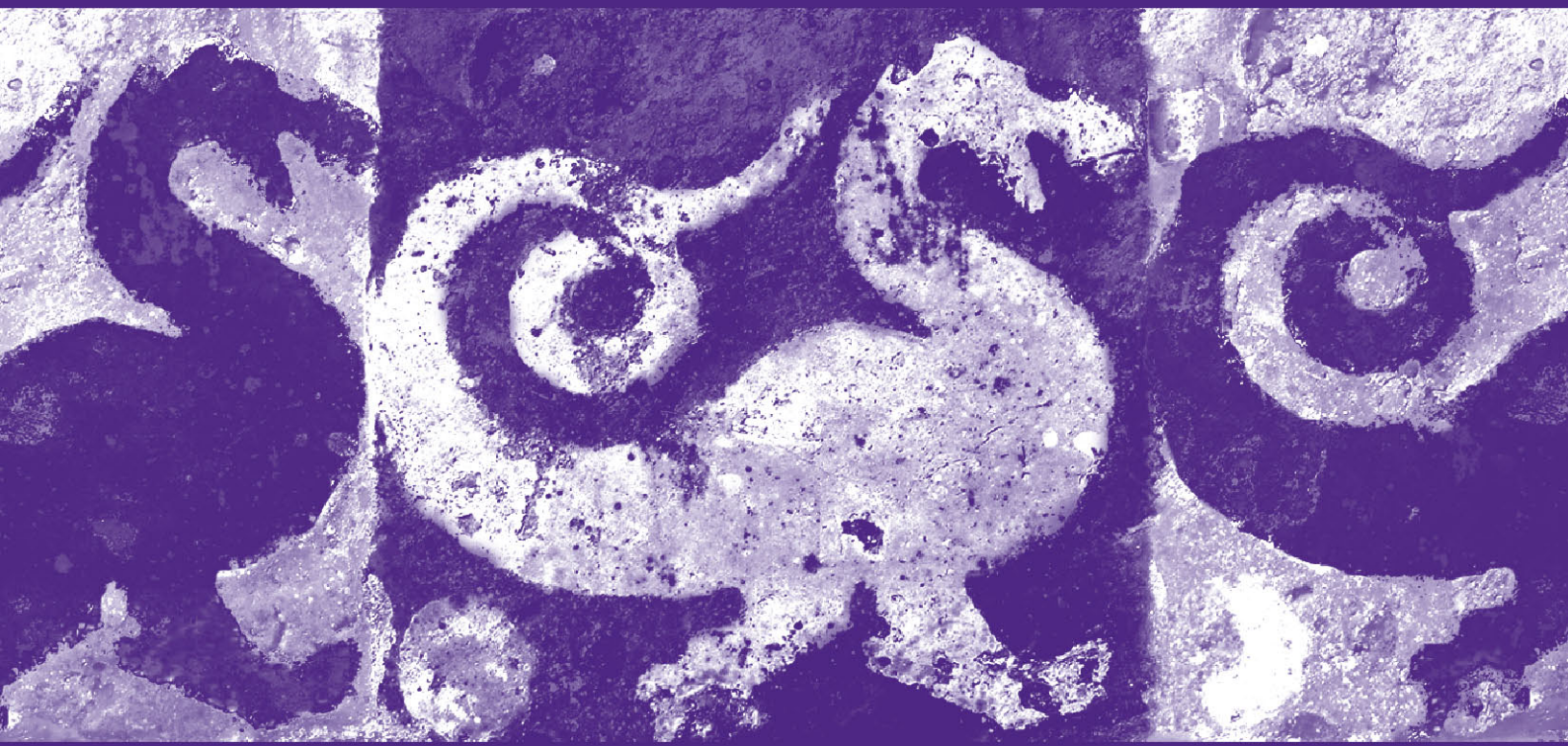
Historic Environment and Archaeology Services

COSMIC+ RISK ASSESSMENT OF ARCHAEOLOGICAL SITES ON THE KEMERTON ESTATE, WORCESTERSHIRE



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COSMIC+
RISK ASSESSMENT OF ARCHAEOLOGICAL SITES ON THE KEMERTON ESTATE, WORCESTERSHIRE

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Illustrations by Richard Bradley

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COSMIC+ Risk assessment of archaeological sites on the Kemerton Estate, Worcestershire

Darren Miller

1. Background

1.1 Sites at risk

This report considers the risk of cultivation and related factors to known archaeological sites on the Kemerton Estate, Worcestershire. It is based on a risk assessment model initially developed for English Nature by the Oxford Archaeological Unit (COSMIC; OAU 2006) and further developed by Worcestershire Historic Environment and Archaeology Service for Natural England (COSMIC+; WHEAS 2009).

The assessment and report are intended to inform a management plan and an application for Higher Level Stewardship. They cover fourteen fields in which archaeological sites were already known from cropmarks or other evidence (Figure 1). The sites are described in the appendix. Most of them are Iron Age and/or Roman farmsteads. They also include a group of Neolithic and early Bronze Age monuments, a possible Roman villa, and what appears to be a medieval hamlet.

All of the sites had been noted in a previous Farm Environment Plan (WHEAS 2007). Most of them were considered to be of high risk of erosion (truncation of archaeological deposits). The main aims of the project were to define the risk, in each case; to identify the factors that cause and prevent erosion; and to recommend appropriate management options.

1.2 Current management

The fields are all in continuous cultivation. Current management follows a four crop rotation in which wheat is grown after oilseed rape, then again after beans or oats. In each field, three successive crops are established by minimum tillage. A disc or tine cultivator is used to a depth of about four inches (10cm). The fourth crop is established by ploughing to a depth of six to eight inches (15-20cm). Only one field needs to be subsoiled occasionally. No field requires frequent drainage work. The crops are harvested with a combine harvester. All these factors are relevant to the risk assessment, as are intrinsic (topographical) factors and archaeological factors.

1.3 Risk assessment

The assessment proceeded in six stages broadly following a detailed project design produced for the holding (WHEAS 2009, 8-19).

The first stage was a review of the Farm Environment Plan and the information on which it was based.

The second stage was an interview with the Farm Manager, who provided detailed information on the fields and their management.

The third stage involved a walkover survey and test-pitting. This fieldwork provided consistent data on slopes, soil types, and depths of cultivation.

The fourth stage involved additional fieldwork. In seven fields, the evidence of the cropmarks was supplemented by geophysical surveying. In six of these fields, the results were tested by excavating small trenches.

The information was then assessed, using a modified version of the original model. For each site, the likelihood of erosion was established by scoring a range of management and intrinsic factors. The survival, quality, and significance of each site were established by considering the evidence and current research frameworks. The total scores for each set of factors were weighted to acknowledge particular combinations. Final risk scores were calculated and related to broader risk levels.

Finally, the results were checked and reviewed to identify appropriate management options.

2. Summary of results

The results are summarised below. The detailed results are presented in the appendix, except for the results of the geophysical survey. Information relating to each field is presented together, for ease of reference. Each field is shown on a large-scale plan. Each plan shows the best available plot of the cropmarks and the location of test pits (exaggerating their size). Where appropriate, the plans also show geophysical survey plots and sample trenches. In addition, for each field there is a sheet summarising the results of the walkover survey and test-pitting; an annotated photograph of a typical test pit; and an assessment sheet, showing how each site was scored. Where sample trenches were excavated, there is also a table and at least one photograph.

The main technical terms used below, and in the appendix, are defined and explained in section 6.

2.1 Sites at moderate risk

The sites in Ryall and Calvers Hill are at moderate risk (Table 1; Figure 2). According to the COSMIC+ model, the risk is such that changes in management should be considered.

In Ryall, the risk reflects a combination of a moderate slope, sandy/silty soils, and the well preserved remains of a Roman farmstead. The moderate slope and sandy/silty soils could result in soil loss through water erosion. This would reduce the depth of the buffer and increase the likelihood of erosion. At present, the risk is not high or serious because the limited depth of current cultivation leaves a buffer of 10-26cm. However, a buffer of 10cm is not sustainable, and the average depth is only 15cm.

In Calvers Hill, the risk represents the same combination of factors. Here, deposits indicating another Roman farmstead had already been identified by previous work although *tesserae* found during the walkover survey, and anomalies identified in resistivity grids R1 and R2, suggest that the site could in fact be a villa. The two test pits excavated in Calvers Hill suggest a buffer of about 17cm.

Field number	Field name	Final risk score				
		Minimal 0-30	Low 30-40	Moderate 40-50	High 50-60	Serious 60+
7447	Ryall	42				
7972	Calvers Hill	41				

Table 1: Sites at moderate risk

2.2 Sites at low risk

The sites in Poppy Field and Beet Pad are at low risk (Table 2; Figure 2). As such, there is no current need to consider changes in management. Nevertheless, it is worth noting the factors in each case, not least because the score for the site in Beet Pad is close to the low/moderate threshold.

In Poppy Field the risk reflects the significance of the sites as much as the likelihood of erosion. The field contains two Neolithic or early Bronze Age monuments and a multi-phase Iron Age or Roman farmstead. The risk to these sites is low because the field is on level ground, and because current cultivation leaves a buffer of 10-21cm (average 15cm).

Beet Pad contains what appears to be a row of medieval tofts (enclosures for houses and agricultural buildings). In other circumstances, the remains of this unexpected hamlet would not be at risk, as current cultivation leaves a moderate buffer of 11-23cm (average 16cm). However, the buffer might not be sustainable, as the combination of a moderate slope and sandy/silty soils increases the likelihood of soil loss through water erosion.

Field number	Field name	Final risk score				
		Minimal 0-30	Low 30-40	Moderate 40-50	High 50-60	Serious 60+
9854	Poppy Field	30				
0232	Beet Pad	38.5				

Table 2: Sites at low risk

2.3 Sites at minimal risk

The sites in the other fields are at minimal risk (Table 3; Figure 2). Crucially, they are all on level ground or gentle slopes. They also appear to be less significant or less well preserved than the sites discussed above. Although the remains in Wise Acre form part of a Scheduled Ancient Monument (WT 212), some features indicated by cropmarks and geophysical anomalies were not identified in sample trenches (see appendix). This discrepancy suggests that the features have been eroded to such an extent that only residual traces survive in the ploughsoil. A similar discrepancy observed in 28 Acres can also be explained in this way.

According to the COSMIC+ model, sites at minimal risk do not warrant changes in management.

Field number	Field name	Final risk score				
		Minimal 0-30	Low 30-40	Moderate 40-50	High 50-60	Serious 60+
7090	Wise Acre	28.5				
0818	Seed Ground	28.5				
5152	Home Field	27.5				

Field number	Field name	Final risk score				
		Minimal 0-30	Low 30-40	Moderate 40-50	High 50-60	Serious 60+
0958	Pig Croft	26.8				
1950	17 Acres	25.8				
6309	Cheltenham Road	25.8				
7835	Close and Marketside	25.8				
9559	I.P.	24.8				
8363	Gravel Hole	24				
0384	28 Acres	22				

Table 3: Sites at minimal risk

3. Management options

The following discussion is limited to the management of Ryall and Calvers Hill, although the same options could also be applied in Poppy Field and Beet Pad.

The best option for both Ryall and Calvers Hill would be to reduce the depth of cultivation. One such option is available through Higher Level Stewardship (HD3). In this option, combinable crops are established by non-inversion tillage to a maximum depth of 10cm or 4 inches. Subsoiling and mole-ploughing are not permitted and other restrictions apply. This option is similar to the current management of both fields and taking it would ensure a deep, sustainable buffer.

Another option available through HLS would be to establish crops by direct drilling (HD6). This option would afford the sites even more protection but may not be practical or sustainable. In the first place, the light soils of both fields are not well suited to direct drilling. Also, direct drilling may lead to compaction, and the option does not permit subsoiling.

A third option, also available through HLS, would be reversion (HD2 or HD7). However, it is not clear that reversion is warranted in either case. In the first place, neither site is of national significance, according to the criteria adopted in the model. Secondly, the risk of soil loss reducing the depth of buffers may be more apparent than real. The model incorporates the main factors that cause soil loss but does not allow for measures that prevent it and are actually taken across the estate (e.g. timing cultivations, ensuring crop cover over winter, and retaining crop stubble).

Other options, not available through HLS, would be to grow cover crops or introduce grass leys into the rotations. On the whole, however, the current management of both fields is relatively benign and need not change, at least in the short term (e.g. for the standard ten-year term of a Higher Level Stewardship agreement).

Field number	Field name	Main risk factors	Management options	Final risk score after mitigation
7447	Ryall	Moderate slope; sandy/silty soils; highly significant deposits	Establish crops by reduced-depth, non-inversion tillage with no subsoiling or mole-ploughing (HD3)	40
			Establish crops by direct drilling with no cultivation, subsoiling, deep ploughing or mole-ploughing (HD6)	39
7972	Calvers Hill	Moderate slope; sandy/silty soils; highly significant deposits	Establish crops by reduced-depth, non-inversion tillage with no subsoiling or mole-ploughing (HD3)	40
			Establish crops by direct drilling with no cultivation, subsoiling, deep ploughing or mole-ploughing (HD6)	39

Table 4: Summary of risk factors and management options for sites at moderate risk

4. Acknowledgements

Kemerton Estate: The Estate Owner, Adrian Darby, commissioned the project with the support of Natural England. The Farm Manger, Peter Doble, provided information at interview and throughout the fieldwork. He and his colleague Mark Cleaver also transported a tracked excavator around the estate. The excavator was operated by Dave Whitcomb and at times, by Mark Cleaver.

Natural England: The project was initiated and overseen by Jez Bretherton and Helen Trapp.

English Heritage: work at the SAMs within the holding was monitored by the West Midlands Regional Inspector, Tony Fleming.

Stratascan: The survey team was managed and led by Simon Stowe. It included Allen Wright, Mel Biggs, Peter Barker, and Amanda Dawson.

WHEAS: The project was managed by Robin Jackson and led by Darren Miller. Information on fields and current management was recorded digitally by Ruth Humphreys. The fieldwork team comprised Darren Miller, Supervisor Adam Lee and Archaeologists Richard Bradley, Tegan Cole, Tim Cornah, Chris Gibbs, Christine Elgy and Mike Nicholson. Most of the post-fieldwork analysis was undertaken by Darren Miller, Adam Lee, and Richard Bradley. The illustrations were produced by Richard Bradley.

5. References

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

WHEAS, 2009 *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 11th November 2009

WHEAS, 2007 *Farm Environment Plan: report for features of Historic Environmental potential*, Worcestershire Historic Environment and Archaeology Service unpublished document, dated 22nd November 2007

6. Glossary and notes

Buffer: Soil or soils between *current cultivation* and known or inferred archaeological deposits. On the Kemerton Estate, all buffers are composed of *former cultivation*, but elsewhere, they might comprise alluvium, colluvium, or even 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. On the Kemerton Estate, the parent material is either sand and gravel or limestone brash.

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 groups 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.

Erosion, loss of information and significance: When used of archaeological deposits, the term erosion signifies truncation or reworking as a result of cultivation (mainly ploughing and other kinds of tillage, but also subsoiling and drainage work). The erosion of deposits 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. However, this assessment does not negate the wider significance that some sites might have if they were known to exist (e.g. as personal or communal points of reference to a distant past).

