 288)**





COSMIC+ RISK ASSESSMENT OF  
SIX SCHEDULED ANCIENT  
MONUMENTS IN SOUTH-EAST  
WORCESTERSHIRE

Darren Miller

Illustrations by Richard Bradley

26<sup>th</sup> August 2010

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Project 3409  
Report 1763



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# COSMIC+ Risk Assessment of six Scheduled Ancient Monuments in South-East Worcestershire

**Darren Miller**

## 1. Introduction

Between December 2009 and May 2010, the Field Section of the Worcestershire Historic Environment and Archaeology Service assessed the risk posed by cultivation and related factors to archaeological sites on four holdings in south-east Worcestershire (Fig 1). The assessments were commissioned by the owners of each holding (with support from Natural England) and were designed to inform proposed applications for Higher Level Stewardship (HLS). Most of the sites were known from cropmarks recorded on National Monument Record plots. They included six Scheduled Ancient Monuments, as shown on Table 1 and on Figures 2-10.

The assessments were based on the COSMIC (Conservation of Scheduled Monuments In Cultivation) model developed by Oxford Archaeology. This is based on established principles of risk assessment and previous work by archaeologists and agronomists (OA 2006). In essence, it provides a means of quantifying the risk of truncation to known archaeological sites. The probability of truncation is addressed by scoring management and intrinsic (topographical) factors, while the potential consequences of truncation are addressed by scoring the archaeological significance of each site. The final risk scores produced by the model are related to five risk levels, as shown on Table 1. The assessments followed the model but enhanced it by undertaking additional fieldwork on selected sites, by considering different methods of cultivation within crop rotations, and by revising the criteria used to assess archaeological significance; the additional elements (COSMIC+; WHEAS 2009a-d).

The results were presented in four reports, one for each holding (Miller 2010a-d). The present report is extracted from those reports and covers the six Scheduled Ancient Monuments shown in Table 1.

SAM	Name	Final risk scores and risk levels				
		Minimal 0-30	Low 30-40	Moderate 40-50	High 50-60	Serious 60+
WT212	Settlement site north-east of Kinsham	74.5 in Spires North			28.5 in Wise Acre	
WT215	Enclosures and ring ditches west of Crashmore Lane, Overbury	77 in Lynch Piece			70 in Perks	
WT217	Cursus and trackways north of Oaklands Farm, Wick	33 in Barracks A			30.5 in Barracks B	
WT220	Double-ditched enclosure south of Robin's mill, Kemerton	74.5				
WT287	Enclosures north-north-east of Fernhill Farm, Charlton	40.5				
WT288	Settlement site north-east of Fernhill Farm, Charlton	39				

*Table 1: Scheduled Ancient Monuments assessed in COSMIC+ assessments*

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## 2. Results

### 2.1 WT212: Settlement site to the north-east of Kinsham

WT212 occupies two land parcels, a field called Spires North and half of a field to the west called Wise Acre (Figs 2 and 3). Like all the SAMs covered in this report, the area was scheduled on the basis of cropmarks shown on aerial photographs. The main cropmarks in Wise Acre and Spires North suggest a pit alignment and rectangular enclosures linked by a sinuous holloway. The holloway appears to cut the pit alignment. Other cropmarks in Spires North are indicative of a circular enclosure, a roundhouse, and a cluster of pits.

In 1994, sample trenching to the north of Spires North identified part of an Anglo-Saxon sunken-featured building (Fagan *et al* 1994). In 1998, cropmarks in the north of the field were confirmed by geophysical survey, and part of the holloway, an enclosure ditch, and another sunken-featured building were exposed in a sample trench (Bellamy 2001). The finds assemblage included sixty-seven sherds of Anglo-Saxon pottery and four sherds of Iron Age pottery.

COSMIC+ fieldwork comprised the excavation of twelve test pits (each measuring approximately 0.30 x 0.30m), followed by magnetometer survey in four sample grids (each measuring 30 x 30m) and the excavation of three sample trenches (each 11.50m long by 1.30m wide). Detailed results of the fieldwork are presented in Appendix 1.

During the fieldwork, a thin scatter of Roman pottery was observed along the west side of Spires North. This may indicate a hitherto unrepresented phase of Roman activity. No Roman pottery was observed in Wise Acre, however, implying that the enclosures in this field are of Iron Age or earlier date. In both fields, the geophysical survey identified anomalies corresponding to the cropmarks. In two of the trenches (Trenches 6 and 16), the anomalies proved to represent features. One feature (a pit in Trench 6) produced a single sherd of handmade, probably Iron Age pottery and 291g of animal bone. However, no features were found in the other trench (Trench 7) and this implies that that former cultivation has truncated (reworked) features but left properties within the topsoil and subsoil that produce cropmarks and anomalies. Evidence from the test pits and trenching indicates that this truncation is not related to current cultivation practice; however, information collected on former land management regimes indicates that deep ploughing was undertaken in the past to establish potatoes and sugar beet crops and this has almost certainly truncated archaeological deposits in this land parcel.

The final risk scores shown in Table 1 reflect the high significance of the site and the risks posed by the differing cultivations currently practiced across these two fields. In Spires North, three combinable crops are established by minimum tillage but every fourth year, potatoes are established after ploughing to a depth of ten to twelve inches (25-30cm). The minimum tillage presents a low risk of further truncation, but the deeper ploughing for potatoes, combined with soil loss during harvesting, presents a serious risk of truncation of the monument. This will now be addressed by removing potatoes from the rotation as part of an HLS agreement informed by this project. In Wise Acre, combinable crops are established by minimum tillage and shallow ploughing. Although, as noted above, evidence indicates that former cultivations have truncated deposits in this field, the current system presents a minimal risk and no requirement for a change in land management has been identified.

### 2.2 WT215: Enclosures and ring-ditches west of Crashmore Lane, Overbury

WT215 once covered four fields called Lynch Piece, Perks, Top Heath and Bottom Heath. The NMR plot shows sites in all four fields (Fig 2) but the southern sites, in Top Heath, Bottom Heath and at the southern end of Perks, were removed without record during the course of quarrying undertaken in the 1980s. The remaining sites comprise two pit



alignments in Lynch Piece and an enclosure, straddling Lynch Piece and Perks and these formed the focus of the COSMIC+ assessment in these two land parcels (Fig 4).

In each field three test pits were excavated, one 0.30 x 0.30m magnetometer grid was surveyed, and one 10m-long sample trench was excavated. Detailed results of the fieldwork are presented in Appendix 1.

The results were clear and consistent, in that the geophysical anomalies recorded corresponded to the cropmarks and were found to represent features. The enclosure straddling Lynch Piece and Perks was confirmed, although parallel ditches were found in one trench (Trench 15), suggesting two phases of enclosure (probably Iron Age, in view of the absence of Roman pottery in both trenches and in the ploughsoil). The pit alignment in Lynch Piece was also confirmed (in Trench 14); however, no dating was recovered and the pits had evidently been truncated and reworked (by cultivation) as they were very shallow, and one of them had been contaminated or may be later in date as it contained a sherd of 18<sup>th</sup> century pottery and a fragment of post-medieval brick.

Both Lynch Piece and Perks are managed in a similar way to Spires North, except that salad onions sometimes take the place of potatoes. The risk presented by potato cultivation is serious in both fields. The risk from salad onion cultivation is moderate in Lynch Piece and low in Perks, while the risk from other cultivations is low in both fields. In this case, mitigation as part of the HLS agreement will take the form of partial reversion (50m strips along both sides of the boundary between Lynch Piece and Perks) ensuring no further truncation.

### 2.3 **WT217: Cursus and trackway north-west of Oakland Farm, Wick**

The area included in Scheduled Monument WT217 covers two adjacent fields called Young Yard and Barracks A, although the cropmarks that prompted the scheduling actually cover Barracks A and part of a field to the east called Barracks B (Figs 5 and 6).

What appeared to be the most significant cropmarks lay within Barracks B, just outside the scheduled area (Fig 6). They suggest ditches on north-west to south-east alignments that turn inwards to form a terminus at the south-east end. This shape was thought to represent the end of a Neolithic cursus. Since the area was scheduled, the farmer has found a Neolithic axe in the north of Barracks A. This was taken as further evidence of Neolithic activity. The other cropmarks extend across Barracks A and Barracks B (Fig 6). They suggest a series of ditches on roughly parallel, east-west alignments. They were interpreted as the flanking ditches of successive trackways.

The fieldwork began with the excavation of eight test-pits, four in Barracks A and four in Barracks B. The apparent cursus in Barracks B was then targeted for additional fieldwork. Two 30 x 30m magnetometer grids were surveyed, and three sample trenches were excavated (between 9.6m and 13m long) ensuring that both sides of the putative cursus and its terminus were investigated. However, neither geophysical survey nor sample trenching produced any evidence to substantiate the cropmarks. Some periglacial features were identified, but none of them corresponded to cropmarks. No artefacts were recovered. No fieldwork was undertaken to investigate the trackways since these were felt to be less significant than the putative cursus. Detailed results of the fieldwork are presented in Appendix 1.

Since the area was scheduled, both Barracks A and Barracks B have been planted with cereals, beans, onions, and sugarbeet, although no sugarbeet has been planted recently. Both fields are ploughed but not often and not as deeply as other fields on the holding. Both fields are also subsoiled but not frequently (about once every eight years). Although erosion events have been recorded and sugar beet cultivation does present a high risk of truncation, only a handful of sugar beet crops will have been established over the period this crop was included in the rotation, and it is therefore felt to be unlikely that any ditches in Barracks B would have been entirely ploughed out since the photographs were taken in 1967. On the balance of

evidence, it therefore appears most probable that the cropmarks are misleading and that their original interpretation is incorrect, however, it remains a possibility that shallowly surviving features could have been entirely ploughed away and that a cursus was present but no longer survives.

In the light of the non-presence (or non-survival) of the cursus, the final risk scores shown in Table 1 have been produced in relation to the trackways represented by the other cropmarks. These features are at low risk, partly because of their limited archaeological significance but also because the fields are ploughed less deeply. No mitigation is therefore identified in the proposed HLS agreement.

#### 2.4 **WT220: Double ditched enclosure, south of Robins Mill, Kemerton**

WT220 occupies a single field called Troughters. The cropmarks show a sub-rectangular enclosure (double-ditched along two sides) with two small annexes and a similar-sized enclosure to the south-west (Figs 2 and 7). The field was fieldwalked by the South Worcestershire Archaeology Group in 1988 and produced heavily abraded Roman Severn Valley ware, three sherds of Iron Age pottery, and many Neolithic or Bronze Age flints, including four Bronze Age scrapers, cores and flakes.

The fieldwork began with the excavation of four test pits. The centre of the main enclosure, both annexes and the southern enclosure were then targeted for geophysical survey and sample trenching. Four 30 x 30m magnetometer grids were surveyed. Anomalies in the centre, the western annexe, and the small enclosure were targeted by means of three sample trenches (up to 10.5m long). The results were reasonably clear and consistent, although the central grid showed anomalies that did not appear as cropmarks, and not all the anomalies proved to be features. No artefacts were recovered, which is surprising in view of the Roman pottery recovered in 1998; however, since the previously recorded Roman pottery was heavily abraded this may represent manuring debris rather than occupation deposits. It is therefore suggested the enclosures and annexes are of Iron Age or possibly earlier date. Detailed results of the fieldwork are presented in Appendix 1.

In Troughters, the current crop rotation sees three combinable crops established by minimum tillage followed every fourth year by either spring onions or potatoes which are established by ploughing to a depth of ten to twelve inches (25-30cm). The minimum tillage for combinable crops presents a low risk of further truncation, cultivation for salad onions presents a moderate risk and the deeper ploughing for potatoes, combined with soil loss during harvesting, presents a serious risk of truncation of the monument. In this case, mitigation as part of the HLS agreement is proposed to take the form of whole-field reversion thus removing any risk arising from cultivation over the duration of the HLS agreement.

#### 2.5 **WT287: Enclosures north-north-east of Fernhill Farm, Charlton**

WT287 comprises several sites occupying the western half of a field called Hanging Bank (Figs 8 and 9).

Cropmarks near the southern boundary are indicative of two elongated rectangular ditched enclosures cut by a circular ditch. The enclosures are adjacent and oriented on the same north-west to south-east axis. The northern enclosure is defined by a single ditch. The southern enclosure is defined by two sets of ditches and clearly extends into the adjacent field (Rick Yard). The circular ditch was interpreted as the quarry ditch of a Bronze Age barrow. The northern enclosure was interpreted as a possible Neolithic mortuary enclosure.

Another set of cropmarks straddles the boundary between Hanging Bank and a field to the west called North Foxy. The cropmarks suggest a large rectangular enclosure on an east-west axis, a ditch running south from the east end of the enclosure, and several pits. These cropmarks were thought to represent part of a late prehistoric or Roman settlement.

To begin with, four test pits were excavated across the west half of the field. The cropmarks near the southern boundary were then investigated by means of one 30 x 30m magnetometer grid and one 16m long sample trench. The geophysical anomalies suggested a different pattern of ditches to that described above. A sample trench excavated across a linear anomaly exposed a substantial ditch. It would therefore seem that the plotted cropmark evidence does not reflect the buried deposits and cannot bear much interpretation. However, they clearly indicate a site of some kind, and as no Iron Age or Roman pottery was found in the sample trenches (or on the surface) an early prehistoric date remains possible.

In the other area of cropmarks straddling the field boundary, geophysical survey in one 30 x 30m grid supported the evidence of the cropmarks. Strong anomalies defined the east end of the rectangular enclosure, the ditch to the south, and the pits to the east. The survey also identified other internal and external features. Two sample trenches were excavated across the rounded corner of the rectangular enclosure. The ditches were exposed but no other features were found and no artefacts were recovered; the absence of Roman pottery possibly being indicative of an Iron Age or earlier date for this site.

Finally, other cropmarks indicating sub-rectangular enclosures lie between the cropmarks described above. They were not investigated, and it is uncertain whether they are misleading, like the first group, or representative, like the second group. Detailed results of the fieldwork are presented in Appendix 1.

According to the assessment, all of these sites are at moderate risk. However, to a large extent, the final risk score reflected the management of the field at the time of the assessment, when it was in a rotation in which successive crops of leeks and salad onions were followed by two crops of cereals. This rotation was set to continue but soon after the assessment, a new tenant took over, and the fields will soon be managed quite differently. Some cereals and salad onions will still be grown but most fields will be planted with fennel or asparagus. The risk to the sites under this management will be low or minimal, and no mitigation will be required.

## 2.6 **WT288: Settlement site north-east of Fernhill Farm, Charlton**

WT288 comprises a discrete site in the centre of a field called Boat House Bank (Figs 8 and 10). NMR photographs show cropmarks indicating two or three closely-spaced enclosures and a dense cluster of over 70 pits. One enclosure is D-shaped. The other is more irregular and may represent a circular enclosure extended to the east. Rows of pits appear to define the western and northern extent of these features.

Four test pits were excavated around the cropmarks. Two enclosures and part of the cluster of pits were then investigated by means of one 30 x 30m magnetometer grid and two sample trenches (9.80m and 8.50m long). The anomalies identified in the geophysical survey corresponded to the cropmarks, and targeted anomalies were verified in two sample trenches. A further sample trench (12.20m long) was excavated across the west side of the D-shaped enclosure but found no corresponding ditches or other features. Several fragments of animal bone were recovered during this work, but no dateable artefacts. As noted above, with regard to WT212, 215, 220, and 287, the absence of Roman pottery can probably be taken to indicate a prehistoric date (in this case, morphology would suggest a mid to late Iron Age). Detailed results of the fieldwork are presented in Appendix 1.

According to the assessment, the risk to this site is low, and no mitigation is required. The risk will be lower still in the future, as the field will be managed in the same way as WT287 discussed above.

### 3. **Discussion**

COSMIC+ assessment has established that two of the six SAMs were at serious risk of truncation (WT215 and WT220) along with the eastern half of a third (WT212). Another SAM was at moderate risk (WT287), two SAMs were at low risk (WT217 and WT288) and half of one SAM was at minimal risk (the west half of WT212).

For the most part, the final risk scores and risk levels reflect management factors - the methods used to establish and harvest different types of crop - rather than intrinsic or archaeological factors. The SAMs at serious risk are in fields where potato crops are grown; the risks being associated with both deep ploughing to establish the crops allied to soil loss (erosion) during harvesting. The SAMs at low and minimal risk are in fields where combinable crops are established by shallow ploughing or disc/tine cultivation (minimum tillage). In the one SAM at moderate risk, leeks and onions are established by moderately deep ploughing and are harvested by hand, the latter leading to some soil loss.

The importance of management factors reflects the balance of the COSMIC model, and is reasonable enough, although it could be argued that factors that reduce the risk of truncation should be included as well. This is one of several criticisms that could be made of the current model. For example, in the writer's opinion, the scoring of some crops as more or less 'risky' in themselves is inconsistent and does not seem fully justifiable. This appears to overemphasise the risk some crops pose, while conversely the impact of subsoiling may be underestimated. Nevertheless, in each assessment undertaken so far, the model has clearly identified the most significant sites at the greatest risk. It has also allowed the effects of changes in management to be inferred with reasonable confidence. As described above, because of changes in management as a result of the assessment (and in two cases, as a result of a change in tenancy), all six SAMs will be at low or minimal risk of truncation for the foreseeable future once the holdings enter into Higher Level Stewardship. The same is also true of other unscheduled but equally significant sites on each of the four holdings. These are excellent outcomes and result as much from the co-operation of the farmers and land-managers and the work of their advisors from Natural England as they do to the effectiveness of the model.

### 4. **Conclusions**

The six SAMs described above are among dozens of archaeological sites assessed by WHEAS in recent COSMIC+ projects. The evidence and experience accumulated in these projects suggests that while the original COSMIC model (OA 2006) provides a reasonable means of assessing the risk of truncation to archaeological sites (as long as the fieldwork includes hand-excavated test pits), the results can be improved by undertaking additional fieldwork, by allowing for different methods of cultivation in crop rotations, and by revising the criteria used to assess archaeological significance. The COSMIC+ model incorporates these additional elements and, whilst there remains further scope for improvement, the enhanced approach provided has proved its worth by consistently identifying the most significant sites at greatest risk. Most importantly, the results of the surveys have informed management plans that will ensure that these sites are protected for the foreseeable future.

As well as achieving these primary aims, the COSMIC+ projects have produced a good deal of new archaeological information. At one level, the projects have provided a rare opportunity to investigate sites known wholly or mainly from cropmarks, and to test the quality of this evidence. In general, there was a good correspondence between cropmarks, geophysical anomalies, and excavated features. This is encouraging, as it shows that cropmarks provide a reasonable basis for assessment and interpretation. In a few cases, however, the cropmarks were shown to be unreliable or even misleading indicators of buried deposits (as in the case of the apparent cursus in WT217). At a more detailed level, the additional fieldwork has provided useful information on the character and date of each targeted site. In most cases, the information was limited (as with each of the SAMs described

above). However, all the sites are better known than they were, and some of them are much better known (e.g. a group of Roman sites on the south side of Bredon Hill above Comberton, reported in Miller 2010a).

## 5. References

Bellamy, P., 2001 *Kemerton, Worcestershire: Investigations by Time Team, Septmeber/October 1998*, Terrain Archaeology Report, **5032.1**

Fagan, L, Hurst, D, and Pearson, E, 1994 *Evaluation at Kemerton WRW*, Archaeological Service, Hereford and Worcester County Council, internal report, **153**

Miller, D, 2010a *COSMIC+ risk assessment of archaeological sites on Overbury Farms, Worcestershire*, Historic Environment and Archaeology Service, Worcestershire County Council, report **1763**

Miller, D, 2010b *COSMIC+ risk assessment of archaeological sites on the Kemerton Estate, Worcestershire*, Historic Environment and Archaeology Service, Worcestershire County Council, report **1759**

Miller, D, 2010c *COSMIC+ risk assessment of archaeological sites near Charlton, Worcestershire*, Historic Environment and Archaeology Service, Worcestershire County Council, report **1768**

Miller, D, 2010d *COSMIC+ risk assessment of archaeological sites near Wick and Crophorne, Worcestershire*, Historic Environment and Archaeology Service, Worcestershire County Council, report **1767**

OAU 2006 Conservation of Scheduled Monuments in Cultivation (COSMIC) for English Heritage and Defra (Oxford Archaeological Unit, unpublished document dated June 2006)

WHEAS, 2009a *Project Design. Erosion and Archaeology Risk Assessment for use in support of Higher Level Stewardship Applications (COSMIC+): Overbury Farms, Worcestershire*, Worcestershire Historic Environment and Archaeology Service, unpublished document dated 11<sup>th</sup> November 2009

WHEAS, 2009b *Project Design. Erosion and Archaeology Risk Assessment for use in support of Higher Level Stewardship Applications (COSMIC+): Kemerton Estate, Worcestershire*, Worcestershire Historic Environment and Archaeology Service, unpublished document dated 16<sup>th</sup> November 2009

WHEAS, 2009c *Project Design. Erosion and Archaeology Risk Assessment for use in support of Higher Level Stewardship Applications (COSMIC+): Land at Charlton (John Rodgman's), Worcestershire*, Worcestershire Historic Environment and Archaeology Service, unpublished document dated 16<sup>th</sup> November 2009

WHEAS, 2009d *Project Design. Erosion and Archaeology Risk Assessment for use in support of Higher Level Stewardship Applications (COSMIC+): Wick Grange and Lower Freelands Farm, Worcestershire*, Worcestershire Historic Environment and Archaeology Service, unpublished document dated 16<sup>th</sup> November 2009

## 6. Glossary and notes

*Buffer*: Soil or soils between *current cultivation* and known or inferred archaeological deposits. On all the sites described above, buffers are composed of *former cultivation*, but elsewhere, they might comprise alluvium, colluvium, or made ground. In the COSMIC+ model, buffers are defined as shallow (less than 10cm), moderate (10-15cm), deep (15-25cm)

or very deep (more than 25cm). The field summary sheets identify the minimum buffer in each field but also indicate both the range of values and the average (i.e. mean) value. Naturally, the depth of a buffer will vary according to the depth of cultivation (e.g. a buffer may be 20cm after ploughing for cereals but only 10cm after deeper ploughing for salad onions or potatoes). Buffers can also decrease as a result of soil loss through wind erosion, water erosion, and harvesting.

*Current cultivation:* Soil inverted or reworked by the last cultivation. It can be identified in the field and distinguished from *former cultivation* on the basis of colour, texture, and compaction.

*Former cultivation:* Soil beneath *current cultivation*, evidently inverted or reworked, but not by the last cultivation.

*Subsoil:* Archaeological term for soil above natural, formed by a combination of weathering and leaching. A lack of subsoil between *former cultivation* and *natural* indicates deep ploughing at some time in the past and constitutes evidence of *erosion*.

