

# TIRLEY TO DYMOCK

Proposed High Pressure  
Natural Gas Pipeline

ARCHAEOLOGICAL  
DESK-BASED  
ASSESSMENT

**NETWORK ARCHAEOLOGY LTD**

for

**MOUCHEL CONSULTING LTD**

on behalf of

**TRANSCO**

**network**  
ARCHAEOLOGY LTD

**Mouchel**

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### **ARCHAEOLOGICAL DESK-BASED ASSESSMENT**

**(Revision 003)**

**Prepared by**

**NETWORK ARCHAEOLOGY LTD**

**for**

**MOUCHEL CONSULTING LTD**

**on behalf of**

**TRANSCO**

**Report No. 262**

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## 1 SUMMARY

1.1 This Archaeological Desk-Based Assessment deals with the proposed c. 16 km long, Transco high-pressure gas pipeline between Tirley and Dymock in Gloucestershire.

1.2 Generally, there is a moderate amount of known archaeology within the study corridor. The majority of this consists of extant structures, documentary and archaeological evidence of medieval settlements, land use and land division, and earthwork remains of post medieval infrastructure. Sub-surface archaeology has mainly come to light through limited archaeological investigations, so it is likely that unknown sites may await detection, some of them concealed beneath alluvium over river terraces, or beneath colluvium on hillslopes.

1.4 One Mesolithic flint scatter is recorded in the study corridor. There are no other definite prehistoric sites, although two areas of cropmarks could be prehistoric. A former road provided the only evidence of Roman activity, and no Saxon remains have been recorded. Medieval sites within the study corridor include a Motte and Bailey Castle (SAM 28863), a second possible castle site, Oridge shrunken settlement, Pauntley deserted settlement and mill site, a possible site of a beacon, and a meeting place at Botloe Green. Evidence for Post-Medieval activity in the study corridor is mostly represented by existing buildings, railways, a canal, former field systems and boundaries.

### 1.5 General Impacts and Recommendations

A lack of previous systematic field-based research in the study corridor means that the potential for archaeological remains is undetermined. The most cost-effective and proven means of managing the potential archaeological risks is to implement a stage of field investigation (Stage 3 - see Appendix A):

- field reconnaissance survey of new areas encountered due to route changes
- combined electro-magnetic survey and hand auger survey (*on the River Leadon floodplain*)
- field walking survey (*arable areas*)
- geophysical survey (*entire route, except on deep alluvium on the River Leadon floodplain*)

### 1.10 Site-Specific Impacts and Recommendations

1.10.1 One hundred and fifty-two archaeological sites have been identified within the study corridor. Of these, thirty-three are located in the path of the proposed pipeline, and there is an uncertain impact on another eight.

1.10.2 All the sites studied have been placed into one of five categories, ranging in significance from Scheduled Ancient Monuments (category A) to single find spots (category E) (see table below).

1.10.3 Most of the sites are either unavoidable or of insufficient significance to require avoidance. At this stage, avoidance has not been recommended for any sites.

Grade	Description	Total no. sites recorded	Total no. sites within study corridor	Total no. sites indirectly and possibly affected by the pipeline	Total no. sites crossed by proposed working width
A	Legally protected site	23	20	0	0
B	Nationally important site, currently not legally protected	5	3	0	0
C	Regionally important site	30	27	3	2
D	Locally important site	48	45	2	13
E	Other site	61	57	3	18
<b>TOTALS</b>		167	152	8	33

Total number of sites recorded, those within study corridor, those indirectly and possibly affected by pipeline construction, and those crossed by proposed pipeline working width (\* excludes field boundaries)

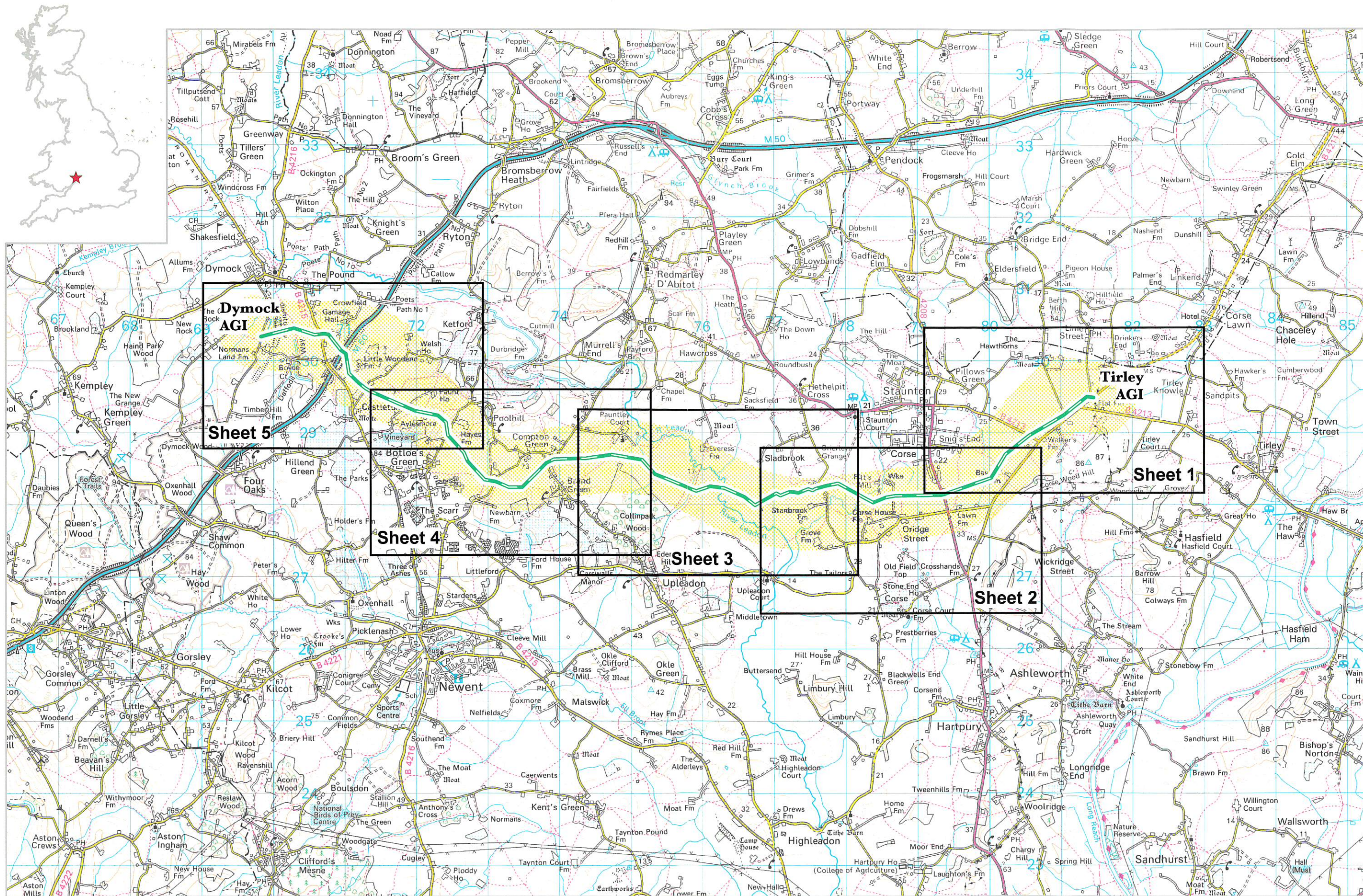


Figure 1: Proposed Tirley to Dymock Pipeline and location of archaeological constraints maps

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# **1 INTRODUCTION**

## **1.1 Background**

- 1.1.1 Network Archaeology Ltd. was commissioned by Mouchel Consulting Ltd. to carry out an Archaeological Desk-Based Assessment of the proposed c.16 km long, high-pressure pipeline between Tirley Above Ground Installation (AGI) (NGR 381340 229480) and Dymock AGI (NGR 369790 230340) in Gloucester (Figure 1). The proposed pipeline is intended to reinforce Transco's Local Distribution Zone and National Transmission System.
- 1.1.2 This report will form the basis of the Archaeology and Heritage section of a non-mandatory Environmental Statement undertaken to meet the requirements of *The Public Gas Transporter Pipeline Works (Assessment of Environmental Effects) Regulations 1996*, which have been in effect since July 1999.
- 1.1.3 This study forms one stage in what is expected to be a detailed investigative programme of mitigation (see Appendix A).

## **1.2 Context of Pipeline Assessments**

- 1.2.1 Linear developments such as pipelines provide an opportunity to examine a transect across a landscape and the evidence of past human activity preserved within it.
- 1.2.2 Potentially, pipelines can severely impact upon the archaeological resource. Close co-operation between archaeologist and engineer is essential to ensure that the impact on the archaeological resource is minimised.
- 1.2.3 Identification of archaeological sites at an early stage allows for forward planning of appropriate mitigation measures, such as route modifications, and site-specific investigations in advance of construction.

## **1.3 Project Objectives**

- 1.3.1 The purpose of this assessment is to consider the Cultural Heritage implications of the proposed pipeline, to assist in the selection of an archaeologically least-damaging pipeline route, and to provide a basis for further stages of investigation.
- 1.3.2 The objectives are to:
- identify and define the extent of known archaeological constraints within and immediately outside the proposed pipeline corridor, and to provide a preliminary assessment of their significance;
  - make an informed assessment of the potential for new sites;
  - assess the potential for evaluative field survey, and
  - recommend mitigation measures.



## **2 PROCEDURES**

### **2.1 Standards**

This assessment has been conducted according to the Institute of Field Archaeologists:

- *Code of Conduct* (2000), and
- *Standard and Guidance for Archaeological Desk-based Assessment* (1999).