Figure 1: Distribution of sites

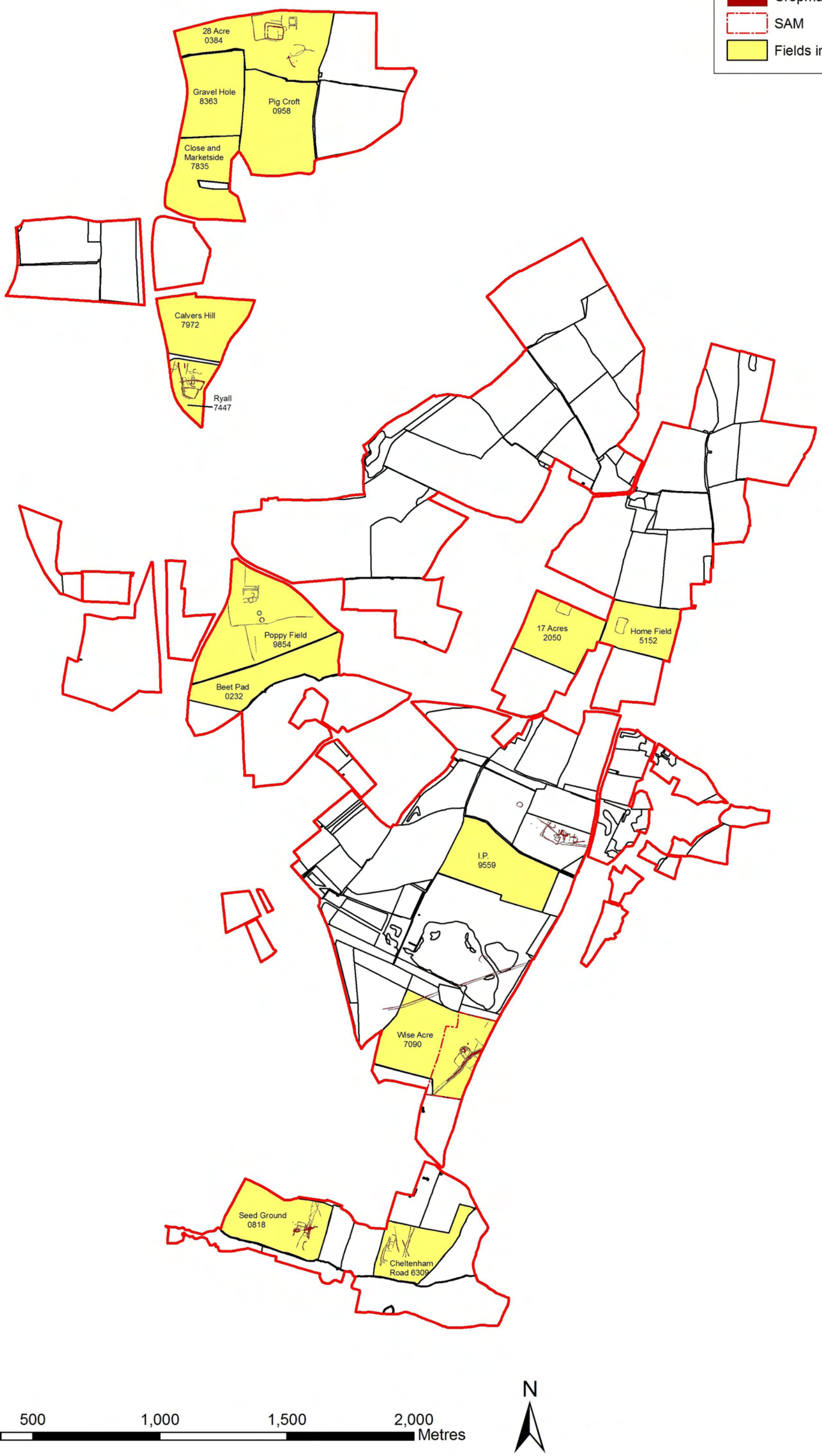
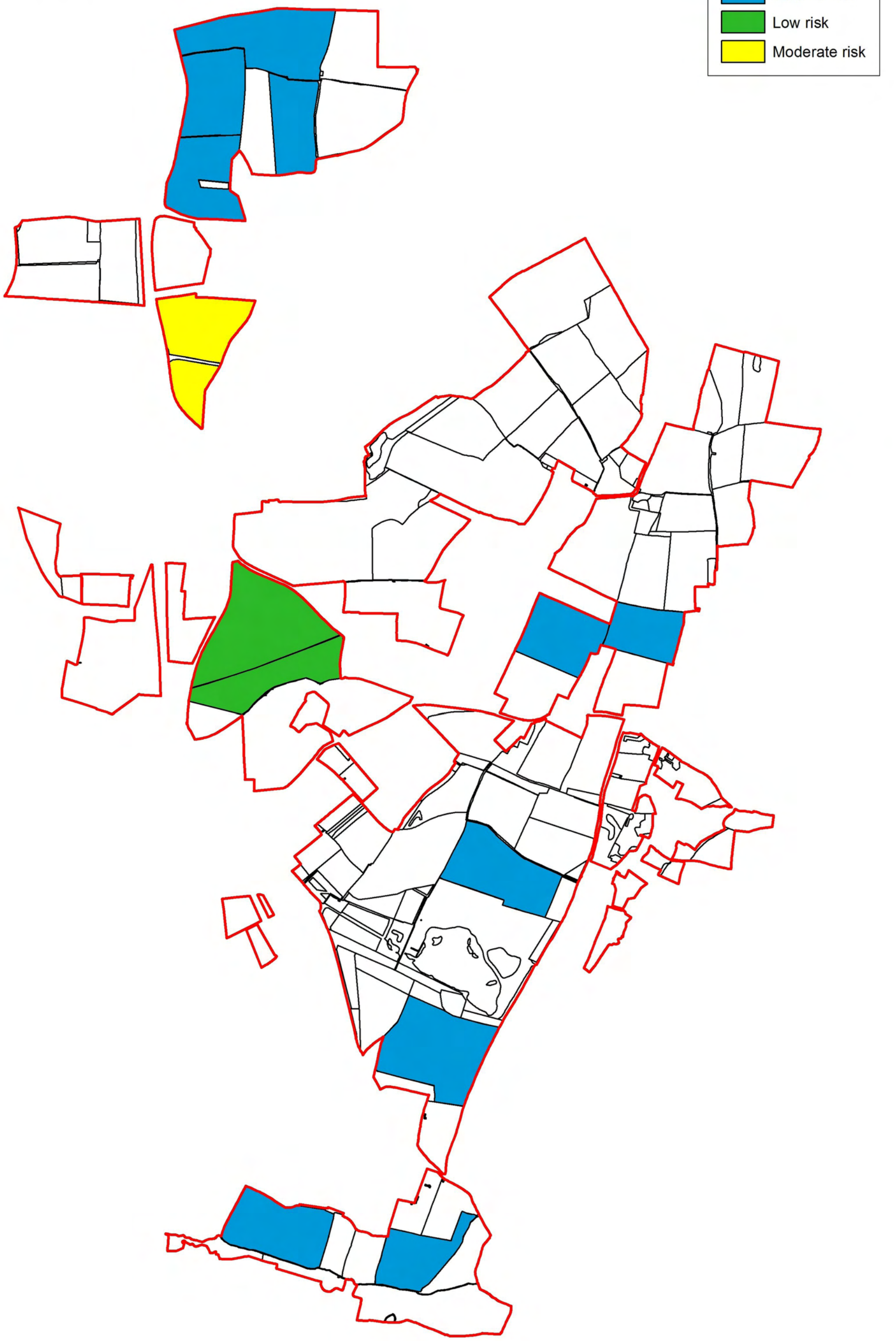


Figure 2: Risk levels



Appendix

Land parcel no.	Field name	HER number	Grid ref. (point)	Feature quantity (area/ length/ no.)	Monument type	Description	Notes
232	Beet Pad	WSM04630	SO93326 37505	21 ha	Deserted Medieval village	Cropmarks and shadow marks or earthworks suggest a medieval settlement of regular plots fronting onto the track that divides Beet Pad from Poppy Field to the north	Site of National Significance - considered for scheduling by English Heritage. National Monuments Record SO93NW22. The area (21 ha) refers to only half of the site. The other half is covered under record WSM32474. Ongoing training excavation by University of Worcester (WSM33610)
384	28 Acres	WSM09779	SO93157 39842	2.1 ha	Ditch Pit	Ditches associated with possible field bounadries and ¸ its¸ identifiable as cro¸ marks. Hart/Thom¸ son ¸mdus¸ recovering coarse pottery, two abraded 1st century coins and a mid-2nd century wheel brooch	Fieldwalking in 1987 unearthed large quantities of Romano British ¸ otter¸ ¸ ¸ redomientl¸ Severn Valle¸ Ware, with a date range of AD 80 - 140 (WSM39850) Metal detecting in 1999, unearthed a brooch, a metal pendant and two Roman coins, dating to the 4th century (WSM39851)
		WSM06044	SO92958 39937	1.8 ha	Enclosure	Group of cropmarks to the north of WSM09779 and in the same field. Traces of rectangular double ditched enclosures and overlapping circular features within. Visible on CUAP 1975 photo but not on later prints.	Fieldwalking in 1987 unearthed large quantities of Romano British pottery, predomiently Severn Valley Ware, with a date range of AD 80 - 140 (WSM39850) Metal detecting in 1999, unearthed a brooch, a metal pendant and two Roman coins, dating to the 4th century (WSM39851)
		WSM7648	SO92700 39800		Ring ditch	Circular ditch with fragment of ditch to north	
		WSM09778	SO93109 39940	0.83 ha	Enclosure	Square enclosure, double ditch entrance to the west. Field boundaries/ditches around.	Fieldwalking in 1987 unearthed large quantities of Romano British pottery, predomiently Severn Valley Ware, with a date range of AD 80 - 140 (WSM39850) Metal detecting in 1999, unearthed a brooch, a metal pendant and two Roman coins, dating to the 4th century (WSM39851)
818	Seed Ground	WSM41813	SO93200 35149	3.21 ha	Field system Enclosure Ring Ditch	Cropmarks associated with an enclosure, ring ditch and field system.	The area on the northern side of the Carrant Brook contains some of the most dense concentrations of archaeological sites in the county. Adjacent to area of orchard.
958	Pig Croft	WSM42001	SO93135 39571	0.64 ha	Enclosure	Possible enclosure identified as a cropmark on 1999 aerial photographs and the NMR cropmark layer.	
2050	17 Acres	WSM41812	SO94211 37597	0.42 ha	Enclosure	Cropmark enclosure.	
5152	Home Field	WSM41947	SO94418 37568	0.47 ha	Enclosure	Cropmark enclosure.	
6309	Cheltenham Road	WSM09775	SO93493 35166	4.35 ha	Ditch	Ditch lines identified in 1972 and 2005 during aerial photography	The area on the northern side of the Carrant Brook contains some of the most dense concentrations of archaeological sites in the county. Adjacent to area of orchard.
		WSM7643	SO93459 34966		Ridge and furrow	Ridge and furrow running roughly north - south across the field. No longer visible as an earthwork. Slight trace as cropmark	Not in FEP

Land parcel no.	Field name	HER number	Grid ref. (point)	Feature quantity (area/ length/ no.)	Monument type	Description	Notes
7090	Wise Acre	WSM05098	SO93785 35781	5.13 ha	Enclosure Trackway Pit alignment	Enclosure identified by cropmark. Appears to have had several phases of activity.	Feature size refers to scheduled area. Ridge and furrow is identifiable as a cropmark, overlying the earlier archaeology
		WSM05137	SO93680 35682	5.13 ha	Trackway	Trackway identifiable as a cropmark, running through a probable prehistoric landscape with enclosures and field systems, in the surrounding area. The trackway runs up to Anglo-Saxon settlement, identified during evaluation, and may therefore, be of early medieval date	
		WSM06090 (part - also in 4803, 6609, 7606 & 8527)	SO93495 36018	300 m	Road	Aerial photographs show parallel double ditches (a possible road) running south west - north east, across the field. The area is now partially quarried out	
		WSM9774	SO93600 35800		Ridge and furrow	Much ploughed out ridge and furrow. Wide rig in S of field, narrow in N. Faintly visible in 1992 but not in 1994	Not in FEP
		WSM7642	SO93700 35800		Ridge and furrow	Part SAM 212. Overlies WSM5098. Ridge and furrow fairly faint but visible in certain light across whole field	Not in FEP
7447	Ryall	WSM29226	SO92751 38445	3.0 ha	Enclosure	Enclosure with internal subdivisions, pits and possible building.	Metal detecting has unearthed a significant assemblage of Roman and Saxon artefacts in parcels NG7970 and NG7544 (WSM39782, WSM27863 and WSM30521)
7835	Close and Marketside	WSM33470	SO92810 39385	0.57 ha	Enclosure	Cropmark enclosure identified on 1999 aerial photographs by J Bretherton	
7972	Calvers Hill	WSM35982	SO92911 38861	1.0 ha	Occupation site	Possible occupation area, identified during geophysical survey	Gradiometer survey, undertaken in 2006, revealed a number of linear anonalies (WSM35981).
8363	Gravel Hole	WSM42000	SO92851 39694	1.15 ha	Trackway	Trackway identifiable as a cropmark on 1999 aerial photographs and the NMR cropmark layer.	Iron Age and Roman artefacts have been unearthed within parcel NG8262 (WSM23029)
9559	I.P.	WSM42002	SO94000 36460	0.78 ha	Enclosure Ridge and furrow	Ridge and furrow, two sub circular enclosures and isolated negative linear features , identified as cropmarks, during geophysical prospection. Finds from fieldwalking attested to the use of the site during the Neolithic period.	Geophysical prospection revealed evidence of ridge and furrow cultivation and two sub-circular enclosures together with isolated negative linear features (WSM27139)
9854	Poppy Field	WSM32474	SO93030 37529	16.7 ha	Henge Round Barrow Enclosure	A small henge with an entrance aligned south east. Adjacent to a double ring ditch. Rectilinar and curvilinear enclosures lie to the north.	Ongoing training excavation by University of Worcester (WSM33610)
		WSM9777	SO92780 37310		Ridge and furrow	Ridge and furrow in varying directions - some running under Moreton lane	Not in FEP

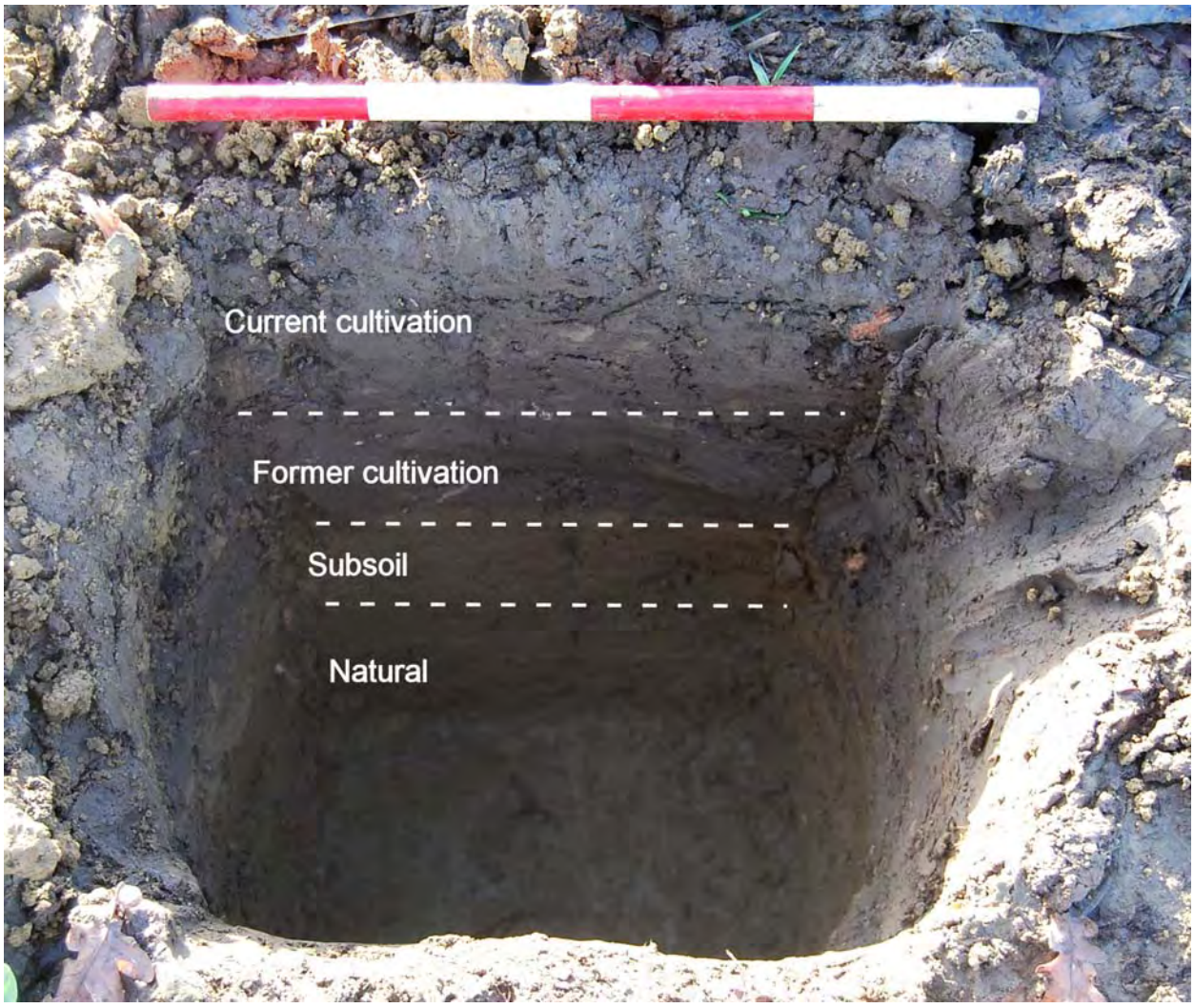
Fields 9854 and 0232

Legend

- Sample trenches
- Cropmark interpretation
- Test pits

Franmar
GP
The Bramleys
Bredon Fields
129
131
130
132
128
127
133
134
140
Path (um)
Poppy Field
9854
Beet Pad
0232
Pavilion
Cricket Ground
Stone
Croft V
Fairfield C
Ward B
LB
4
5
Swimming Pool
Furlong Cottage
Dairy Cottage
Brensham
The Banda
Corner Ho
The Dovecote
Clock Ho
Moretons Cottage
The Moretons
Moretons Lodge
0 25 50 100 150 200 Metres
N

Field 0232: Beet Pad						
Test pits	**133**	**134**	**140**	**Range**		**Average**
				min	**max**	
Current cultivation	0.15	0.15	0.19	0.15	0.19	0.16
Former cultivation	0.11	0.15	0.23	0.11	0.23	0.16
Subsoil 1	0.09	0.07	None	0.00	0.09	0.05
Subsoil 2	>0.30	N/A	N/A			
Natural	N/A	Unexc.	>0.05			
Buffer: 0.11						
Slope: Moderate						
Soil group in relation to water erosion: Light						
Soil group in relation to wind erosion: Loams						



Test pit 134 (scale 0.40m)

COSMIC Assessment Sheet – Land Parcel 0232 Field Name Beet Pad

Management factors							
	Serious risk Score 5	**High risk Score 4**	**Medium risk Score 3**	**Low risk Score 2**	**Minimum risk Score 1**	**Score***	
						Ploughing	**Miniumum tillage**
Buffer	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**.....
Cultivation method and depth	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**.....
Cropping	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**.....
Subsoiling	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		**A**.....2 **B**..... **C**.....	
Initial score						10	10
Weighting	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1	1
Initial score multiplied by weighting						A …10 B …. C ….	A ….10 B …. C ….