*Natural:* Archaeological term for parent material

*Slope, soil groups, and water erosion:* For each field, the model use slope categories and soil groups along with a figure for average annual rainfall to assess the risk of soil loss through water erosion. Slopes are categorised as steep (more than 7°), moderate (3-7°), or gentle (2-3°) and there is a separate category for level ground (less than 2°). In this connection, similar soils are classified as light (sand, loamy sand, sandy loam, sandy silt loam, silt loam); moderate (sandy clay loam, clay loam, silty clay loam, and silty clay); or heavy (silty clay and clay).

*Soil types and wind erosion:* In assessing the risk of soil loss through wind erosion, the model identifies five different soil groups, namely peats, silts/sands (sand, loamy sand, silty loam), loams (sandy loam, sandy silt loam, sand clay loam, clay loam, silty clay loam), sandy clay/silty clay and clay.

*Archaeological deposits:* material remains and traces of past human activity, often associated with artefacts and plant or animal remains. The term covers both positive features, such as walls and banks, and negative features, such as ditches and pits.

*Truncation, loss of information and significance:* In the present context, truncation means direct damage to archaeological deposits as a result of ploughing, disc/tine cultivation, and/or subsoiling. Truncation constitutes a loss of information. The extent of the loss is proportionate to the significance of the deposits. In the model, significance is assessed in terms of the survival and character of deposits and their relevance to current research agendas.

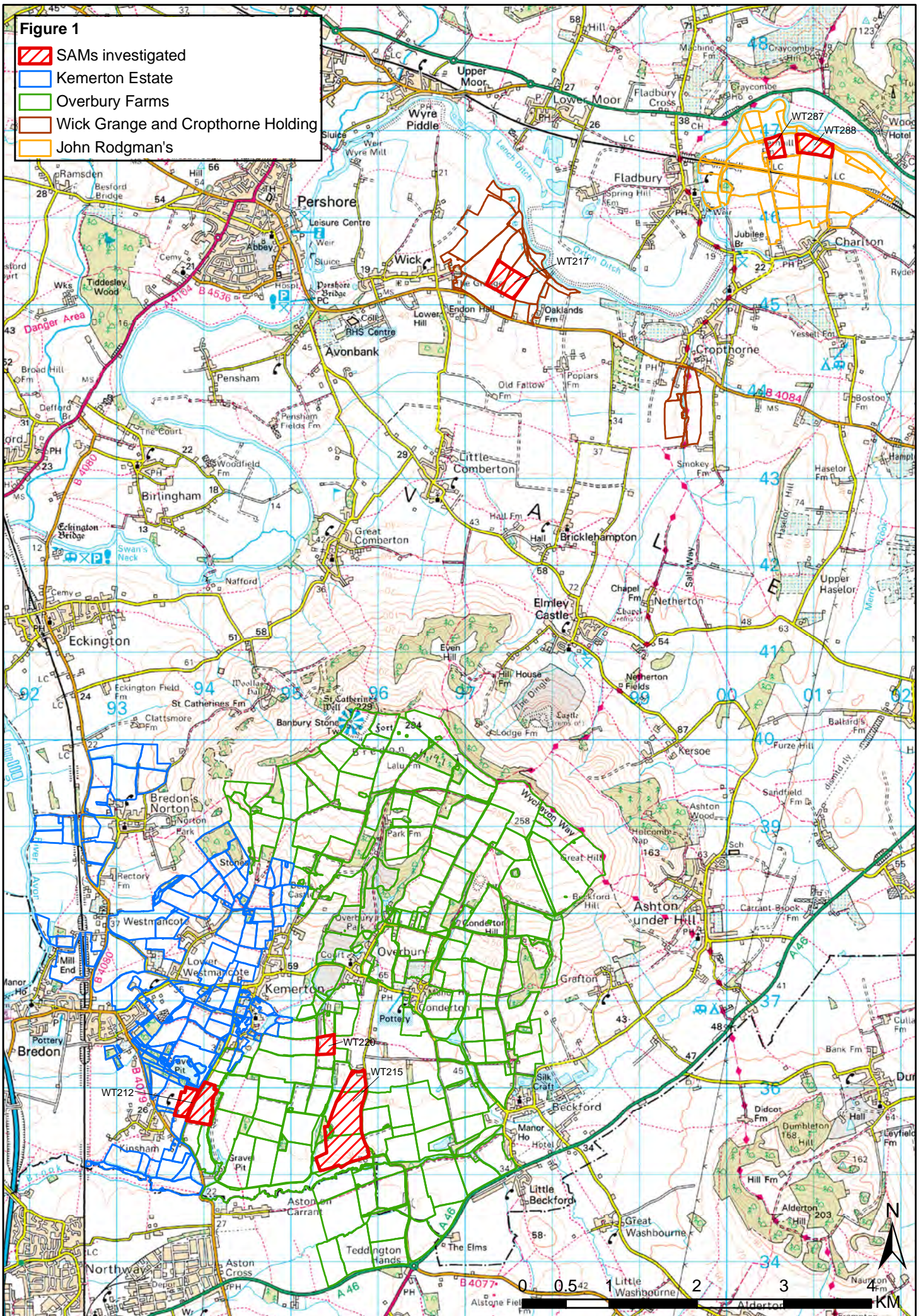
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## Figures

- Figure 1 Location map of Overbury Farms, Kemerton Estate, John Rodgman's holding, Wick Grange and Cropthorne holding, with SAMs highlighted
- Figure 2 Overbury Farms and Kemerton Estate, with insets showing areas shown on Figures 3, 4 and 7
- Figure 3 Spires North and Wise Acre, showing cropmarks, test pits, geophysical survey grids, and sample trenches
- Figure 4 Lynch Piece and Perks, showing cropmarks, test pits, geophysical survey grids, and sample trenches
- Figure 5 Wick Grange and Cropthorne holdings, with inset showing area shown on Figure 6
- Figure 6 Barracks A and Barracks B, showing cropmarks, test pits, geophysical survey grids, and sample trenches
- Figure 7 Troughters, showing cropmarks, test pits, geophysical survey grids, and sample trenches
- Figure 8 John Rodgman's holding, with insets showing areas shown on Figures 9 and 10
- Figure 9 Hanging Bank, showing cropmarks, test pits, geophysical survey grids, and sample trenches
- Figure 10 Boat House Bank, showing cropmarks, test pits, geophysical survey grids, and sample trenches



Figure 1

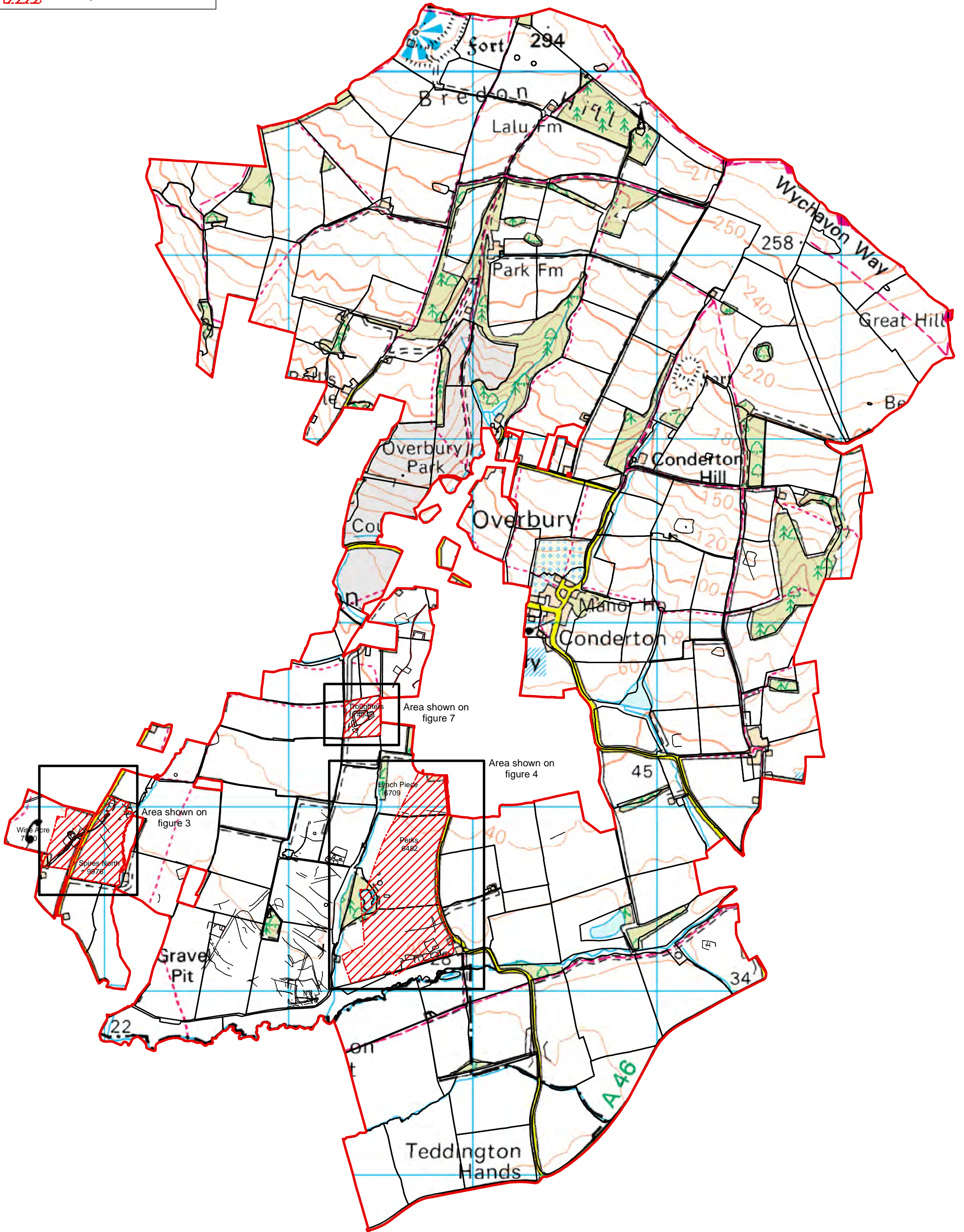
-  SAMs investigated
-  Kemerton Estate
-  Overbury Farms
-  Wick Grange and Crophorne Holding
-  John Rodgman's





**Figure 2**

-  Cropmark interpretation
-  WT212, WT215 and WT220



0 250 500 1,000 1,500 2,000 Metres



**Figure 3**

- ☒ Test pits
- ▭ Sample trenches
- ▬ Cropmark interpretation
- ▭ Geophysics grids
- ▭ WT212

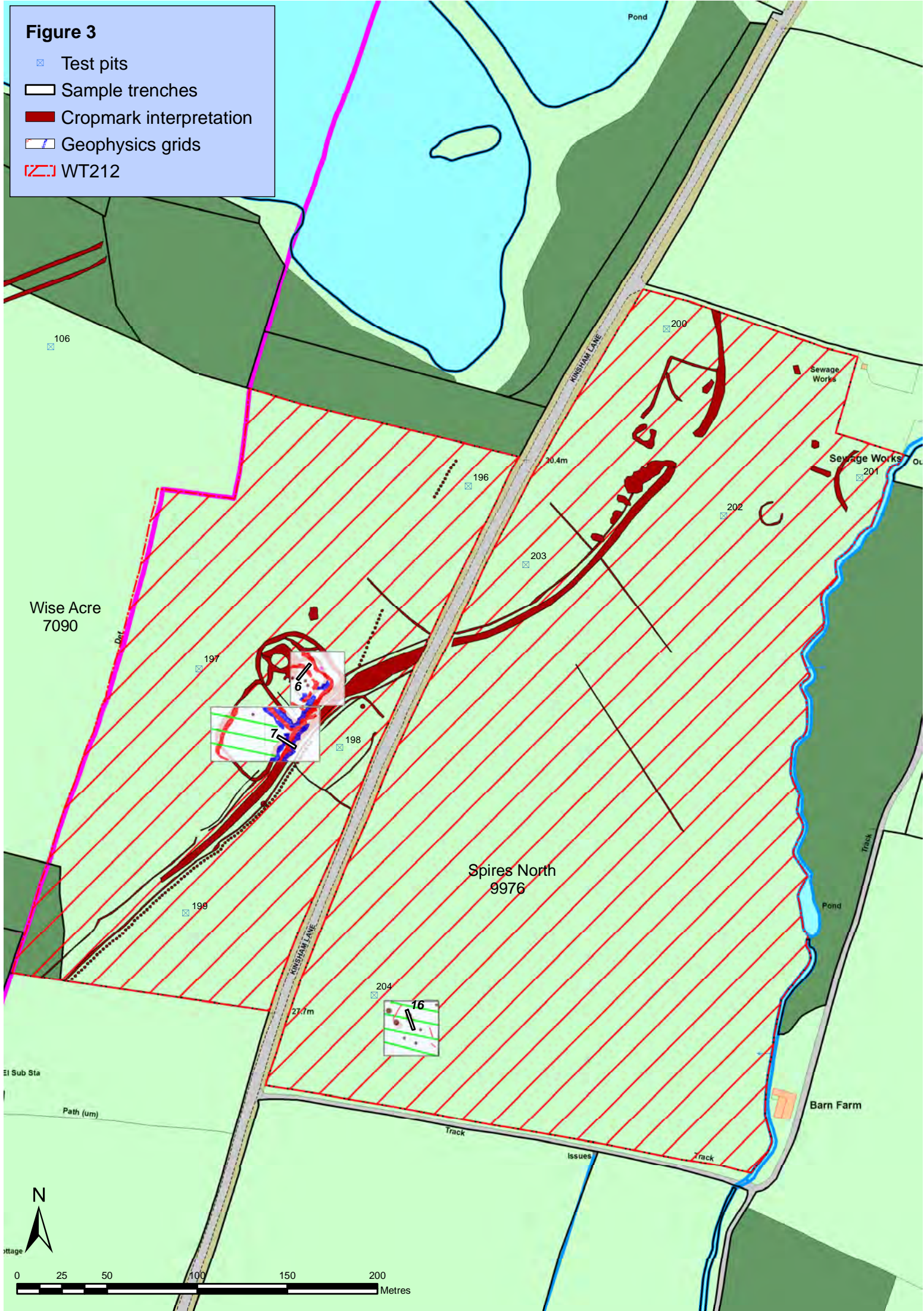
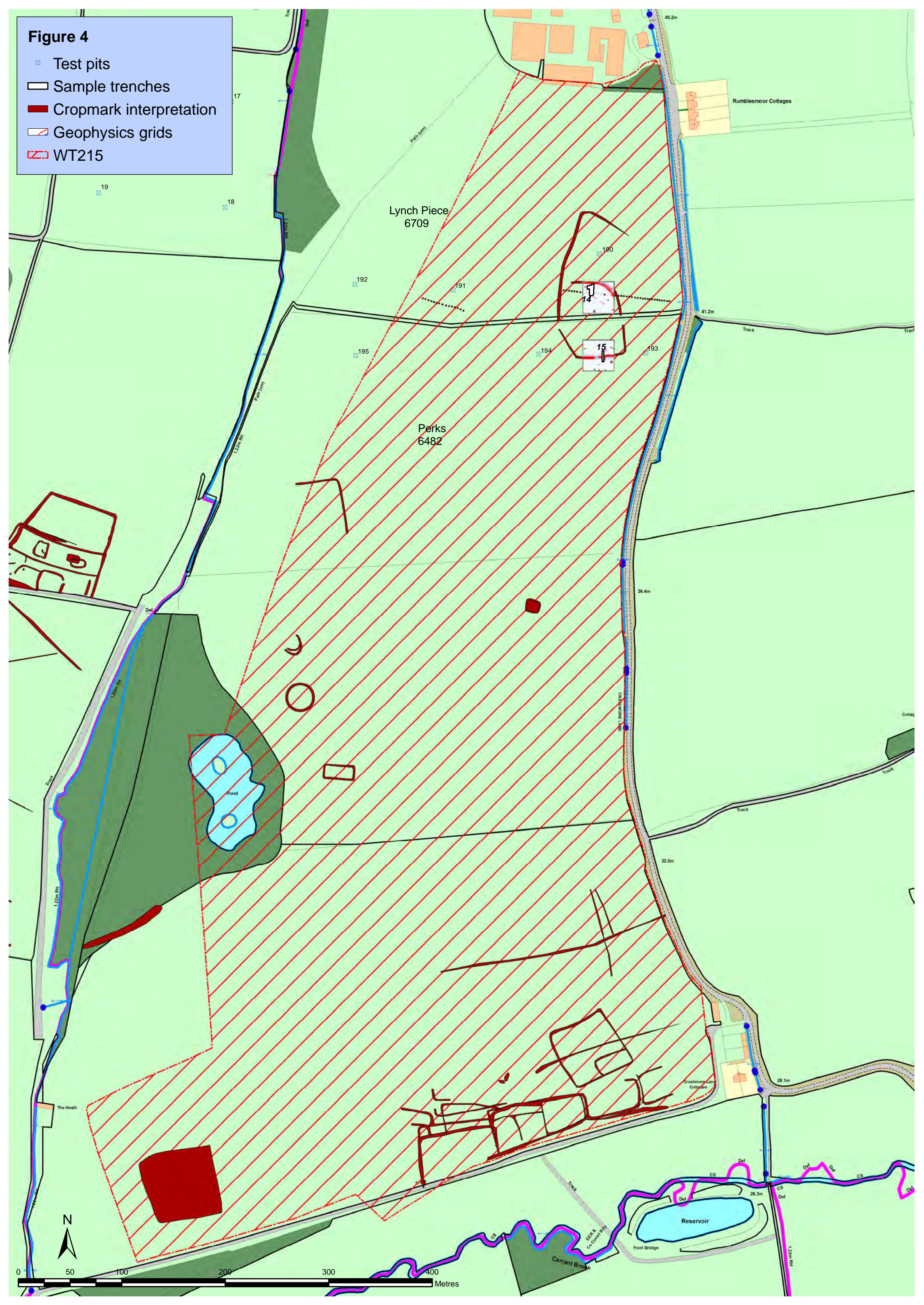




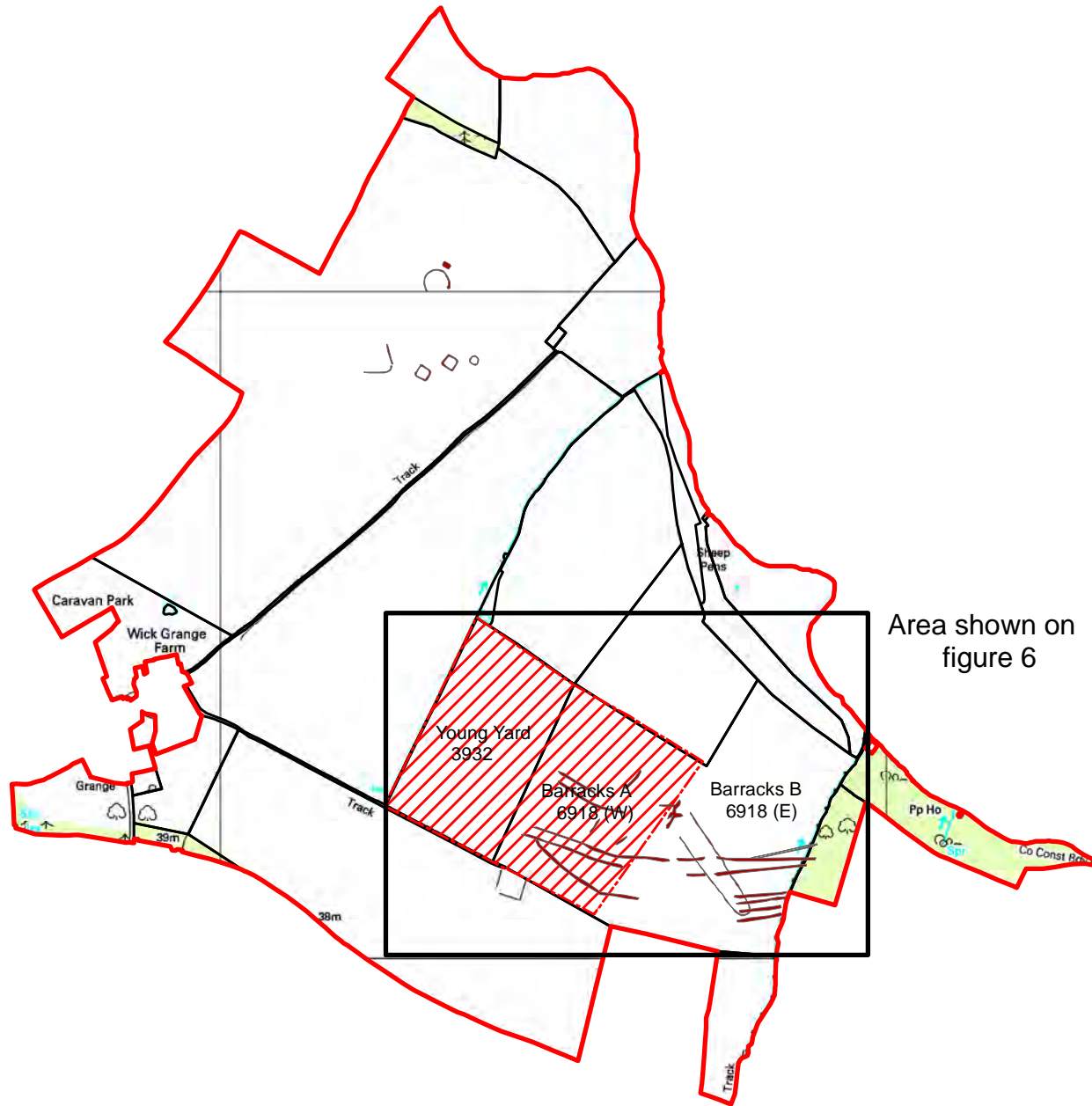
Figure 4

- Test pits
- Sample trenches
- Cropmark interpretation
- Geophysics grids
- WT215