### **2.2 Study Corridor**

Data collection focused on a one kilometre wide route corridor. Background information for the localities through which the corridor passes was additionally recorded to provide a broader archaeological context for the corridor information.

### **2.3 Data Sources**

#### *2.3.1 English Heritage:*

- County list of Scheduled Ancient Monuments for England (SAMs - legally protected under the Ancient Monuments and Archaeological Areas Act 1979)
- National Monuments Record (NMR) MONARCH database of registered archaeological sites and excavations
- NMR collection of vertical and oblique aerial photographs
- Monument Protection Programme (MPP)

#### *2.3.2 Gloucester County Council Sites and Monuments Records:*

- county list of known archaeological sites and finds
- county list of Listed Buildings
- registered parks and gardens
- registered battlefields

#### *2.3.4 Gloucester Record Office*

- tithe maps
- OS maps

#### *2.3.5 Gloucester Local Studies Library*

- secondary printed sources

#### *2.3.6 Public Record Office, Kew*

- tithe maps

#### *2.3.7 Cambridge University Collection of Air Photographs*

### 3 DESCRIPTION OF THE PROPOSED PIPELINE ROUTE

#### 3.1 Location and Topography

3.1.1 The proposed pipeline route lies about eight kilometres to the north of Gloucestershire. The pipeline runs for approximately 16 km in a generally east to west direction between Tirley AGI and Dymock AGI (Figure 1).

3.1.2 Leaving Tirley AGI (40m AOD), the proposed pipeline heads west south west, initially parallel to the B4211, and then bending gradually in a more westerly direction. The proposed route descends gently, as it passes between Corse and Oridge Street, before crossing the Glynch Brook, and the River Leadon (20m AOD). After skirting the north side of Collinpark Wood, the proposed route heads north west, over more rugged terrain, with steep hills up to 70m AOD. The route turns west towards Dymock AGI (50m AOD), just before crossing the B4215.

#### 3.2 Geology, Soils and Land Use

##### 3.2.1 Solid Geology

The eastern half of the proposed pipeline route is underlain by formations belonging to the *Mercian Mudstone group*. These include: *Arden Sandstone*; *Skerry*, a hard, blocky red and green mottled siltstone, or silty mudstone, or thinly bedded green/grey sandstone; and *Blue Anchor Formation*, which which comprises greenish grey siltstones and silty mudstones, is found to the south east of Staunton and forms the uppermost 3-10m of the *Mercia Mudstone group*.

About a quarter of the proposed route is underlain by *Bromsgrove Sandstone* (the upper section of the *Sherwood Sandstone Group*), which crops out to the south of Bromsberrow Heath. The geology comprises reddish to yellowish brown conglomerates, pebbly sandstones, sandstones and thin red brown mudstones.

The western portion of the proposed route is underlain by *Raglan Mudstone* (part of the *Lower Old Red Sandstone Group*). This comprises red-brown, micaceous mudstones and siltstones with subordinate sandstones and concretionary limestones as cornstones (BGS 1979).

##### 3.2.2 Drift Geology

Narrow bands of *alluvium* are found along the River Leadon, the Glynch Brook and most of the smaller watercourses in the study corridor. River terrace deposits, comprising silts, sands and gravels laid down by present and former rivers, are found along the courses of the River Leadon and the Glynch Brook. In places, these deposits have built up to form a series of terraces. The deposits do not exceed four metres thickness.

Glacial deposits include *Upleadon Gravels* through the central Bromsgrove Sandstone region, and *Woolridge gravels*, found to the east of Staunton. The *Woolridge gravels* mainly consist of *Bunter quartzite* pebbles and *silurian fragments* (BGS 1989, 1994).

### 3.2.3 Soils

The soils across the area reflect the underlying solid and drift geology. The eastern half of the route, is mainly overlain by reddish, fine loamy or fine silty over clayey soils (*Whimble 3*). This is ideally suited to stock rearing, dairying, temporary grassland, and winter cereals.

To the east of Staunton there is a pocket of *Brochurst 2*. This is a slowly permeable, seasonally waterlogged, reddish clayey soil, suitable for winter cereals, short term grassland, stock rearing and dairying.

Bands of slowly permeable reddish, clayey soils (*Worcester*) lie to the east and west of Staunton. These soils are ideal for grassland, dairying, stock rearing, and for winter cereals in drier districts.

A band of well drained, reddish, sandy and coarse loamy soils (*Bridgnorth*) lies in the vicinity of Compton Green. Cereals, potatoes, horticultural and fruit crops are grown on this type of soil, with some permanent grassland and woodland on steep slopes.

*Bromsgrove*, a well drained reddish coarse loamy soil, is located over the area to the east of the M50, in the vicinity of Botloes Green. Grassland is predominant in moist districts, but cereals, sugar beet, potatoes, some field vegetables and fruit can be grown in this soil.

The west end of the route is overlain by a well drained, reddish, fine silty soil (*Bromyard*), which is suitable for cereals, short term grassland, stock rearing, some hops, and deciduous woodland on steep slopes (SSEW 1983).

## 4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

### 4.1 Palaeolithic (c.500,000 - 8,300 BC)

- 4.1.1 The first humans entered the area now known as Britain about 500,000 years BC. Britain lay on the north western extremity of the Palaeolithic world, and during this period was joined to the Continent by a land bridge where the English Channel now exists. Harsh glacial conditions prevalent throughout much of the era, were interspersed with interglacials (slightly warmer periods).
- 4.1.2 During the Lower and Middle Palaeolithic periods (c.500,000 - 40,000 BC) man's presence in Britain was mainly concentrated in southern and south eastern England. Occupation would have been largely limited to the warmer interglacials or, during an ice-age, to brief summer visits from mainland Europe.
- 4.1.3 Concentrations of Lower and Middle Palaeolithic stone tools are known from the lower reaches of the Bristol Avon, from the Severn valley at Twyning, north of Tewkesbury and Barnwood east of Gloucester, and from gravel spreads west of Lechlade in the Thames valley. Generally, the post-depositional history of the tools is that they became incorporated into river gravels, and were later discovered during gravel quarrying. Although none of the artefacts is likely to represent *in-situ* activity, Palaeolithic people may well have roamed throughout the area that is present-day Gloucestershire during warmer periods. The Barnwood deposits came from an Oolitic gravel of supposed local origin, which produced a rich variety of Pleistocene faunal remains. Similar material has been radiocarbon dated to 34,500 +/- 800 bp, but it is possible that the bones post-date the artefacts (Saville 1984).
- 4.1.4 Lower and Middle Palaeolithic handaxes from Gloucestershire include a variety of forms, many of which are small (Saville 1984). The predominant stone-working traditions represented are Mousterian and Acheulean.
- 4.1.5 The Upper Palaeolithic period (40,000-10,000 years bp) is characterised by, the production of more sophisticated stone tools, and personal ornaments. However, the occupation of Britain during this time, was interrupted by a glaciation which prevented human settlement for several millennia (20,000-15,000 years bp). At this time, the country would have resembled polar desert. It was not until the climate warmed that Britain was gradually re-colonised.
- 4.1.6 Upper Palaeolithic finds are rare throughout most of central England west of East Anglia. The upper levels of the Barnwood gravels have produced some flintwork and an ivory point ascribed to the period. It has been suggested that these finds indicate a small open-air encampment near the find-spot. Open sites of this period are generally extremely rare in Britain. Most known Upper Palaeolithic sites are in caves or rock shelters where preservation conditions have been enhanced. Many such sites occur in the Mendips. Others might be expected in the far west of Gloucestershire along the Wye valley, since King Arthur's Cave at Whitchurch, on the Herefordshire side of the valley has produced evidence of both early and late Upper Palaeolithic occupation (Saville 1984).

4.1.7 Palaeolithic stone tools have been found in the study area in the vicinity of Brand Green (MON 1053613). A split quartzite pebble from Brand Green (MON 763015) may also be a Lower Palaeolithic implement, despite its imprecise form. Indeed, Acheulean quartzite tools are common in the south Worcestershire and south Warwickshire region and should be expected in north Gloucestershire (Saville 1984).

## 4.2 Mesolithic (c. 8,300 - 4,000 BC)

4.2.1 Mesolithic culture appears to have been a response to dramatic environmental changes created by much warmer climatic conditions. Scrub woodland and forest gradually replaced the tundra and cold steppe grassland of the Palaeolithic, providing new habitats more suitable for small woodland game than herbivorous herds of large animals. The huge body of water freed by the melting of the ice sheets contributed to the enlargement of the oceans, and the warmer waters encouraged colonisation by a much wider diversity of fish and molluscs. By c. 5800 bc, the raised sea level had also isolated Britain from the rest of Europe. The insulating properties of the sea caused further rises in winter temperatures.

4.2.2 These environmental changes provided Mesolithic Man with a much broader and abundant subsistence base than had been available in the Palaeolithic. River valleys provided forest game, fish and plants. Some of these resources were available all year, although the richest time of year would have been from spring until autumn. Dense woodland also provided opportunities for food procurement, particularly in summer and early autumn.

4.2.3 Man responded to these improved conditions in a number of ways. New tool types, tactics and skills were developed for the exploitation of resources. Projectiles, to be thrown by hand or shot from a bow, are particularly prominent in the archaeological record. Burins, awls and scrapers were also in use, and the presence of flint axes and adzes indicates that some woodland clearance was being attempted, and that timber working was possibly taking place. Towards the end of the Mesolithic, it is possible that man was taking greater control of his environment, using fire in a more concerted effort to clear trees and create scrub and grassland. Although there is little evidence for this in the pollen record, it would have been a logical progression towards the pastoralism of the Neolithic period. Sedentism may also have increased in the Mesolithic due to the greater variety and abundance of subsistence forms.