***Graded A-C according to quality of evidence**

Site intrinsic factors

Susceptibility of cultivated soil to water erosion

Average annual rainfall = 600mm

	Steep slopes (> 7°)		**Moderate slopes** (3°-7°)		**Gentle slopes** (2°-3°)		**Level ground** (< 2°)	**Score***
Soil group	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**……3 **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	

Susceptibility of cultivated soil to wind erosion

Soil group	**Peats**	**Sands/Silts**	**Loams**	**Sandy clays/silty clay**	**Clay**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	**A**.....3 **B**..... **C**.....

Risk of soil loss during harvesting

Crop type	**Potatoes/sugar beet**	**Other root/tuber crops**	**Combinable crops**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	**A**.....3 **B**..... **C**.....
Initial score				9
Weighting	Any of above in grey shaded box = 2			2
Initial score multiplied by weighting				A …..18 B..... C.....

***Graded A-C according to quality of evidence**

Archaeological factors						
Survival and quality of evidence **[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections]**	**Serious Score 5**	**High Score 4**	**Medium Score 3**	**Low Score 2**	**Minimum Score 1**	**Score***
	- 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 distriguishing 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**.....
Significance	National significance	Regional significance	County significance	Local significance	No obvious significance	**A**..... **B** .....4 **C**.....
Initial score						7
Weighting	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
Initial score multiplied by weighting						**A** … **B** …10.5 **C** …

***Graded A-C according to quality of evidence**

Final risk score

Management factors (out of 50)	10
Site intrinsic factors (out of 30)	18
Archaeological factors (out of 20)	10.5
Final risk score (out of 100)	**38.5**

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 Name: *Beet Pad* **Field Number:** *0232*

Trench 4

Maximum dimensions:

Length: 9.70m Width: 1.20m Depth: 0.80m

Orientation: NE – SW

Main deposit description:

Context	Classification	Description	Depth below ground surface	Artefacts
400	Upper topsoil	Moderately compact medium greyish brown sandy silt with moderate small to medium rounded stones.	0.00-0.15m	Two sherds of late Iron Age/early Roman pottery (23g), one piece of animal bone (11g).
401	Lower topsoil	Moderately compact light greyish brown sandy silt with frequent dark reddish brown mottling. Moderate small to medium rounded stones.	0.15-0.50m	
402	Fill	Moderately compact medium brown sandy silt with occasional small rounded stones. Upper fill of ditch [405].	0.50-0.65m	
403	Fill	Same as 402 but with frequent dark red brown mottling/staining. Middle fill of ditch [405].	0.65-0.97m	
404	Fill	Moderately compact medium blue grey clayey silt with frequent small to medium stones. Lower, gleyed, fill of ditch [405].	0.45-1.18m	One piece of animal bone (12g)
405	Cut	Cut for ditch.	0.50m	
406	Natural	Light yellow brown silty sand with small to medium gravels.	0.50m +	

Trench 5

Maximum dimensions:

Length: 15m Width: 1.20m Depth: 0.55m

Orientation: NE – SW

Main deposit description:

Context	Classification	Description	Depth below ground surface	Artefacts
500	Upper topsoil	Moderately compact medium greyish brown sandy silt with moderate small to medium rounded stones.	0.00-0.20m	Three sherds of possible Iron Age pottery (26g).
501	Lower topsoil	Moderately compact light greyish brown sandy silt with frequent dark reddish brown mottling. Moderate small to medium rounded stones.	0.20-0.40m	
502	Fill	Moderately compact medium grey brown sandy silt with frequent small to medium rounded stones. Fill of ditch [503].	0.30-1.10m	Nine sherds of medieval cooking pot (127g).
503	Cut	Cut for a ditch, 2.75m wide, aligned N-S.	0.30m	
504	Natural	Light yellow brown silty sand with small to medium gravels.	0.40m +	

Beet Pad: Trench 4 looking west, showing medieval ditch

Beet Pad: Trench 5 looking west, showing medieval ditch.

Beet Pad: Trench 5 looking east, with medieval ditch in foreground.

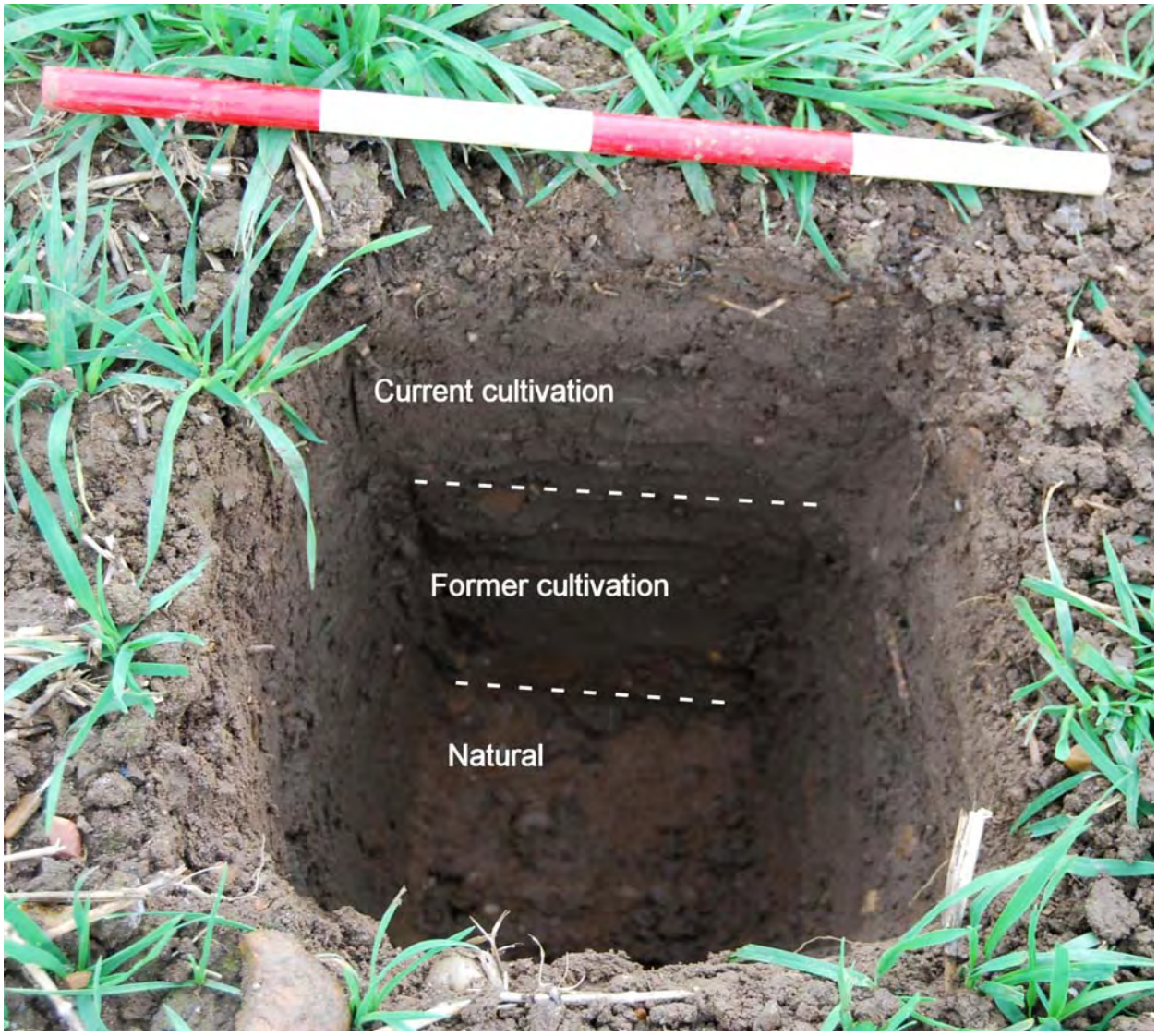
Fields 0384, 8363, 0958 and 7835

Legend

- Sample trenches
- Cropmark interpretation
- Test pits

144
145
1
143
28 Acre
0384
148
146
149
147
150
151
153
Gravel Hole
8363
Pig Croft
0958
154
Track
Issues
Path (um)
Sinks
152
Issues
Close and
Marketside
7835
The
Homeland
Walnut
Tree
Cottage
Ox
Leasow
Edscote
Lower End
Cottage
Thatchways
Bredon's
Norton
Malvern View
Malvern
View
The Croft
The Croftlands
N
0
25
50
100
150
200
Metres

Field 0384: 28 Acres									
Test pits	**143**	**144**	**145**	**146**	**147**	**148**	**Range**		**Average**
							min	**max**	
Current cultivation	0.15	0.17	0.19	0.14	0.14	0.10	0.10	0.19	0.15
Former cultivation	0.15	0.17	0.19	0.13	0.18	0.16	0.13	0.19	0.16
Subsoil	0.33	None	None	0.12	None	0.22	0.00	0.33	0.11
Natural	Unex	Unex	Unex	Unex	Unex	Unex			
Buffer: 0.13									
Notes									
1) Low density scatter of Roman pottery across field. Higher concentration in NE part of field coincides with cropmarks.									
Slope: Gentle									
Soil group in relation to water erosion: Light									
Soil group in relation to wind erosion: Loams									



Test pit 145 (scale 0.40m)

COSMIC Assessment Sheet – Land Parcel 0384 Field Name 28 Acres

Management factors	Serious risk Score 5	High risk Score 4	Medium risk Score 3	Low risk Score 2	Minimum risk Score 1	Score*	
						Ploughing	Miniumum tillage
Buffer	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**.....
Cultivation method and depth	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**.....
Cropping	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**.....
Subsoiling	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		**A**.....2 **B**..... **C**.....	
Initial score						10	10
Weighting	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1	1
Initial score multiplied by weighting						A …10 B …. C ….	A ….10 B …. C ….

***Graded A-C according to quality of evidence**

Site intrinsic factors

Susceptibility of cultivated soil to water erosion

Average annual rainfall = 600mm

	Steep slopes (> 7°)		**Moderate slopes** (3°-7°)		**Gentle slopes** (2°-3°)		**Level ground** (< 2°)	**Score***
Soil group	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	

Susceptibility of cultivated soil to wind erosion

Soil group	**Peats**	**Sands/Silts**	**Loams**	**Sandy clays/silty clay**	**Clay**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	**A**.....3 **B**..... **C**.....

Risk of soil loss during harvesting

Crop type	**Potatoes/sugar beet**	**Other root/tuber crops**	**Combinable crops**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	**A**.....3 **B**..... **C**.....
Initial score				8
Weighting	Any of above in grey shaded box = 2			1
Initial score multiplied by weighting				A …..8 B..... C.....

***Graded A-C according to quality of evidence**

Archaeological factors						
Survival and quality of evidence **[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections]**	**Serious Score 5**	**High Score 4**	**Medium Score 3**	**Low Score 2**	**Minimum Score 1**	**Score***
	- 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 distriguishing 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**.....
Significance	National significance	Regional significance	County significance	Local significance	No obvious significance	**A**..... **B** .....2 **C**.....
Initial score						4
Weighting	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
Initial score multiplied by weighting						**A** … **B** …4 **C** …

***Graded A-C according to quality of evidence**

Final risk score

Management factors (out of 50)	10
Site intrinsic factors (out of 30)	8
Archaeological factors (out of 20)	4
Final risk score (out of 100)	**22**

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 Name: *28 Acres* **Field Number:** *0384*

Trench 1

Maximum dimensions:

Length: 10m Width: 1.30m Depth: 0.60m

Orientation: NW – SE

Main deposit description:

Context	Classification	Description	Depth below ground surface	Artefacts
100	Topsoil	Moderately compact medium greyish brown sandy silt loam with a few small gravels. Clear lower boundary.	0.00-0.23m	One sherd Severn Valley Ware Roman pottery (2g)
101	Subsoil	Moderately compact light greyish brown silt with c. 5% yellow sand and a few small gravels. Diffuse boundary with natural (104).	0.23-0.44m	
102	Fill	Moderately compact medium greyish brown sandy silt loam with frequent small gravels and occasional manganese pieces. Fill of pit [103].	0.44-0.62m	Several burnt stones, nine fragments of animal bone (29g), one sherd Prehistoric pottery (3g).
103	Cut	Partially exposed pit, 0.18m deep. Concave sides, imperceptible break of slope to undulating base.	0.44m	
104	Natural	Medium brown silt with varying proportions of yellow and white sand. Contains abundant small to medium gravels. Cut into by partially exposed pit [103].	0.62m +	

28 Acres. Trench 1 looking north.


Fields 0818 and 6309
Legend
Sample trenches
Cropmark interpretation
Test pits
Seed Ground
0818
Cheltenham Road
6309
Track
The Swallow
Issues
Foot Bridge
107
111
112
113
114
110
109
108
2
3
N
0
25
50
100
150
200
Metres

Field 0818: Seed Ground								
Test pits	**107**	**111**	**112**	**113**	**114**	**Range**		**Average**
						min	**max**	
Current cultivation	0.11	0.17	0.15	0.16	0.15	0.11	0.17	0.15
Former cultivation	0.12	0.10	0.15	0.08	0.07	0.07	0.15	0.10
Subsoil	0.10	>0.29	None	0.23	0.12	0.00	>0.29	0.11
Natural	Unex	Unex	Unex	Unex	Unex			
Buffer: 0.07								
Notes								
1) Wide variation in depth of subsoil has no obvious explanation. The average excludes test pit 111 as this was not bottomed and was much deeper that the other test pits.								
Slope: Level ground								
Soil group in relation to water erosion: Light								
Soil group in relation to wind erosion: Silts/sands								

Test pit 107 (scale 0.40m)

COSMIC Assessment Sheet – Land Parcel 0818 Field Name Seed Ground

Management factors							
	Serious risk Score 5	**High risk Score 4**	**Medium risk Score 3**	**Low risk Score 2**	**Minimum risk Score 1**	**Score***	
						Ploughing	**Miniumum tillage**
Buffer	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**.....
Cultivation method and depth	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**.....
Cropping	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**.....
Subsoiling	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		**A**.....2 **B**..... **C**.....	
Initial score						10	10
Weighting	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1	1
Initial score multiplied by weighting						A …10 B …. C ….	A ….10 B …. C ….

***Graded A-C according to quality of evidence**

Site intrinsic factors

Susceptibility of cultivated soil to water erosion

Average annual rainfall = 600mm

	Steep slopes (> 7°)		**Moderate slopes** (3°-7°)		**Gentle slopes** (2°-3°)		**Level ground** (< 2°)	**Score***
Soil group	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	

Susceptibility of cultivated soil to wind erosion

Soil group	**Peats**	**Sands/Silts**	**Loams**	**Sandy clays/silty clay**	**Clay**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	**A**.....4 **B**..... **C**.....

Risk of soil loss during harvesting

Crop type	**Potatoes/sugar beet**	**Other root/tuber crops**	**Combinable crops**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	**A**.....3 **B**..... **C**.....
Initial score				8
Weighting	Any of above in grey shaded box = 2			1
Initial score multiplied by weighting				A …..8 B..... C.....