**Figure 5**

-  Cropmark interpretation
-  WT217

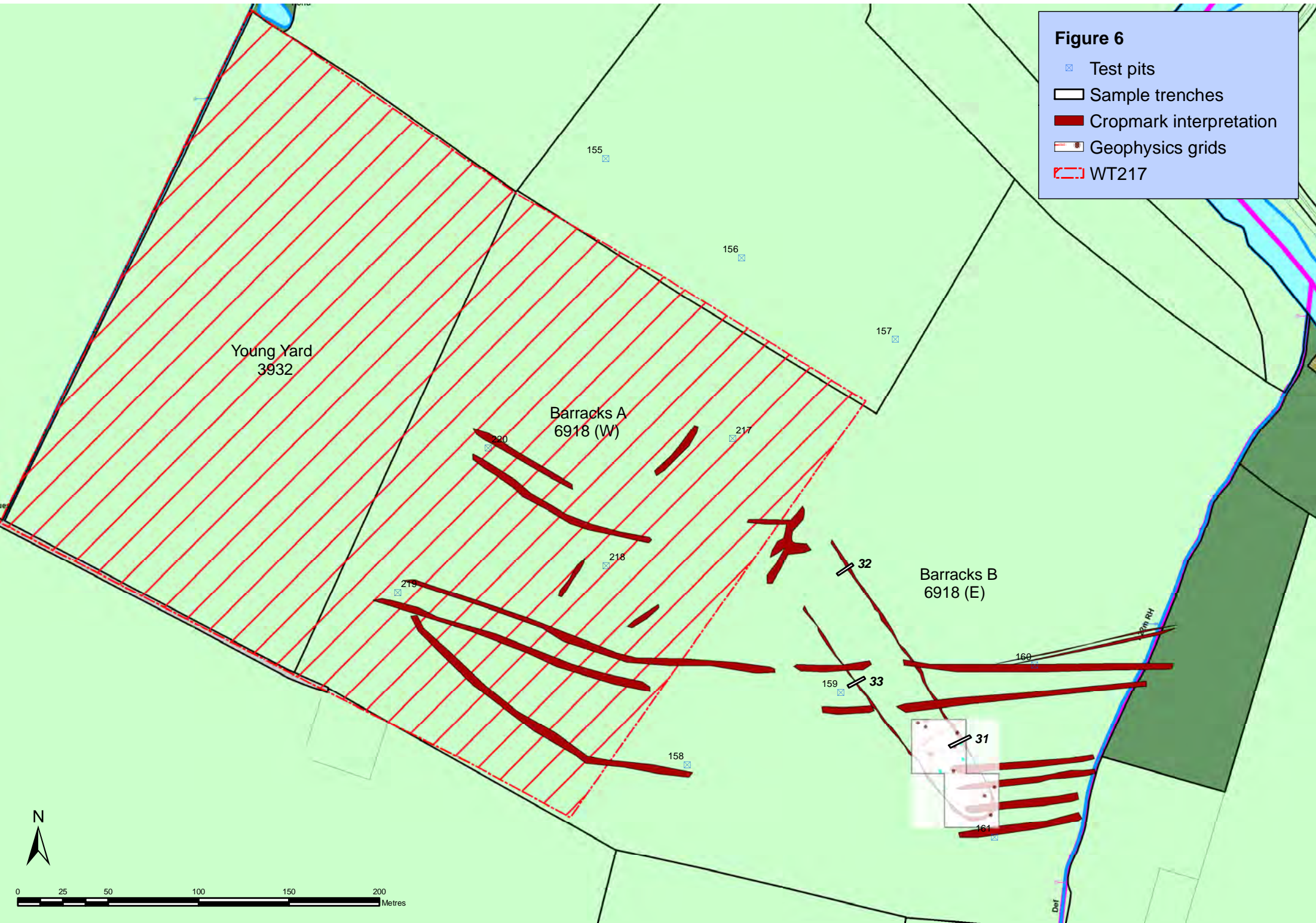


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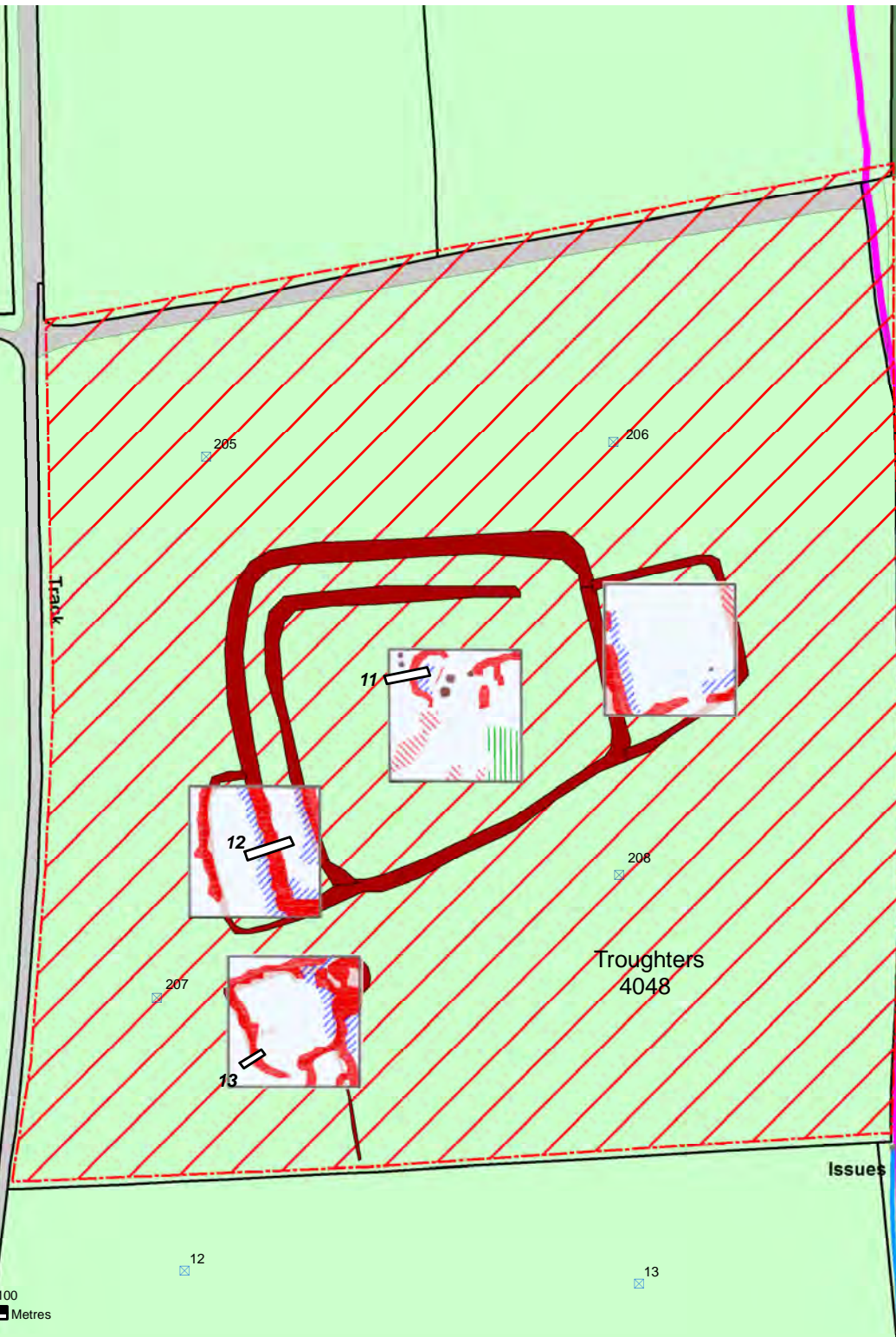
**Figure 6**

- ☒ Test pits
- ▭ Sample trenches
- █ Cropmark interpretation
- ▭ Geophysics grids
- ▭ WT217



**Figure 7**

- ☒ Test pits
- ▭ Sample trenches
- ▬ Cropmark interpretation
- ▭ Geophysics grids
- ▭ WT220

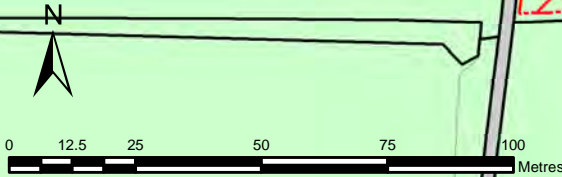


Track

1.22m RH

Troughers  
4048

Issues



205

206

208

207

12



13

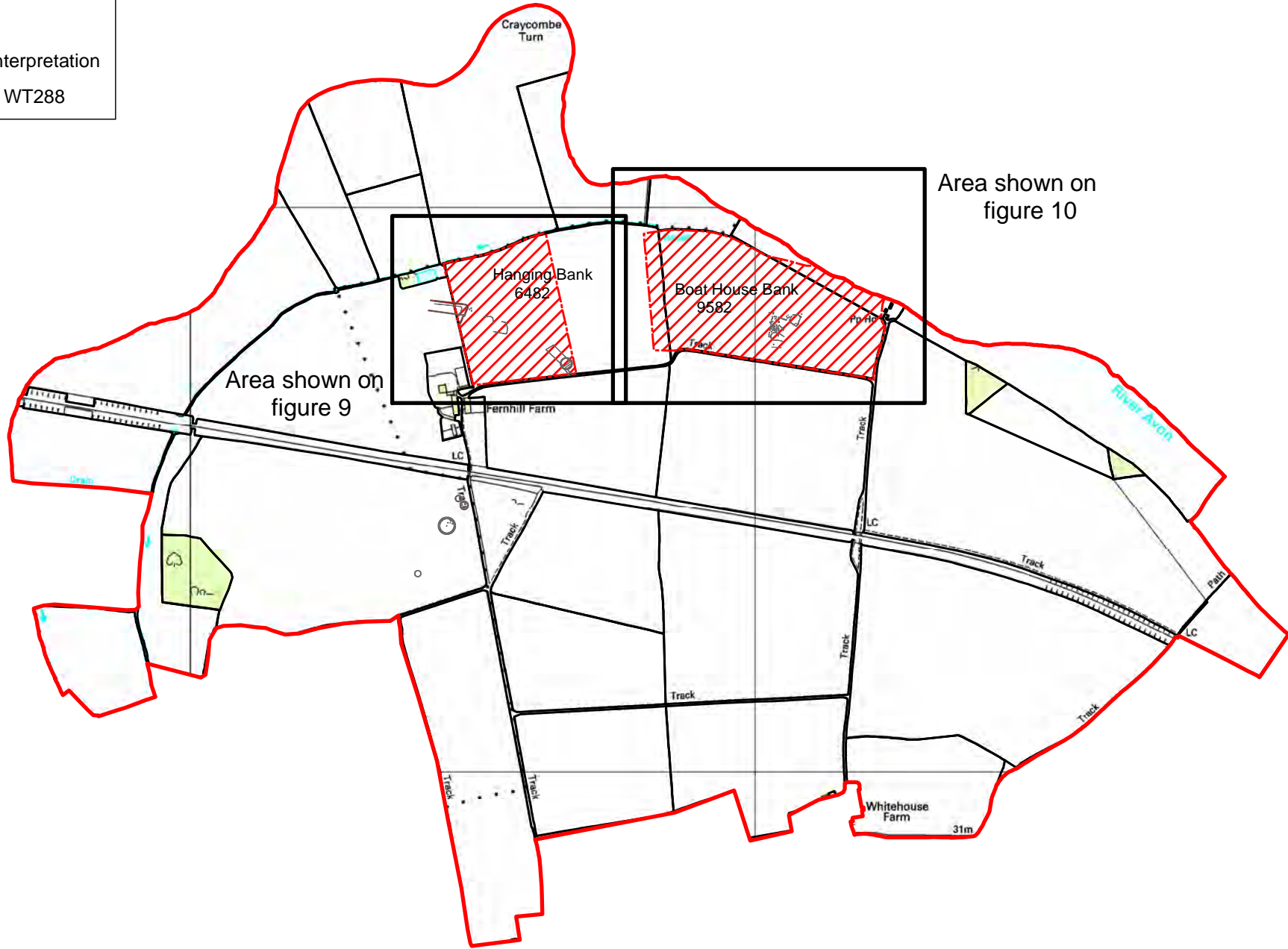
11

12

13

**Figure 8**

-  Cropmark interpretation
-  WT287 and WT288



0 125 250 500 750 1,000 Metres



**Figure 9**

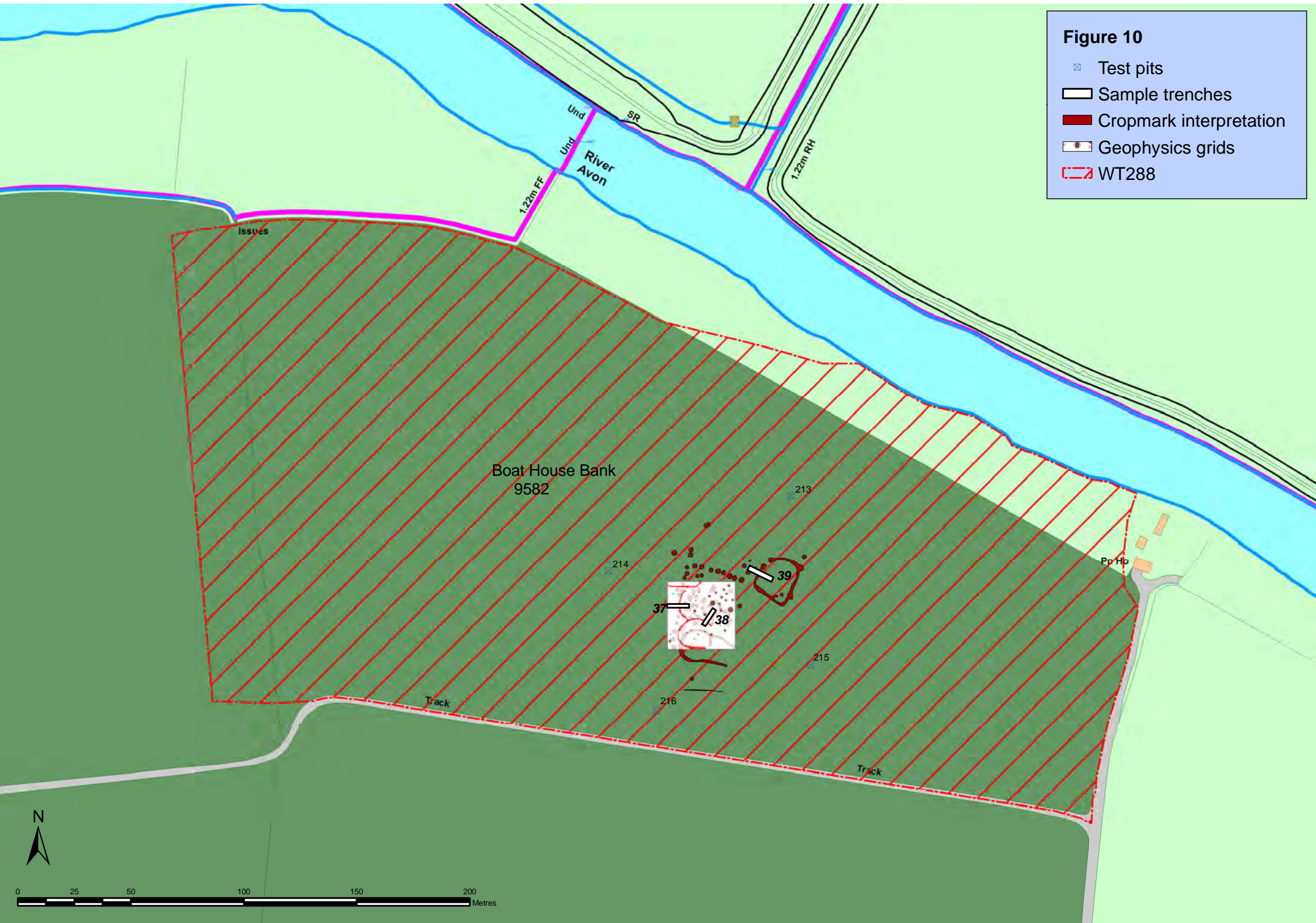
- ☒ Test pits
- ▭ Sample trenches
- Cropmark interpretation
- ▭ Geophysics grids
- ▭ WT287





**Figure 10**

- ☒ Test pits
- ▭ Sample trenches
- Cropmark interpretation
- ▭ Geophysics grids
- ▭ WT288



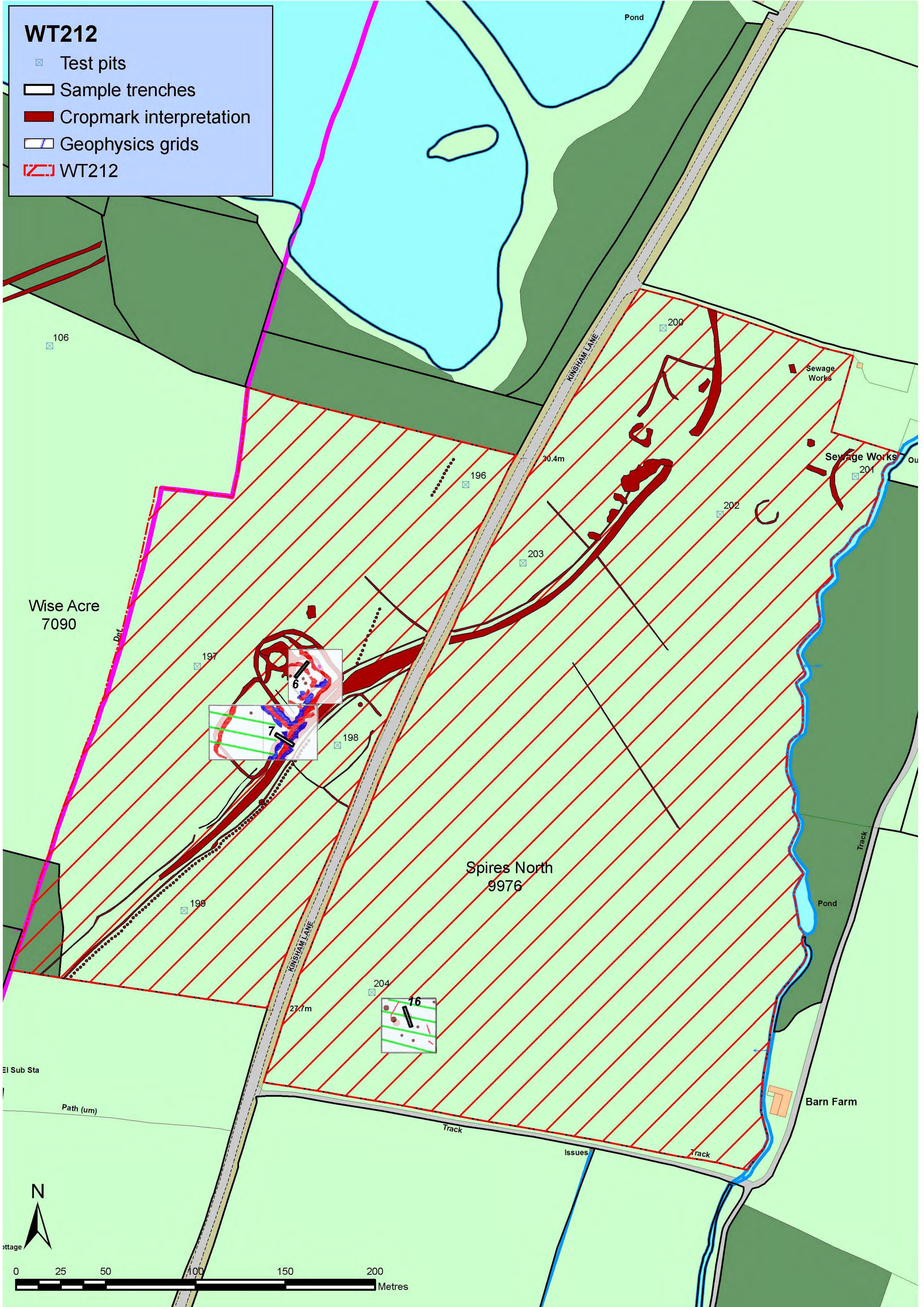


**Appendix**

WT212 ..... 1-18  
WT215 ..... 19-33  
WT217 ..... 34-48  
WT220 ..... 49-58  
WT287 ..... 59-69  
WT288 ..... 70-82

# WT212

- ☒ Test pits
- ▭ Sample trenches
- Cropmark interpretation
- ▭ Geophysics grids
- ▭ WT212



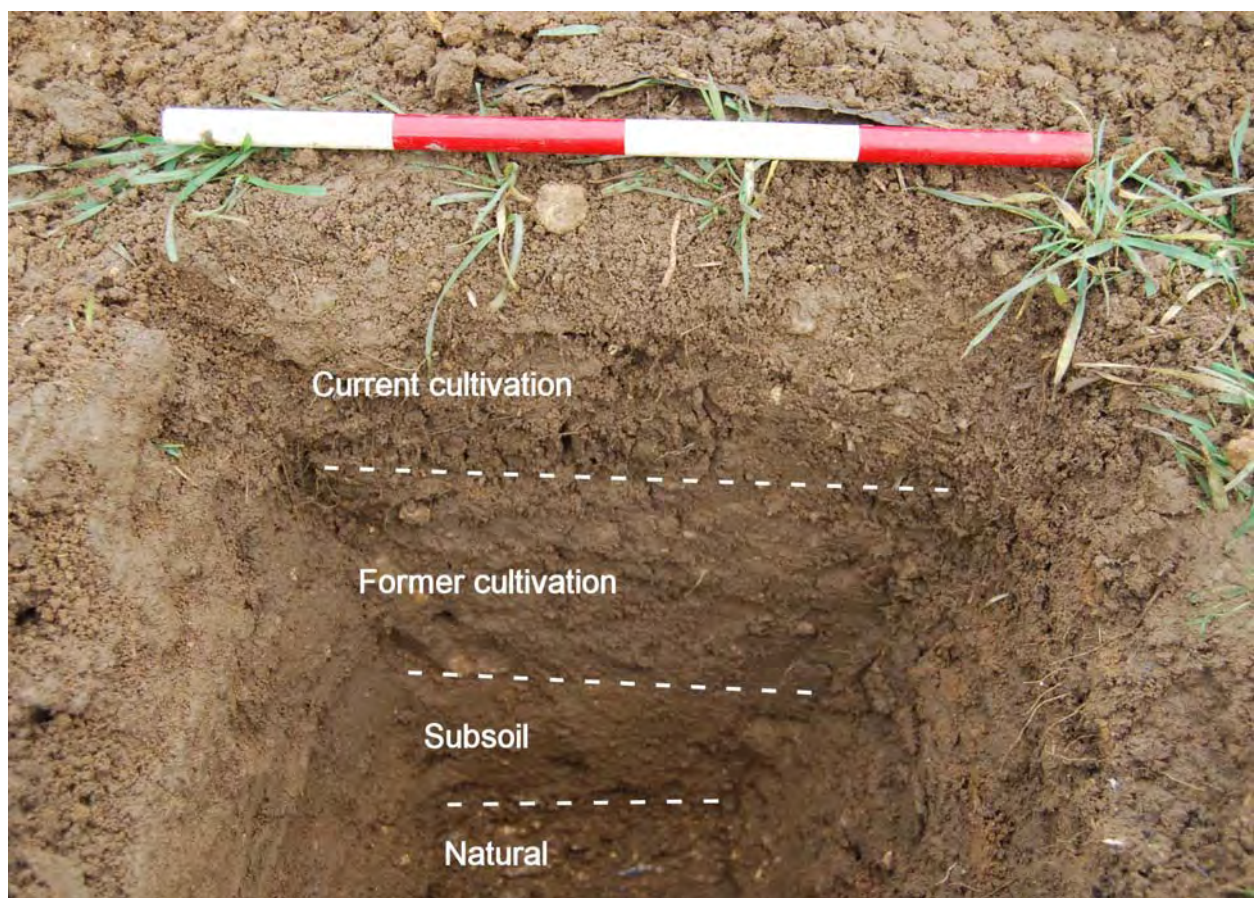
Wise Acre  
7090

Spires North  
9976

Barn Farm



Field 9976: Spires North (SAM 212)								
Test pits	200	201	202	203	204	Range		Average
						min	max	
Current cultivation	0.14	0.26	0.19	0.14	0.17	0.14	0.19	0.15
Former cultivation	0.21	n/a	0.14	0.16	0.11	0.11	0.21	0.16
Subsoil	0.19	0.42	0.17	0.11	0.22	0.11	0.22	0.17
Natural	Unex	Unex	Unex	>0.03	>0.05			
<b>Minimum buffer: 0.16</b>								
<b>Notes</b>								
1) Test pit 201 excavated outside ploughed area so not included in averages.								
2) Thin scatter of Roman pottery observed on surface along west side of field								
<b>Slope type:</b> Level ground								
<b>Soil type in relation to water erosion:</b> Light								
<b>Soil type in relation to wind erosion:</b> Silts/sands								