4.2.4 Typologically, the flint assemblage from the county as a whole indicates occupation in the later Mesolithic. Find spot distribution is concentrated largely on the Cotswold uplands because of the superior retrieval conditions. Sites on the lower ground outside the Cotswolds are thought to be masked by post-Mesolithic alluvial and colluvial deposits (Saville 1984). Few sites of certain Mesolithic origin are known in the north west of the county, although some lithic scatters have been found over relatively limited areas. A scatter of worked flints including diagnostic Mesolithic artefacts was found at Welsh House (SMR 5718) and other flints of the period have been found at Dymock (MON 763081). Material from Dymock, in the Ballard collection at Hereford Museum includes Mesolithic flintwork, but the exact provenance of the items is uncertain (Saville 1984). Nevertheless, these finds indicate the presence of Mesolithic people in and around the western section of the study corridor.

### **4.3 Neolithic (c.4,000 - 2,500 BC)**

- 4.3.1 The Neolithic period saw the adoption of agriculture, accompanied by a more sedentary existence. Animals were domesticated and plants cultivated and harvested. Stone axes and fire were used to clear areas of dense woodland where crops were sown and stock grazed. New flint and stone technologies included flint sickles and stone querns used for harvesting and processing grain. Pottery was introduced and funerary arrangements became increasingly complex. Society by this time was sufficiently large, organised and affluent to construct immense burial mounds, chambers and ceremonial monuments. Such changes could have been engendered by new settlers from abroad, or may have resulted from a gradual influx of ideas, perhaps communicated through trading links.
- 4.3.2 The emergence of defended sites suggests that warfare was resorted to in order to resolve conflicts. It is unlikely that communities competed due to environmental stress and the short supply of natural resources as large tracts of land were still available for colonisation. However, communities may have fought over natural resources in order to gain wealth and prestige.
- 4.3.3 Polished stone axes were traded throughout the country and are thought to have had powerful symbolism. Most polished stone axes were not functional as conventional use would have caused them to shatter (Children & Nash 1994). Their value is demonstrated by the immense distances over which they were transported. These axes were probably exchanged for other commodities no longer visible in the archaeological record, such as skins, furs and brides.
- 4.3.4 A polished stone axe was found near Newent in 1980. Of seventy examples known from Gloucestershire, the Newent axe was the only one which came from the north west of the county. The stone for such tools commonly came from sources in the Lake District, Wales or Cornwall, but the Newent axe was made from stone which came from elsewhere (Kellock 1987).
- 4.3.5 No Neolithic sites or find spots are known within the study corridor, though it has been suggested that Welch House Lane is a prehistoric trackway linking Neolithic settlements at Linton and Hatfield (Gethyn-Jones 1952).

### **4.4 Bronze Age (c.2,500 - 600 BC)**

- 4.4.1 The first metal objects began to appear in Britain during the early Bronze Age. Influences from the continent also brought new types of flint and pottery, new forms of burial rite involving the use of grave goods, and large funerary monuments, which hint at social differentiation, and possibly even the emergence of local, dynastic polities. As the Bronze Age progressed, people increasingly lived in nucleated farming communities, growing crops and raising livestock.
- 4.4.2 Many bronze implements were influenced by Continental forms and by 1000 BC new weapon types including socketed leaf shaped spearheads and slashing swords were being produced. As well as its practical uses, bronze was employed as a status

symbol, as currency, and for votive purposes. Both undamaged bronze objects and scrap bronze are often found in hoards.

- 4.4.3 A wide variety of burial practices were employed in Britain during the Bronze Age: inhumation, cremation, simple pits, stone cists, wooden coffins, flat graves with no surface marker, and graves covered by a cairn or mound and surrounded by a ditch.
- 4.4.4 Monumental burials are thought to have been constructed by leading families, partly as territorial markers, particularly in the middle of the second millennium BC, when there was a great deal of land taking. Most monumental burials appear to have been situated on prominent sites, usually on high ground. No barrow crop marks or earthworks are recorded within the corridor. In the Cotswolds barrows are concentrated on the Great Oolite, prompting the suggestion that settlements, rather than funerary monuments, lay on the more hospitable geologies (Darvill and Grinsell 1987).
- 4.4.5 Aerial photography has indicated the presence of buried features within the corridor, but there is no artefactual or documentary evidence to provide dating. A curvilinear cropmark extends north from Newbarn Farm (SMR 4418) and traces of an irregular rectangular ditched enclosure covering roughly a quarter of a hectare were recorded to the west of Brand Green in Newent (SMR 4417).
- 4.4.6 A scatter of Bronze Age flint work was found at Littleford about a mile to the south of the pipeline (MON 113398), but no remains of this period have yet been found within the corridor.

#### **4.5 Iron Age (c.600 BC - 43 AD)**

- 4.5.1 New ideas about working with iron came from the continent, probably initially by communication through trade, and later by a series of Celtic tribal invasions and immigrations. Iron was largely used for weapons and farming tools, the production of which would have increased during the period. Copper, bronze and gold continued to be used for utensils and decorative ware. Pottery began to be made using a potter's wheel, and the first inscribed coins were minted in Britain. Iron Age tribes emerged with their own territories, and with land in increasingly short supply, society was becoming more aggressive to defend it.
- 4.5.2 The social structure of Iron Age Gloucestershire, like that of much of the country, was dominated by a warrior aristocracy. This may have emerged partly in response to a climatic decline in the late Bronze Age, which would have led to competition for agricultural land. It was also due to invasions from abroad. Tribal chiefs would have wielded considerable power across the countryside, and as the Iron Age progressed people became increasingly aware of the threat of violence, and more and more settlements were defended. Defended hilltop settlements or 'hillforts', some of which had been constructed at the end of the Bronze Age, were built in far greater numbers.
- 4.5.3 Initially, hillfort design was probably simple, more like enclosed farms than major fortifications, but ramparts and ditches increased in complexity with growing hostilities between tribes, and with the later threat of the advancing Romans. Many of

the hillforts would only have been occupied in times of war. Much of the time they probably acted as deterrents, as well as symbols of power and group identity.

- 4.5.4 The population of Britain is thought to have increased considerably during the Iron Age. Large numbers of farming settlements would have been established. Pressure on existing resources caused by population growth, would have forced large parts of the lowlands to be settled and cleared for agriculture, whilst uplands were used for summer grazing.
- 4.5.5 The Iron Age tribe occupying the study area were known to the Romans as *Dobunni*. Their territory seems to have been expanding during the late Iron Age. By the late first century BC it covered Gloucestershire east of the Severn and much of Oxfordshire and north Somerset. Their coins bore the emblem of a three-tailed horse. The earliest examples were uninscribed. One has been found on a Roman site at Dymock (MON 763085). Inscribed coins appeared c.20 AD and reveal the shortened names of their kings - Anted, Eisu, Catti, Comux, Corio and Bodvoc. The oppidum at Bagendon near Cirencester was the site of one of the chief *Dobunni* mints and is thought to have been established c.15 AD (Frere 1974).
- 4.5.6 Gloucestershire's best known Iron Age sites are the hillforts of the Cotswold escarpment. Evidence from the lower-lying areas to the north west is relatively sparse. A Gaulish gold coin was found in Dymock (MON 113608). This and the uninscribed *Dobunnic* coin (MON 763085) may be isolated finds but they could indicate that there was a settlement at Dymock in the Iron Age.

#### 4.6 Romano-British (43 - 410 AD)

- 4.6.1 Over most of England, the Roman invasion was followed by a rapid implementation of centralised administration based on towns and supported by a network of roads. In the first phases of conquest the *Dobunni* territory between the Fosse Way and the Severn became a military zone and camps were set up at Kingsholm, near Gloucester and *Abone* at Sea Mills.
- 4.6.2 A legionary fortress was founded at Gloucester in 49 AD. From here and *Abone* the Romans conquered the *Silures* tribe of South Wales and the Forest of Dean in 74-78 AD. The *colonia* at Gloucester (GLEVUM COLONIA) was founded in the reign of Nerva (96-98 AD) on the site of the legionary fortress. Nevertheless, King Bodvoc (or Boduococ) moved into the legionary fort at Cirencester soon after the arrival of the troops c.47 AD. So it was Cirencester (CORINIUM DOBUNNORUM) that became the *civitas* capital of the *Dobunni* territory. Cirencester acted as the administrative centre for the entire area.
- 4.6.3 Road networks had previously been little more than tracks formed by the feet of people and livestock. Roman army engineers built more substantial roads with metalled and cambered surfaces, to expedite the movement of soldiers, food and equipment. Naturally these roads were also exploited as trade and communication routes.