***Graded A-C according to quality of evidence**

Archaeological factors						
Survival and quality of evidence **[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections]**	**Serious Score 5**	**High Score 4**	**Medium Score 3**	**Low Score 2**	**Minimum Score 1**	**Score***
	- 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 distriguishing 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**.....
Significance	National significance	Regional significance	County significance	Local significance	No obvious significance	**A**..... **B** .....4 **C**.....
Initial score						7
Weighting	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
Initial score multiplied by weighting						**A** … **B** …10.5 **C** …

***Graded A-C according to quality of evidence**

Final risk score

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

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 Name: *Seed Ground* **Field Number:** *0818*

Trench 2

Maximum dimensions:

Length: 10.5m Width: 1.30m Depth:

Orientation: NE-SW

Main deposit description:

Context	Classification	Description	Depth below ground surface	Artefacts
200	Topsoil	Moderately compact medium greyish brown silt loam with a few small limestone fragments and gravels. Clear lower boundary.	0.00-0.33m	
201	Subsoil	Moderately compact light greyish brown silt with c. 15% light yellowish brown medium sand and a few small limestone fragments. Clear lower boundary with natural (202).	0.33-0.46m	
202	Natural	Light yellowish brown medium sand with abundant small limestone fragments. Cut into by features [204], [206], and [208].	0.46m +	
203	Fill	Soft medium yellowish/reddish brown sandy silt loam with a few small gravels and limestone fragments. Fill of [204].	0.50-1.12m	
204	Cut	Cut for large pit or possible corner of right angled ditch oriented NE-SW and NW-SE.	0.50m	
205	Fill	Same as (201) but slightly darker. Fill of [206].	0.42-0.60m	
206	Cut	Linear ditch aligned N-S, 1.75m wide.	0.42m	

Context	Classification	Description	Depth below ground surface	Artefacts
207	Fill	As (205). Fill of [208].	0.30-0.53m	
208	Cut	Ditch, aligned NE-SW	0.30m	

Trench 3

Maximum dimensions:

Length: 9.30m Width: 1.20m Depth: 0.60m

Orientation: E-W

Main deposit description:

Context	Classification	Description	Depth below ground surface	Artefacts
300	Topsoil	Moderately compact medium greyish brown silt loam with occasional small to medium sub-angular stones.	0.00-0.25m	
301	Subsoil	Moderately compact mid orange brown sandy silt loam with occasional small to large angular stones.	0.20-0.30m	
302	Natural	Moderately compact medium to light yellow/orange brown silty sand and gravel with angular limestone fragments.	0.30m +	
303	Fill	Moderately compact medium orange brown sandy silt loam with occasional small to medium stones. Fill of tree bole [304].		

Context	Classification	Description	Depth below ground surface	Artefacts
304	Cut	Tree bole.		
305	Fill	Compact mid orange brown clayey silt, greyer towards base. Contains moderate amounts of small to medium rounded and sub-angular stones. Fill of ditch [306].	0.42m	
306	Cut	Cut of ditch.	0.42m	

Seed Ground: Trench 2 looking south-west showing ditch 205.

Seed Ground: Trench 3 looking south-west.

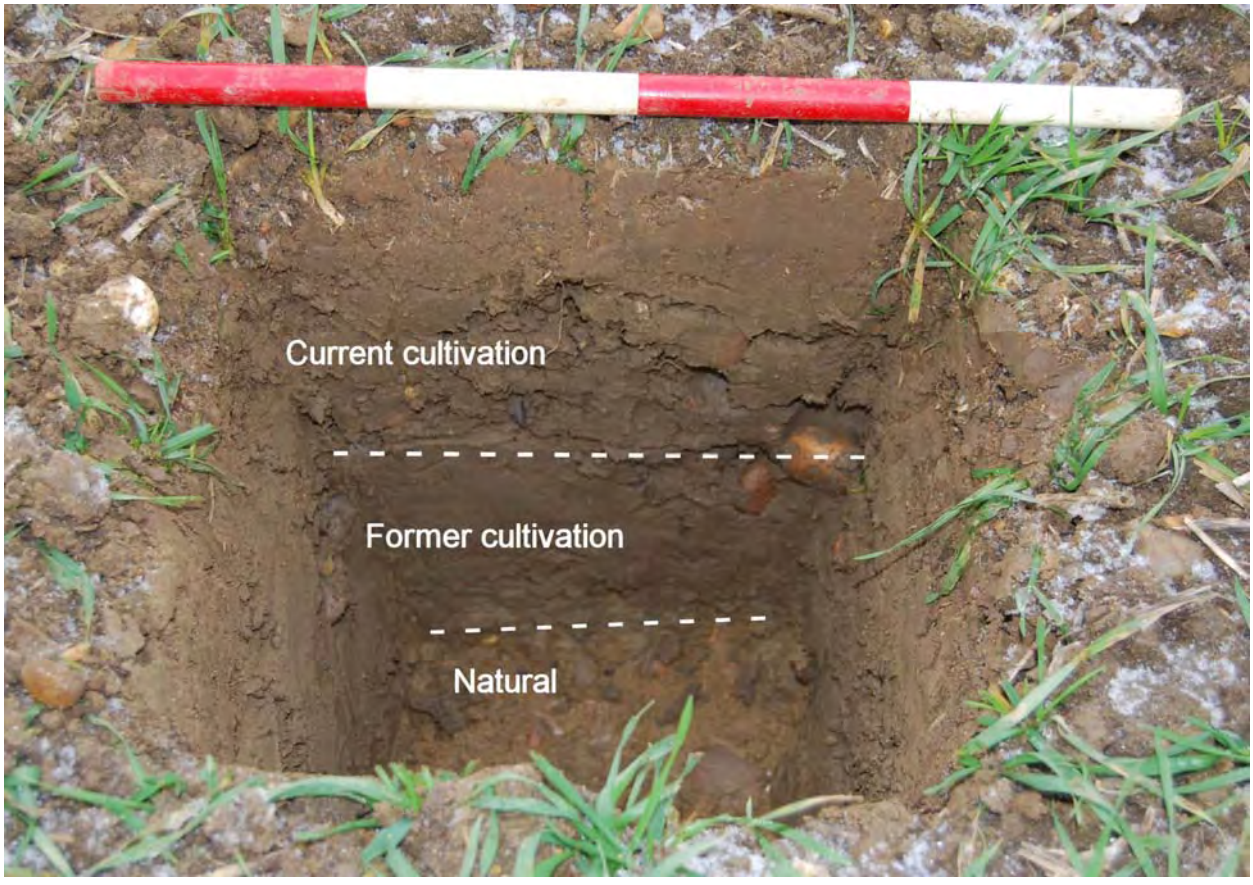
Fields 0384, 8363, 0958 and 7835

Legend

- Sample trenches
- Cropmark interpretation
- Test pits

144
145
1
143
28 Acre
0384
148
146
149
147
150
151
153
Gravel Hole
8363
Pig Croft
0958
154
Track
Issues
Path (um)
Sinks
152
Issues
Close and
Marketside
7835
The
Homeland
Walnut
Tree
Cottage
Ox
Leasow
Edscote
Lower End
Cottage
Thatchways
Bredon's
Norton
Malvern View
Malvern
View
The Croft
The Croftlands
N
0
25
50
100
150
200
Metres

Field 0958: Pig Croft					
Test pits	**153**	**154**	**Range**		**Average**
			min	**max**	
Current cultivation	0.16	0.15	0.15	0.16	0.16
Former cultivation	0.14	0.16	0.14	0.16	0.15
Subsoil	None	None			
Natural	Unex	Unex			
Buffer: 0.14					
Slope: Gentle slope					
Soil group in relation to water erosion: Light					
Soil group in relation to wind erosion: Silts/sands					



Test pit 153 (scale 0.40m)

COSMIC Assessment Sheet – Land Parcel 0958 Field Name Pig Croft

Management factors							
	Serious risk Score 5	**High risk Score 4**	**Medium risk Score 3**	**Low risk Score 2**	**Minimum risk Score 1**	**Score***	
						Ploughing	**Miniumum tillage**
Buffer	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**.....
Cultivation method and depth	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**.....
Cropping	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**.....
Subsoiling	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		**A**.....2 **B**..... **C**.....	
Initial score						10	10
Weighting	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1	1
Initial score multiplied by weighting						A …10 B …. C ….	A ….10 B …. C ….

***Graded A-C according to quality of evidence**

Site intrinsic factors

Susceptibility of cultivated soil to water erosion

Average annual rainfall = 600mm

	Steep slopes (> 7°)		**Moderate slopes** (3°-7°)		**Gentle slopes** (2°-3°)		**Level ground** (< 2°)	**Score***
Soil group	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	

Susceptibility of cultivated soil to wind erosion

Soil group	**Peats**	**Sands/Silts**	**Loams**	**Sandy clays/silty clay**	**Clay**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	**A**.....4 **B**..... **C**.....

Risk of soil loss during harvesting

Crop type	**Potatoes/sugar beet**	**Other root/tuber crops**	**Combinable crops**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	**A**.....3 **B**..... **C**.....
Initial score				9
Weighting	Any of above in grey shaded box = 2			1
Initial score multiplied by weighting				A …..9 B..... C.....

***Graded A-C according to quality of evidence**

Archaeological factors						
Survival and quality of evidence **[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections]**	**Serious Score 5**	**High Score 4**	**Medium Score 3**	**Low Score 2**	**Minimum Score 1**	**Score***
	- 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 distriguishing 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**.....
Significance	National significance	Regional significance	County significance	Local significance	No obvious significance	**A**..... **B** .....3 **C**.....
Initial score						6
Weighting	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					1.3
Initial score multiplied by weighting						**A** … **B** …7.8 **C** …

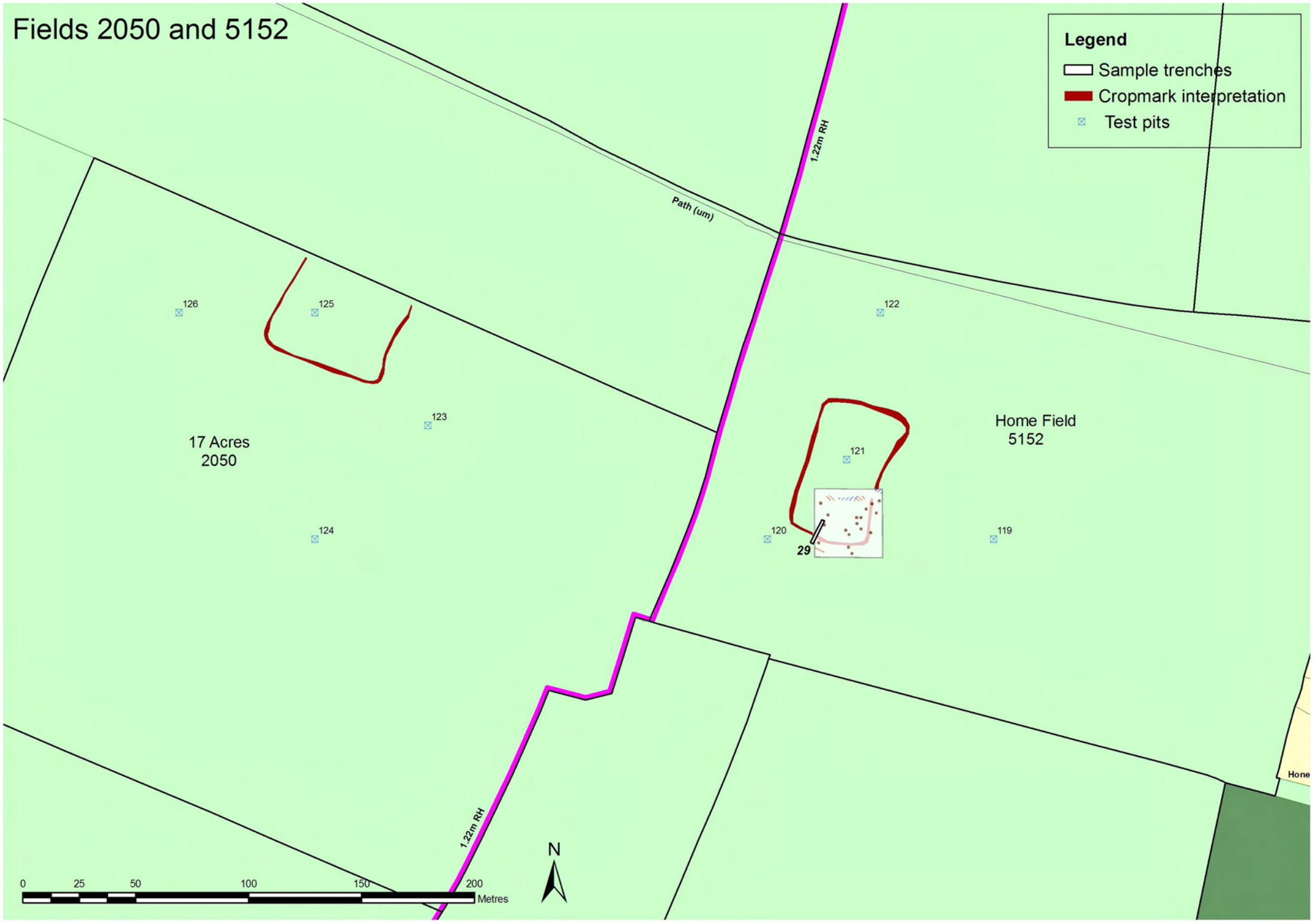
***Graded A-C according to quality of evidence**

Final risk score

Management factors (out of 50)	10
Site intrinsic factors (out of 30)	9
Archaeological factors (out of 20)	7.8
Final risk score (out of 100)	**26.8**

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**


Fields 2050 and 5152
Legend
Sample trenches
Cropmark interpretation
Test pits
Path (um)
1.22m RH
126
125
122
123
17 Acres
2050
Home Field
5152
121
124
120
119
29
1.22m RH
N
0
25
50
100
150
200
Metres

Field 2050: 17 Acres							
Test pits	**123**	**124**	**125**	**126**	**Range**		**Average**
					min	**max**	
Current cultivation	0.13	0.15	0.11	0.10	0.10	0.15	0.12
Former cultivation	0.17	0.12	0.12	0.12	0.12	0.17	0.13
Subsoil	None	None	None	None			
Natural	Unex	Unex	>0.07	>0.08			
Buffer: 0.12							
Slope: Level ground							
Soil group in relation to water erosion: Light							
Soil group in relation to wind erosion: Silts/sands							

Test pit 125 (scale 0.40m)

COSMIC Assessment Sheet – Land Parcel 2050 Field Name 17 Acres

Management factors							
	Serious risk Score 5	**High risk Score 4**	**Medium risk Score 3**	**Low risk Score 2**	**Minimum risk Score 1**	**Score***	
						Ploughing	**Miniumum tillage**
Buffer	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**.....
Cultivation method and depth	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**.....
Cropping	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**.....
Subsoiling	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		**A**.....2 **B**..... **C**.....	
Initial score						10	10
Weighting	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1	1
Initial score multiplied by weighting						A …10 B …. C ….	A ….10 B …. C ….

***Graded A-C according to quality of evidence**

Site intrinsic factors

Susceptibility of cultivated soil to water erosion

Average annual rainfall = 600mm

	Steep slopes (> 7°)		**Moderate slopes** (3°-7°)		**Gentle slopes** (2°-3°)		**Level ground** (< 2°)	**Score***
Soil group	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	

Susceptibility of cultivated soil to wind erosion

Soil group	**Peats**	**Sands/Silts**	**Loams**	**Sandy clays/silty clay**	**Clay**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	**A**.....4 **B**..... **C**.....

Risk of soil loss during harvesting

Crop type	**Potatoes/sugar beet**	**Other root/tuber crops**	**Combinable crops**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	**A**.....3 **B**..... **C**.....
Initial score				8
Weighting	Any of above in grey shaded box = 2			1
Initial score multiplied by weighting				A …..8 B..... C.....