Test pit 203 facing north (scale 0.40m)

## WT212

### Spires North (9976)

#### Trench 16

Maximum dimensions: Length: 11.5m

Width: 1.30m

Depth: 0.50m

Orientation: N – S

Context	Classification	Description	Depth below ground surface
1600	Ploughsoil	Loose mid greyish brown silt loam with c 5% light yellowish white sand. Occasional small to medium limestone fragments. One sherd of handmade, possibly Iron Age pottery (10g); 96 pieces of animal bone, predominantly dog (291g).	0-0.30m
1601	Subsoil	Loose mid brown silt with c 5% light yellowish white sand and few small limestone fragments.	0.30-0.50m
1602	Natural	Light reddish brown medium sand with abundant small limestone fragments. Few pockets of mid brown silt.	0.50m+
1603	Fill of 1604	Firm mid brown silt with 5% light yellowish white fine sand. Few small limestone fragments and fire-cracked stones.	0.40m
1604	Pit	Partially exposed feature c3.30m wide. Interpreted as a pit because of correspondence with sub-circular geophysical anomaly.	0.40m



*Trench 16 facing south with pit 1604 in foreground (1m scale)*

**COSMIC Assessment Sheet – Land Parcel**

9976

**Field Name**

Spires North

<b>Management factors</b>							
	Serious risk Score 5	High risk Score 4	Medium risk Score 3	Low risk Score 2	Minimum risk Score 1	Score*	
						Ploughing	Minimum tillage
<b>Buffer</b>	No buffer	Shallow buffer(< 10cm)	Moderate buffer (10-15cm)	Deep buffer (16-25cm)	Very deep buffer (> 25cm)	A.....4 B..... C.....	A.....2 B..... C.....
<b>Cultivation method and depth</b>	Very deep ploughing (>30cm)	Deep ploughing (26-30cm)	Normal ploughing (20-25cm)	Minimum tillage Shallow ploughing (10-19cm)	Direct drilling (<10cm)	A.....4 B..... C.....	A.....2 B..... C.....
<b>Cropping</b>	Cropping includes potatoes/sugar beet	Cropping includes other root/tuber crops	Cropping includes cereals, non-root crops		Cropping includes long term grass ley or set-aside(> 5 years)	A.....5 B..... C.....	A.....3 B..... C.....
<b>Subsoiling</b>	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		A.....4 B..... C.....	
<b>Initial score</b>						17	11
<b>Weighting</b>	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					2.5	1.5
<b>Initial score multiplied by weighting</b>						A ...42.5 B .... C ....	A ....16.5 B .... C ....

\*Graded A-C according to quality of evidence



<b>Site intrinsic factors</b>								
<b>Susceptibility of cultivated soil to water erosion</b>								
Average annual rainfall = 600mm								
	<b>Steep slopes (&gt; 7°)</b>		<b>Moderate slopes (3°-7°)</b>		<b>Gentle slopes (2°-3°)</b>		<b>Level ground (&lt; 2°)</b>	<b>Score*</b>
<b>Soil group</b>	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm		
Light soils	Serious Score 5	High Score 4	High Score 4	Medium Score 3	Medium Score 3	Low Score 2	Minimal Score 1	A.....1 B..... C.....
Moderate soils	High Score 4	Medium Score 3	Medium Score 3		Low Score 2		Minimal Score 1	
Heavy soils	Low Score 2		Minimal Score 1		Minimal Score 1		Minimal Score 1	
<b>Susceptibility of cultivated soil to wind erosion</b>								
<b>Main soil group</b>	<b>Peats</b>		<b>Sands/Silts</b>	<b>Loams</b>	<b>Sandy clays/silty clay</b>	<b>Clay</b>	<b>Score*</b>	
	Serious Score 5		High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	A.....4 B..... C.....	
<b>Risk of soil loss during harvesting</b>								
<b>Crop type</b>	<b>Potatoes/sugar beet</b>	<b>Other root/tuber crops</b>	<b>Combinable crops</b>	<b>Score*</b>				
				<b>Potoates</b>	<b>Combinable and other crops</b>			
	Serious Score 5	High Score 4	Medium Score 3	A.....5 B..... C.....	A.....3 B..... C.....			
<b>Initial score</b>				10	8			
<b>Weighting</b>				Any of above in grey shaded box = 2	2	1		
<b>Initial score multiplied by weighting</b>				A .....20 B..... C.....	A .....8 B..... C.....			

\*Graded A-C according to quality of evidence

Archaeological factors						
Survival and quality of evidence	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimum Score 1	Score*
[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections)]	- Upstanding earthworks/structures -Well-preserved deposits demonstrated by excavation -Other evidence indicating well-preserved deposits - Dense, discrete, and/or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Other evidence of nationally significant deposits	-Positive and negative features demonstrated by excavation - Positive and negative features indicated by cropmarks/anomalies -Other evidence indicating good preservation -Dense, discrete, and/or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Less dense, discrete, or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Other evidence of highly significant deposits	-Negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits - Dense, discrete, or, diagnostic deposits relevant to county research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Less dense, discrete, or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) - Dense, discrete, or diagnostic ploughsoil scatters - Other evidence of significant deposits	-Truncated negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits -Other evidence indicating truncation -Sparse or undiagnostic deposits relevant to local research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) - Diffuse or undiagnostic ploughsoil scatters -Other evidence distinguishing between sites of low and minimum significance	- Heavily truncated negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits -Other evidence indicating heavy truncation -Sparse or undiagnostic deposits demonstrated by excavation or indicated by cropmarks/anomalies - Diffuse or undiagnostic ploughsoil scatters	A..... B .....4 C.....
<b>Significance</b>	National significance	Regional significance	County significance	Local significance	No obvious significance	A..... B .....4 C.....
<b>Initial score</b>						8
<b>Weighting</b>	For score of 9-10 use weighting factor = 2; for score of 8-7 use weighting factor = 1.5; for score of 6 use weighting factor = 1.3; for score of 5-4 use weighting factor = 1; for score of 2-3 use weighting factor = 0.5					1.5
<b>Initial score multiplied by weighting</b>						A ... B ...12 C ...

\*Graded A-C according to quality of evidence

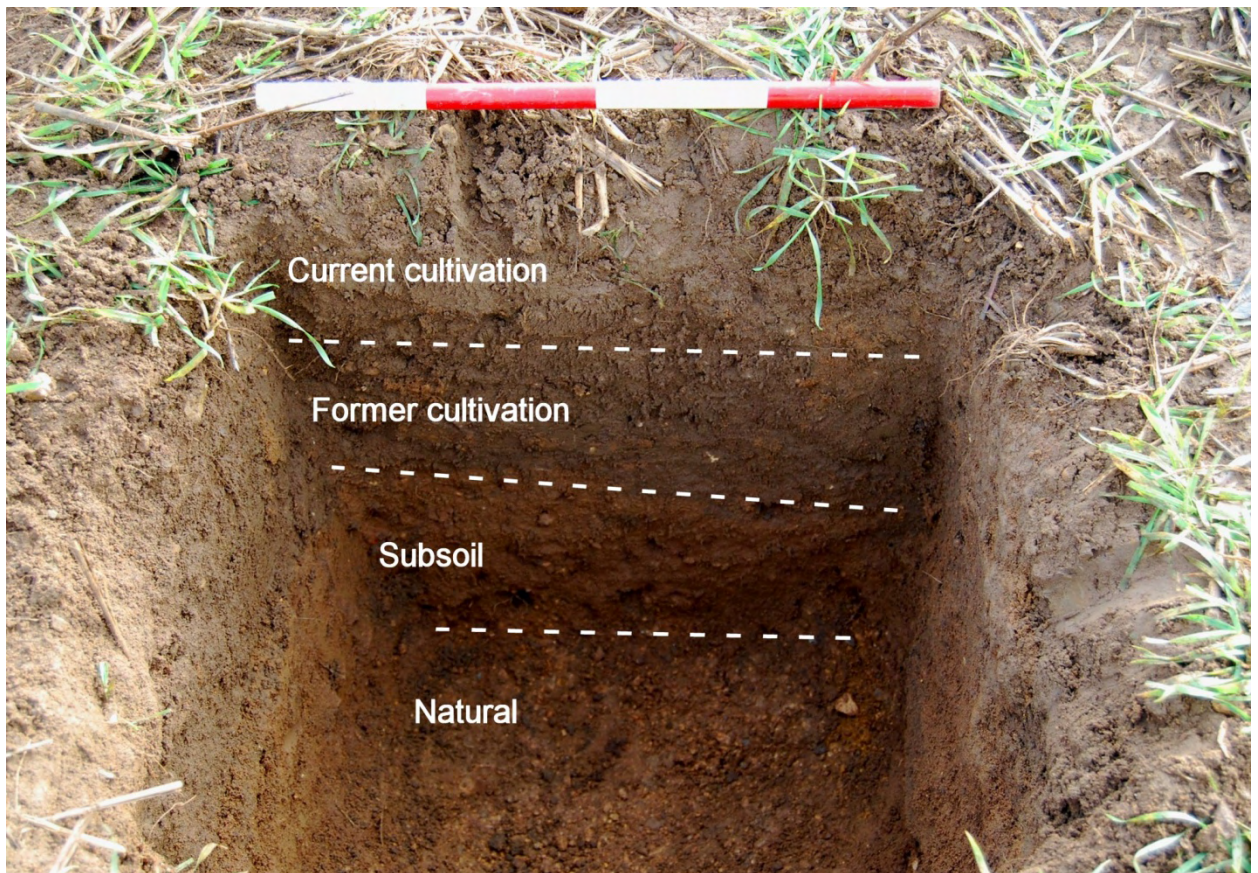
## Final risk score

	Ploughing:potatoes	Minimum tillage:combinable crops
Management factors (out of 50)	42.5	16.5
Site intrinsic factors (out of 30)	20	8
Archaeological factors (out of 20)	12	12
<b>Final risk score (out of 100)</b>	<b>74.5</b>	<b>36.5</b>

## Risk levels

Final risk score	Risk level
0-29	Minimal risk
30-39	Low risk
40-49	Moderate risk
50-59	High risk
60+	Serious risk

Field 7090: Wise Acre										
Test pits	104	105	106	196	197	198	199	Range		Average
								min	max	
Current cultivation	0.18	0.16	0.14	0.16	0.16	0.16	0.11	0.11	0.18	0.15
Former cultivation	0.10	0.12	0.09	0.17	0.16	0.20	0.15	0.09	0.20	0.14
Subsoil	0.18	0.07	0.13	0.37	0.09	0.34	0.20	0.07	0.37	0.20
Natural	Unex	Unex	Unex	Unex	Unex	>0.02	Unex			
<b>Buffer:</b> 0.14										
<b>Slope:</b> Level ground										
<b>Soil group in relation to water erosion:</b> Light										
<b>Soil group in relation to wind erosion:</b> Silts/sands										



Test pit 199 (scale 0.40m)

## WT212

### Wise Acre (7090)

#### Trench 6

Maximum dimensions: Length: 11.50m

Width: 1.20m

Depth: 0.32m

Orientation: NE-SW

Context	Classification	Description	Depth below ground surface
600	Ploughsoil	Firm mid greyish brown sandy silt loam with few small gravels and limestone fragments	0-0.30m
601	Subsoil	Firm light reddish brown fine sandy silt with few small gravels and limestone fragments.	0.30-0.36m
602	Natural	Firm light yellowish/reddish brown silty sand and with common gravels and limestone fragments.	0.32m+
603	Fill of 604	Firm mid greyish brown sandy silt with common small to medium gravels. Unexcavated.	0.30m+
604	Ditch?	Partially exposed feature represented by one linear edge, aligned E-W, and one irregular edge.	0.30m+
605	Fill of 606	Firm light greyish brown sandy silt with few small gravels and manganese concretions. Augered.	0.30-0.68m
606	Ditch	Linear, parallel-sided feature c3m wide, aligned E-W.	0.30-0.68m
607	Deposit	Deposit similar to 605 but with more common gravels and limestone fragments.	0.28m+
608	Fill of 609	Loose light grey brown sandy silt with common limestone fragments.	0.30m+
609	Pit	Partially exposed sub-circular feature c2m in diameter or possibly 2.50m, if surrounding reddish brown silt and gravels are redeposited natural. Unexcavated.	0.30m+
610	Fill of 611	As 608. Unexcavated.	0.37m+
611	Cut	Partially exposed feature, represented by one irregular edge.	0.37m+

#### Trench 7

Maximum dimensions: Length: 11.50m

Width: 1.30m

Depth: 0.60m

Orientation: NW-SE

<b>Context</b>	<b>Classification</b>	<b>Description</b>	<b>Depth below ground surface</b>
700	Ploughsoil	Firm mid brown sandy silt loam with a few small to medium gravels and limestone fragments.	0.00-0.28m
701	Subsoil	Firm light greyish brown silt with c.15% light yellow/yellowish brown medium sand. Common small to medium gravels.	0.28-0.60m
702	Natural	Firm mid to light yellowish brown medium sand with abundant small limestone fragments.	0.58m +



*Trench 6 facing south-west (1m scale)*



*Trench 7 facing south-east (1m scale)*



**COSMIC Assessment Sheet – Land Parcel**

7090

**Field Name**

Wise Acre

<b>Management factors</b>							
	Serious risk Score 5	High risk Score 4	Medium risk Score 3	Low risk Score 2	Minimum risk Score 1	Score*	
						Ploughing	Minimum tillage
<b>Buffer</b>	No buffer	Shallow buffer(< 10cm)	Moderate buffer (10-15cm)	Deep buffer (16-25cm)	Very deep buffer (> 25cm)	A.....3 B..... C.....	A.....3 B..... C.....
<b>Cultivation method and depth</b>	Very deep ploughing (> 30cm)	Deep ploughing (26-30cm)	Normal ploughing (20-25cm)	Minimum tillage Shallow ploughing (10-19cm)	Direct drilling (< 10cm)	A.....2 B..... C.....	A.....2 B..... C.....
<b>Cropping</b>	Cropping includes potatoes/sugar beet	Cropping includes other root/tuber crops	Cropping includes cereals, non-root crops		Cropping includes long term grass ley or set-aside(> 5 years)	A.....3 B..... C.....	A.....3 B..... C.....
<b>Subsoiling</b>	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		A.....2 B..... C.....	
<b>Initial score</b>						10	10
<b>Weighting</b>	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1	1
<b>Initial score multiplied by weighting</b>						A ...10 B .... C ....	A ....10 B .... C ....

\*Graded A-C according to quality of evidence

<b>Site intrinsic factors</b>								
<b>Susceptibility of cultivated soil to water erosion</b>								
Average annual rainfall = 600mm								
	<b>Steep slopes (&gt; 7°)</b>		<b>Moderate slopes (3°-7°)</b>		<b>Gentle slopes (2°-3°)</b>		<b>Level ground (&lt; 2°)</b>	<b>Score*</b>
<b>Soil group</b>	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm		
Light soils	Serious Score 5	High Score 4	High Score 4	Medium Score 3	Medium Score 3	Low Score 2	Minimal Score 1	A.....1 B..... C.....
Moderate soils	High Score 4	Medium Score 3	Medium Score 3		Low Score 2		Minimal Score 1	
Heavy soils	Low Score 2		Minimal Score 1		Minimal Score 1		Minimal Score 1	
<b>Susceptibility of cultivated soil to wind erosion</b>								
<b>Soil group</b>	<b>Peats</b>		<b>Sands/Silts</b>	<b>Loams</b>	<b>Sandy clays/silty clay</b>	<b>Clay</b>	<b>Score*</b>	
	Serious Score 5		High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	A.....4 B..... C.....	
<b>Risk of soil loss during harvesting</b>								
<b>Crop type</b>	<b>Potatoes/sugar beet</b>		<b>Other root/tuber crops</b>	<b>Combinable crops</b>			<b>Score*</b>	
	Serious Score 5		High Score 4	Medium Score 3			A.....3 B..... C.....	
<b>Initial score</b>							8	
<b>Weighting</b>	Any of above in grey shaded box = 2						1	
<b>Initial score multiplied by weighting</b>							A .....8 B..... C.....	

\*Graded A-C according to quality of evidence

Archaeological factors						
Survival and quality of evidence	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimum Score 1	Score*
[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections)]	- Upstanding earthworks/structures -Well-preserved deposits demonstrated by excavation -Other evidence indicating well-preserved deposits - Dense, discrete, and/or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Other evidence of nationally significant deposits	-Positive and negative features demonstrated by excavation - Positive and negative features indicated by cropmarks/anomalies -Other evidence indicating good preservation -Dense, discrete, and/or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Less dense, discrete, or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Other evidence of highly significant deposits	-Negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits - Dense, discrete, or, diagnostic deposits relevant to county research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Less dense, discrete, or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) - Dense, discrete, or diagnostic ploughsoil scatters - Other evidence of significant deposits	-Truncated negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits -Other evidence indicating truncation -Sparse or undiagnostic deposits relevant to local research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) - Diffuse or undiagnostic ploughsoil scatters -Other evidence distinguishing between sites of low and minimum significance	- Heavily truncated negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits -Other evidence indicating heavy truncation -Sparse or undiagnostic deposits demonstrated by excavation or indicated by cropmarks/anomalies - Diffuse or undiagnostic ploughsoil scatters	A..... B .....3 C.....
<b>Significance</b>	National significance	Regional significance	County significance	Local significance	No obvious significance	A..... B .....4 C.....
<b>Initial score</b>						7
<b>Weighting</b>	For score of 9-10 use weighting factor = 2; for score of 8-7 use weighting factor = 1.5; for score of 6 use weighting factor = 1.3; for score of 5-4 use weighting factor = 1; for score of 2-3 use weighting factor = 0.5					1.5
<b>Initial score multiplied by weighting</b>						A ... B ...10.5 C ...

\*Graded A-C according to quality of evidence

## Final risk score

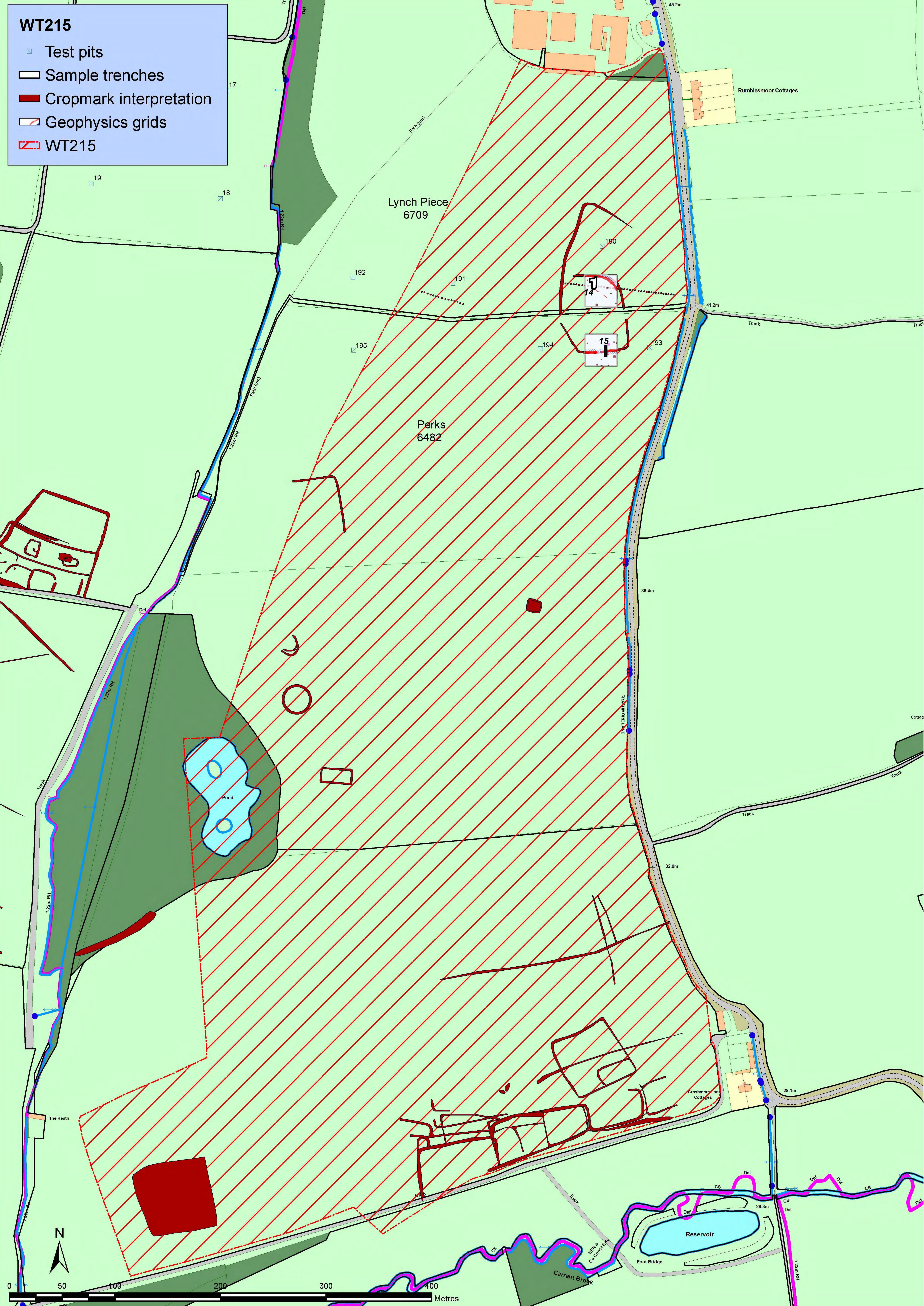
<b>Management factors (out of 50)</b>	10
<b>Site intrinsic factors (out of 30)</b>	8
<b>Archaeological factors (out of 20)</b>	10.5
<b>Final risk score (out of 100)</b>	<b>28.5</b>