- 4.6.4 A paved road (SMR 7677) is thought to have been laid north west of Gloucester, leading from Over and through Newent. It may have passed Castle Tump (Gethyn-Jones 1952) and run on to Dymock village, where the first obvious traces of an aligned road survive (Margary 1957). From Dymock the road continued to Stretton Grandison, approximately ten miles (or a day's march) to the north west. As a halfway point between Stretton and Gloucester, Dymock may have been a staging post and supported a community in the Roman period. The road may have linked Gloucester to the main arterial route between Caerleon and Chester (Gethyn-Jones 1952).
- 4.6.5 Excavation of a section of Roman road in Dymock village revealed it to be about twelve feet wide with a small ditch on one side (Waters 1969). The gravel had been laid directly onto the soil but had been resurfaced five or six times. Aerial photographs show the road heading east out of Dymock as far as Crowfield Farm (Waters 1969). Waters suggests that the Dymock to Crowfield Farm road ran on towards Redmarley and Tewkesbury and that there may be a junction where this east-west road joined the north west-south east Stretton to Dymock road. The fact that only one section of road was noted in the trenches dug for the M50 motorway (Waters 1969) might imply that the Crowfield Farm road was the only route to the south or east of Dymock. It has been suggested that the road kinked to avoid the low ground near the meanders of the River Leadon because of the dangers of flooding (Rawes 1972). Whatever its alignment, any road from Dymock to Gloucester is certain to have traversed the corridor at some point. The place name "Portway Top" also refers to a Roman road.
- 4.6.6 Below the Roman road in Dymock there were two parallel ditches, possibly of military origin (Waters 1969). Roman pottery and coins of the first to third centuries lay within and above these ditches. A series of occupation layers overlay the ditches and there was copious evidence of metal working as well as the remains of stone and timber buildings. Most of the material from the site dated from the second and third centuries. The remains are thought to represent ribbon development along both sides of the road (MON 763085). The settlement may be equated with MACATONION (OR MAGALONIUM) of the Ravenna Cosmography (McWhirr 1984).
- 4.6.7 There may have been a Roman building in the area east of Old Field Top and Stone End House, approximately half a mile south east of Oridge Street (Goult 1995). Excavations for the Staunton rising main replacement revealed no features but produced nine sherds of Severn Valley and Black Burnished ware and nine pieces of Romano-British brick and tile (SMR 16947). Sherds of Romano-British pottery and a quern stone were also discovered half a mile south west of Oridge Street (MON 113360).
- 4.6.8 It is likely that many more sites lie undiscovered in the region. The 50 yard wide strip excavated for the M5 motorway in Gloucestershire in 1969-70 revealed thirty previously unknown Romano-British settlements (Smith & Ralph 1972).
- 4.6.9 Many Iron Age settlements continued in occupation, gradually becoming more "Romanised". For many of the rural population the way of life was apparently little changed by Roman control.

- 4.6.10 Notable Roman developments included a new monetary economy, the extension of trading links, farming improvements, and a small influence on the material culture of the native population.
- 4.6.11 The Roman empire was in decline by the late fourth century, and in AD 407, the Roman army left Britain. The Roman Emperor, Honorius wrote to the cities of Britain in AD 410 telling them to defend themselves. The monetary system introduced by the Romans ceased to function after the last consignment of bronze coins was sent to Britain in AD 402, and by 411 all supply of coinage had ceased. Britain was no longer part of the Roman Empire.

#### **4.7 Early Medieval (Anglo-Saxon) (c.410 - 1066 AD)**

- 4.7.1 After the end of Roman rule in Britain, the economy stagnated, coins stopped circulating and much of the Roman infrastructure ceased to be used. Metalwork became a rare commodity, mass produced pottery was replaced by locally made vessels of wood or leather. Later in the period Christianity became a dominant force and Gloucestershire acquired much of its present pattern of land settlement and exploitation and political identity.
- 4.7.2 Historical and archaeological evidence for the fifth to seventh centuries is limited and open to interpretation. During the fifth century Britain fragmented into a series of kingdoms. The monk historian Gildas claimed that the British defeated the Saxons at a place called *Mons Badonicus*. It has been suggested that this battle took place c.500 AD and that, as a consequence, Saxon colonisation of the Gloucester area did not begin until the late sixth century (Heighway 1984). The Anglo Saxon Chronicle records a battle at Dyrham in 577 AD in which the Saxons Ceawlin and Cuthwine killed three British kings and captured Gloucester, Cirencester and Bath. It is possible that the Saxons were too few in number to colonise the whole county and that it was Anglian people from the Norfolk area who took over the north of Gloucestershire (Smith & Ralph 1972). The Mercians conquered the West Saxons at Cirencester in 628 AD, establishing an extensive Anglo-Saxon kingdom ruled by the Northumbrian royal family. The limits of this kingdom of the *Hwicce* remain uncertain, but it is likely that its western boundary ran across the eastern end of the study area (Heighway 2000).
- 4.7.3 During the first major Danish invasion Guthrum made Gloucester his base against Alfred from 877 to 879 AD. The second wave of Danish invasions occurred late in the tenth century and culminated with the succession of Cnut to the English throne in 1016. By late Saxon times Gloucester was one of the most important towns in the kingdom, with trade largely dependant on the iron mines of the Forest of Dean.
- 4.7.4 The relative scarcity of early Anglo-Saxon artefacts in the West Midlands and Lower Severn Valley has prompted some to argue that the population here remained largely British, despite the influx of Angles and Saxons on the east coast. The replacement of the Celtic language with Old English, however, suggests that the British were outnumbered by incomers. The survival of a few Celtic words in Gloucestershire place names, and the occurrence of the Anglo-Saxon element *walh* (Welshman or

foreigner) suggests that there remained some settlements of Celtic-speaking Britons who were singled out as *walh* by the Anglo-Saxon majority (Sermon 2000).

- 4.7.5 Although there may have been a Christian bishop in Gloucester or Cirencester in the early fourth century (Reece 2000), the seventh century bishopric was at Worcester, the first bishop there being appointed in 679. Events during the intervening period are uncertain, but the *Hwicce* were not converted until after the death of King Penda in 654. It has been argued that the Christianity introduced by the Romans was developing in Wales during these “Dark Ages” and was eventually re-exported to England’s western provinces (Heighway 2000).
- 4.7.6 The pipeline study corridor crosses nine historic parishes. Many of these parish names have Celtic elements which may suggest that they are early formations. The place name Dymock is thought to derive from the Celtic *din*, meaning fort. It first appears in 1086 as *Dimock*. Pauntley means “clearing in the valley”. *Paunt* and *Pant* also occur locally, the *pant* element refers to the Welsh for “clearing”. Corse is derived from the Welsh *cors* meaning marsh or bog. It refers to the low lying ground known as *Corsmersc* (Corsemere) in c.1200. The name Upleadon refers to its position on the River Leadon. The *Leadon* element is possibly derived from the Welsh *llydan* meaning “broad”. Newent was recorded as *Noent* in 1086. It is probably a Celtic name meaning 'new place'.
- 4.7.7 The other parish names are all of Old English origin. Redmarley D'Abitot appeared in 963 as *Reodemaereleage* and in 1324 *Rudmarleye Dabetot*. The first element stems from the words *hreod* (reedy) + *mere* (pond) + *leah* (clearing). The d'Abitot family were in the area in 1086. Hartpury was recorded as *Hardepiry* in the 12th century. The name derives from *heard* (hard) + *pirige* (pear tree). The derivation is now thought to refer to the hard pear tree (i.e. one with hard fruit like perry-pears). Tirley comes from *trind* + *leah*, meaning “circular woodland clearing”. It was not recorded until Domesday. Staunton was mentioned in 972 as *Stantun*. It is a common place name, usually signifying a farmstead on stony ground or near a standing stone. It derives from the Old English *stan* + *tun*.
- 4.7.8 Prior to the Norman Conquest, Dymock was the chief manor of Botloe Hundred. Both Dymock and Newent belonged to the king (Gethyn-Jones 1952). Staunton was granted to the Abbey of Pershore by the king in 972 (VCH 1924) and lands “near the Glynch Brook” at Redmarley were leased by the Bishop of Worcester in 963 and in 978 (Herbert & Jurica 1998).
- 4.7.9 The Manor of Hartpury was given by Offa, King of Mercia, to the Abbey of Gloucester in about 760 AD. The Benedictines of Gloucester were granted the manor in about 1022. Hartpury as such was not mentioned in the Domesday Book (1086), but the holdings of *Merewent* and *Merwen* were, the former being Morwents Place (the modern Murrells End farm) and the latter being Morwents End (the modern Laughtons, Drews and Coopeys farms).
- 4.7.10 Several places in the locality retain Old English personal names. Aylesmore derives from the name *Ægel*, and Wigstys Coppice retains the name *Wicga*. In Ketford, referred to as *Chitiford* in 1086, the *ket* element refers to a man called *Cyddas*.

Ashleworth first appears in 1086 as *Escelesuuorde*. It means "enclosure of a man called Æscel" (*Æscel + worth*).

- 4.7.11 Botloe's Green was recorded in 1241 as *Bottelawe*, meaning "Bota's mound". It derives from the Old English personal name *Bota* and the word *hlaw*, which can mean either "tumulus" or "hill".
- 4.7.12 Other place names with Old English roots refer to topographical features and land use. The first element of Brand Green is of Old English origin and means "burnt place". The Old English *mor* meaning "mere or marsh" survives in Moor Oak. Sladbrook is derived from Old English *slaed* meaning valley. Hasfield was recorded in 1086 as *Hasfelde*. It is an Old English formation from *haesel* and *feld*, meaning "open land where hazels grow". Compton Green was referred to as *Cumpton* in 1220. It is derived from the Old English words *cumb* (valley) and *tun* (farmstead or village). Ryton usually means a farm where rye is grown. It derives from the Old English *ryge + tun*. The name Hayes comes from the Old English *haes*, meaning "land overgrown with brushwood".
- 4.7.13 Although towns were in decline from the fourth century, smaller settlements often continued to function as markets for local produce. Settlement throughout the corridor and surrounding area remained scattered. In Tirley parish the original Anglo-Saxon settlement may have followed the piecemeal exploitation of waste or woodland as there are several place names - Tirley, the Haw, Cumberwood - signifying clearings and enclosures (Elrington 1968). Corse also remained heavily wooded until comparatively late. Settlement in the parish is therefore thought to be late, despite the British origin of its name. It is suggested that later Welsh influence may account for this (Elrington 1968). The land in Corse appears to have been cleared from the west: Oridge Street, its name signifying an enclosure, was recorded in 1086. It was then known as *Tereige*, although it occurs as *Harridge* or *Harwich Street* in 1830. The name is an Old English compound derived from *haga* (enclosure) and *hrycg* (ridge). It has been suggested that the marly soil encouraged cultivation in this part of the parish first (Elrington 1968).
- 4.7.14 Modern parish boundaries in southern England frequently correspond with those of Anglo-Saxon estates. Topographical features provided the earliest form of land division. Many of the parish boundaries crossing the corridor are marked by natural features, particularly the Glynch Brook, the River Leadon, and its tributaries. The western boundary of Corse parish is not marked by natural or ancient features yet it has remained unchanged since the 11th century (Elrington 1968).
- 4.7.15 No early Medieval or Saxon remains are recorded within the area of the study corridor.