***Graded A-C according to quality of evidence**

Archaeological factors						
Survival and quality of evidence **[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections]**	**Serious Score 5**	**High Score 4**	**Medium Score 3**	**Low Score 2**	**Minimum Score 1**	**Score***
	- 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 distriguishing 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**.....
Significance	National significance	Regional significance	County significance	Local significance	No obvious significance	**A**..... **B** .....3 **C**.....
Initial score						6
Weighting	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					1.3
Initial score multiplied by weighting						**A** … **B** …7.8 **C** …

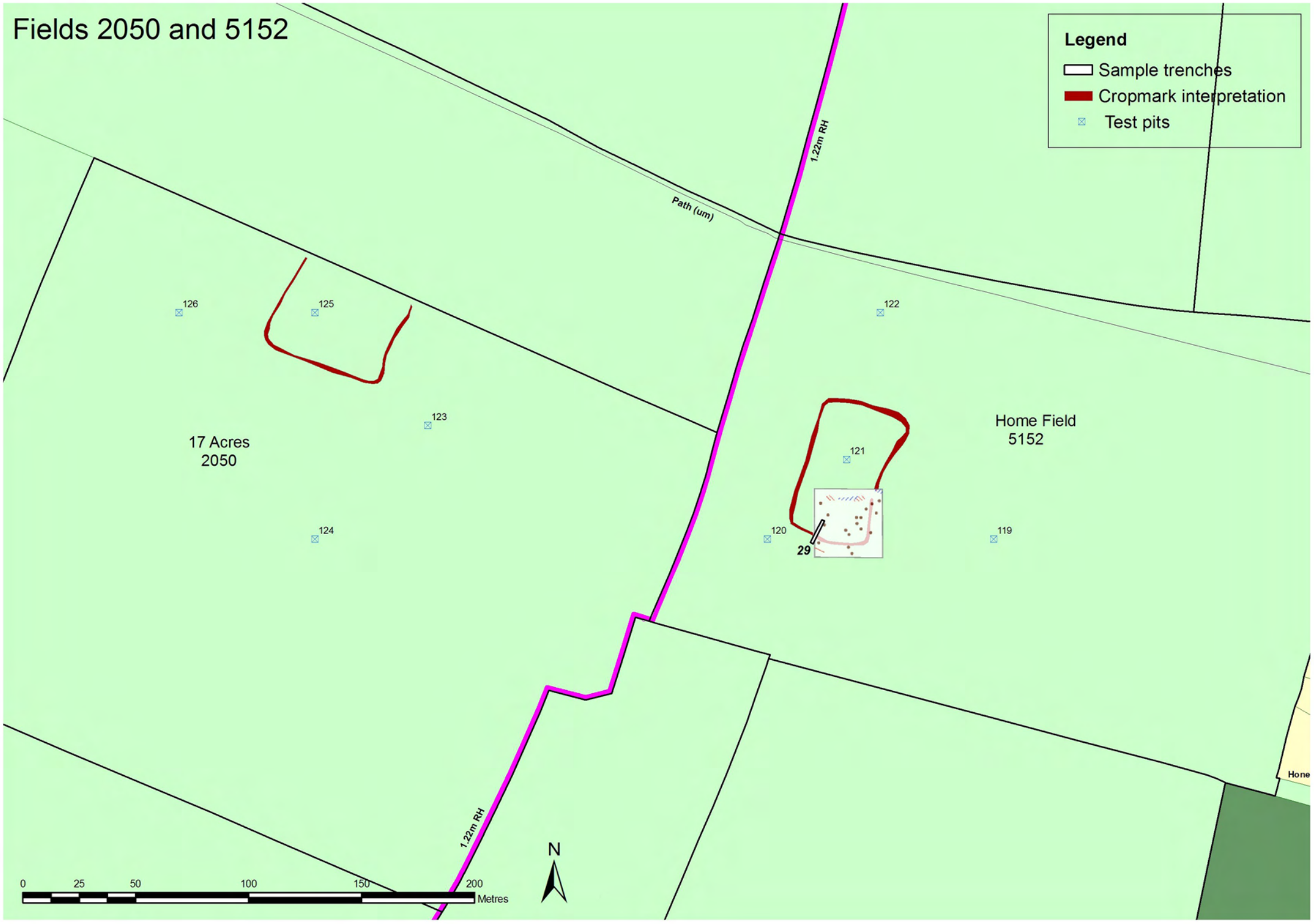
***Graded A-C according to quality of evidence**

Final risk score

Management factors (out of 50)	10
Site intrinsic factors (out of 30)	8
Archaeological factors (out of 20)	7.8
Final risk score (out of 100)	**25.8**

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**


Fields 2050 and 5152
Legend
Sample trenches
Cropmark interpretation
Test pits
Path (um)
1.22m RH
126
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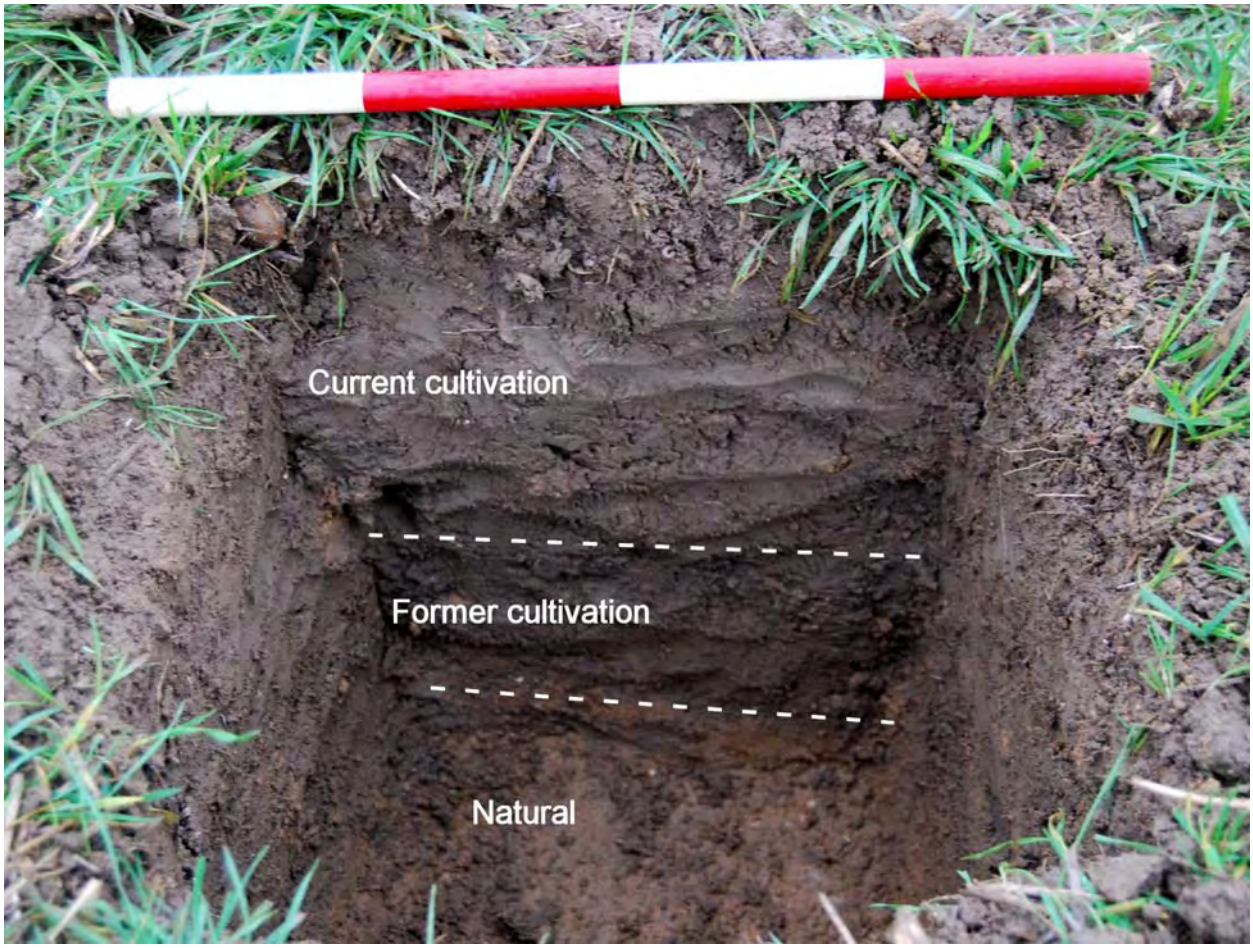
17 Acres
2050
Home Field
5152
121
124
120
119
29
1.22m RH
N
0
25
50
100
150
200
Metres

Field 5152: Home Field							
Test pits	**119**	**120**	**121**	**122**	**Range**		**Average**
					min	**max**	
Current cultivation	0.15	0.14	0.15	0.17	0.14	0.17	0.15
Former cultivation	0.09	0.16	0.12	0.14	0.09	0.16	0.13
Subsoil	None	None	0.07	None			
Natural	>0.09	>0.05	Unex	Unex			
Buffer: 0.09							
Slope: Level ground							
Soil group in relation to water erosion: Light							
Soil group in relation to wind erosion: Loams							



Test pit 122 (scale 0.40m)

COSMIC Assessment Sheet – Land Parcel 5152 **Field Name** Home Field

Management factors							
	Serious risk Score 5	**High risk Score 4**	**Medium risk Score 3**	**Low risk Score 2**	**Minimum risk Score 1**	**Score***	
						Ploughing	**Miniumum tillage**
Buffer	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**.....
Cultivation method and depth	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**.....
Cropping	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**.....
Subsoiling	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		**A**.....2 **B**..... **C**.....	
Initial score						10	10
Weighting	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1	1
Initial score multiplied by weighting						A …10 B …. C ….	A ….10 B …. C ….

***Graded A-C according to quality of evidence**

Site intrinsic factors

Susceptibility of cultivated soil to water erosion

Average annual rainfall = 600mm

	Steep slopes (> 7°)		**Moderate slopes** (3°-7°)		**Gentle slopes** (2°-3°)		**Level ground** (< 2°)	**Score***
Soil group	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	

Susceptibility of cultivated soil to wind erosion

Soil group	**Peats**	**Sands/Silts**	**Loams**	**Sandy clays/silty clay**	**Clay**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	**A**.....3 **B**..... **C**.....

Risk of soil loss during harvesting

Crop type	**Potatoes/sugar beet**	**Other root/tuber crops**	**Combinable crops**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	**A**.....3 **B**..... **C**.....
Initial score				7
Weighting	Any of above in grey shaded box = 2			1
Initial score multiplied by weighting				A …..7 B..... C.....

***Graded A-C according to quality of evidence**

Archaeological factors						
Survival and quality of evidence **[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections]**	**Serious Score 5**	**High Score 4**	**Medium Score 3**	**Low Score 2**	**Minimum Score 1**	**Score***
	- 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 distriguishing 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**.....
Significance	National significance	Regional significance	County significance	Local significance	No obvious significance	**A**..... **B** .....3 **C**.....
Initial score						7
Weighting	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
Initial score multiplied by weighting						**A** … **B** …10.5 **C** …

***Graded A-C according to quality of evidence**

Final risk score

Management factors (out of 50)	10
Site intrinsic factors (out of 30)	7
Archaeological factors (out of 20)	10.5
Final risk score (out of 100)	**27.5**

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 Name: *Home Field* **Field Number:** *5152*

Trench 29

Maximum dimensions:

Length: 11.15m Width: 1.30m Depth: 0.62m

Orientation: NE – SW

Main deposit description:

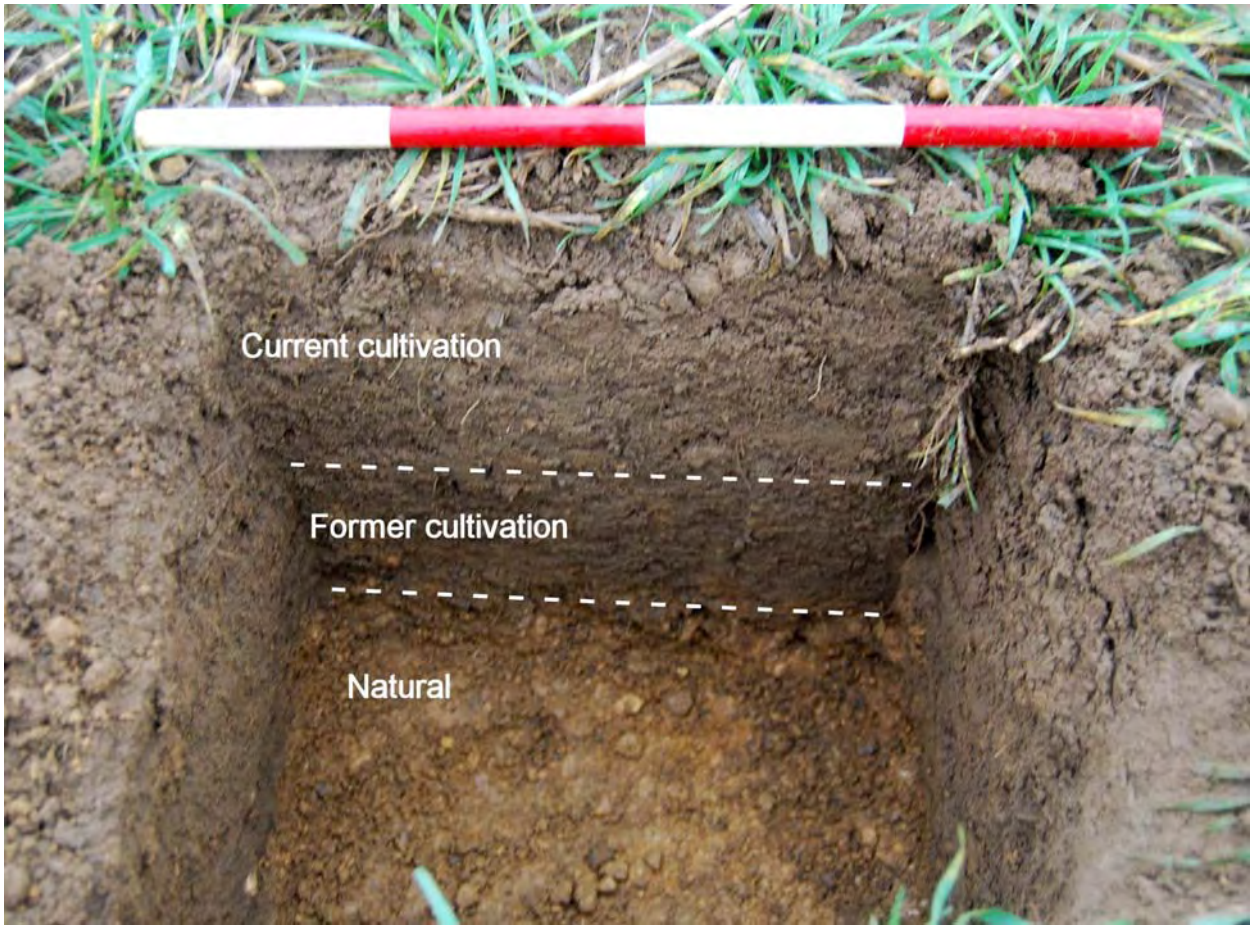
Context	Classification	Description	Depth below ground surface	Artefacts
2900	Topsoil	Moderately compact medium greyish brown sandy silt loam with frequent small to medium limestone fragments. Clear lower boundary.	0.00-0.28m	
2901	Subsoil	Moderately compact light greyish brown silt c. 75% mixed with light yellowish brown fine-medium sand c. 25%.	0.28-0.50m	
2902	Structure	Medium to large un-coursed roughly hewn masonry in matrix of soil same as (2901) forming wall or bank structure. Heavily truncated by ancient ploughing.	0.37m	
2903	Natural	Medium-light yellowish brown silty sand with varying proportions of small to medium limestone fragments.	0.50m	

Home Field: Trench 29 looking north-east, wall 2902 in foreground.

Home Field: Trench 29 looking east, showing wall 2902.


Fields 0818 and 6309
Legend
Sample trenches
Cropmark interpretation
Test pits
Seed Ground
0818
Cheltenham Road
6309
Track
The Swallow
Issues
Foot Bridge
107
111
112
113
114
110
109
108
2
3
N
0
25
50
100
150
200
Metres

Field 6309: Cheltenham Road						
Test pits	**108**	**109**	**110**	**Range**		**Average**
				min	**max**	
Current cultivation	0.19	0.18	0.20	0.18	0.20	0.19
Former cultivation	0.16	0.14	0.10	0.10	0.16	0.13
Subsoil	None	None	0.10	0.00	0.10	
Natural	Unex	Unex	Unex			
Buffer: 0.10						
Notes						
1) The subsoil preserved in test pit 110 may represent shallower ploughing towards field boundary						
Slope: Level ground						
Soil group in relation to water erosion: Light						
Soil group in relation to wind erosion: Silts/sands						



Test pit 109 (scale 0.40m)

COSMIC Assessment Sheet – Land Parcel 6309 Field Name Cheltenham Road

Management factors	Serious risk Score 5	High risk Score 4	Medium risk Score 3	Low risk Score 2	Minimum risk Score 1	Score*	
						Ploughing	Miniumum tillage
Buffer	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**.....
Cultivation method and depth	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**.....
Cropping	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**.....
Subsoiling	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		**A**.....2 **B**..... **C**.....	
Initial score						10	10
Weighting	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1	1
Initial score multiplied by weighting						A …10 B …. C ….	A ….10 B …. C ….

***Graded A-C according to quality of evidence**

Site intrinsic factors

Susceptibility of cultivated soil to water erosion

Average annual rainfall = 600mm

	Steep slopes (> 7°)		**Moderate slopes** (3°-7°)		**Gentle slopes** (2°-3°)		**Level ground** (< 2°)	**Score***
Soil group	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	

Susceptibility of cultivated soil to wind erosion

Soil group	**Peats**	**Sands/Silts**	**Loams**	**Sandy clays/silty clay**	**Clay**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	**A**.....4 **B**..... **C**.....

Risk of soil loss during harvesting

Crop type	**Potatoes/sugar beet**	**Other root/tuber crops**	**Combinable crops**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	**A**.....3 **B**..... **C**.....
Initial score				8
Weighting	Any of above in grey shaded box = 2			1
Initial score multiplied by weighting				A …..8 B..... C.....