## Risk levels

Final risk score	Risk level
0-29	<b>Minimal risk</b>
30-39	<b>Low risk</b>
40-49	<b>Moderate risk</b>
50-59	<b>High risk</b>
60+	<b>Serious risk</b>

# WT215

- Test pits
- Sample trenches
- Cropmark interpretation
- Geophysics grids
- WT215



Field 6709: Lynch Piece (SAM 215)						
Test pits	190	191	192	Range		Average
				min	max	
Current cultivation	0.18	0.15	0.18	0.15	0.18	0.17
Former cultivation	0.20	0.14	0.14	0.14	0.20	0.16
Subsoil	None	None	0.25			
Natural	>0.04	>0.11	Unex			
<b>Minimum buffer: 0.14</b>						
<b>Notes</b>						
1) Subsoil not observed in east part of site						
<b>Slope:</b> Level ground						
<b>Soil group in relation to water erosion:</b> Light						
<b>Soil group in relation to wind erosion:</b> Silts/sands						



Test pit 190 facing north (scale divisions at 0.50m)

## Lynch Piece (6709)

### Trench 14

Maximum dimensions: Length: 10m

Width: 5.90m

Depth: 0.45m

Orientation: NNE-SSW

Context	Classification	Description	Depth below ground surface
1400	Ploughsoil	Firm medium brown sandy silt with frequent small to medium gravels.	0-0.30m
1401	Natural	Loose light to mid brownish yellow and yellowish grey sand with common small gravels.	0.30m+
1402	Fill of 1403	Firm medium yellow brown sandy silt with frequent small to medium gravels. One sherd of 18 <sup>th</sup> century stoneware (7g); one fragment of post-medieval brick/tile (38g).	0.30-0.45m+
1403	Ditch	Linear, parallel-sided feature up to 2m wide, aligned E-W. Unexcavated.	0.30-0.45m+
1404	Fill of 1405	As 1402	0.30-0.45m
1405	Pit (or bioturbation)	Sub-circular feature with poorly-defined edges. c0.70m in diameter. Unexcavated.	0.30-0.45m
1406	Fill of 1407	As 1402	0.30-0.45m
1407	Pit (or bioturbation)	Sub-oval feature with poorly-defined edges, but c1.45m long by 0.90m wide. Unexcavated.	0.30-0.45m



*Trench 14 facing north across pit 1405, pit 1407, and ditch 1403 (2m scale)*



**COSMIC Assessment Sheet – Land Parcel**

6709

**Field Name**

Lynch Piece

<b>Management factors</b>							
	Serious risk Score 5	High risk Score 4	Medium risk Score 3	Low risk Score 2	Minimum risk Score 1	Score*	
						Ploughing	Minimum tillage
<b>Buffer</b>	No buffer	Shallow buffer(< 10cm)	Moderate buffer (10-15cm)	Deep buffer (16-25cm)	Very deep buffer (> 25cm)	A.....5 B..... C.....	A.....3 B..... C.....
<b>Cultivation method and depth</b>	Very deep ploughing (>30cm)	Deep ploughing (26-30cm)	Normal ploughing (20-25cm)	Minimum tillage Shallow ploughing (10-19cm)	Direct drilling (<10cm)	A.....4 B..... C.....	A.....2 B..... C.....
<b>Cropping</b>	Cropping includes potatoes/sugar beet	Cropping includes other root/tuber crops	Cropping includes cereals, non-root crops		Cropping includes long term grass ley or set-aside(> 5 years)	A.....5 B..... C.....	A.....3 B..... C.....
<b>Subsoiling</b>	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		A.....4 B..... C.....	
<b>Initial score</b>						18	12
<b>Weighting</b>	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					2.5	1.5
<b>Initial score multiplied by weighting</b>						A ...45 B .... C ....	A ....18 B .... C ....

\*Graded A-C according to quality of evidence

<b>Site intrinsic factors</b>								
<b>Susceptibility of cultivated soil to water erosion</b>								
Average annual rainfall = 600mm								
	<b>Steep slopes</b> (> 7°)		<b>Moderate slopes</b> (3°-7°)		<b>Gentle slopes</b> (2°-3°)		<b>Level ground</b> (< 2°)	<b>Score*</b>
<b>Soil group</b>	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm		
Light soils	Serious Score 5	High Score 4	High Score 4	Medium Score 3	Medium Score 3	Low Score 2	Minimal Score 1	A.....1 B..... C.....
Moderate soils	High Score 4	Medium Score 3	Medium Score 3		Low Score 2		Minimal Score 1	
Heavy soils	Low Score 2		Minimal Score 1		Minimal Score 1		Minimal Score 1	
<b>Susceptibility of cultivated soil to wind erosion</b>								
<b>Main soil group</b>	<b>Peats</b>		<b>Sands/Silts</b>	<b>Loams</b>	<b>Sandy clays/silty clay</b>	<b>Clay</b>	<b>Score*</b>	
	Serious Score 5		High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	A.....4 B..... C.....	
<b>Risk of soil loss during harvesting</b>								
<b>Crop type</b>	<b>Potatoes/sugar beet</b>	<b>Other root/tuber crops</b>	<b>Combinable crops</b>	<b>Score*</b>				
				<b>Potoates</b>	<b>Combinable and other crops</b>			
	Serious Score 5	High Score 4	Medium Score 3	A.....5 B..... C.....	A.....3 B..... C.....			
<b>Initial score</b>				10	8			
<b>Weighting</b>	Any of above in grey shaded box = 2			2	1			
<b>Initial score multiplied by weighting</b>				A .....20 B..... C.....	A .....8 B..... C.....			

\*Graded A-C according to quality of evidence

Archaeological factors						
Survival and quality of evidence	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimum Score 1	Score*
[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections)]	- Upstanding earthworks/structures -Well-preserved deposits demonstrated by excavation -Other evidence indicating well-preserved deposits - Dense, discrete, and/or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Other evidence of nationally significant deposits	-Positive and negative features demonstrated by excavation - Positive and negative features indicated by cropmarks/anomalies -Other evidence indicating good preservation -Dense, discrete, and/or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Less dense, discrete, or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Other evidence of highly significant deposits	-Negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits - Dense, discrete, or, diagnostic deposits relevant to county research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Less dense, discrete, or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) - Dense, discrete, or diagnostic ploughsoil scatters - Other evidence of significant deposits	-Truncated negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits -Other evidence indicating truncation -Sparse or undiagnostic deposits relevant to local research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) - Diffuse or undiagnostic ploughsoil scatters -Other evidence distinguishing between sites of low and minimum significance	- Heavily truncated negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits -Other evidence indicating heavy truncation -Sparse or undiagnostic deposits demonstrated by excavation or indicated by cropmarks/anomalies - Diffuse or undiagnostic ploughsoil scatters	A..... B .....4 C.....
<b>Significance</b>	National significance	Regional significance	County significance	Local significance	No obvious significance	A..... B .....4 C.....
<b>Initial score</b>						8
<b>Weighting</b>	For score of 9-10 use weighting factor = 2; for score of 8-7 use weighting factor = 1.5; for score of 6 use weighting factor = 1.3; for score of 5-4 use weighting factor = 1; for score of 2-3 use weighting factor = 0.5					1.5
<b>Initial score multiplied by weighting</b>						A ... B ...12 C ...

\*Graded A-C according to quality of evidence

## Final risk score

	Ploughing:potatoes	Minimum tillage:combinable crops
Management factors (out of 50)	45	18
Site intrinsic factors (out of 30)	20	8
Archaeological factors (out of 20)	12	12
<b>Final risk score (out of 100)</b>	<b>77</b>	<b>38</b>

## Risk levels

Final risk score	Risk level
0-29	Minimal risk
30-39	Low risk
40-49	Moderate risk
50-59	High risk
60+	Serious risk

Field 6482: Perks (SAM 215)						
Test pits	193	194	195	Range		Average
				min	max	
Current cultivation	0.16	0.22	0.27	0.16	0.27	0.21
Former cultivation	0.10	0.10	0.22	0.10	0.22	0.14
Subsoil	0.09	0.28	0.11	0.09	0.28	0.16
Natural	>0.13	Unexc.	Unexc.			
<b>Minimum buffer: 0.14</b>						
<b>Notes</b>						
1) Deep subsoil in test pit 195 included in average						
<b>Slope: Gentle</b>						
<b>Soil group in relation to water erosion: Moderate</b>						
<b>Soil group in relation to wind erosion: Loams</b>						



Test pit 193 facing west (scale divisions at 0.50m)

## WT215

### Perks (6482)

#### Trench 15

Maximum dimensions: Length: 10.50m

Width: 1.85m

Depth: 0.30m

Orientation: N-S

Context	Classification	Description	Depth below ground surface
1500	Ploughsoil	Firm mid brown sandy silt with common small to medium gravels.	0-0.30m
1501	Natural	Loose light to mid brownish yellow and yellowish grey sand with common small gravels.	0.30m+
1502	Fill of 1503	Firm mid yellow brown sandy silt with common small to medium gravels. Augered to base.	0.30-0.55m
1503	Ditch	Linear, parallel-sided feature c1.90m wide, aligned E-W.	0.30-0.55m
1504	Fill of 1505	As 1502 but with more frequent gravels. Unexcavated.	0.30m+
1505	Ditch	Linear, parallel-sided feature c2.10m wide, aligned E-W.	0.30m+



*Trench 15 facing south across ditches 1503 and 1505 (1m scale)*

**COSMIC Assessment Sheet – Land Parcel**

6482

**Field Name**

Perks

Management factors							
	Serious risk Score 5	High risk Score 4	Medium risk Score 3	Low risk Score 2	Minimum risk Score 1	Score*	
						Ploughing	Minimum tillage
<b>Buffer</b>	No buffer	Shallow buffer(< 10cm)	Moderate buffer (10-15cm)	Deep buffer (16-25cm)	Very deep buffer (> 25cm)	A.....5 B..... C.....	A.....3 B..... C.....
<b>Cultivation method and depth</b>	Very deep ploughing (>30cm)	Deep ploughing (26-30cm)	Normal ploughing (20-25cm)	Minimum tillage Shallow ploughing (10-19cm)	Direct drilling (<10cm)	A.....4 B..... C.....	A.....3 B..... C.....
<b>Cropping</b>	Cropping includes potatoes/sugar beet	Cropping includes other root/tuber crops	Cropping includes cereals, non-root crops		Cropping includes long term grass ley or set-aside(> 5 years)	A.....5 B..... C.....	A.....3 B..... C.....
<b>Subsoiling</b>	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		A.....2 B..... C.....	
<b>Initial score</b>						16	11
<b>Weighting</b>	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					2.5	1
<b>Initial score multiplied by weighting</b>						A ...40 B .... C ....	A ....11 B .... C ....

\*Graded A-C according to quality of evidence



<b>Site intrinsic factors</b>								
<b>Susceptibility of cultivated soil to water erosion</b>								
Average annual rainfall = 600mm								
	<b>Steep slopes</b> (> 7°)		<b>Moderate slopes</b> (3°-7°)		<b>Gentle slopes</b> (2°-3°)		<b>Level ground</b> (< 2°)	<b>Score*</b>
<b>Soil group</b>	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm		
Light soils	Serious Score 5	High Score 4	High Score 4	Medium Score 3	Medium Score 3	Low Score 2	Minimal Score 1	A.....1 B..... C.....
Moderate soils	High Score 4	Medium Score 3	Medium Score 3		Low Score 2		Minimal Score 1	
Heavy soils	Low Score 2		Minimal Score 1		Minimal Score 1		Minimal Score 1	
<b>Susceptibility of cultivated soil to wind erosion</b>								
<b>Main soil group</b>	<b>Peats</b>		<b>Sands/Silts</b>	<b>Loams</b>	<b>Sandy clays/silty clay</b>	<b>Clay</b>	<b>Score*</b>	
	Serious Score 5		High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	A..... B.....3 C.....	
<b>Risk of soil loss during harvesting</b>								
<b>Crop type</b>	<b>Potatoes/sugar beet</b>	<b>Other root/tuber crops</b>	<b>Combinable crops</b>	<b>Score*</b>				
				<b>Potoates</b>	<b>Combinable and other crops</b>			
	Serious Score 5	High Score 4	Medium Score 3	A.....5 B..... C.....	A.....3 B..... C.....			
<b>Initial score</b>				9	7			
<b>Weighting</b>				Any of above in grey shaded box = 2	2	1		
<b>Initial score multiplied by weighting</b>				A .....18 B..... C.....	A .....7 B..... C.....			

\*Graded A-C according to quality of evidence

Archaeological factors						
Survival and quality of evidence	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimum Score 1	Score*
[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections)]	- Upstanding earthworks/structures -Well-preserved deposits demonstrated by excavation -Other evidence indicating well-preserved deposits - Dense, discrete, and/or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Other evidence of nationally significant deposits	-Positive and negative features demonstrated by excavation - Positive and negative features indicated by cropmarks/anomalies -Other evidence indicating good preservation -Dense, discrete, and/or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Less dense, discrete, or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Other evidence of highly significant deposits	-Negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits - Dense, discrete, or, diagnostic deposits relevant to county research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Less dense, discrete, or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) - Dense, discrete, or diagnostic ploughsoil scatters - Other evidence of significant deposits	-Truncated negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits -Other evidence indicating truncation -Sparse or undiagnostic deposits relevant to local research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) - Diffuse or undiagnostic ploughsoil scatters -Other evidence distinguishing between sites of low and minimum significance	- Heavily truncated negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits -Other evidence indicating heavy truncation -Sparse or undiagnostic deposits demonstrated by excavation or indicated by cropmarks/anomalies - Diffuse or undiagnostic ploughsoil scatters	A..... B .....4 C.....
<b>Significance</b>	National significance	Regional significance	County significance	Local significance	No obvious significance	A..... B .....4 C.....
<b>Initial score</b>						8
<b>Weighting</b>	For score of 9-10 use weighting factor = 2; for score of 8-7 use weighting factor = 1.5; for score of 6 use weighting factor = 1.3; for score of 5-4 use weighting factor = 1; for score of 2-3 use weighting factor = 0.5					1.5
<b>Initial score multiplied by weighting</b>						A ... B ...12 C ...

\*Graded A-C according to quality of evidence

## Final risk score

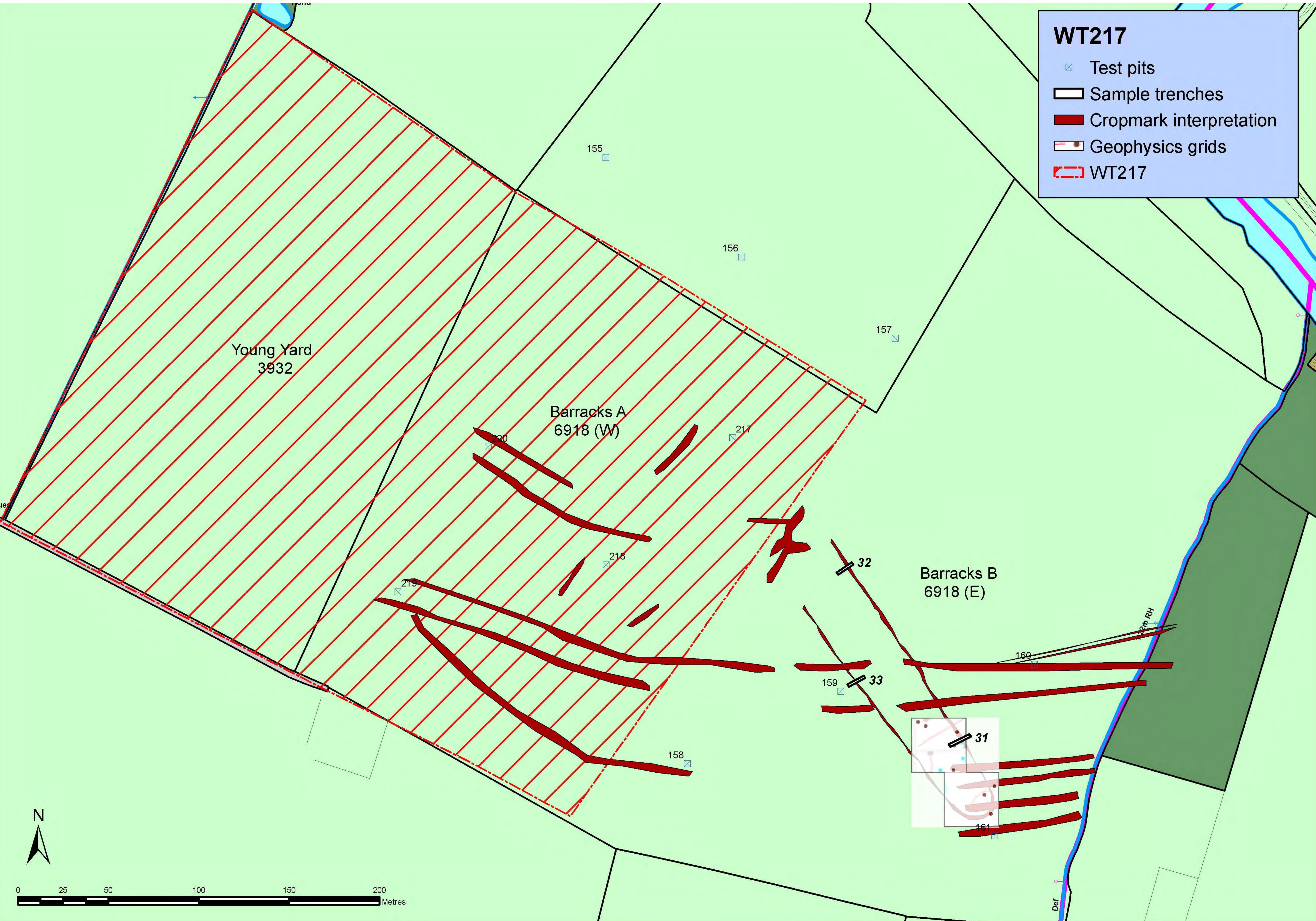
	Ploughing:potatoes	Minimum tillage:combinable crops
Management factors (out of 50)	40	11
Site intrinsic factors (out of 30)	18	7
Archaeological factors (out of 20)	12	12
<b>Final risk score (out of 100)</b>	<b>70</b>	<b>30</b>

## Risk levels

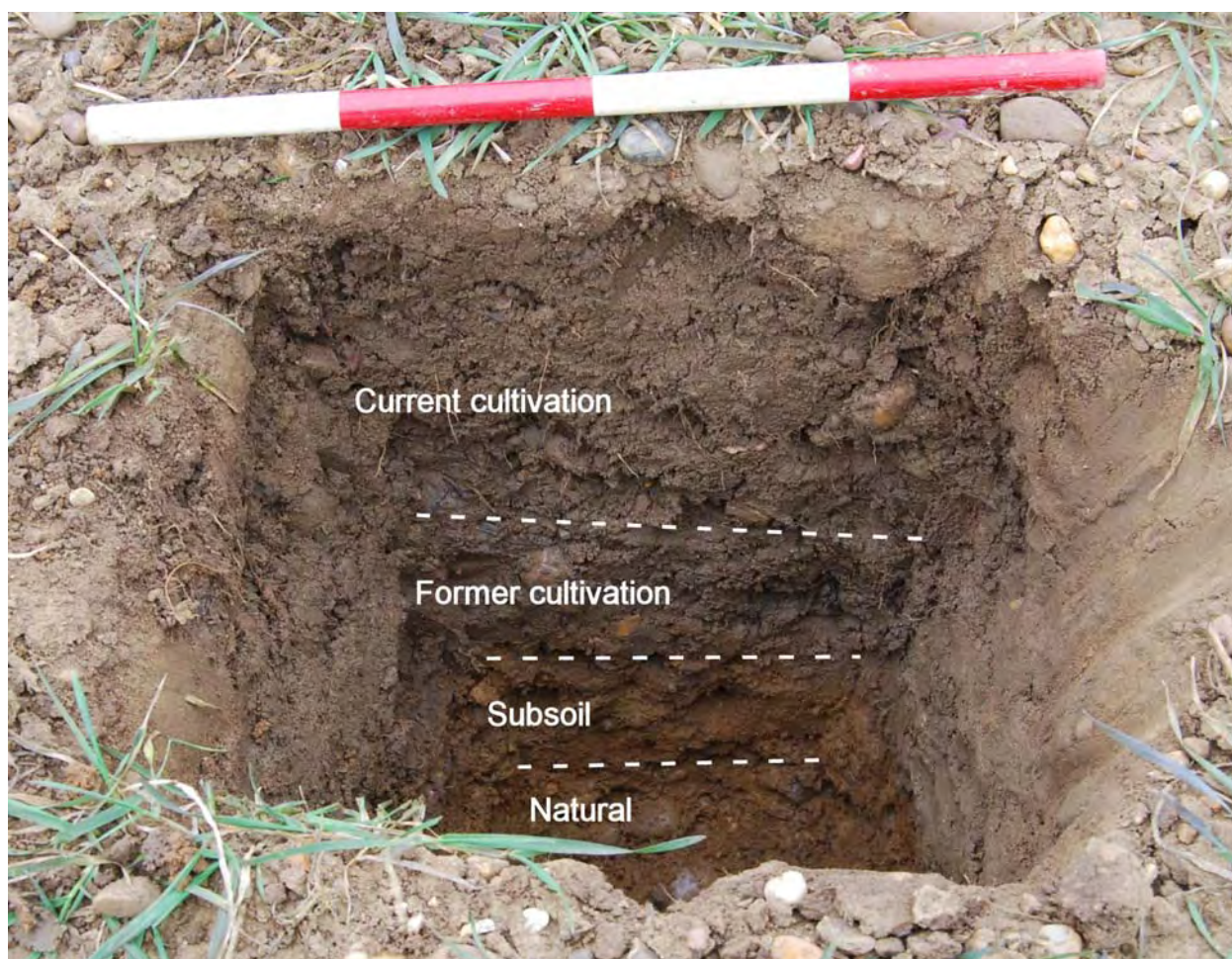
Final risk score	Risk level
0-29	Minimal risk
30-39	Low risk
40-49	Moderate risk
50-59	High risk
60+	Serious risk

**WT217**

- ☒ Test pits
- ▭ Sample trenches
- ▬ Cropmark interpretation
- ▭ Geophysics grids
- ▭ WT217



Field 6918 (west): Barracks A							
Test pits	217	218	219	220	Range		Average
					min	max	
Current cultivation	0.24	0.24	0.17	0.18	0.17	0.24	0.21
Former cultivation	0.10	0.08	0.19	0.16	0.08	0.19	0.13
Subsoil	None	0.12	0.12	0.11	0.00	0.12	0.09
Natural	>0.10	>0.02	>0.07	>0.10			
<b>Minimum buffer: 0.08</b>							
<b>Slope: Level ground</b>							
<b>Soil group in relation to water erosion: Light</b>							
<b>Soil group in relation to wind erosion: Silts/sands</b>							



Test pit 218 (scale 0.40m)

**COSMIC Assessment Sheet – Land Parcel**

6918 (W)

**Field Name**

Barracks A

<b>Management factors</b>						
	<b>Serious risk Score 5</b>	<b>High risk Score 4</b>	<b>Medium risk Score 3</b>	<b>Low risk Score 2</b>	<b>Minimum risk Score 1</b>	<b>Score*</b>
<b>Buffer</b>	No buffer	Shallow buffer(< 10cm)	Moderate buffer (10-15cm)	Deep buffer (15-25cm)	Very deep buffer (> 25cm)	A.....4 B..... C.....
<b>Cultivation method and depth</b>	Very deep ploughing (> 30cm)	Deep ploughing (25-30cm)	Normal ploughing (20-25cm)	Minimum tillage Shallow ploughing (10-20cm)	Direct drilling (< 10cm)	A.....3 B..... C.....
<b>Cropping</b>	Cropping includes potatoes/sugar beet	Cropping includes other root/tuber crops	Cropping includes cereals, non-root crops		Cropping includes long term grass ley or set-aside (> 5 years)	A.....4 B..... C.....
<b>Subsoiling</b>	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		A.....3 B..... C.....
<b>Initial score</b>						14
<b>Weighting</b>	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1.5
<b>Initial score multiplied by weighting</b>						A ....21 B .... C ....