#### **4.8 Medieval (c.1066 - 1540 AD)**

- 4.8.1 After the Norman Conquest, the invading lords took over the lands held by the Anglo-Saxons, and broke up many of the estates which had developed. Ultimately, Gloucestershire, like most other parts of England, was divided into tax paying

districts, which the Domesday survey of 1086 refers to as 'hundreds'. Within each hundred there were a number of parishes.

- 4.8.2 The pipeline runs west from the compact Westminster Hundred, which currently comprises Tirley, Corse and Hasfield parishes, to Botloe Hundred, which now includes eleven parishes. Of these, Redmarley D'Abitot and Staunton originally belonged to Worcestershire. Redmarley fell within the Hundred of Oswaldslow whilst Staunton was in Pershore Hundred.
- 4.8.3 In order to maintain control, the Normans constructed formidable castles. In the eleventh and twelfth centuries, these were either of the motte-and-bailey or the ringwork type. The motte-and-bailey was surrounded by a ditch. A steep mound or motte was the site of the lord's residence, and the bailey was an area containing timber industrial buildings and servants quarters. Ringworks were simply areas surrounded by banks and ditches, within which there were a number of buildings. In the thirteenth century, many of these castles were allowed to decay, because the Earls and Dukes who owned them lived elsewhere.
- 4.8.4 The remains of a motte and bailey castle, Castle Tump (SAM 28863) lie on a ridge of high ground near the southern edge of the corridor. The castle was granted temporarily to William de Braose between 1148 and 1154, by Roger, Earl of Hereford. Field boundaries to the south mark the outer wall of the bailey and it is thought there was a double bank here until 1946. On the north west side of the motte there is a pond 15m long. It is thought to be spring fed and may be the remains of the moat which would have encircled the motte (MON 113374).
- 4.8.5 Old Rock, also in Dymock parish, is thought to have been the site of the castle of the *de Bohuns* (Rawes 1977). A small tump at Ragman's Castle in Staunton parish, is thought to be a possible castle site (SMR 20731).
- 4.8.6 Along with a possible long barrow in Newent (Darvill and Grinsell 1987), the motte by Castle Tump has been suggested as the meeting place for the Botloe Hundred. However, a mile to the south east at Botloes Green there is a cottage called "Hundred House" and a "Hundred Field" is marked nearby on the Pauntley tithe map. The place name "Botloe" may refer to a tumulus (SMR 9410). There is no trace of a mound today (SMR 9411) but hundred meeting places were often on raised ground and marked with stones, trees or mounds. At Botloe's Green, the green itself is thought to be the likeliest site owing to its elevated position and the presence of an ancient black poplar. Some of the tracks converging on the green are well developed holloways. These may relate to the small late Medieval or Post Medieval settlement shown here on the early editions of the Ordnance Survey maps (SMR 20944).
- 4.8.7 The names of several Medieval families have been preserved in the names of properties and some are clearly of Norman origin. Boyce Court derives its name from the *de Bosco* family of 1225. Similarly, Gamage Hall (SMR 5353) is named after the *de Gamages* family and was mentioned in 1176. The *la Pulle* family were first recorded in the area c.1280 and Poolhill is named after John Poole, steward of Pauntley c.1619. Pitt House and Pitt's Mill refer to the local family surname *La Putte* of c.1292. Walden Court refers to the 13th century *Walding* family from Staunton.

- 4.8.8 The parish of Tirley was one of the estates of the monastery of Deerhurst that were originally divided between Westminster Abbey and St. Denis, Paris. It later lay in two hundreds - Deerhurst (to the east) and Westminster. Corse is also thought to have belonged to Deerhurst, but it passed entirely to Westminster Abbey in the 11th century. Staunton was known as *Staunton in Cors* in the 14th century, differentiating it from *Staunton in Bigland*.
- 4.8.9 The ancient Corse forest extended east from Oridge Street across Tirley and into the parishes of Eldersfield and Chacely to the north. Staunton was originally included in the forest (Elrington 1968). When the forest was cleared the area became known as Corse Lawn. The eastern end of the corridor lies entirely within it.
- 4.8.10 In the twelfth century Corse Chase belonged to the Earls of Gloucester and was closely connected to the Malvern Chase. By 1350 the chase not only encompassed Corse forest, but appears to have included all that part of Gloucestershire lying between the Severn and the Leadon. The chase was part of the manor of Tewkesbury until the 16th century (Elrington 1968). In 1274 it was said that the Earl of Gloucester had appropriated the D'Abitots' land near the Glynch Brook in Redmarley and put it into his chase (Herbert & Jurica 1998).
- 4.8.11 Woodland clearance in Corse parish continued during the Medieval period. *Corse field* was mentioned in the early 13th century and a new assart called *Barente* was recorded on the road through Oridge c. 1300. Nevertheless, in 1262 Corse Chase was referred to as the 'forest' of Corse and in 1322 it was still considered wooded enough to conceal a rebel army (Elrington 1968). The Crown ordered the felling of trees in Corse in 1345 and by the 1490s Corse forest had come to be called Corse Lawn. This suggests that the clearings were by then as extensive as the woodland itself.
- 4.8.12 Corse parish had no nucleated village centre and so took its name from the area around the church, which was known as *Corse Marsh* in the 11th century. By 1221, there was a "Corse township". At Oridge Street there was a larger and apparently earlier settlement. The Domesday Book records a small estate at *Tereige* and there was a township at Oridge by 1248 (Elrington 1968). Both Oridge and Corse later became part of the township referred to as *Woodrow and Corse* in 1327. *Woodrow* was an apt name for the settlement at Oridge at that time, which was apparently a short street of houses on the edge of Corse Chase. The Medieval settlement at Oridge is thought to have been bounded on its east side by the lane between Oridge Street pumping station and the sewage works at Pitt's Mill (Goult 1995). Excavations along the west side of the lane for the Staunton rising main replacement revealed no features or finds (SMR 16947).
- 4.8.13 The study area has numerous moated sites and fishponds. The most typical form of moated homestead is a rectangular platform surrounded by a single, water-filled moat five metres or more wide. It is unlikely that moats were built for defensive reasons. They were probably constructed as fashionable symbols of social prestige, although they also offered drainage for house sites, a good source of water for fish rearing and for fire fighting purposes, a source of clay, and a means of security against animals.

- 4.8.14 The moated manor house of Corse stood close to the church and was later known as Corse Farm or Corse Court. Corse was originally a royal demesne and was also known as Witcombe Gate Manor. The first reference to a house at The Boyce relates to a William Bridges who lived "at the Boyse" in the 1530s (Gethyn-Jones 1952). Areas of water immediately to the north and north west of the present house are believed to be remains of a moat. Further north there are earthworks of boundaries, ponds and enclosures which may be Medieval in origin (MON 1326928) as well as traces of ridge and furrow (MON 1326931). Aerial photographs have also revealed part of a settlement and two fishponds associated with the present site at Gamage Manor (SMR 13195).
- 4.8.15 Fishponds are one of the most numerous classes of medieval monument in England, and it is estimated that in excess of two thousand examples have been recorded to date. They are concentrated in mid and southern England. The tradition of constructing and using fishponds in England appears to have begun during the medieval period, with the impetus coming from the monastic institutions. The 12th century was probably the high-point of fish farming in England. After the Dissolution the practice declined, although in some areas it was still taken seriously in the 17th century. The later fishponds are thought to have been more sophisticated in terms of the complexity of their water management systems and the number of ponds they comprised.
- 4.8.16 The Manor of Dymock belonged to the king until 1141, when it was granted to Milo, Earl of Hereford. When, two years later, Milo was killed at Flaxley, his son Roger founded a Cistercian abbey there. Dymock therefore belonged to Flaxley Abbey until it reverted to the Crown in 1246. Abbey records mention "*de Monasterio de Dimmoc*". It has been suggested that this refers to a minster church at Dymock serving an area greater than the present parish (Gethyn-Jones 1952).
- 4.8.17 The Manor of Gamage was originally part of the Manor of Dymock. It was also known as Dymock Parva or the Manor of Mune. At some time after 1287 Boyce Manor split from Dymock, but the manors were reunited in 1680 under the ownership of Edward Pye.
- 4.8.18 The Benedictines of Gloucester had been granted the Manor of Hartpury in about 1022 and after the Norman Conquest were responsible for the church. By the end of the 16th century, they had established a mansion, known as Abbot's Court, or Place, near St Mary's Church as a country residence for the Abbots of Gloucester.
- 4.8.19 The churches of St. Mary in Dymock and St. James in Staunton date from the 11th century, though the latter may be even older, as in the 1920s an ancient yew, said to be the largest in Worcestershire, stood close to the tower (Herbert & Jurica 1998).
- 4.8.20 In Corse, the church of St. Margaret was founded by 1290. The present building dates largely from the late 14th century but has a 12th century font. It has been suggested that the church owes its foundation to the inhabitants of Corse Court as it lies close by (Eltrington 1968). The parish church of Pauntley dates from the twelfth century.