***Graded A-C according to quality of evidence**

Archaeological factors						
Survival and quality of evidence **[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections]**	**Serious Score 5**	**High Score 4**	**Medium Score 3**	**Low Score 2**	**Minimum Score 1**	**Score***
	- 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 distriguishing 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**.....
Significance	National significance	Regional significance	County significance	Local significance	No obvious significance	**A**..... **B** .....3 **C**.....
Initial score						6
Weighting	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					1.3
Initial score multiplied by weighting						**A** … **B** …7.8 **C** …

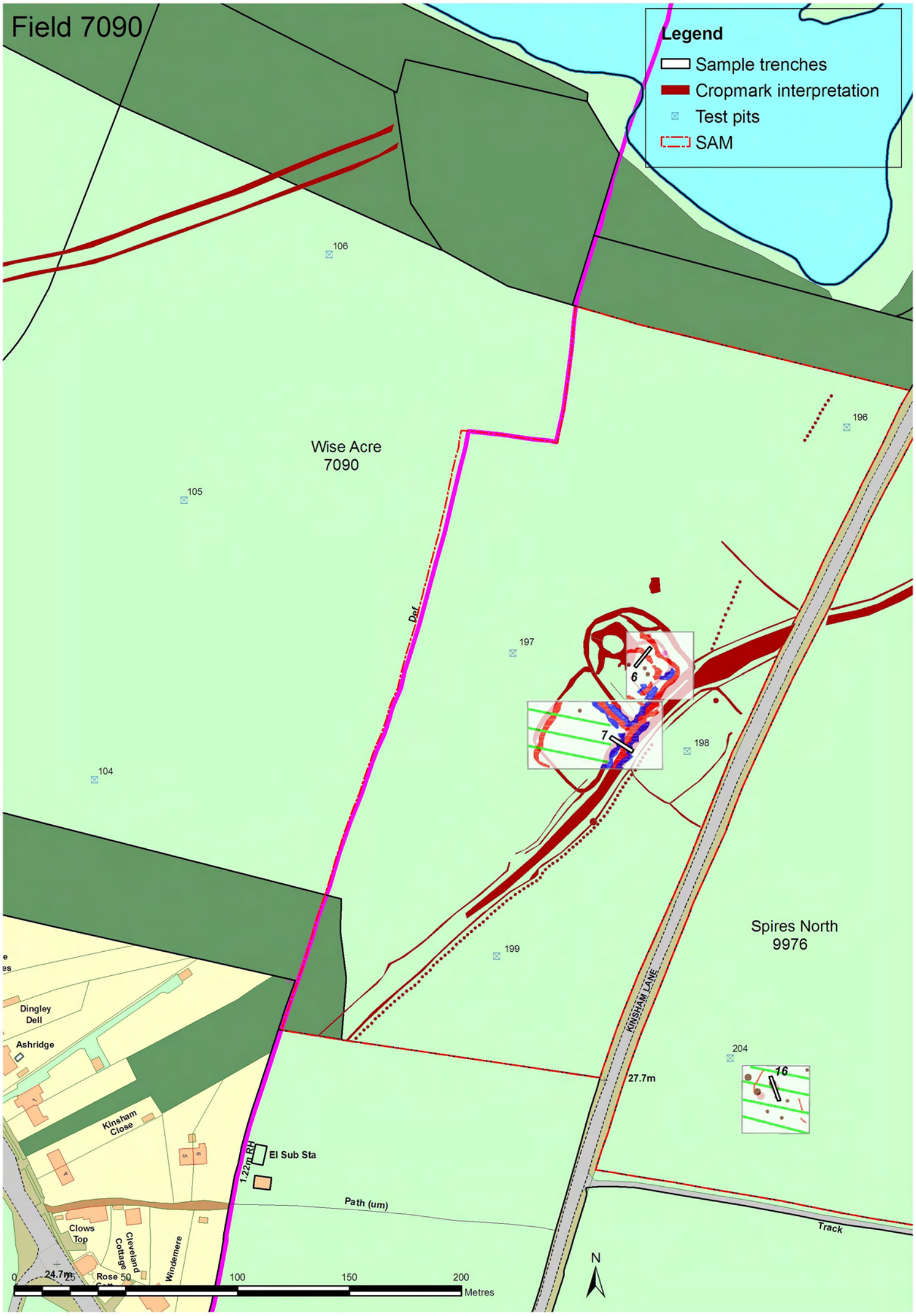
***Graded A-C according to quality of evidence**

Final risk score

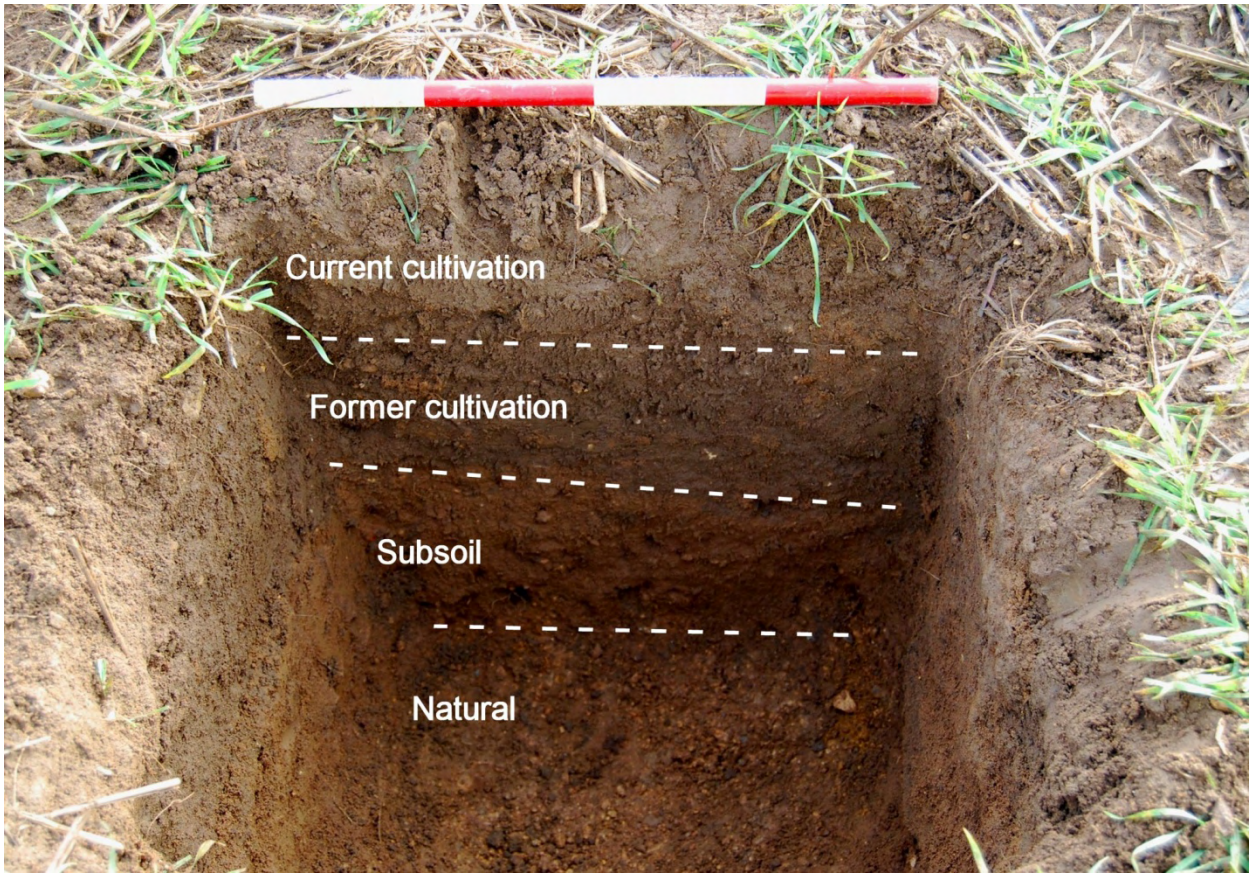
Management factors (out of 50)	10
Site intrinsic factors (out of 30)	8
Archaeological factors (out of 20)	7.8
Final risk score (out of 100)	**25.8**

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
Legend
Sample trenches
Cropmark interpretation
Test pits
SAM
106
Wise Acre
7090
105
196
Def
197
6
7
198
104
199
Spires North
9976
KINSHAM LANE
204
16
27.7m
Dingley
Dell
Ashridge
Kinsham
Close
El Sub Sta
1.22m RH
Path (um)
Track
Clows
Top
Cleveland
Cottage
Windermere
Rose
24.7m
0
25
50
100
150
200
Metres
N

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			
Buffer: 0.14										
Slope: Level ground										
Soil group in relation to water erosion: Light										
Soil group in relation to wind erosion: Silts/sands										



Test pit 199 (scale 0.40m)

COSMIC Assessment Sheet – Land Parcel 7090 Field Name Wise Acre

Management factors	Serious risk Score 5	High risk Score 4	Medium risk Score 3	Low risk Score 2	Minimum risk Score 1	Score*	
						Ploughing	Miniumum tillage
Buffer	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**.....
Cultivation method and depth	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**.....
Cropping	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**.....
Subsoiling	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		**A**.....2 **B**..... **C**.....	
Initial score						10	10
Weighting	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1	1
Initial score multiplied by weighting						A …10 B …. C ….	A ….10 B …. C ….

***Graded A-C according to quality of evidence**

Site intrinsic factors

Susceptibility of cultivated soil to water erosion

Average annual rainfall = 600mm

	Steep slopes (> 7°)		**Moderate slopes** (3°-7°)		**Gentle slopes** (2°-3°)		**Level ground** (< 2°)	**Score***
Soil group	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	

Susceptibility of cultivated soil to wind erosion

Soil group	**Peats**	**Sands/Silts**	**Loams**	**Sandy clays/silty clay**	**Clay**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	**A**.....4 **B**..... **C**.....

Risk of soil loss during harvesting

Crop type	**Potatoes/sugar beet**	**Other root/tuber crops**	**Combinable crops**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	**A**.....3 **B**..... **C**.....
Initial score				8
Weighting	Any of above in grey shaded box = 2			1
Initial score multiplied by weighting				A …..8 B..... C.....

***Graded A-C according to quality of evidence**

Archaeological factors						
Survival and quality of evidence **[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections]**	**Serious Score 5**	**High Score 4**	**Medium Score 3**	**Low Score 2**	**Minimum Score 1**	**Score***
	- 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 distriguishing 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**.....
Significance	National significance	Regional significance	County significance	Local significance	No obvious significance	**A**..... **B** .....4 **C**.....
Initial score						7
Weighting	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
Initial score multiplied by weighting						**A** … **B** …10.5 **C** …

***Graded A-C according to quality of evidence**

Final risk score

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

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 Name: *Wise Acre* **Field Number:** *7090*

Trench 6

Maximum dimensions:

Length: 11.50m Width: 1.20m Depth: 0.32m

Orientation: NE – SW

Main deposit description:

Context	Classification	Description	Depth below ground surface	Artefacts
600	Topsoil	Moderately compact medium greyish brown sandy silt loam with a few small gravels and limestone fragments. Clear lower boundary.	0.00-0.30m	
601	Subsoil	Moderately compact light reddish brown fine sandy silt with a few small gravels and limestone fragments. Clear lower boundary with natural (602). Observed at SW and NE end of trench but not in centre of trench.	0.30-0.36m	
602	Natural	Moderately compact light yellow orange silty sands and gravels with limestone pieces.	0.32m +	
603	Fill	Moderately compact medium grey brown sandy silt with frequent small to medium rounded stones. Fill of feature [604].	0.30m	
604	Cut	Cut of unknown feature, only partially exposed. Unexcavated.	0.30m	
605	Fill	Moderately compact light grey brown sandy silt with occasional small stones and manganese flecks. Fill of possible ditch [606].	0.30-0.68m	
606	Cut	Cut of possible ditch, c. 3m wide	0.30m	

Context	Classification	Description	Depth below ground surface	Artefacts
607	Deposit	Deposit very similar to (605) but with more frequent gravel and stones.	0.28m	
608	Fill	Loose light grey brown sandy silt with frequent limestone fragments. Fill of possible pit [609].	0.30m	
609	Cut	Cut of possible pit, c. 2m in diameter.	0.30m	
610	Fill	Same as (608). Fill of unknown feature [611].	0.37m	
611	Cut	Partially exposed edge of feature, unexcavated.	0.37m	

Trench 7

Maximum dimensions:

Length: 11.50m Width: 1.30m Depth: 0.60m

Orientation: NW – SE

Main deposit description:

Context	Classification	Description	Depth below ground surface	Artefacts
700	Topsoil	Moderately compact medium brown sandy silt loam with a few small to medium gravels and limestone fragments. Clear lower boundary.	0.00-0.28m	
701	Subsoil	Moderately compact light greyish brown silt with c.15% light yellow/yellowish brown medium sand and frequent small to medium gravels.	0.28-0.60m	

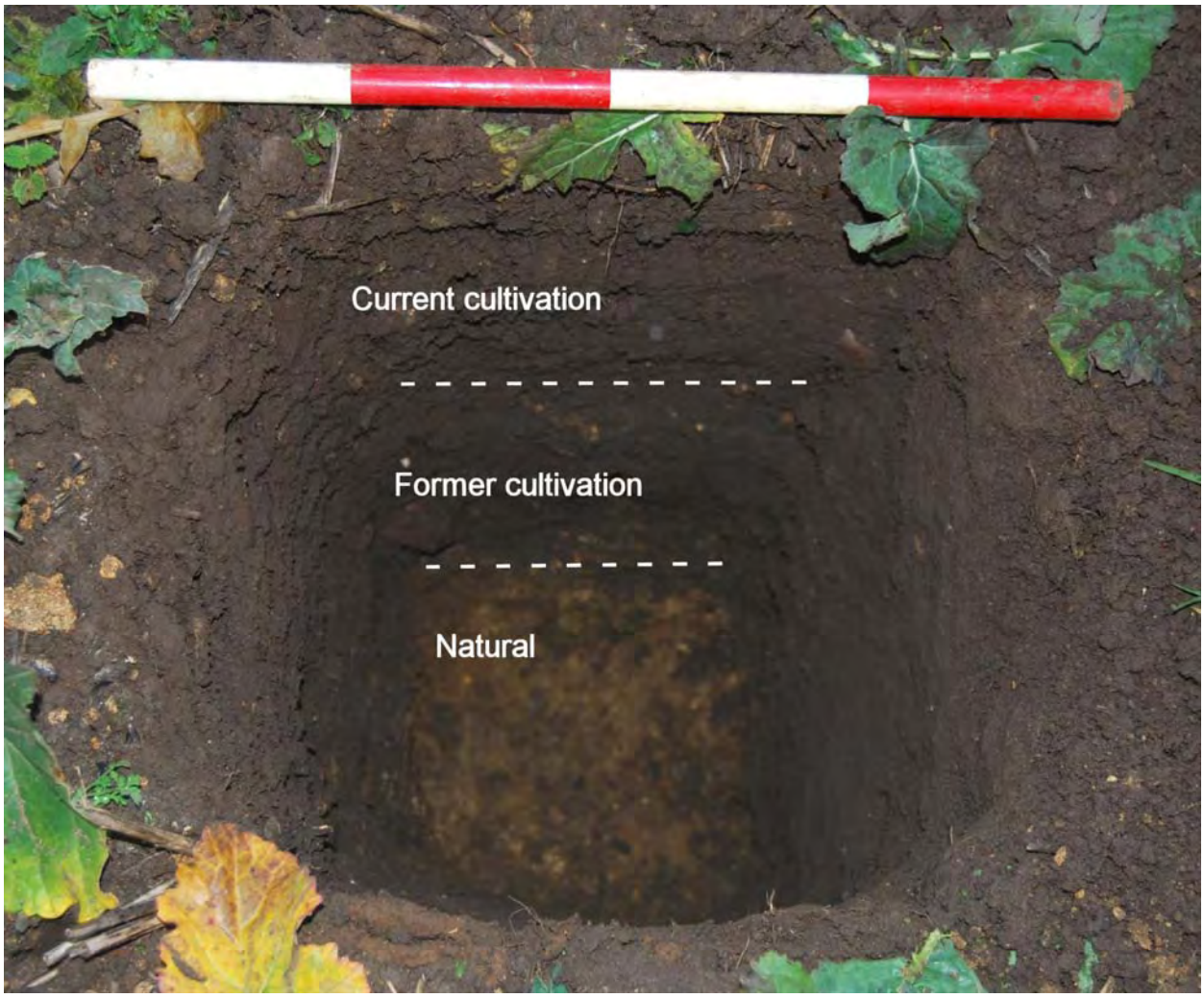
Context	Classification	Description	Depth below ground surface	Artefacts
702	Natural	Mid to light yellowish brown medium sand with abundant small limestone fragments.	0.58m +	

Wise Acre: Trench 6 looking north-east

Wise Acre: Trench 7 looking south-east.