\* Graded A-C according to quality of evidence

\* Graded A-C according to quality of evidence

<b>Site intrinsic factors</b>								
<b>Susceptibility of cultivated soil to water erosion</b>								
Average annual rainfall = 650mm								
	<b>Steep slopes (&gt;7°)</b>		<b>Moderate slopes (3°-7°)</b>		<b>Gentle slopes (2°-3°)</b>		<b>Level ground (&gt;2°)</b>	<b>Score*</b>
<b>Soil group</b>	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm		
Light soils	Serious Score 5	High Score 4	High Score 4	Medium Score 3	Medium Score 3	Low Score 2	Minimal Score 1	A.....1 B..... C.....
Moderate soils	High Score 4	Medium Score 3	Medium Score 3		Low Score 2		Minimal Score 1	
Heavy soils	Low Score 2		Minimal Score 1		Minimal Score 1		Minimal Score 1	
<b>Susceptibility of cultivated soil to wind erosion</b>								
<b>Soil group</b>	<b>Peats</b>		<b>Sands/Silts</b>	<b>Loams</b>	<b>Sandy clays/silty clay</b>	<b>Clay</b>	<b>Score*</b>	
	Serious Score 5		High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	A.....3 B..... C.....	
<b>Risk of soil loss during harvesting</b>								
<b>Crop type</b>	<b>Potatoes/sugar beet</b>		<b>Other root/tuber crops</b>	<b>Combinable/hand-picked crops</b>			<b>Score*</b>	
	Serious Score 5		High Score 4	Medium Score 3			A.....3 B..... C.....	
<b>Initial score</b>							8	
<b>Weighting</b>							1	
<b>Initial score multiplied by weighting</b>							A .....8 B..... C.....	

Archaeological factors						
Survival and quality of evidence	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimum Score 1	Score*
[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections)]	- Upstanding earthworks/structures -Well-preserved deposits demonstrated by excavation -Other evidence indicating well-preserved deposits - Dense, discrete, and/or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Other evidence of nationally significant deposits	-Positive and negative features demonstrated by excavation - Positive and negative features indicated by cropmarks/anomalies -Other evidence indicating good preservation -Dense, discrete, and/or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Less dense, discrete, or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Other evidence of highly significant deposits	-Negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits - Dense, discrete, or, diagnostic deposits relevant to county research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Less dense, discrete, or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) - Dense, discrete, or diagnostic ploughsoil scatters - Other evidence of significant deposits	-Truncated negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits -Other evidence indicating truncation -Sparse or undiagnostic deposits relevant to local research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) - Diffuse or undiagnostic ploughsoil scatters -Other evidence distinguishing between sites of low and minimum significance	- Heavily truncated negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits -Other evidence indicating heavy truncation -Sparse or undiagnostic deposits demonstrated by excavation or indicated by cropmarks/anomalies - Diffuse or undiagnostic ploughsoil scatters	A..... B .....2 C.....
<b>Significance</b>	National significance	Regional significance	County significance	Local significance	No obvious significance	A..... B .....2 C.....
<b>Initial score</b>						4
<b>Weighting</b>	For score of 9-10 use weighting factor = 2; for score of 8-7 use weighting factor = 1.5; for score of 6 use weighting factor = 1.3; for score of 5-4 use weighting factor = 1; for score of 2-3 use weighting factor = 0.5					1
<b>Initial score multiplied by weighting</b>						A ...4 B ... C ...

\* Graded A-C according to quality of evidence



## Final risk score

<b>Management factors (out of 50)</b>	21
<b>Site intrinsic factors (out of 30)</b>	8
<b>Archaeological factors (out of 20)</b>	4
<b>Final risk score (out of 100)</b>	<b>33</b>

## Risk Levels

Final risk score	Risk level
0-29	<b>Minimal risk</b>
30-39	<b>Low risk</b>
40-49	<b>Moderate risk</b>
50-59	<b>High risk</b>
60+	<b>Serious risk</b>

Field 6918 (east): Barracks B							
Test pits	158	159	160	161	Range		Average
					min	max	
Current cultivation	0.18	0.20	0.14	0.16	0.14	0.20	0.17
Former cultivation	0.12	0.15	0.10	0.14	0.10	0.15	0.13
Subsoil	None	>0.35	>0.36	None			
Natural	Unex	n/a	n/a	Unex			
<b>Minimum buffer: 0.10</b>							
<b>Notes</b>							
1) Test pits 159 and 160 were excavated in the vicinity of a presumed paleochannel, which may explain the deep subsoil in these test pits.							
2) Possible archaeological features were identified in the base of test pits 158 and 161.							
<b>Slope:</b> Level ground							
<b>Soil group in relation to water erosion:</b> Light							
<b>Soil group in relation to wind erosion:</b> Loams							



Test pit 161 (scale 0.40m)

## WT217

### Barracks B (6918 east)

#### Trench 31

Maximum dimensions: Length: 13.00m

Width: 1.55m

Depth: 1.00m

Orientation: NE–SW

Context	Classification	Description	Depth below ground surface
3100	Ploughsoil	Firm mid brown sandy silt with abundant small to large gravels.	0-0.30m
3101	Natural	Firm mid brownish red sandy silt with abundant small to large gravels.	0.30m+
3102	Fill of 3104	Moderately compacted light orangey brown clayey silt, few small manganese concretions.	0.30-0.45m
3103	Fill of 3104	Soft blue-grey sand with common small to medium gravels.	0.45-1.00m
3104	Periglacial feature	Partially exposed irregular, but broadly linear, parallel-sided with one steeply sloping side and one concave side.	0.30-1.00m

#### Trench 32

Maximum dimensions: Length: 9.60m

Width: 1.60m

Depth: 1.05m

Orientation: NE–SW

Context	Classification	Description	Depth below ground surface
3200	Ploughsoil	Firm mid greyish brown sandy silt loam with few small gravels.	0-0.37m
3201	Natural	Firm light greyish brown clay silt and light reddish brown clay sand mixed with c 5% 3200.	0.37-0.47m
3202	Natural	Compact light reddish brown clay sand containing several periglacial features filled with blueish grey clay and abundant small gravels.	0.47-1.05m+

**Trench 33**

Maximum dimensions: Length: 10m

Width: 1.55m

Depth: 0.54m

Orientation: NE-SW

<b>Context</b>	<b>Classification</b>	<b>Description</b>	<b>Depth below ground surface</b>
3300	Ploughsoil	Firm mid brown sandy silt with abundant small to medium gravels.	0-0.34m
3301	Subsoil	Firm light greyish brown sandy silt with common small to medium gravels.	0.34-0.54m
3302	Natural	Compact mid yellowish brown silty sand matrix with abundant small to medium gravels and common patches of blue-grey sand.	0.54m+



*Trench 31 facing north-east (1m scale)*



*Trench 32 facing east (1m scale)*



*Trench 33 facing north (1m scale)*

**COSMIC Assessment Sheet – Land Parcel**

6918 (E)

**Field Name**

Barracks B

<b>Management factors</b>						
	<b>Serious risk Score 5</b>	<b>High risk Score 4</b>	<b>Medium risk Score 3</b>	<b>Low risk Score 2</b>	<b>Minimum risk Score 1</b>	<b>Score*</b>
<b>Buffer</b>	No buffer	Shallow buffer(< 10cm)	Moderate buffer (10-15cm)	Deep buffer (15-25cm)	Very deep buffer (> 25cm)	A.....3 B..... C.....
<b>Cultivation method and depth</b>	Very deep ploughing (> 30cm)	Deep ploughing (25-30cm)	Normal ploughing (20-25cm)	Minimum tillage Shallow ploughing (10-20cm)	Direct drilling (< 10cm)	A.....3 B..... C.....
<b>Cropping</b>	Cropping includes potatoes/sugar beet	Cropping includes other root/tuber crops	Cropping includes cereals, non-root crops		Cropping includes long term grass ley or set-aside (> 5 years)	A.....4 B..... C.....
<b>Subsoiling</b>	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		A.....3 B..... C.....
<b>Initial score</b>						13
<b>Weighting</b>	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1.5
<b>Initial score multiplied by weighting</b>						A ....19.5 B .... C ....

\* Graded A-C according to quality of evidence

\* Graded A-C according to quality of evidence

<b>Site intrinsic factors</b>								
<b>Susceptibility of cultivated soil to water erosion factors</b>								
Average annual rainfall = 650mm								
	<b>Steep slopes</b> ( $> 7^\circ$ )		<b>Moderate slopes</b> ( $3^\circ-7^\circ$ )		<b>Gentle slopes</b> ( $2^\circ-3^\circ$ )		<b>Level ground</b> ( $< 2^\circ$ )	<b>Score*</b>
<b>Soil group</b>	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm		
Light soils	Serious Score 5	High Score 4	High Score 4	Medium Score 3	Medium Score 3	Low Score 2	Minimal Score 1	A.....1 B..... C.....
Moderate soils	High Score 4	Medium Score 3	Medium Score 3		Low Score 2		Minimal Score 1	
Heavy soils	Low Score 2		Minimal Score 1		Minimal Score 1		Minimal Score 1	
<b>Susceptibility of cultivated soil to wind erosion</b>								
<b>Soil group</b>	<b>Peats</b>	<b>Sands/Silts</b>	<b>Loams</b>	<b>Sandy clays/silty clay</b>	<b>Clay</b>	<b>Score</b>		
	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	A.....3 B..... C.....		
<b>Risk of soil loss during harvesting</b>								
<b>Crop type</b>	<b>Potatoes/sugar beet</b>	<b>Other root/tuber crops</b>	<b>Combinable/hand-picked crops</b>			<b>Score</b>		
	Serious Score 5	High Score 4	Medium Score 3			A.....3 B..... C.....		
<b>Initial score</b>						7		
<b>Weighting</b>						Any of above in grey shaded box = 2 1		
<b>Initial score multiplied by weighting</b>						A .....7 B..... C.....		



Archaeological factors						
Archaeological survival and quality of evidence	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimum Score 1	Score*
<p>[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections)]</p>	<ul style="list-style-type: none"> <li>- Upstanding earthworks/structures</li> <li>-Well-preserved deposits demonstrated by excavation</li> <li>-Other evidence indicating well-preserved deposits</li> <li>- Dense, discrete, and/or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies)</li> <li>-Other evidence of nationally significant deposits</li> </ul>	<ul style="list-style-type: none"> <li>-Positive and negative features demonstrated by excavation</li> <li>- Positive and negative features indicated by cropmarks/anomalies</li> <li>-Other evidence indicating good preservation</li> <li>-Dense, discrete, and/or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies)</li> <li>-Less dense, discrete, or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies)</li> <li>-Other evidence of highly significant deposits</li> </ul>	<ul style="list-style-type: none"> <li>-Negative features demonstrated by excavation</li> <li>-Negative features indicated by cropmarks/anomalies</li> <li>-Ploughsoil scatters derived from buried deposits</li> <li>- Dense, discrete, or, diagnostic deposits relevant to county research agendas (demonstrated by excavation or indicated by cropmarks/anomalies)</li> <li>-Less dense, discrete, or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies)</li> <li>- Dense, discrete, or diagnostic ploughsoil scatters</li> <li>- Other evidence of significant deposits</li> </ul>	<ul style="list-style-type: none"> <li>-Truncated negative features demonstrated by excavation</li> <li>-Negative features indicated by cropmarks/anomalies</li> <li>-Ploughsoil scatters derived from buried deposits</li> <li>-Other evidence indicating truncation</li> <li>-Sparse or undiagnostic deposits relevant to local research agendas (demonstrated by excavation or indicated by cropmarks/anomalies)</li> <li>- Diffuse or undiagnostic ploughsoil scatters</li> <li>-Other evidence distinguishing between sites of low and minimum significance</li> </ul>	<ul style="list-style-type: none"> <li>- Heavily truncated negative features demonstrated by excavation</li> <li>-Negative features indicated by cropmarks/anomalies</li> <li>-Ploughsoil scatters derived from buried deposits</li> <li>-Other evidence indicating heavy truncation</li> <li>-Sparse or undiagnostic deposits demonstrated by excavation or indicated by cropmarks/anomalies</li> <li>- Diffuse or undiagnostic ploughsoil scatters</li> </ul>	<p><b>A</b>.....2 <b>B</b> ..... <b>C</b>.....</p>
<b>Significance</b>	National significance	Regional significance	County significance	Local significance	No obvious significance	<p><b>A</b>.....2 <b>B</b> ..... <b>C</b>.....</p>
<b>Initial score</b>						4
<b>Weighting</b>	For score of 9-10 use weighting factor = 2; for score of 8-7 use weighting factor = 1.5; for score of 6 use weighting factor = 1.3; for score of 5-4 use weighting factor = 1; for score of 2-3 use weighting factor = 0.5					1
<b>Initial score multiplied by weighting</b>						<p><b>A</b> ...4 <b>B</b> ... <b>C</b> ...</p>

\* Graded A-C according to quality of evidence

## Final risk score

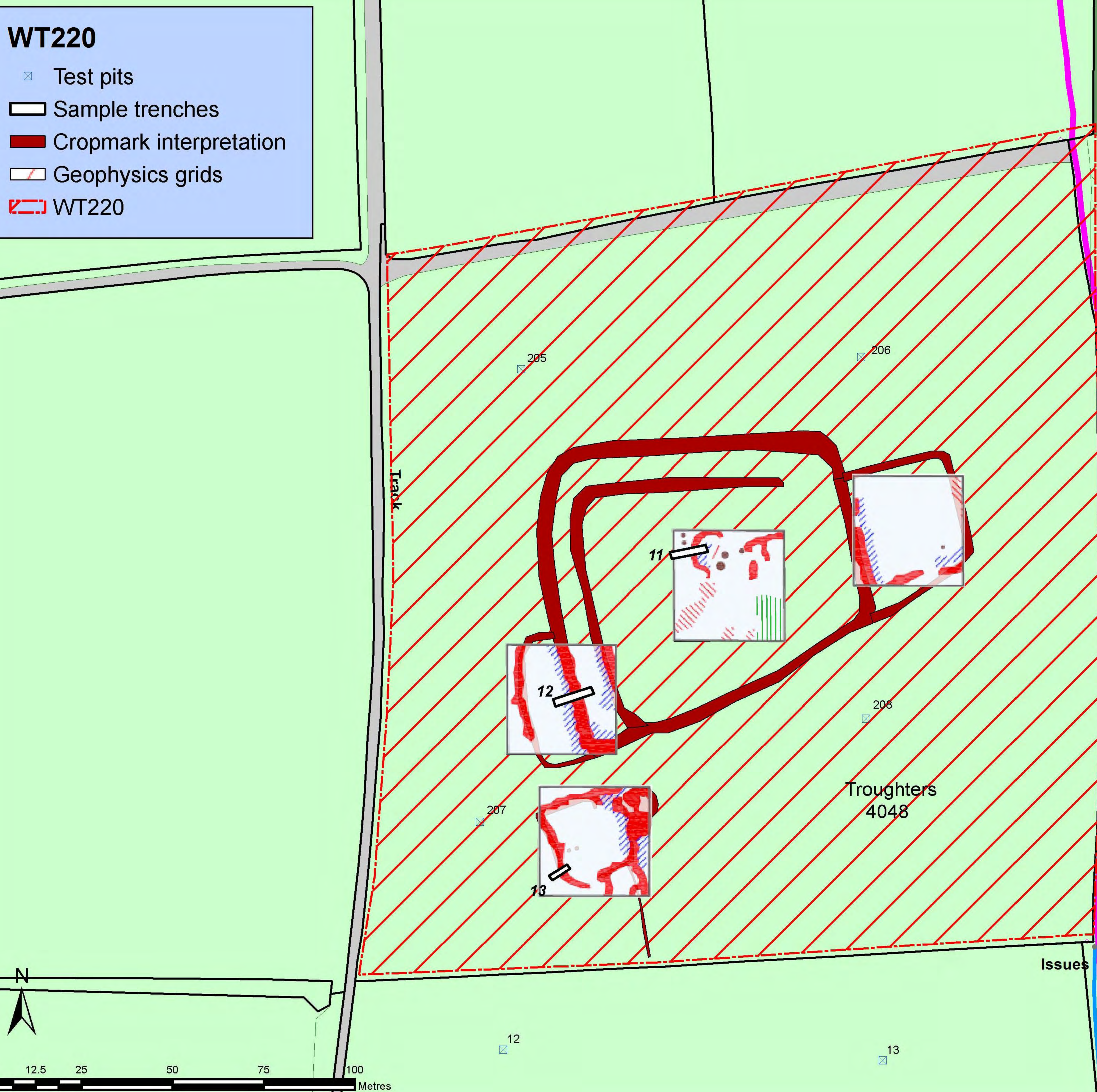
<b>Management factors (out of 50)</b>	19.5
<b>Site intrinsic factors (out of 30)</b>	7
<b>Archaeological factors (out of 20)</b>	4
<b>Final risk score (out of 100)</b>	<b>30.5</b>

## Risk levels

Final risk score	Risk level
0-29	<b>Minimal risk</b>
30-39	<b>Low risk</b>
40-49	<b>Moderate risk</b>
50-59	<b>High risk</b>
60+	<b>Serious risk</b>

# WT220

- ☒ Test pits
- ▭ Sample trenches
- ▬ Cropmark interpretation
- ▨ Geophysics grids
- ▨ WT220

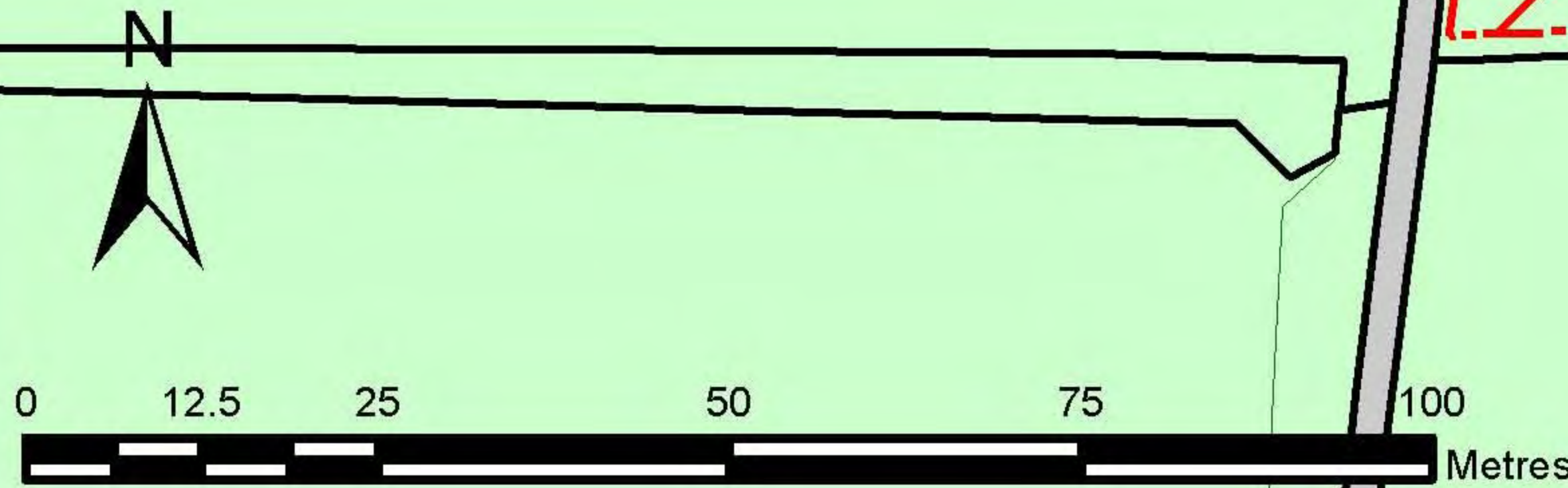


Track

1.22m RH

Troughers  
4048

Issues



Field 4048: Troughers							
Test pits	205	206	207	208	Range		Average
					min	max	
Current cultivation	0.15	0.12	0.13	0.14	0.12	0.15	0.14
Former cultivation	0.15	0.17	0.18	0.12	0.12	0.18	0.16
Subsoil 1	0.35	0.09	>0.45	0.42	0.09	>0.45	0.29
Subsoil 2	n/a	0.24	n/a	n/a			
Natural	Unex	Unex	n/a	Unex			
<b>Minimum buffer: 0.16</b>							
<b>Notes</b>							
1) Natural not observed in test pit 207, therefore depth of subsoil not recorded in average							
<b>Slope: Level ground</b>							
<b>Soil group in relation to water erosion: Light</b>							
<b>Soil group in relation to wind erosion: Silts/sands</b>							



Test pit 208 facing west (scale 0.40m)