- 4.8.21 There is thought to have been a church or chapel of ease in Tirley c.1220 and the present church of St. Michael retains its 14th century plan and tower. Another chapel is commemorated in the name *Chapel Farm* north east of Pauntley Court (MON 113367). South of the corridor, the late 16th century Stone End House (SMR 6766) is traditionally believed to occupy the site of a monastery belonging to Little Malvern (Goult 1995).
- 4.8.22 Sheep farming became the basis of the later medieval economy and the area prospered, the population grew and the churches were enlarged. Wool exports peaked in the mid fourteenth century. The Ryeland breed of sheep originated in Dymock parish and as late as 1608 there were weavers in Tirley and Dymock. Sheep grazed the unenclosed common on Corse Lawn and in 1707 there was a building called *Sheephouse* near Tirley Court (Elrington 1968).
- 4.8.23 Exports of wool fell as cloth was increasingly manufactured in England. About half the production was broad cloth made in the West Country mills. This was a heavier fabric than the worsteds of East Anglia and required fulling. The study area was well supplied with running water and a source of fuller's earth lay a few miles away in the Cotswolds.
- 4.8.24 It is thought that wool was processed locally since corn-ginding alone could not account for the proliferation of mills along the Leadon and its tributaries (Gethyn-Jones 1952).
- 4.8.25 Staunton and Dymock were once flourishing market towns. A stone cross removed from Hethelpit Cross a mile west of Staunton church is thought to have marked the site of a market begun in 1347 (Herbert & Jurica 1998). By the 17th century, however, all traces of Staunton's former prosperity had disappeared. Similarly in Dymock, many of the houses were ruined and deserted by the mid 17th century. The villages of Dymock and Oridge have shrunk since the Middle Ages and traces of the ridge and furrow of the open fields around Oridge are still visible from the air (SMR 5715). Three common and open fields in Corse parish were recorded in 1584: *Haw field*, to the north of Oridge, *Stone Redding* to the south west and *Pease Croft* south east of Corse church. *Old Field* (in the Old Field Top area) was also mentioned in 1584. It appears to have been a former open field that had already been enclosed.
- 4.8.26 The Black Death spread from the south coast in 1348-9. It may have been responsible for the depopulation of settlements like Dymock, Staunton and Oridge Street. It certainly reduced the numbers of clergy in the county. Later in the 14th century the bishop of Hereford found the Forest of Dean poorly served. At Pauntley the parson was non-resident and the church in disrepair. The roof of Dymock's church leaked so badly that the priest could not celebrate Mass when it rained (Smith & Ralph 1972).
- 4.8.27 At Oridge Street there is a 15th century cruck-framed building thought to have been partly rebuilt in the 17th and 18th centuries (SMR 12991).
- 4.8.28 The chief manor house of Tirley lies about a mile south east of the pipeline route at Tirley Court. There was a house on the site by the mid 14th century. The manor was known as Apperley's Place during the 14th and 15th centuries and then as Corse



Court until c.1542 (Elrington 1968). The manor had a large demesne farm in the 15th century.

- 4.8.29 It is uncertain whether the tenement, "Snygges Place", mentioned in 1493 lay at Snig's End, for it was said to be in Staunton (Elrington 1968).
- 4.8.30 As towns became centres of trade, a network of roads developed to serve them. The high road from Wickridge to Oridge was recorded c.1242 and the high road through the middle of Oridge c.1300. The latter ran across Corse Chase, but it is not clear whether the Gloucester to Ledbury and the Gloucester to Upton-upon-Severn roads skirted or traversed the chase (Elrington 1968). A bridge in the port street at Corse was recorded in 1378 (SMR 5314). It is thought to have been on the parish boundary with Staunton and therefore may have crossed the Glynch Brook west of Oridge Street. The bridge is thought to have been situated on the road running near the west boundary of the parish. If so, this road would have been the main route to Gloucester, rather than a route across Corse Lawn. Post Medieval maps show a road from Corse Lawn running through Tirley parish to the Severn crossing at the Haw. The passage of the Severn at this point was recorded as early as 1248.
- 4.8.31 There was a windmill in Tirley in 1287 and a millward in 1358 (Elrington 1968). At Redmarley a mill is mentioned in the Domesday survey. This may have been Pauntley Mill (SMR 7363) as in 1359 a mill known as *Pauntleys* belonged to the lord of Redmarley (Herbert & Jurica 1998).
- 4.8.32 The late twelfth century Flaxley cartulary mentions *Bachinesfeld* (SMR6808). This is thought to refer to the site of a beacon in Dymock parish.
- 4.8.33 There are records of a deer park (MON 113402) in Redmarley by 1457. It was still in use during the reign of Henry VIII (Herbert & Jurica 1998).

#### 4.9 Post-Medieval (c.1540 - 1900 AD)

- 4.9.1 Cider-making was an important part of the local economy for the parishes along the pipeline route. Hattपुरy was famous for its production of cider and perry and for a variety of perry pear, the *Hattपुरy Green*. By the 18th century, fruit growing was a major occupation in the Dymock area, which continued well into the 20th century. Cider apples were one of the principal crops and old cider-making equipment is recorded at The Homestead (SMR 7265) and Waldron Court (SMR 7268) in Poolhill. By 1678 several sections of open-field arable in Tirley parish had been planted with fruit trees. The tithe list for Corse of 1705 shows cider and perry were generating more income than corn and hay. Hops also were grown for a period in the 18th century. In Victorian times there were many orchards in Corse but most had been abandoned or grubbed out by the mid 20th century (Elrington 1968). The decline of the cider and perry orchards in Staunton appears to have begun even earlier, for although they were producing large quantities in the late 18th century, the trees were said to be decaying and few new plantations were made (Elrington 1968).
- 4.9.2 The predominant building material in the early Post Medieval period appears to have been timber, though most of the timber buildings have stone or brick plinths. A

timber-framed, thatched cottage (SMR13007) built in the bailey of Castle Tump dates from the 17th century. Gamage Hall dates from the same period and is also timber-framed (SMR13010). Evere's Farmhouse, once known as Heart's Farm (Elrington 1968), is thought to be timber-framed. It dates from the 16th century (SMR12191) though the nearby moat suggests there was an earlier house in the vicinity.

- 4.9.3 The original building at Boyce Court was rebuilt late in the 16th century as a hunting lodge for the Earl of Essex. The earliest part of the present house dates from the beginning of the 17th century and is thought to have been built by craftsmen from Warwick and Worcester. It was re-fronted and partly rebuilt in the late 17th century and one wing was demolished by General Drummond, who acquired the house in 1835. A century later all but one room of the 17th century building was pulled down.
- 4.9.4 Another country house, Pauntley Court (SMR12025) was built c.1600 on the site of an earlier building. The first house was the home of the Whittington family and the birthplace of its most illustrious member, Richard, who became Lord Mayor of London in the late 14th century. The present building was originally a courtyard house, but it is thought that one wing was moved in the 18th or 19th century to form the stable block (SMR 12027). The house and stables are timber framed, but a nearby 17th century dovecote (SMR 12026), Pauntley Mill, and the church of St. John the Evangelist (LB 3/199) are all stone buildings. There are several important 18th and early 19th century monuments in Pauntley churchyard. These commemorate local families - the Halls (LB 3/200 and LB 3/201), the Pauncefoots (LB 3/202) and the Bayleys (LB 3/203).
- 4.9.5 Many place names in the area have survived from the Medieval period, but several commemorate later inhabitants. Normans Land Farm refers to a surname of 1830 and Collinpark Wood, recorded as *Collin Parke* in 1620, recalls a local surname. Another family name is commemorated in Baylis's Farm. Old Hayles or Shailes Farm, is named after the *Shail* family whose name is derived from *shaile* (scarecrow) or *schayle* (to stumble). The name "Old Shayles" was first recorded in 1576 (Gethyn-Jones 1952).
- 4.9.6 The routes of the Hereford to Gloucester Canal (SMR 5303) and the Gloucester to Ledbury Railway (SMR 5893) coincide for much of their length and can be seen as earthworks at the west end of the study area running south through Dymock to Newent.
- 4.9.7 The Hereford and Gloucester Canal Navigation Company was formed in 1790 by a partnership of local businessmen, which included Lord Moggeridge of Dymock who lived at Boyce Court on the route of the canal. Work on Oxenhall Tunnel began in 1793. The tunnel has now partly collapsed but the portals between Holders Farm near Oxenhall and Boyce Court, c.2 km further north, remain in fairly good condition. The construction of a further two tunnels led to delays, and the section of the canal to Newent was not completed until 1845, by which time the railways had made the canals largely redundant. The canal was finally closed in 1881.