Fields 7972 and 7447
Legend
Sample trenches
Cropmark interpretation
Test pits
15.5m
Meadow Hill
Briar Cottage
Malvern View
Stone Haven
141
142
The Old Parsonage
16.5m
Calvers Hill
7972
28.3m
16.8m
rack
Pumping Station
135
136
Ryall
7447
27
137
139
138
Path (um)
Rectory Farm
26.8m
The Gables
19.2m
Track
0
25
50
100
150
200
Metres
N

Field 7447: Ryall								
Test pits	**135**	**136**	**137**	**138**	**139**	**Range**		**Average**
						min	**max**	
Current Cultivation	0.16	0.10	0.20	0.15	0.19	0.10	0.20	0.16
Former Cultivation	0.14	0.10	0.13	0.14	0.26	0.10	0.26	0.16
Relict Cultivation	n/a	n/a	n/a	0.19	n/a			
Subsoil	0.12	>0.30	0.15	Unex	None			
Fill	0.16	n/a	n/a	n/a	n/a			
Natural	>0.06	n/a	Unex	n/a	Unex			
Buffer: 0.10								
Notes								
1) Low density Roman pottery throughout field but higher concentration to north; modern pot and brick in centre and south.								
2) Feature identified in base of test pit 135 below subsoil.								
3) Extra cultivation layer identified in test pit 138.								
Slope: Moderate								
Soil group in relation to water erosion: Light								
Soil group in relation to wind erosion: Silts/sands								



Test pit 139 (scale 0.40m)

COSMIC Assessment Sheet – Land Parcel 7447 **Field Name** Ryall

Management factors							
	Serious risk Score 5	**High risk Score 4**	**Medium risk Score 3**	**Low risk Score 2**	**Minimum risk Score 1**	**Score***	
						Ploughing	**Miniumum tillage**
Buffer	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**.....
Cultivation method and depth	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**.....
Cropping	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**.....
Subsoiling	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		**A**.....2 **B**..... **C**.....	
Initial score						10	10
Weighting	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1	1
Initial score multiplied by weighting						A …10 B …. C ….	A ….10 B …. C ….

***Graded A-C according to quality of evidence**

Site intrinsic factors

Susceptibility of cultivated soil to water erosion

Average annual rainfall = 600mm

	Steep slopes (> 7°)		**Moderate slopes** (3°-7°)		**Gentle slopes** (2°-3°)		**Level ground** (< 2°)	**Score***
Soil group	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**……3 **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	

Susceptibility of cultivated soil to wind erosion

Soil group	**Peats**	**Sands/Silts**	**Loams**	**Sandy clays/silty clay**	**Clay**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	**A**.....4 **B**..... **C**.....

Risk of soil loss during harvesting

Crop type	**Potatoes/sugar beet**	**Other root/tuber crops**	**Combinable crops**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	**A**.....3 **B**..... **C**.....
Initial score				10
Weighting	Any of above in grey shaded box = 2			2
Initial score multiplied by weighting				A …..20 B..... C.....

***Graded A-C according to quality of evidence**

Archaeological factors						
Survival and quality of evidence **[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections]**	**Serious Score 5**	**High Score 4**	**Medium Score 3**	**Low Score 2**	**Minimum Score 1**	**Score***
	- 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 distriguishing 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**.....
Significance	National significance	Regional significance	County significance	Local significance	No obvious significance	**A**..... **B** .....4 **C**.....
Initial score						8
Weighting	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
Initial score multiplied by weighting						**A** … **B** …12 **C** …

***Graded A-C according to quality of evidence**

Final risk score

Management factors (out of 50)	10
Site intrinsic factors (out of 30)	20
Archaeological factors (out of 20)	12
Final risk score (out of 100)	**42**

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 Name: *Ryall* **Field Number:** *7447*

Trench 27

Maximum dimensions:

Length: 10.30m Width: 1.20m Depth: 0.52m

Orientation: N – S

Main deposit description:

Context	Classification	Description	Depth below ground surface	Artefacts
2700	Topsoil	Moderately compact dark brown sandy silt loam with moderate amounts of small to medium rounded stones and angular limestone fragments.	0.00-0.32m	Five sherds of limestone tempered prehistoric pottery (47g), one sherd of Severn Valley Ware Roman pottery (3g).
2701	Subsoil	Moderately compact medium orange brown sandy silt loam with moderate amounts of small to medium rounded stones.	0.32-0.52m	One sherd of possible Roman pottery (29g).
2702	Natural	Moderately compact medium yellowish orange sands and gravels with limestone fragments.	0.52m	
2703	Fill	Moderately compact medium brown sandy silt with moderate amounts of small to medium rounded stones and angular limestone fragments. Fill of ditch [2704].	0.28m	
2704	Cut	Cut for ditch.	0.28m	
2705	Fill	Same as (2703). Fill of ditch [2706].	0.30m	Two sherds of possible Iron Age/Roman pottery (9g), one sherd of Roman pottery

Context	Classification	Description	Depth below ground surface	Artefacts
				(107g). Thirteen pieces of animal bone (407g).
2706	Cut	Cut for ditch.	0.30m	
2707	Fill	Moderately compact dark grey brown sandy silt with occasional small stones, limestone fragments and flecks of charcoal. Fill of pit [2708].	0.23m	
2708	Cut	Cut of pit, truncates ditch [2710].	0.23m	
2709	Fill	Moderately compact medium brown sandy silt mixed with medium yellow brown fine sand containing frequent small stones and limestone fragments. Fill of ditch [2710].	0.28m	
2710	Cut	Cut for ditch.	0.28m	

Ryall. Trench 27 looking north-east, showing Roman ditches.

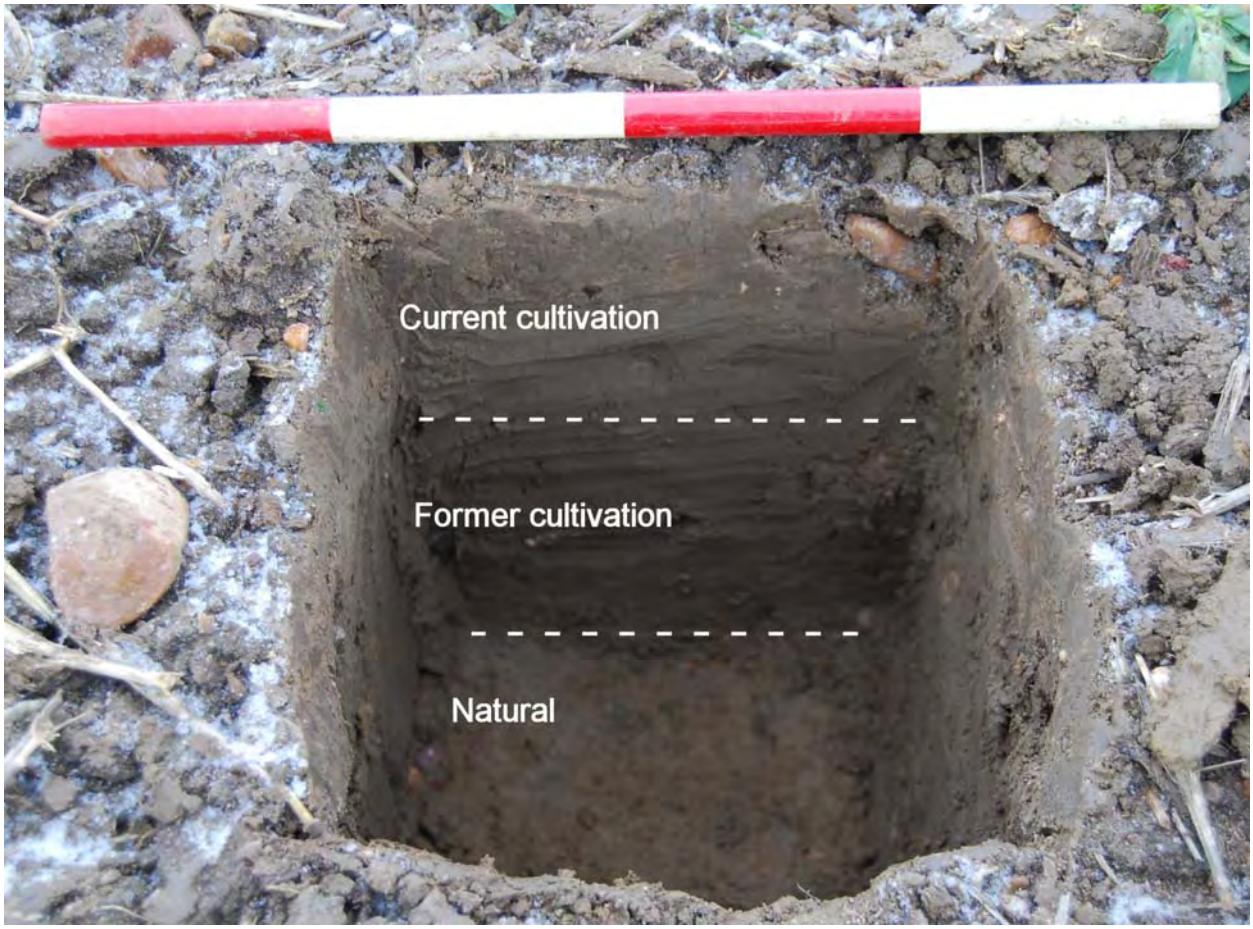
Fields 0384, 8363, 0958 and 7835

Legend

- Sample trenches
- Cropmark interpretation
- Test pits

144
145
1
143
28 Acre
0384
148
146
149
147
150
151
153
Gravel Hole
8363
Pig Croft
0958
154
Track
Issues
Path (um)
Sinks
152
Issues
Close and
Marketside
7835
The
Homeland
Walnut
Tree
Cottage
Ox
Leasow
Edscote
Lower End
Cottage
Thatchways
Bredon's
Norton
Malvern View
Malvern
View
The Croft
The Croftlands
N
0
25
50
100
150
200
Metres

Field 7835: Close and Marketside				
Test pits	**152**	**Range**		**Average**
		min	**max**	
Current cultivation	0.13			
Former cultivation	0.21			
Subsoil	None			
Natural	Unex			
Buffer: 0.21				
Slope: Gentle slope				
Soil group in relation to water erosion: Light				
Soil group in relation to wind erosion: Silts/sands				



Test pit 152 (scale 0.40m)

COSMIC Assessment Sheet – Land Parcel 7835 **Field Name** Close and Marketside

Management factors							
	Serious risk Score 5	**High risk Score 4**	**Medium risk Score 3**	**Low risk Score 2**	**Minimum risk Score 1**	**Score***	
						Ploughing	**Miniumum tillage**
Buffer	No buffer	Shallow buffer(< 10cm)	Moderate buffer (10-15cm)	Deep buffer (16-25cm)	Very deep buffer (> 25cm)	**A**..... **B**.....2 **C**.....	**A**..... **B**.....2 **C**.....
Cultivation method and depth	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**.....
Cropping	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**.....
Subsoiling	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		**A**.....2 **B**..... **C**.....	
Initial score						9	9
Weighting	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1	1
Initial score multiplied by weighting						A …9 B …. C ….	A ….9 B …. C ….

***Graded A-C according to quality of evidence**

Site intrinsic factors

Susceptibility of cultivated soil to water erosion

Average annual rainfall = 600mm

	Steep slopes (> 7°)		**Moderate slopes** (3°-7°)		**Gentle slopes** (2°-3°)		**Level ground** (< 2°)	**Score***
Soil group	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**…… **B**.....2 **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	

Susceptibility of cultivated soil to wind erosion

Soil group	**Peats**	**Sands/Silts**	**Loams**	**Sandy clays/silty clay**	**Clay**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	**A**.....4 **B**..... **C**.....

Risk of soil loss during harvesting

Crop type	**Potatoes/sugar beet**	**Other root/tuber crops**	**Combinable crops**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	**A**.....3 **B**..... **C**.....
Initial score				9
Weighting	Any of above in grey shaded box = 2			1
Initial score multiplied by weighting				A …..9 B..... C.....

***Graded A-C according to quality of evidence**

Archaeological factors						
Survival and quality of evidence **[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections]**	**Serious Score 5**	**High Score 4**	**Medium Score 3**	**Low Score 2**	**Minimum Score 1**	**Score***
	- 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 distriguishing 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**.....
Significance	National significance	Regional significance	County significance	Local significance	No obvious significance	**A**..... **B** .....3 **C**.....
Initial score						6
Weighting	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					1.3
Initial score multiplied by weighting						**A** … **B** …7.8 **C** …

***Graded A-C according to quality of evidence**

Final risk score

Management factors (out of 50)	9
Site intrinsic factors (out of 30)	9
Archaeological factors (out of 20)	7.8
Final risk score (out of 100)	**25.8**

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**


Fields 7972 and 7447
Legend
Sample trenches
Cropmark interpretation
Test pits
15.5m
Meadow Hill
Briar Cottage
Malvern View
Stone Haven
141
142
The Old Parsonage
16.5m
Calvers Hill
7972
28.3m
16.8m
rack
Pumping Station
135
136
Ryall
7447
27
137
139
138
Path (um)
Rectory Farm
26.8m
The Gables
19.2m
Track
0
25
50
100
150
200
Metres
N

Field 7972: Calvers Hill					
Test pits	**141**	**142**	**Range**		**Average**
			min	**max**	
Current cultivation	0.16	0.15	0.15	0.16	0.16
Former cultivation	0.19	0.17	0.17	0.19	0.18
Subsoil	None	None			
Natural	Unex	Unex			
Buffer: 0.17					
Notes					
1) Roman pot and modern finds at low density across field. Concentration of tesserae in NE corner.					
Slope: Moderate					
Soil group in relation to water erosion: Light					
Soil group in relation to wind erosion: Silts/sands					

Test pit 142 (scale 0.40m)

COSMIC Assessment Sheet – Land Parcel 7972 Field Name Calvers Hill

Management factors							
	Serious risk Score 5	**High risk Score 4**	**Medium risk Score 3**	**Low risk Score 2**	**Minimum risk Score 1**	**Score***	
						Ploughing	**Miniumum tillage**
Buffer	No buffer	Shallow buffer(< 10cm)	Moderate buffer (10-15cm)	Deep buffer (16-25cm)	Very deep buffer (> 25cm)	**A**.....2 **B**..... **C**.....	**A**.....2 **B**..... **C**.....
Cultivation method and depth	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**.....
Cropping	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**.....
Subsoiling	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		**A**.....2 **B**..... **C**.....	
Initial score						9	9
Weighting	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1	1
Initial score multiplied by weighting						A …9 B …. C ….	A ….9 B …. C ….

***Graded A-C according to quality of evidence**

Site intrinsic factors

Susceptibility of cultivated soil to water erosion

Average annual rainfall = 600mm

	Steep slopes (> 7°)		**Moderate slopes** (3°-7°)		**Gentle slopes** (2°-3°)		**Level ground** (< 2°)	**Score***
Soil group	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**……3 **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	

Susceptibility of cultivated soil to wind erosion

Soil group	**Peats**	**Sands/Silts**	**Loams**	**Sandy clays/silty clay**	**Clay**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	**A**..... **B**.....4 **C**.....

Risk of soil loss during harvesting

Crop type	**Potatoes/sugar beet**	**Other root/tuber crops**	**Combinable crops**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	**A**.....3 **B**..... **C**.....
Initial score				10
Weighting	Any of above in grey shaded box = 2			2
Initial score multiplied by weighting				A …..20 B..... C.....