## WT220

### Troughters (4048)

#### Trench 11

Maximum dimensions: Length: 10m

Width: 2m

Depth: 0.44m

Orientation: E-W

Context	Classification	Description	Depth below ground surface
1100	Ploughsoil	Firm mid greyish brown silt with 5% white medium sand. Few small gravels.	0-0.28m
1101	Subsoil	Firm light grey and reddish brown sandy silt with few small gravels.	0.28-0.42m
1102	Natural	Light yellowish brown limestone brash.	0.42m+
1103	Fill of 1104	Firm mid greyish brown fine sandy silt. Common small gravels; few charcoal flecks and fragments of fired clay.	0.34-0.44m+
1104	Ditch	Linear, parallel-sided feature c0.65m wide, aligned NE-SW.	0.34-0.44m+
1105	Fill of 1106	As 1103	0.34m+
1106	Pit	Poorly-defined sub-circular feature c0.30m in diameter. Unexcavated.	0.34m+
1107	Fill of 1108	As 1103	0.34m+
1108	Bioturbation conjoining pits or	Poorly-defined double-lobed feature or two conjoining oval pits. Maximum dimensions 0.90m E-W by 0.70m N-S. Unexcavated.	0.34m+

**Trench 12**

Maximum dimensions: Length: 10.5m

Width: 1.88m

Depth: 0.47m

Orientation: E-W

Context	Classification	Description	Depth below ground surface
1200	Ploughsoil	Soft mid greyish brown sandy silt loam with few small gravels. One piece of flint debitage (4g).	0-0.37m
1201	Subsoil	Soft mid reddish brown silty sand with few small gravels and manganese concretions.	0.37-0.47m
1202	Fill of 1204	Friable mid brown sandy silt with abundant small gravels and few charcoal flecks. Unexcavated.	0.37m+
1203	Ditch	Poorly defined linear, parallel-sided feature c4.40m wide, aligned N-S.	0.37m+

**Trench 13**

Maximum dimensions: Length: 6.5m

Width: 1.80m

Depth: 0.42m

Orientation: E- W

Context	Classification	Description	Depth below ground surface
1300	Ploughsoil	Firm mid greyish brown silt with 5-10% white sand.	0-0.30m
1301	Subsoil	Firm light to mid reddish brown silty sand with abundant small gravels.	0.30-0.42m
1302	Natural	Firm reddish brown silty sand with patches of yellow limestone brash. Cut by ploughscars aligned E-W.	0.42m+



*Trench 11 facing west (1m scale)*



*Trench 12 facing east (1m scale)*



*Trench 13 facing north-east with ploughscars in foreground (1m scales)*



**COSMIC Assessment Sheet – Land Parcel**

4048

**Field Name**

Troughters

<b>Management factors</b>							
	Serious risk Score 5	High risk Score 4	Medium risk Score 3	Low risk Score 2	Minimum risk Score 1	Score*	
						Ploughing	Minimum tillage
<b>Buffer</b>	No buffer	Shallow buffer(< 10cm)	Moderate buffer (10-15cm)	Deep buffer (16-25cm)	Very deep buffer (> 25cm)	A.....4 B..... C.....	A.....2 B..... C.....
<b>Cultivation method and depth</b>	Very deep ploughing (>30cm)	Deep ploughing (26-30cm)	Normal ploughing (20-25cm)	Minimum tillage Shallow ploughing (10-19cm)	Direct drilling (<10cm)	A.....4 B..... C.....	A.....2 B..... C.....
<b>Cropping</b>	Cropping includes potatoes/sugar beet	Cropping includes other root/tuber crops	Cropping includes cereals, non-root crops		Cropping includes long term grass ley or set-aside(> 5 years)	A.....5 B..... C.....	A.....3 B..... C.....
<b>Subsoiling</b>	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		A.....4 B..... C.....	
<b>Initial score</b>						17	11
<b>Weighting</b>	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					2.5	1.5
<b>Initial score multiplied by weighting</b>						A ...42.5 B .... C ....	A ....16.5 B .... C ....

\*Graded A-C according to quality of evidence

<b>Site intrinsic factors</b>								
<b>Susceptibility of cultivated soil to water erosion</b>								
Average annual rainfall = 600mm								
	<b>Steep slopes</b> (> 7°)		<b>Moderate slopes</b> (3°-7°)		<b>Gentle slopes</b> (2°-3°)		<b>Level ground</b> (< 2°)	<b>Score*</b>
<b>Soil group</b>	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm		
Light soils	Serious Score 5	High Score 4	High Score 4	Medium Score 3	Medium Score 3	Low Score 2	Minimal Score 1	A.....1 B..... C.....
Moderate soils	High Score 4	Medium Score 3	Medium Score 3		Low Score 2		Minimal Score 1	
Heavy soils	Low Score 2		Minimal Score 1		Minimal Score 1		Minimal Score 1	
<b>Susceptibility of cultivated soil to wind erosion</b>								
<b>Main soil group</b>	<b>Peats</b>		<b>Sands/Silts</b>	<b>Loams</b>	<b>Sandy clays/silty clay</b>	<b>Clay</b>	<b>Score*</b>	
	Serious Score 5		High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	A..... B.....4 C.....	
<b>Risk of soil loss during harvesting</b>								
<b>Crop type</b>	<b>Potatoes/sugar beet</b>	<b>Other root/tuber crops</b>	<b>Combinable crops</b>	<b>Score*</b>				
				<b>Potoates</b>	<b>Combinable and other crops</b>			
	Serious Score 5	High Score 4	Medium Score 3	A.....5 B..... C.....	A.....3 B..... C.....			
<b>Initial score</b>				10	8			
<b>Weighting</b>				Any of above in grey shaded box = 2	2	1		
<b>Initial score multiplied by weighting</b>				A .....20 B..... C.....	A .....8 B..... C.....			

\*Graded A-C according to quality of evidence

Archaeological factors						
Survival and quality of evidence	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimum Score 1	Score*
[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections)]	- Upstanding earthworks/structures -Well-preserved deposits demonstrated by excavation -Other evidence indicating well-preserved deposits - Dense, discrete, and/or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Other evidence of nationally significant deposits	-Positive and negative features demonstrated by excavation - Positive and negative features indicated by cropmarks/anomalies -Other evidence indicating good preservation -Dense, discrete, and/or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Less dense, discrete, or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Other evidence of highly significant deposits	-Negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits - Dense, discrete, or, diagnostic deposits relevant to county research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Less dense, discrete, or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) - Dense, discrete, or diagnostic ploughsoil scatters - Other evidence of significant deposits	-Truncated negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits -Other evidence indicating truncation -Sparse or undiagnostic deposits relevant to local research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) - Diffuse or undiagnostic ploughsoil scatters -Other evidence distinguishing between sites of low and minimum significance	- Heavily truncated negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits -Other evidence indicating heavy truncation -Sparse or undiagnostic deposits demonstrated by excavation or indicated by cropmarks/anomalies - Diffuse or undiagnostic ploughsoil scatters	A..... B .....4 C.....
<b>Significance</b>	National significance	Regional significance	County significance	Local significance	No obvious significance	A..... B .....4 C.....
<b>Initial score</b>						8
<b>Weighting</b>	For score of 9-10 use weighting factor = 2; for score of 8-7 use weighting factor = 1.5; for score of 6 use weighting factor = 1.3; for score of 5-4 use weighting factor = 1; for score of 2-3 use weighting factor = 0.5					1.5
<b>Initial score multiplied by weighting</b>						A ... B ...12 C ...

\*Graded A-C according to quality of evidence

## Final risk score

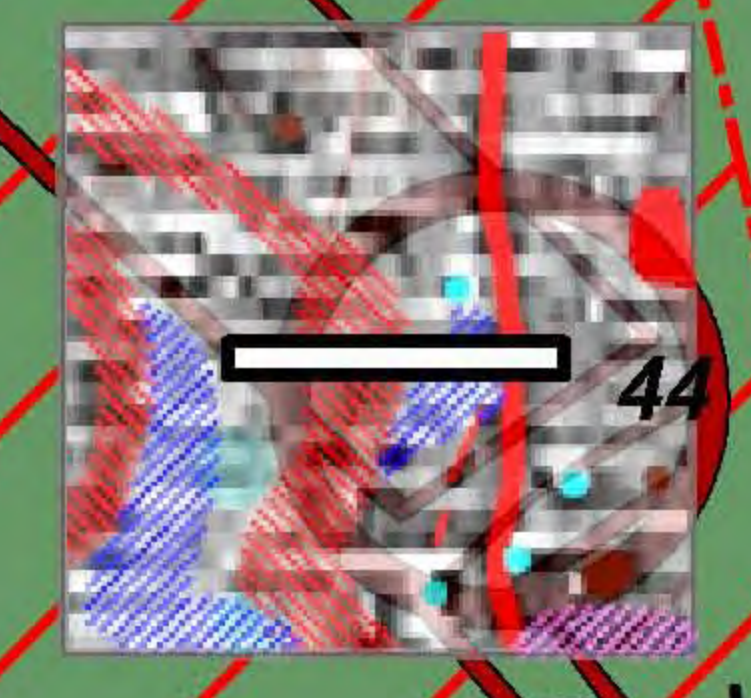
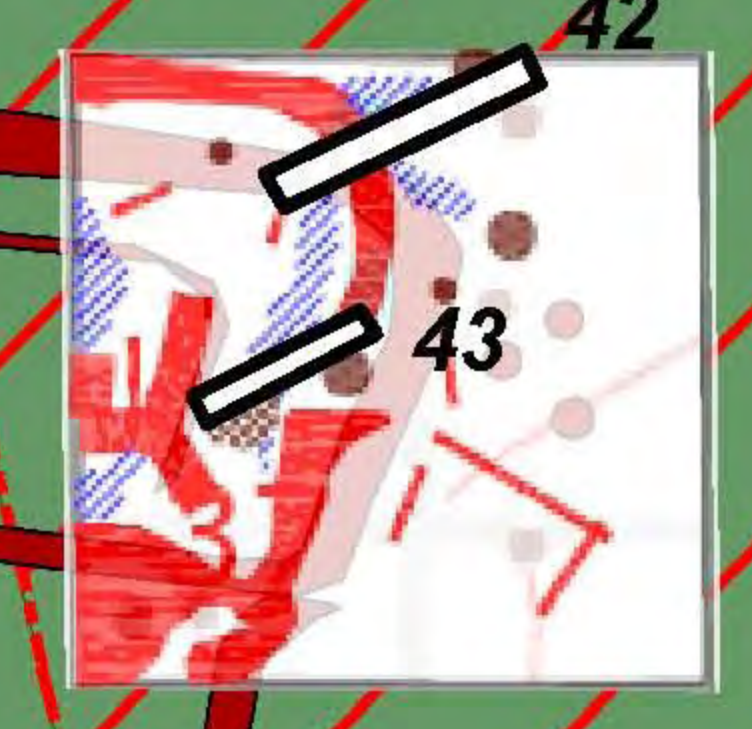
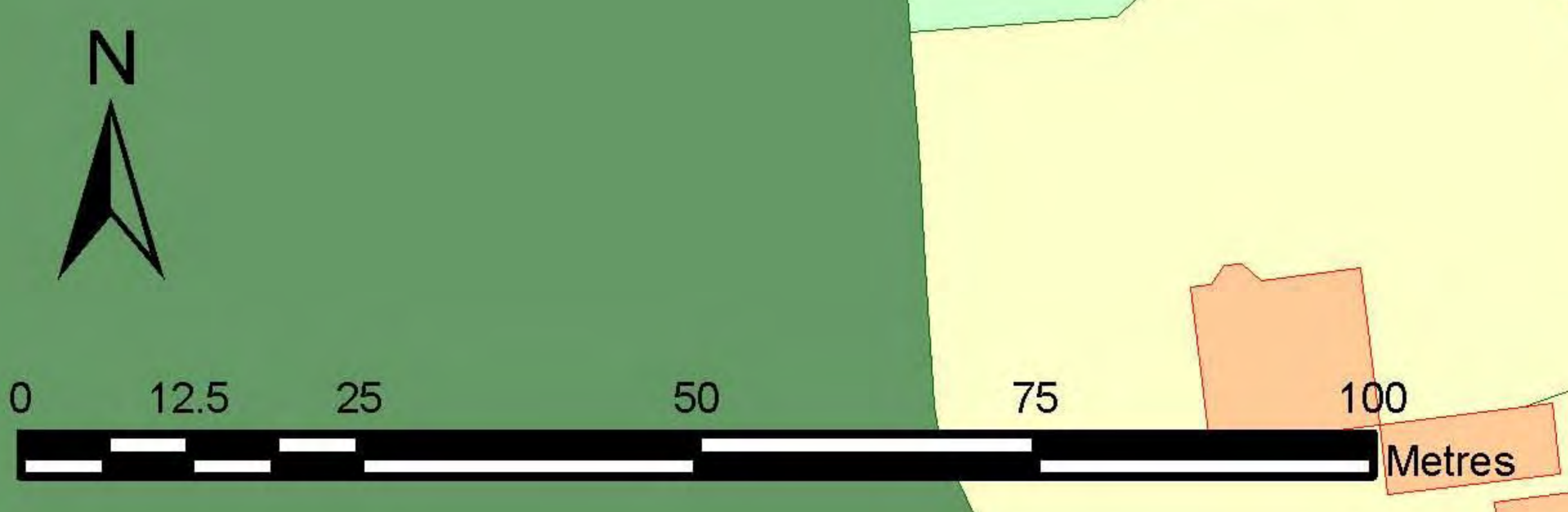
	Ploughing:potatoes	Minimum tillage:combinable crops
Management factors (out of 50)	42.5	16.5
Site intrinsic factors (out of 30)	20	8
Archaeological factors (out of 20)	12	12
<b>Final risk score (out of 100)</b>	<b>74.5</b>	<b>36.5</b>

## Risk levels

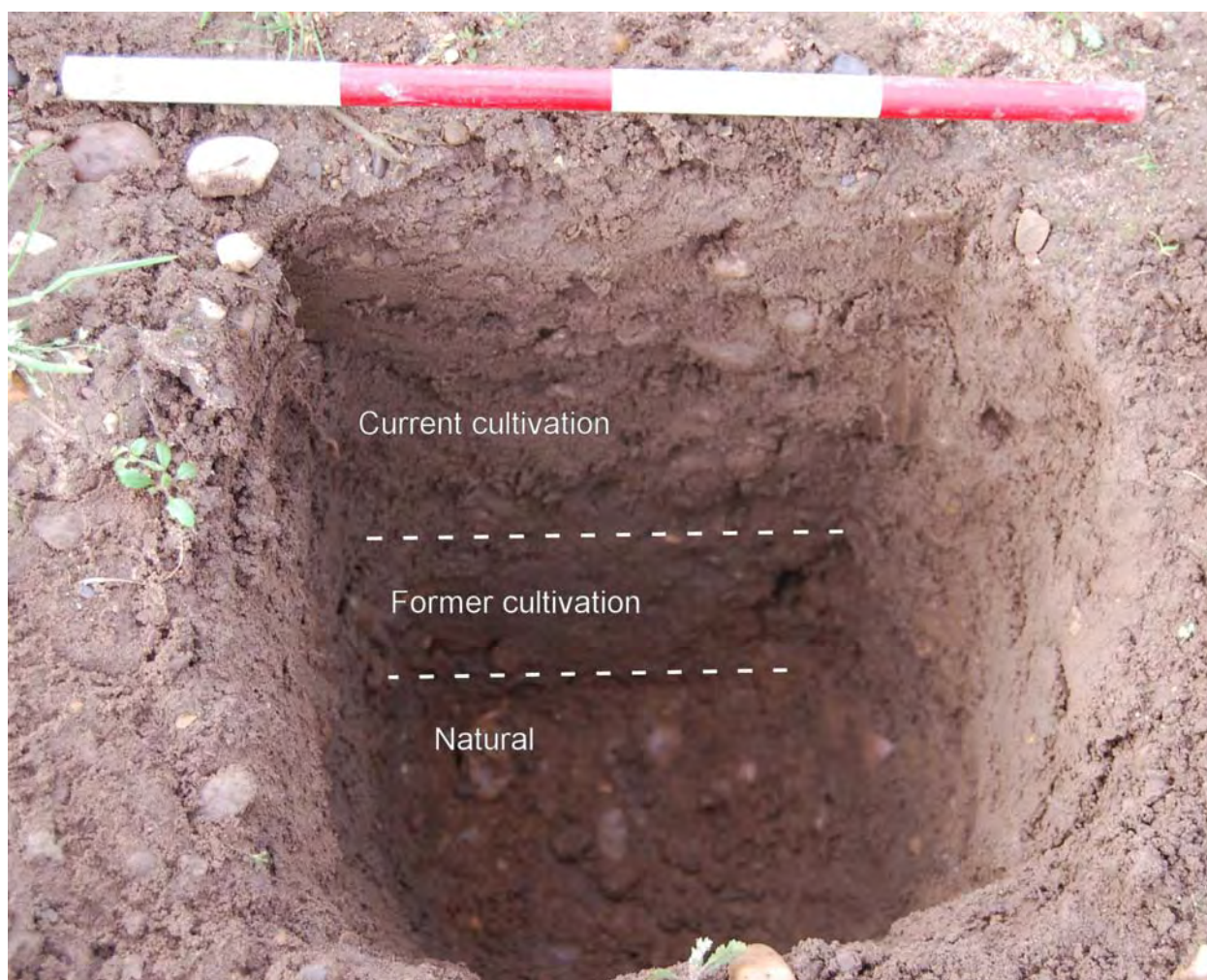
Final risk score	Risk level
0-29	Minimal risk
30-39	Low risk
40-49	Moderate risk
50-59	High risk
60+	Serious risk

**WT287**

- ☒ Test pits
- ▭ Sample trenches
- ▬ Cropmark interpretation
- ▭ Geophysics grids
- ▭ WT287



Field 6482: Hanging Bank							
Test pits	209	210	211	212	Range		Average
					min	max	
Current cultivation	0.30	0.23	0.30	0.28	0.23	0.30	0.28
Former cultivation	0.15	0.21	0.12	0.15	0.12	0.21	0.16
Subsoil	None	None	None	None			
Natural	Unex	Unex	>0.18	Unex			
<b>Minimum buffer: 0.12</b>							
<b>Slope: Gentle slope</b>							
<b>Soil group in relation to water erosion: Light</b>							
<b>Soil group in relation to wind erosion: Loams</b>							



Test pit 212 (scale 0.40m)

## WT287

### Hanging Bank (6482)

#### Trench 42

Maximum dimensions: Length: 14.00m

Width: 1.55m

Depth: 0.50m

Orientation: ENE-WSW

Context	Classification	Description	Depth below ground surface
4200	Ploughsoil	Firm mid greyish brown sandy silt with common small to large gravels.	0-0.40m
4201	Natural	Loose mid to light reddish brown sand with common small to medium gravels.	0.40m+
4202	Fill of 4203	Firm mid brown sandy silt with few small to large gravels.	0.36-1.32m
4203	Ditch	Linear, parallel-sided feature c3.20m wide and 0.96m deep (augered). Aligned roughly N-S.	0.36-1.32m

#### Trench 43

Maximum dimensions: Length: 7.50m

Width: 1.55m

Depth: 0.60m

Orientation: ENE-WSW

Context	Classification	Description	Depth below ground surface
4300	Ploughsoil	Firm mid greyish brown sandy silt with common small to large gravels.	0-0.36m
4301	Natural	Loose mid to light reddish brown sand with common small to medium gravels.	0.36m+
4302	Fill of 4303	Firm mid brown sandy silt with few small to large gravels.	0.38-1.48m
4304	Ditch	Linear, parallel-sided feature c3.20m wide and 1.10m deep (augered). Aligned roughly N-S.	0.38-1.48m

#### Trench 44

Maximum dimensions: Length: 16.00m

Width: 1.55m

Depth: 0.60m

Orientation: E-W

Context	Classification	Description	Depth below ground surface
4400	Ploughsoil	Firm mid greyish brown silty sand with common small to medium gravels.	0-0.30m

<b>Context</b>	<b>Classification</b>	<b>Description</b>	<b>Depth below ground surface</b>
4401	Subsoil	Firm mid reddish brown silty sand with common small to medium gravels.	0.30-0.40m
4402	Natural	Loose light to mid reddish brown fine sand with abundant small to medium gravels.	0.40m+
4403	Fill of 4404	Firm mid brown silty sand with common small to medium gravels.	0.30-1.15m
4404	Ditch	Linear, parallel-sided feature c1.90m wide and 0.85m deep (augered). Aligned roughly N-S.	0.30-1.15m
4405	Fill of 4406	Moderately compact mid, slightly reddish brown silty sand with common small to medium gravels. Sealed by 4401.	0.53-1.00m
4406	Ditch	Poorly defined but apparently linear, parallel-sided feature c1.80m wide and 0.47m deep (augered). Aligned roughly NW-SE.	0.53-1.00m





*Trench 42 facing north-east across ditch 4203 (1m scale)*



*Trench 43 facing south-west across ditch 4303 (1m scale)*



*Trench 44 facing south-west across ditches 4403 and 4406 (1m scale)*

**COSMIC Assessment Sheet – Land Parcel**

6482

**Field Name**

Hanging Bank

<b>Management factors</b>							
	Serious risk Score 5	High risk Score 4	Medium risk Score 3	Low risk Score 2	Minimum risk Score 1	Score*	
						Root/tuber crops	Combin- able crops
<b>Buffer</b>	No buffer	Shallow buffer(< 10cm)	Moderate buffer (10-15cm)	Deep buffer (16-25cm)	Very deep buffer (> 25cm)	A.....4 B..... C.....	A.....4 B..... C.....
<b>Cultivation method and depth</b>	Very deep ploughing (> 30cm)	Deep ploughing (26-30cm)	Normal ploughing (20-25cm)	Minimum tillage Shallow ploughing (10-19cm)	Direct drilling (<10cm)	A.....4 B..... C.....	A.....4 B..... C.....
<b>Cropping</b>	Cropping includes potatoes/sugar beet	Cropping includes other root/tuber crops	Cropping includes cereals, non-root crops		Cropping includes long term grass ley or set-aside(> 5 years)	A.....4 B..... C.....	A.....3 B..... C.....
<b>Subsoiling</b>	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		A.....2 B..... C.....	
<b>Initial score</b>						14	13
<b>Weighting</b>	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1.5	1.5
<b>Initial score multiplied by weighting</b>						A ....21 B .... C ....	A ....19.5 B .... C ....