- 4.9.8 An open stretch of canal, c. 500m long, still exists between the north portal of Oxenhall Tunnel and Boyce Court, where spoil heaps from the construction of the tunnel can still be seen. On aerial photographs of 1946, the section from Boyce Court to Dymock shows as a shallow earthwork lined with trees. Only a discontinuous line of sparse trees remains of this section today. It is crossed by the proposed pipeline.
- 4.9.9 The Great Western Railway Company began work on the Dymock to Newent section of the Gloucester to Ledbury Railway in 1883. The whole line was opened in 1885. This used the bed of the canal for the most of the route. By the late 19th century the Dymock section was reduced from double to single track with local services only. Attempts to revive the route in the 1930s by adding extra halts were largely unsuccessful. The line was closed to passengers in 1959 and to freight in 1964. Dymock station was demolished but the engine shed survives as a chapel, along with sidings and a bridge. The dismantled railway shows as earthworks south of Dymock which the route of the proposed pipeline crosses.
- 4.9.10 A railway linking Worcester to the Forest of Dean and Monmouth was begun c. 1860 but never completed (SMR 9957). It is traceable as earthworks and crop marks to the south of the pipeline, particularly in Collinpark Wood. The earthwork traces of the workers' temporary settlements (SMR 5312) have been mistaken for Pauntley DMV.
- 4.9.11 A Chartist settlement was established by Fergus O'Connor at Snig's End in the late 1840s. The site was bought by the Chartist Cooperation Land Society which later became the National Land Company. Estates at O'Connorville and Charterville had previously been established in Hertfordshire and Oxfordshire. O'Connor had been frustrated with attempts to achieve social progress through parliamentary reform. He reasoned that reform could be achieved through enfranchising the urban poor by turning them into freeholders. Raising funds from small subscriptions from supporters throughout the country, O'Connor bought up farmland and subdivided it into plots of two to four acres, each with a cottage. These dwellings were well made and were designed as a models of improvement. A lottery was held and the smallholdings were distributed amongst the winning subscribers. By 1848 a school and 85 cottages had been built. In 1849 O'Connor attempted to raise capital by demanding rent. The residents refused as this would reduce them from freeholders to tenants. However, The National Land Company was dissolved by Act of Parliament in 1851, and sixteen remaining occupants became tenants of Chancery. The surviving single-storey cottages and the school (now the Prince of Wales public house) are listed (SMR5878).
- 4.9.12 Two water mills are mentioned in Staunton parish in the 17th century. These were probably Staunton Mill and Pitt's Mill (SMR 5882) on the Glynch Brook. Both continued to grind corn until the 1920s. There is also a record of a mill at Corse Lawn in 1790, but its site is uncertain (Elrington 1968). Blackford, Bury and Flaxeorde Mills also lay beside the Glynch Brook in the 15th and 16th centuries, whilst *Thurbache Mill* is thought to be the 16th century name of Durbridge Mill on the Leadon. Pauntley Mill (SMR 7363) was powered by a leat from the River Leadon. The present mill building and adjacent barn were built in the 18th century. The mill has a crow-stepped gable and was designed as an eyecatcher for Pauntley Court. Place name evidence suggests that there was once a windmill near Whittingtree (SMR 9543).

- 4.9.13 Although none of the great Civil War battles was fought in Gloucestershire, the Royalist attacks on Bristol and Gloucester in 1643 have been interpreted as the turning point of the conflict (Smith & Ralph 1972). Royalist troops were garrisoned at Dymock in 1643 and a battle took place in the fields outside Redmarley in 1644. Between two and three thousand troops were engaged, and the Royalist leader, major General Mynn was killed (Herbert & Jurica 1998).
- 4.9.14 Common on Corse Lawn was held by residents of several parishes. Six hundred acres of furze and heath, believed to have been part of Corse Lawn, were conveyed with Tirley manor in 1632. In 1628 there were still many deer in Corse Chase and attempts were made to preserve the cover in the 1630s. There was great destruction of the woods in the years prior to 1635 and by 1779 all the trees had been cleared from Corse Lawn. Until enclosure in 1798, the part of Corse Lawn that lay in Tirley was rough grazing land. In Corse parish the encroachments on Corse Lawn were said to yield "vast crops" of grain. The 1790s enclosures made small allotments to replace common belonging to cottages with apparently no land, whilst a broad strip of land on the west side of Corse parish was enclosed out of the Lawn (Elrington 1968). The straight roads and field boundaries in the Lawn are typical of late 18th century common enclosures. The late 18th century enclosures of Corse Lawn were mainly arable and orchard until the end of the 19th century, when many were turned into pasture.
- 4.9.15 By the late 18th century settlement had developed along the north and western fringes of Corse Lawn, with buildings at Stone End House, Oldfield Top, Oridge Street and Snig's End. Many commoners lived in small houses built by encroachment. Enclosure of the Lawn resulted in new farmhouses being built in its centre and in the gradual abandonment of some small farmhouses on its edge. Scattered cottages on the old enclosures within the Lawn were left to decay (Elrington 1968).
- 4.9.16 The main roads over Corse Lawn from Gloucester to Upton upon Severn and Ledbury were turnpiked in 1747. The road connecting them and forming the third side of a triangle was turnpiked from 1764 until 1871 and became the main route from Ledbury to the Haw Bridge. The other roads were disturnpiked in 1879 (Elrington 1968). The milestone south of the Straight Lane/Worcester Road junction is believed to date from the late 18th century (SMR 12998).

#### **4.10 Modern (c.1900 AD to present)**

- 4.10.1 Apart from the construction of the M50 motorway in 1969, there has been little modern development within the study area. Newent council built a small estate at Snig's End in 1961 and several bungalows were built in the area c.1960.
- 4.10.2 Contrary to the national trend, Gloucestershire's small fruit production rose in the second half of the 20th century. There was a marked increase in black-currant growing in the Newent and Dymock areas after the second world war, encouraged by the soils and climate, as well as the introduction of mechanised picking. Fruit trees have long contributed to the picturesque quality of the area.

4.10.3 In the Edwardian period, the beauty of the countryside was celebrated by number of local poets, including Edward Thomas, Rupert Brooke and Robert Frost (Gethyn-Jones 1952).

## **5 EXPLANATION OF GAZETTEER**

- 5.1 The information gathered from the assessment work is summarised for each constraint map (*Appendix D*) as a Gazetteer of Archaeological Sites in Appendix C. This lists all sites of archaeological interest located within, and immediately outside the one kilometre wide study area.
- 5.2 Information retrieved from public data sources is listed by SAM, SMR, LB and MON number in the Gazetteer. Previously unrecorded sites found from aerial photographs or from cartographic sources during the course of this desk based assessment are referred to as DBA sites, identified by a double letter suffix.

## 6 CRITERIA FOR GRADING SITES

6.1 Sites identified during this study were graded on two criteria:

- Significance
- Impact

### 6.2 Significance

The sites have been placed into one of five categories, A to E, as shown in the table below. Although based on all the collated information, the inclusion of a site in a particular category often involved a degree of subjective judgement. The categories should not be taken as a statement of fact regarding the importance or value of a particular site. Categories are not fixed and there is every possibility that the classification of a site may change as a result of findings made during later stages of investigation.

Grade	Description	Examples	Mitigation
A	Legally protected site	Scheduled Ancient Monuments and listed buildings	To be avoided
B	Nationally important site, currently not legally protected	Burial sites, historic buildings, settlements e.g.. villas, deserted Medieval villages	To be avoided
C	Regionally important site	Possible Settlements, Field Systems, finds scatters, former buildings, Roman roads & other ancient track ways	Avoidance recommended
D	Locally important site	Ridge and furrow, unidentified features from aerial photographs	Avoidance not recommended at this stage
E	Other site: single find spot, modern feature	Single find spots of various dates, modern Field Boundaries, drains & ponds	Avoidance unlikely to be recommended

Table 1: Site category definitions

### 6.3 Impact

6.3.1 The potential impact of the proposed pipeline on the archaeological resource will be:

<i>Direct (D)</i>	- physical damage including compaction and/or partial or total removal - severance of archaeological features, in particular linear features
<i>Indirect (I)</i>	- visual intrusion, affecting the aesthetic setting of sites or landscape - disturbances caused by vibration, dewatering, changes in hydrology etc.
<i>Uncertain</i>	- where the physical extent, or survival of a site, on the course of the pipeline, is uncertain
<i>None (-)</i>	- no impact due to distance from the proposed pipeline's working width, and/or construction technique (e.g. auger boring) removes the impact

Table 2: Impact definitions

Much of the impact will occur during the construction phase of the proposed pipeline: topsoil stripping, soil storage, movement of heavy machinery, excavation of the pipe

trench and easement reinstatement can all have a permanent, damaging effect on the archaeological resource.

6.3.2 The magnitude of direct and indirect impact will vary:

<i>Severe (sev):</i>	entire or almost entire destruction of deposits
<i>Major (maj):</i>	a high ratio of damage or destruction to deposits
<i>Minor (min):</i>	a low ratio of damage to surviving archaeological deposits
<i>Uncertain (Unc):</i>	e.g. because the quality and extent of deposits are unknown, or because construction techniques have not yet been decided.

**Table 3: Impact levels**

6.3.3 Factors affecting the assessed magnitude of impact include:

- the proportion of the site or feature affected.
- the integrity of the site or feature; impacts may be reduced if there is pre-existing damage or disturbance of a site.
- the nature, potential and heritage value of a site or feature



## 7 RELIABILITY AND POTENTIAL LIMITATIONS OF DATA

7.1 The limitations of an impact assessment of the proposed pipeline include:

- the lack of clarity surrounding the extent of some sites. This makes it difficult to provide a precise assessment of potential impact.
- the possibility that *unknown* sites will be encountered along the route.

The development of mitigation strategies should take these points into consideration.

7.2 Information held by public data sources can normally be assumed to be reliable, but uncertainty can arise in a number of ways:

- The SMR can be limited because it depends on random opportunities for research, fieldwork and discovery.
- Documentary sources are rare before the Medieval period, and as documents were not usually compiled for archaeological purposes, are inherently biased.
- Primary sources, especially older records, often fail to accurately locate sites and are obviously very subjective in any interpretation.
- There may be a lack of dating evidence for sites.
- The usefulness of aerial photographs depends upon geology, land use and weather conditions when the photographs were taken. Some types of geology and remains do not produce crop, soil or vegetation marks. Aerial photographs necessarily involve some subjective interpretation of the nature of sites.