***Graded A-C according to quality of evidence**

Archaeological factors						
Survival and quality of evidence **[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections]**	**Serious Score 5**	**High Score 4**	**Medium Score 3**	**Low Score 2**	**Minimum Score 1**	**Score***
	- 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 distriguishing 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**.....
Significance	National significance	Regional significance	County significance	Local significance	No obvious significance	**A**..... **B** .....4 **C**.....
Initial score						8
Weighting	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
Initial score multiplied by weighting						**A** … **B** …12 **C** …

***Graded A-C according to quality of evidence**

Final risk score

Management factors (out of 50)	9
Site intrinsic factors (out of 30)	29
Archaeological factors (out of 20)	12
Final risk score (out of 100)	**41**

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**

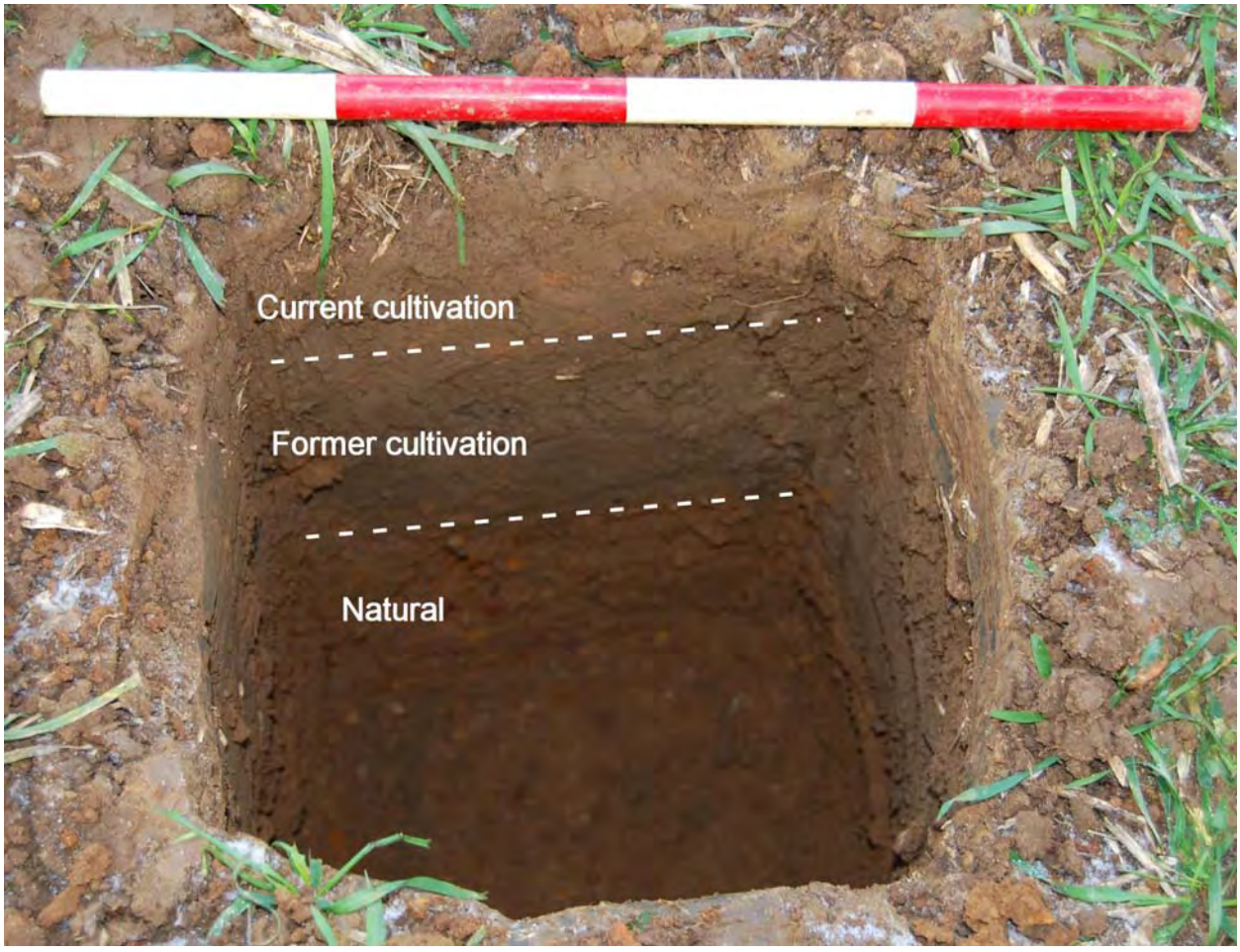
Fields 0384, 8363, 0958 and 7835

Legend

- Sample trenches
- Cropmark interpretation
- Test pits

144
145
1
143
28 Acre
0384
148
146
149
147
150
151
153
Gravel Hole
8363
Pig Croft
0958
154
Track
Issues
Path (um)
Sinks
152
Issues
Close and
Marketside
7835
The
Homeland
Walnut
Tree
Cottage
Ox
Leasow
Edscote
Lower End
Cottage
Thatchways
Bredon's
Norton
Malvern View
Malvern
View
The Croft
The Croftlands
N
0
25
50
100
150
200
Metres

Field 8363: Gravel Hole						
Test pits	**149**	**150**	**151**	**Range**		**Average**
				min	**max**	
Current cultivation	0.10	0.13	0.15	0.10	0.15	0.13
Former cultivation	0.26	0.15	0.15	0.15	0.26	0.19
Subsoil	None	None	>0.40			
Natural	Unex	>0.18	Unex			
Buffer: 0.15						
Notes						
1) Subsoil identified in test pit 151 may be derived from fill of quarry in south part of field						
Slope: Gentle						
Soil group in relation to water erosion: Light						
Soil group in relation to wind erosion: Silts/sands						



Test pit 150 (scale 0.40m)

COSMIC Assessment Sheet – Land Parcel 8363 Field Name Gravel Hole

Management factors	Serious risk Score 5	High risk Score 4	Medium risk Score 3	Low risk Score 2	Minimum risk Score 1	Score*	
						Ploughing	Miniumum tillage
Buffer	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**.....
Cultivation method and depth	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**.....
Cropping	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**.....
Subsoiling	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		**A**.....2 **B**..... **C**.....	
Initial score						10	10
Weighting	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1	1
Initial score multiplied by weighting						A …10 B …. C ….	A ….10 B …. C ….

***Graded A-C according to quality of evidence**

Site intrinsic factors

Susceptibility of cultivated soil to water erosion

Average annual rainfall = 600mm

	Steep slopes (> 7°)		**Moderate slopes** (3°-7°)		**Gentle slopes** (2°-3°)		**Level ground** (< 2°)	**Score***
Soil group	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	

Susceptibility of cultivated soil to wind erosion

Soil group	**Peats**	**Sands/Silts**	**Loams**	**Sandy clays/silty clay**	**Clay**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	**A**..... **B**.....4 **C**.....

Risk of soil loss during harvesting

Crop type	**Potatoes/sugar beet**	**Other root/tuber crops**	**Combinable crops**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	**A**.....3 **B**..... **C**.....
Initial score				9
Weighting	Any of above in grey shaded box = 2			1
Initial score multiplied by weighting				A …..9 B..... C.....

***Graded A-C according to quality of evidence**

Archaeological factors						
Survival and quality of evidence **[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections]**	**Serious Score 5**	**High Score 4**	**Medium Score 3**	**Low Score 2**	**Minimum Score 1**	**Score***
	- 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 distriguishing 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**.....
Significance	National significance	Regional significance	County significance	Local significance	No obvious significance	**A**..... **B** .....2 **C**.....
Initial score						5
Weighting	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
Initial score multiplied by weighting						**A** … **B** …5 **C** …

***Graded A-C according to quality of evidence**

Final risk score

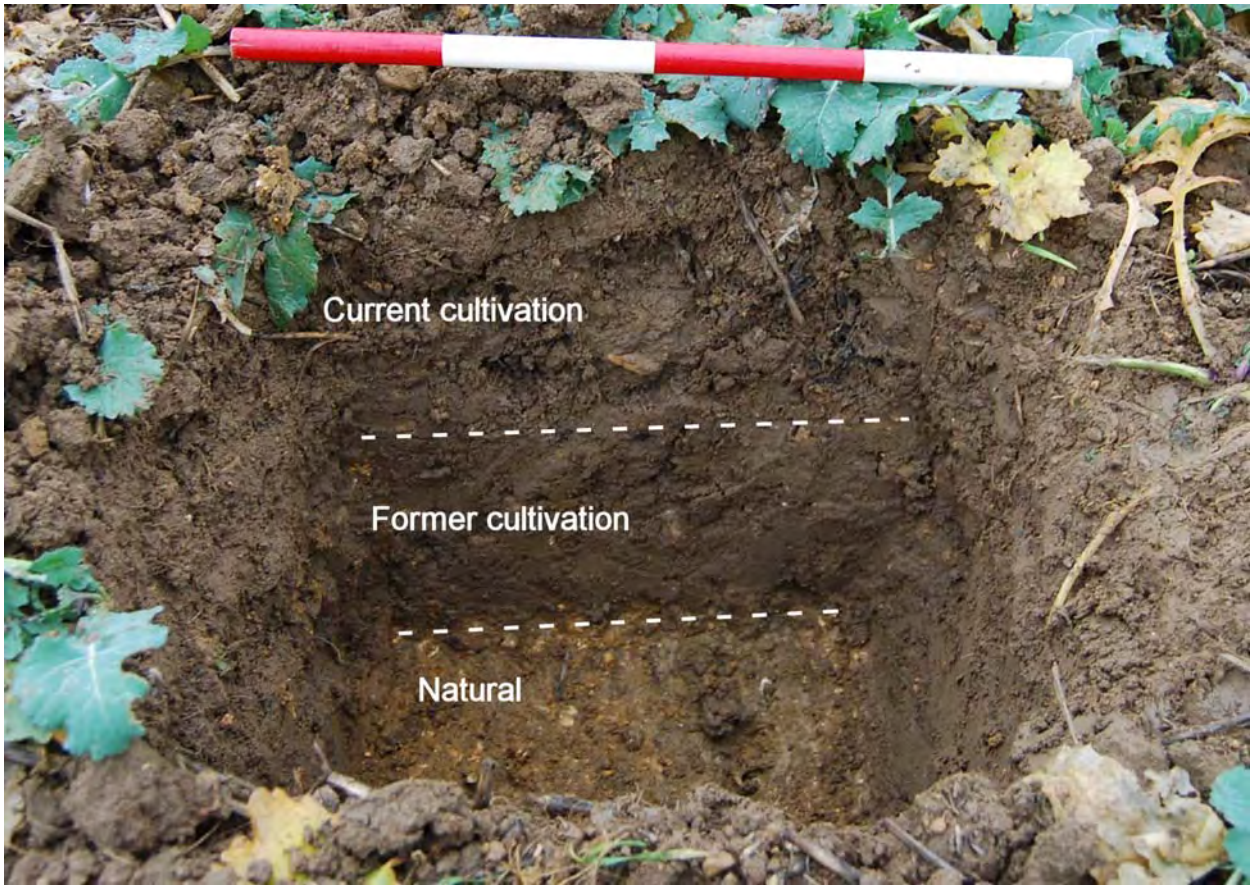
Management factors (out of 50)	10
Site intrinsic factors (out of 30)	9
Archaeological factors (out of 20)	5
Final risk score (out of 100)	**24**

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 9559
Legend
Cropmark interpretation
Test pits
Track
Ward Bdy
Def
Def
1.22m RH
Ward Bdy
Def
Track
116
117
118
I.P. 9559
Issues
36.9m
Dunroa
N
0
25
50
100
150
200
Metres

Field 9559: I.P.						
Test pits	**116**	**117**	**118**	**Range**		**Average**
				min	**max**	
Current cultivation	0.16	0.14	0.15	0.14	0.16	0.15
Former cultivation	0.16	0.13	0.14	0.13	0.16	0.14
Subsoil	>0.07	>0.29	None			
Natural	n/a	n/a	Unex			
Buffer: 0.13						
Notes						
1) No subsoil in test pit 118, but no topographical reason for this difference.						
2) Waterlogging in base of test pit 117.						
Slope: Level ground						
Soil group in relation to water erosion: Moderate						
Soil group in relation to wind erosion: Loams						



Test pit 118 (scale 0.40m)

COSMIC Assessment Sheet – Land Parcel 9559 **Field Name** I.P.

Management factors							
	Serious risk Score 5	**High risk Score 4**	**Medium risk Score 3**	**Low risk Score 2**	**Minimum risk Score 1**	**Score***	
						Ploughing	**Miniumum tillage**
Buffer	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**.....
Cultivation method and depth	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**.....
Cropping	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**.....
Subsoiling	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		**A**.....2 **B**..... **C**.....	
Initial score						10	10
Weighting	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1	1
Initial score multiplied by weighting						A …10 B …. C ….	A ….10 B …. C ….

***Graded A-C according to quality of evidence**

Site intrinsic factors

Susceptibility of cultivated soil to water erosion

Average annual rainfall = 600mm

	Steep slopes (> 7°)		**Moderate slopes** (3°-7°)		**Gentle slopes** (2°-3°)		**Level ground** (< 2°)	**Score***
Soil group	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	

Susceptibility of cultivated soil to wind erosion

Soil group	**Peats**	**Sands/Silts**	**Loams**	**Sandy clays/silty clay**	**Clay**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	**A**..... **B**.....3 **C**.....

Risk of soil loss during harvesting

Crop type	**Potatoes/sugar beet**	**Other root/tuber crops**	**Combinable crops**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	**A**.....3 **B**..... **C**.....
Initial score				7
Weighting	Any of above in grey shaded box = 2			1
Initial score multiplied by weighting				A …..7 B..... C.....

***Graded A-C according to quality of evidence**

Archaeological factors						
Survival and quality of evidence **[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections]**	**Serious Score 5**	**High Score 4**	**Medium Score 3**	**Low Score 2**	**Minimum Score 1**	**Score***
	- 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 distriguishing 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**.....
Significance	National significance	Regional significance	County significance	Local significance	No obvious significance	**A**..... **B** .....3 **C**.....
Initial score						6
Weighting	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					1.3
Initial score multiplied by weighting						**A** … **B** …7.8 **C** …

***Graded A-C according to quality of evidence**

Final risk score

Management factors (out of 50)	10
Site intrinsic factors (out of 30)	7
Archaeological factors (out of 20)	7.8
Final risk score (out of 100)	**24.8**

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**

Fields 9854 and 0232

Legend

- Sample trenches
- Cropmark interpretation
- Test pits

Franmar
GP
The Bramleys
Bredon Fields
129
131
130
132
128
127
133
134
140
Path (um)
Poppy Field
9854
Beet Pad
0232
Pavilion
Cricket Ground
Stone
Croft V
Fairfield C
Ward B
LB
4
5
Swimming Pool
Furlong Cottage
Dairy Cottage
Brensham
The Banda
Corner Ho
The Dovecote
Clock Ho
Moretons Cottage
The Moretons
Moretons Lodge
0 25 50 100 150 200 Metres
N

Field 9584: Poppy Field									
Test pits	**127**	**128**	**129**	**130**	**131**	**132**	**Range**		**Average**
							min	**max**	
Current cultivation	0.14	0.13	0.15	0.16	0.19	0.15	0.13	0.19	0.15
Former cultivation	0.21	0.14	0.14	0.16	0.14	0.10	0.10	0.21	0.15
Subsoil	>0.20	>0.36	>.51	>0.08	>0.35	>0.50			
Natural	n/a	n/a	n/a	n/a	n/a	n/a			
Buffer: 0.15									
Slope: Level ground									
Soil group in relation to water erosion: Light									
Soil group in relation to wind erosion: Silts/sands									

Test pit 130 (scale 0.40m)

COSMIC Assessment Sheet – Land Parcel 9854 **Field Name** Poppy Field

Management factors							
	Serious risk Score 5	**High risk Score 4**	**Medium risk Score 3**	**Low risk Score 2**	**Minimum risk Score 1**	**Score***	
						Ploughing	**Miniumum tillage**
Buffer	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**.....
Cultivation method and depth	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**.....
Cropping	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**.....
Subsoiling	Regular subsoiling (< 3 years)	Regular or occasional subsoiling (3-6 years)	Rare subsoiling (7-15 years)	No subsoiling		**A**.....2 **B**..... **C**.....	
Initial score						10	10
Weighting	Any at serious risk = 2.5 Any at high risk = 1.5 Any at minimum risk = 0.5					1	1
Initial score multiplied by weighting						A …10 B …. C ….	A ….10 B …. C ….

***Graded A-C according to quality of evidence**

Site intrinsic factors

Susceptibility of cultivated soil to water erosion

Average annual rainfall = 600mm

	Steep slopes (> 7°)		**Moderate slopes** (3°-7°)		**Gentle slopes** (2°-3°)		**Level ground** (< 2°)	**Score***
Soil group	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	

Susceptibility of cultivated soil to wind erosion

Soil group	**Peats**	**Sands/Silts**	**Loams**	**Sandy clays/silty clay**	**Clay**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	Low Score 2	Minimal Score 1	**A**.....4 **B**..... **C**.....

Risk of soil loss during harvesting

Crop type	**Potatoes/sugar beet**	**Other root/tuber crops**	**Combinable crops**	**Score***
	Serious Score 5	High Score 4	Medium Score 3	**A**.....3 **B**..... **C**.....
Initial score				8
Weighting	Any of above in grey shaded box = 2			1
Initial score multiplied by weighting				A …..8 B..... C.....

***Graded A-C according to quality of evidence**

Archaeological factors						
Survival and quality of evidence **[Other evidence: e.g. -Documentary (HER records, fieldwork reports) -Oral (information from farmers etc) -Material (artefacts in museums or private collections]**	**Serious Score 5**	**High Score 4**	**Medium Score 3**	**Low Score 2**	**Minimum Score 1**	**Score***
	- 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 distriguishing 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**.....
Significance	National significance	Regional significance	County significance	Local significance	No obvious significance	**A**..... **B** .....4 **C**.....
Initial score						8
Weighting	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
Initial score multiplied by weighting						**A** … **B** …12 **C** …

***Graded A-C according to quality of evidence**

Final risk score

Management factors (out of 50)	10
Site intrinsic factors (out of 30)	8
Archaeological factors (out of 20)	12
Final risk score (out of 100)	**30**

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**