\*Graded A-C according to quality of evidence

\*Graded A-C according to quality of evidence

<b>Site intrinsic factors</b>								
<b>Susceptibility of cultivated soil to water erosion</b>								
Average annual rainfall = 600mm								
	<b>Steep slopes</b> ( $> 7^\circ$ )		<b>Moderate slopes</b> ( $3^\circ-7^\circ$ )		<b>Gentle slopes</b> ( $2^\circ-3^\circ$ )		<b>Level ground</b> ( $< 2^\circ$ )	<b>Score*</b>
<b>Soil group</b>	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm		
Light soils	Serious Score 5	High Score 4	High Score 4	Medium Score 3	Medium Score 3	Low Score 2	Minimal Score 1	A.....2 B..... C.....
Moderate soils	High Score 4	Medium Score 3	Medium Score 3		Low Score 2		Minimal Score 1	
Heavy soil	Low Score 2		Minimal Score 1		Minimal Score 1		Minimal Score 1	
<b>Susceptibility of cultivated soil to wind erosion</b>								
<b>Soil group</b>	<b>Peats</b>	<b>Sands/Silts</b>	<b>Loams</b>	<b>Sandy clays/silty clay</b>	<b>Clay</b>		<b>Score*</b>	
	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimal Score 1		A.....3 B..... C.....	
<b>Risk of soil loss during harvesting</b>								
<b>Crop type</b>	<b>Potatoes/sugar beet</b>	<b>Other root/tuber crops</b>	<b>Combinable crops</b>			<b>Score*</b>		
	Serious Score 5	High Score 4	Medium Score 3			<b>Root/tuber crops</b>	<b>Combinable crops</b>	
						A.....4 B..... C.....	A.....3 B..... C.....	
<b>Initial score</b>						9	8	
<b>Weighting</b>	Any of above in grey shaded box = 2					1	1	
<b>Initial score multiplied by site intrinsic factor weighting</b>						A .....9 B..... C.....	A .....8 B..... C.....	

Archaeological factors						
Survival and quality of evidence	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimum Score 1	Score*
[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections)]	- Upstanding earthworks/structures -Well-preserved deposits demonstrated by excavation -Other evidence indicating well-preserved deposits - Dense, discrete, and/or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Other evidence of nationally significant deposits	-Positive and negative features demonstrated by excavation - Positive and negative features indicated by cropmarks/anomalies -Other evidence indicating good preservation -Dense, discrete, and/or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Less dense, discrete, or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Other evidence of highly significant deposits	-Negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits - Dense, discrete, or, diagnostic deposits relevant to county research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Less dense, discrete, or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) - Dense, discrete, or diagnostic ploughsoil scatters - Other evidence of significant deposits	-Truncated negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits -Other evidence indicating truncation -Sparse or undiagnostic deposits relevant to local research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) - Diffuse or undiagnostic ploughsoil scatters -Other evidence distinguishing between sites of low and minimum significance	- Heavily truncated negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits -Other evidence indicating heavy truncation -Sparse or undiagnostic deposits demonstrated by excavation or indicated by cropmarks/anomalies - Diffuse or undiagnostic ploughsoil scatters	A..... B .....3 C.....
<b>Significance</b>	National significance	Regional significance	County significance	Local significance	No obvious significance	A..... B .....4 C.....
<b>Initial score</b>						7
<b>Weighting</b>	For score of 9-10 use weighting factor = 2; for score of 8-7 use weighting factor = 1.5; for score of 6 use weighting factor = 1.3; for score of 5-4 use weighting factor = 1; for score of 2-3 use weighting factor = 0.5					1.5
<b>Initial score multiplied by weighting</b>						A ... B ...10.5 C ...

\*Graded A-C according to quality of evidence

## Final risk score

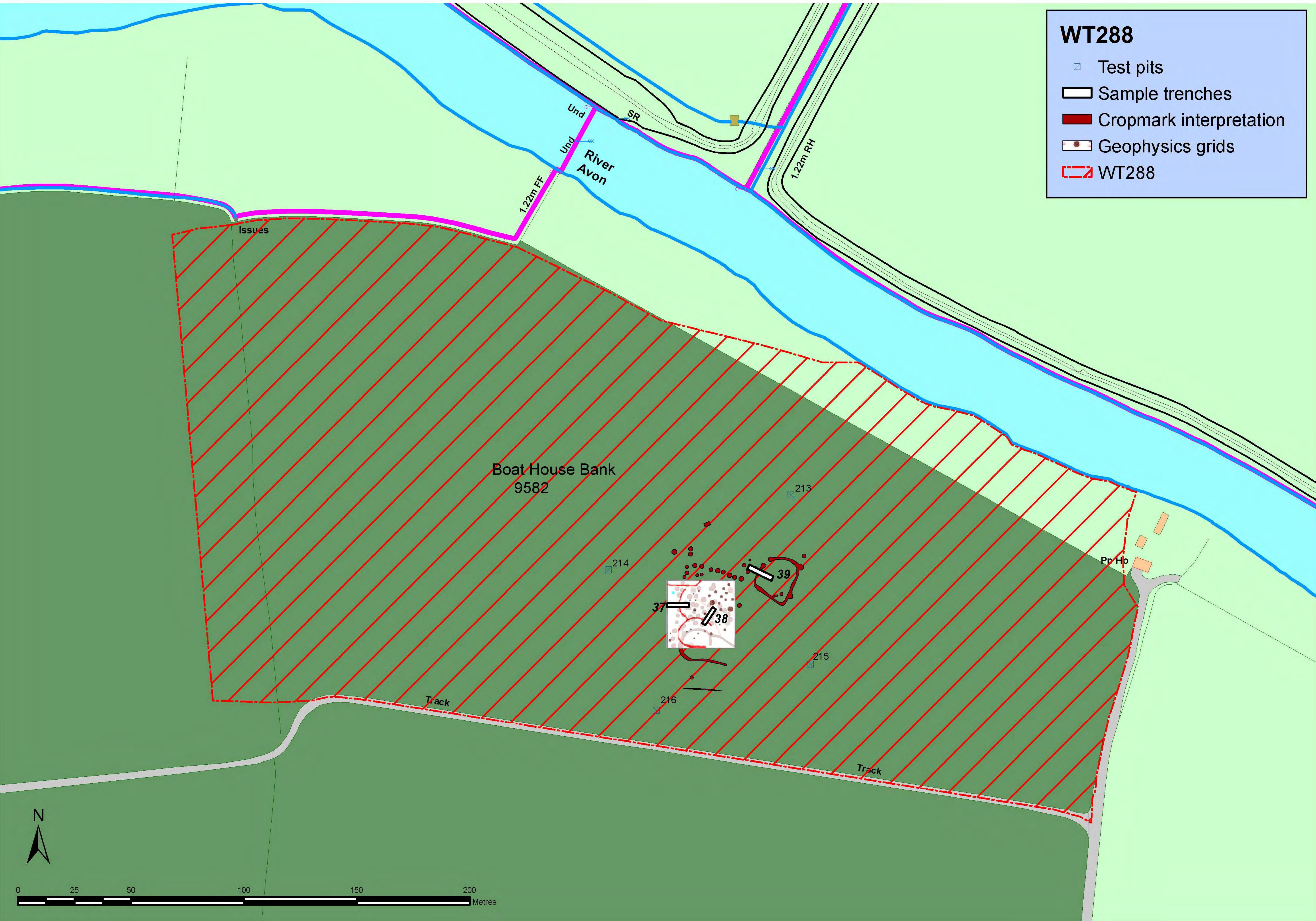
	Root/tuber crops	Combinable crops
Management factors (out of 50)	21	19.5
Site intrinsic factors (out of 30)	9	8
Archaeological factors (out of 20)	10.5	10.5
<b>Final risk score (out of 100)</b>	<b>40.5</b>	<b>38</b>

## Risk levels

Total risk score	Risk level
0-29	Minimal risk
30-39	Low risk
40-49	Moderate risk
50-59	High risk
60+	Serious risk

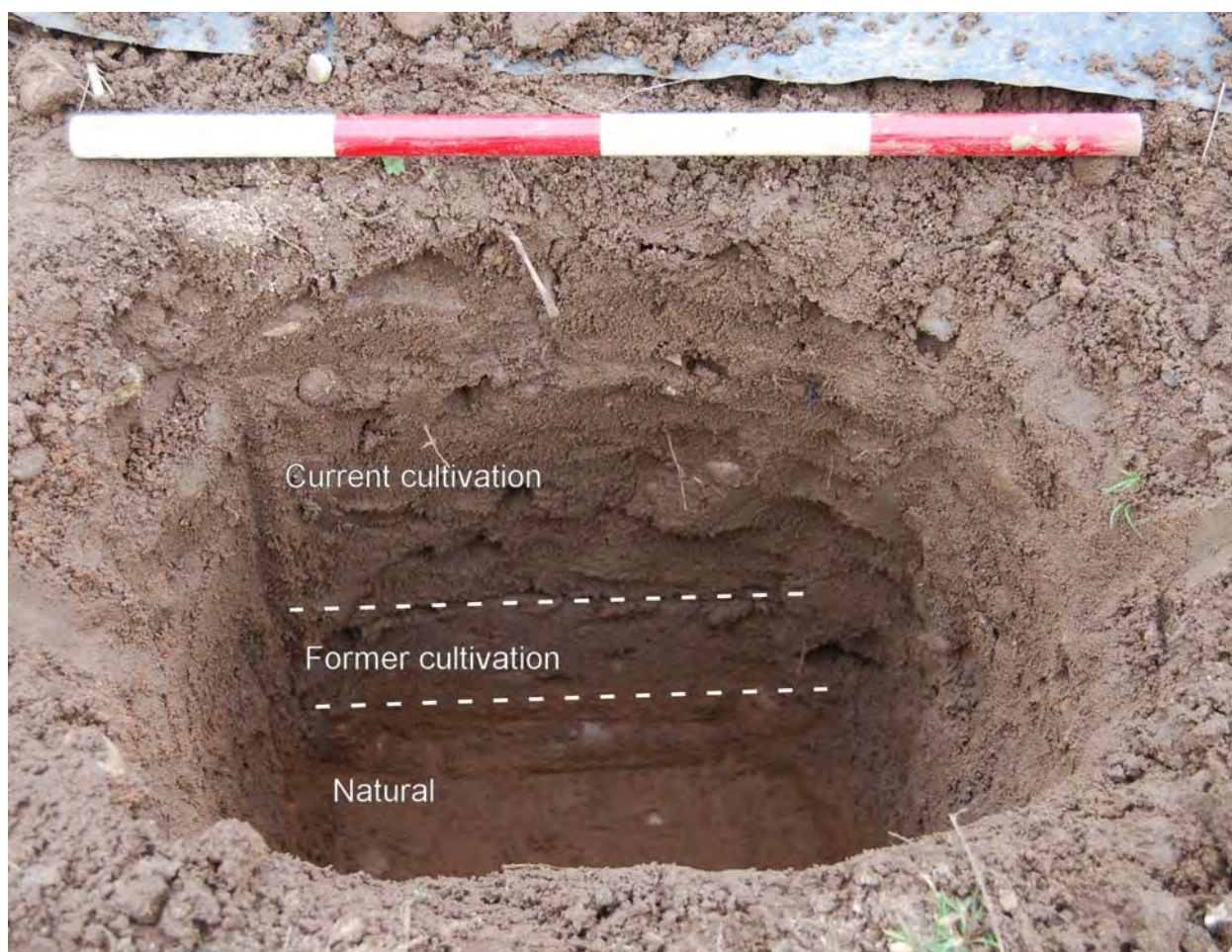
# WT288

- ☒ Test pits
- ▭ Sample trenches
- Cropmark interpretation
- ▭ Geophysics grids
- ▭ WT288





Field 9582: Boat House Bank							
Test pits	213	214	215	216	Range		Average
					min	max	
Current cultivation	0.22	0.28	0.23	0.24	0.22	0.28	0.24
Former cultivation	0.16	0.07	0.10	0.15	0.07	0.16	0.12
Subsoil	None	None	0.19	None			
Natural	Unex	>0.05	Unex	>0.21			
<b>Minimum buffer: 0.07</b>							
<b>Slope: Gentle slope</b>							
<b>Soil group in relation to water erosion: Light</b>							
<b>Soil group in relation to wind erosion: Loams</b>							



Test pit 214 (scale 0.40m)

## WT288

### Boat House Bank (9582)

#### Trench 37

Maximum dimensions: Length: 9.80m

Width: 1.55m

Depth: 1.11m

Orientation: E-W

Context	Classification	Description	Depth below ground surface
3700	Ploughsoil	Firm mid brown silty sand with common small to medium gravels.	0-0.36m
3701	Natural	Loose light to mid reddish/yellowish brown sand with abundant small gravels.	0.36-0.55m+
3702	Fill of 3703	Firm mid, slightly reddish brown silty sand with common small to medium gravels.	0.36-0.84m
3703	Pit	Partially exposed pit. Sub-circular with sharp break of slope at top, steeply sloping sides, gradual break of slope at base and flat base. Diameter of 1.95m.	0.36-1.11m
3704	Fill of 3705	Loose mid brown silty sand with aggregates of yellowish brown sand and gravel Cut by 3703. Unexcavated.	0.36m+
3705	Pit	Partially exposed pit or ditch. Diameter of c1.60m.	0.36m+
3706	Fill of 3707	As 3702. Unexcavated.	0.36m+
3707	Pit	Partially exposed pit. Diameter of c1.60m.	0.36m+
3708	Fill of 3709	As 3702. Unexcavated.	0.36m+
3709	Pit	Partially exposed pit. Diameter of c1.90m.	0.36m+
3710	Fill of 3711	As 3702. Unexcavated.	0.36m+
3711	Pit	Partially exposed pit. Diameter of c1.35m.	0.36m+
3712	Fill of 3703	Firm mid brown sandy silt with common small to large gravels and occasional charcoal flecks.	0.84-1.11m

**Trench 38**

Maximum dimensions: Length: 8.50m

Width: 1.55m

Depth: 0.71m

Orientation: NE – SW

Context	Classification	Description	Depth below ground surface
3800	Ploughsoil	Firm mid brown silty sand with common small to medium gravels.	0-0.34m
3801	Natural	Loose light to mid reddish/yellowish brown sand with abundant small gravels.	0.34m+
3802	Fill of 3803	Firm mid slightly reddish brown silty sand with common small to large gravels and few fragments of animal bone.	0.34-0.71m
3803	Ditch	Linear, parallel sided feature 1.20m and 0.37m deep with gradual break of slope at top, moderately sloping sides and gradual slope to flat base. Aligned NW-SE.	0.34-0.71m
3804	Fill of 3805	Firm mid, slightly reddish brown with aggregates of darker brown silty sand. Few small to medium gravels and charcoal flecks. Also several fragments of animal bone. Unexcavated.	0.34m+
3805	Pit	Sub-circular pit, almost completely exposed, suggesting diameter of c2.25m.	0.34m+

**Trench 39**

Maximum dimensions: Length: 12.20m

Width: 1.55m

Depth: 0.72m

Orientation: WNW-ESE

Context	Classification	Description	Depth below ground surface
3900	Ploughsoil	Loose mid greyish brown silty sand with common small gravels.	0-0.30m
3901	Subsoil	Loose mid, slightly reddish brown silty sand with common small gravels.	0-30-0.40m
3902	Natural	Loose light yellowish and reddish brown sand with abundant small gravels.	0.40m+
3903	Fill of 3904	Firm mid brown silty sand with common small gravels and few fragments of burnt animal bone. Unexcavated.	0.30m+
3904	Pit or tree-bole	Partially exposed irregular but generally sub-circular feature c1.20m in diameter. Uncertain relationship with 3906.	0.30m+
3905	Fill of 3906	As 3903. Unexcavated.	0.30m+
3906	Tree or root	Small sub-circular feature c0.80m long by	0.30m+

Context	Classification	Description	Depth below ground surface
	disturbance	0.35m wide.	
3907	Fill of 3908	Firm mid brown silty sand with common small gravels.	0.30m-0.72m
3908	Tree or root disturbance	Partially exposed feature or features sampled in two hand-excavated slots. One section showed a regular concave profile. The other section showed an irregular profile consistent with bioturbation.	0.30m-0.72m
3909	Fill of 3910	As 3907. Unexcavated.	0.30m+
3910	Tree or root disturbance	Partially exposed irregular feature up to 2.15m wide.	0.30m+
3911	Fill of 3912	As 3907. Unexcavated	0.30m+
3912	Tree or root disturbance	Small elongated oval feature 0.90m long by 0.22m wide.	0.30m+
3913	Void		
3914	Void		
3915	Fill of 3916	As 3907 but slightly sandier.	0.30m+
3916	Tree or root disturbance	Small irregular feature, 0.44m long by 0.35m wide.	0.30m+
3917	Fill of 3918	As 3915.	0.30m+
3918	Tree or root disturbance	Small sub-circular feature, 0.53m long by 0.30m wide.	0.30m+
3919	Fill of 3920	As 3915. Truncated by historic plough scars. Unexcavated.	0.30m+
3920	Tree or root disturbance	Irregular but generally oval feature with longest axis NW-SE. c1.0m long by 0.50m wide.	0.30m+
3921	Fill of 3922	As 3915. Unexcavated.	0.30m+
3922	Tree or root disturbance	Partially exposed sub-circular feature. Uncertain relationship with 3920.	0.30m+



*Trench 37 facing west across pits 3705, 3703, 3707, 3709 and 3711 (1m scale)*



*Trench 37: pit 3703 facing south (1m scale)*



*Trench 38 facing south-east across pit 3805 and ditch 3803 (1m scale)*



*Trench 38: north facing section of ditch 3803 (1m scale)*



*Trench 39 facing south-east (1m scale)*



**COSMIC Assessment Sheet – Land Parcel**

9582

**Field Name**

Boat House Bank

Management factors							
	Serious risk Score 5	High risk Score 4	Medium risk Score 3	Low risk Score 2	Minimum risk Score 1	Score*	
						Root/tuber crops	Combin- able crops
<b>Buffer</b>	No buffer	Shallow buffer(< 10cm)	Moderate buffer (10-15cm)	Deep buffer (16-25cm)	Very deep buffer (> 25cm)	A.....4 B..... C.....	A.....4 B..... C.....
<b>Cultivation method and depth</b>	Very deep ploughing (> 30cm)	Deep ploughing (26-30cm)	Normal ploughing (20-25cm)	Disc/tine cultivation Shallow ploughing (10-19cm)	Direct drilling (< 10cm)	A.....3 B..... C.....	A.....3 B..... C.....
<b>Cropping</b>	Cropping includes potatoes/sugar beet	Cropping includes other root/tuber crops	Cropping includes cereals, non-root crops		Cropping includes long term grass ley or set-aside(> 5 years)	A.....4 B..... C.....	A.....3 B..... C.....
<b>Subsoiling</b>	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		A.....2 B..... C.....	
<b>Initial score</b>						13	12
<b>Weighting</b>	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1.5	1.5
<b>Initial score multiplied by weighting</b>						A ...19.5 B .... C ....	A ....18 B .... C ....

\* Graded A-C according to quality of evidence

\* Graded A-C according to quality of evidence

<b>Site intrinsic factors</b>								
<b>Susceptibility of cultivated soil to water erosion</b>								
Average annual rainfall = 600mm								
	<b>Steep slopes</b> ( $>7^\circ$ )		<b>Moderate slopes</b> ( $3^\circ-7^\circ$ )		<b>Gentle slopes</b> ( $2^\circ-3^\circ$ )		<b>Level ground</b> ( $< 2^\circ$ )	<b>Score*</b>
<b>Soil group</b>	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm	Rainfall more than 800mm	Rainfall less than 800mm		
Light soils	Serious Score 5	High Score 4	High Score 4	Medium Score 3	Medium Score 3	Low Score 2	Minimal Score 1	A.....2 B..... C.....
Moderate soils	High Score 4	Medium Score 3	Medium Score 3		Low Score 2		Minimal Score 1	
Heavy soils	Low Score 2		Minimal Score 1		Minimal Score 1		Minimal Score 1	
<b>Susceptibility of cultivated soil to wind erosion</b>								
<b>Soil group</b>	<b>Peats</b>		<b>Sands/Silts</b>	<b>Loams</b>	<b>Sandy clays/silty clay</b>	<b>Clay</b>	<b>Score+ CF</b>	
	Serious Score 5		High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	A.....3 B..... C.....	
<b>Risk of soil loss during harvesting</b>								
<b>Crop type</b>	<b>Potatoes/sugar beet</b>	<b>Other root/tuber crops</b>	<b>Combinable crops</b>	<b>Score*</b>				
				<b>Root/tuber crops</b>	<b>Combinable crops</b>			
	Serious Score 5	High Score 4	Medium Score 3	A.....4 B..... C.....	A.....3 B..... C.....			
<b>Initial score</b>				9	8			
<b>Weighting</b>	Any of above in grey shaded box = 2			1	1			
<b>Initial score multiplied by weighting</b>				A .....9 B..... C.....	A .....8 B..... C.....			

Archaeological factors						
Survival and quality of evidence	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimum Score 1	Score*
[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections)]	- Upstanding earthworks/structures -Well-preserved deposits demonstrated by excavation -Other evidence indicating well-preserved deposits - Dense, discrete, and/or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Other evidence of nationally significant deposits	-Positive and negative features demonstrated by excavation - Positive and negative features indicated by cropmarks/anomalies -Other evidence indicating good preservation -Dense, discrete, and/or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Less dense, discrete, or diagnostic deposits relevant to national research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Other evidence of highly significant deposits	-Negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits - Dense, discrete, or, diagnostic deposits relevant to county research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) -Less dense, discrete, or diagnostic deposits relevant to regional research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) - Dense, discrete, or diagnostic ploughsoil scatters - Other evidence of significant deposits	-Truncated negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits -Other evidence indicating truncation -Sparse or undiagnostic deposits relevant to local research agendas (demonstrated by excavation or indicated by cropmarks/anomalies) - Diffuse or undiagnostic ploughsoil scatters -Other evidence distinguishing between sites of low and minimum significance	- Heavily truncated negative features demonstrated by excavation -Negative features indicated by cropmarks/anomalies -Ploughsoil scatters derived from buried deposits -Other evidence indicating heavy truncation -Sparse or undiagnostic deposits demonstrated by excavation or indicated by cropmarks/anomalies - Diffuse or undiagnostic ploughsoil scatters	A..... B .....3 C.....
<b>Significance</b>	National significance	Regional significance	County significance	Local significance	No obvious significance	A..... B .....4 C.....
<b>Initial score</b>						7
<b>Weighting</b>	For score of 9-10 use weighting factor = 2; for score of 8-7 use weighting factor = 1.5; for score of 6 use weighting factor = 1.3; for score of 5-4 use weighting factor = 1; for score of 2-3 use weighting factor = 0.5					1.5
<b>Initial score multiplied by weighting</b>						A ... B ...10.5 C ...

\* Graded A-C according to quality of evidence

## Final risk score

	Root/tuber crops	Combinable crops
Management factors (out of 50)	19.5	18
Site intrinsic factors (out of 30)	9	8
Archaeological factors (out of 20)	10.5	10.5
<b>Final risk score (out of 100)</b>	<b>39</b>	<b>36.5</b>

## Risk levels

Final risk score	Risk level
0-29	Minimal risk
30-39	Low risk
40-49	Moderate risk
50-59	High risk
60+	Serious risk