The gazetteer (*Appendix C*) provides an indication of the reliability of each source of information.

## 8 ASSESSMENT OF IMPACT AND RECOMMENDATIONS

### 8.1 General Impact and Recommendations

8.1.1 This desk based assessment is a summary of the current level of archaeological knowledge where the archaeology happens to coincide with the proposed pipeline corridor. Generally, areas which are apparently blank have never been archaeologically investigated, and therefore have an undetermined archaeological potential.

8.1.2 The most cost-effective means of managing archaeological risks is to implement a staged approach to investigation and mitigation, as laid out in Appendix A. This assessment report represents Stage 2. The next recommended stage of work is field survey (Stage 3):

- field reconnaissance survey of new areas encountered due to route changes
- combined electro-magnetic survey and hand auger survey (*on the River Leadon floodplain*)
- field walking survey (*arable areas*)
- geophysical survey (*entire route, except areas of deep alluvium on River Leadon floodplain*)

8.1.3 In addition to the proposed pipeline working width, investigation should also cover the sites used for associated engineering works, such as pipe storage areas, site compounds, road crossing easements and block valve sites, as these areas become known.

#### 8.1.4 Field reconnaissance survey of new areas encountered due to route changes

This is a visual inspection of the proposed pipeline route which should fulfil two main aims:

- to locate and characterise archaeology represented by above ground remains (earthworks).
- to record and correlate the nature and condition of existing field boundaries crossed by the route with the results of a hedgerow survey, in order to determine whether existing boundaries are of potential antiquity (see 8.3.3 *Hedgerow Regulations*).

**Recommendations:** Conduct a walkover of all new areas which were not encountered by the proposed pipeline route at the desk based stage of assessment.

#### 8.1.5 Fieldwalking survey

The distribution of finds found by fieldwalking can indicate areas of archaeological activity, which are not represented by above ground remains.

**Recommendations:** A programme of structured fieldwalking should take place across all available arable land, where conditions are suitable, to recover archaeological

artefacts. A minimum of five transects at 10m separation based upon the centreline of the proposed pipeline should be walked.

Field walking and geophysical survey (see below) are complementary evaluative techniques which are most effective when used concurrently.

#### 8.1.6 **Recorded magnetometer survey and magnetic susceptibility survey** *(all areas except deep alluvium on the River Leadon Floodplain)*

Geophysical survey methods are non-intrusive and can detect and precisely locate buried archaeological features. Magnetometry is the most cost-effective technique for large scale surveys.

**Recommendations:** *Recorded* magnetometer survey, supplemented by background magnetic susceptibility survey is recommended. The surveys should sample the entire length and a proportion of the width of the working width of the proposed pipeline route, except the 300m section of the route which crosses the floodplain of the River Leadon.

Only a *recorded* magnetometer survey can provide direct and objective evidence of the presence and character of individual archaeological features.

*Unrecorded* magnetometer scanning is not recommended because it requires spontaneous, subjective interpretation as the unrecorded scanning survey progresses. This method does not therefore provide a secure basis for eliminating areas that produce negative results from further consideration

#### 8.1.7 **Electro-magnetic (EM) survey** *(River Leadon Floodplain)*

The geophysical survey techniques which would normally be recommended (magnetometry and magnetic susceptibility), can be unreliable for provenancing sites in areas of deep alluvium. A more reliable approach is *predictive modelling*, the detection of areas which are likely to have been favoured for archaeological activity (i.e.):

- *raised gravel/bedrock islands*: these high areas beneath the present land surface would have been favoured for past habitation, and therefore have high archaeological potential.
- *alongside former river channels*: palaeo-channels are potentially of archaeological significance as there tends to be a pattern of prehistoric exploitation in their vicinity.

**Impact:** The proposed pipeline route crosses the River Leadon. Deep alluvium in the river's 200-300m wide floodplain may conceal archaeological sites, and may contain preserved organic material of palaeo-environmental importance. The pipeline also crosses the Glynch Brook and at least three tributary streams, but these areas are unlikely to have extensive deep alluvium.

**Recommendations:** An electro-magnetic (EM) survey along five transects could produce a three-dimensional geomorphological sub-surface map of the River Leadon Floodplain, where it is crossed by the proposed pipeline. The map would be used to pinpoint raised gravel/bedrock islands and former river channels crossed by the pipeline (i.e. the areas where archaeology is most likely to be found). EM profiles will require calibration using measurements obtained by borehole and/or hand auger survey (see 8.1.8).

Ideally, the areas flagged up by EM survey would be targeted by trench evaluation, and/or anticipated for investigation/recording during a construction watching brief.

Due to the difficulties in detecting archaeology, in areas of deep alluvium, in advance of construction, there should be an emphasis on dealing with archaeology during the course of a watching brief. Adequate resources and strategies should be put in place for dealing with archaeology during construction.

#### 8.1.8 Auger survey (*River Leadon Floodplain*)

Geotechnical borehole survey supplemented by hand auger survey could:

- generate stratigraphic profiles and establish the depth of alluvium;
- look for 'islands' of solid geology which are elevated in comparison with their contemporary landscape;
- look for former river channels;
- look for evidence of buried land surfaces;
- calibrate an EM survey, and
- assess the viability of using targeted magnetometer survey on the River Leadon Floodplain.

**Recommendations:** Borehole data taken for non archaeological reasons should be reviewed, but should not be a substitute for archaeological investigations. Ideally, an environmental archaeologist would consult with the geotechnical team in order to develop a strategy which would enable the opportunistic and immediate examination of the geotechnical team's soil cores, in conjunction with a *hand auger survey* tailored to meet archaeological objectives. The location and frequency of the hand augers should be determined by the results of the EM survey, but generally should be taken at regular intervals, no greater than 50m separation, along the centreline of the proposed route.

#### 8.1.9 Evaluation

Significant and unavoidable archaeological constraints identified by the desk-based assessment or field surveys, will require archaeological *evaluation* in advance of construction. Evaluation might involve machine-excavated trenches, hand-dug test-pits and/or hand auguring of specific sites within the proposed pipeline's working width. The objectives are to confirm the presence or absence of archaeological deposits, to determine their character, extent, date and state of preservation, and to produce a report on the findings.

### 8.1.10 Future Mitigation Measures

Later stages of archaeological investigation and mitigation may be recommended in response to the results of the Stage 3 field surveys:

- **Avoidance**

Every effort should be made to avoid an impact upon significant archaeological constraints, either by minor alterations to the proposed route, or by engineering methods, such as boring.

- **Minimisation of Impact**

The impact upon unavoidable archaeological sites should be minimised by reduction of the working width to the minimum practical level, and/or the laying of geotextile matting or bog mats, and/or careful reinstatement procedures (e.g. avoidance of archaeological sites by subsoil ripping).

- **Excavation** (Appendix A - Stage 5)

It may not be possible or desirable to avoid significant archaeological sites identified by an archaeological evaluation. *Excavation* of any such sites should take place in advance of construction. Excavation would involve machine-stripping of limited, open areas within the working width, followed by archaeological investigation. The objectives are to obtain a full record of the archaeological remains prior to construction, and to produce a report on the findings.

### 8.1.11 Watching Brief, and Post-Construction Archive, Report and Publication (Appendix A - Stages 6, and 7)

A permanent-presence watching brief will be required during all ground disturbing activities of the construction phase of the project, to record unexpected discoveries, and known sites which did not merit investigation in advance of construction. The main phases of monitoring for the pipeline will be topsoil stripping, trench excavation and the opportunistic observation of the pre-construction drainage. The objectives are to obtain a thorough record of any archaeological remains found during construction, and to produce a report on the findings. Contingencies should allow for salvage excavation of significant, unexpected archaeological sites found during construction.

### 8.1.12 County Monitoring

The Gloucestershire County Archaeologist should be invited to monitor the implementation of the archaeological project designs, and should be informed of any significant archaeological sites found at each stage. Provision should be made for the Gloucestershire County Archaeologist to monitor fieldwork in progress, and also to visit the construction site.

## 8.2 Landscape Potential - Impacts and Recommendations

9.2.1 The majority of the known sites within the study corridor date to the medieval and post medieval periods. The sites include shrunken or deserted settlement sites, former and extant buildings, industrial sites, and evidence of agriculture. Therefore, potential

for further medieval and post medieval archaeological remains within the study corridor is probably high.

A general dearth of earlier remains suggests that potential for these within the corridor is low. However, environmental conditions in this area should not have precluded earlier settlement and/or utilisation. Two cropmark areas (SMR 04418.1/2, and enclosure SMR 04417.1) of uncertain date, may represent an area of prehistoric potential. The cropmarks lie approximately 300m apart, between Brand Green and Poultry Farm (NGR 373 228).

**Impact: Uncertain;** While it is recommended that the known sites are avoided, there is a moderate risk of encountering further, as yet unknown, archaeology.

**Recommendations:** Field investigations (reconnaissance, fieldwalking, geophysical survey) of the preferred route should take place well before the final route is fixed, so that appropriate mitigation measures, based on the results of these surveys, can be put in place.

8.2.2 Alluvium within former water channels may contain preserved organic material of palaeo-environmental importance.

**Recommendations:** The presence of palaeo-environmentally important deposits on the course of the pipeline should be ascertained by a hand auger survey in advance of construction (see 8.1.8). This will enable appropriate mitigation measures to be put in place for their recording, and if appropriate, for their sampling and analysis. The need for such work would be determined by the importance of any deposits in their own right, or due to their raised value following the discovery of associated archaeological deposits.

### 8.3 Important Hedgerows

Hedgerows which risk damage or removal are required, by the Hedgerow Regulations 1997 (Section 97 of the Environment Act 1995), to be assessed according to a number of historical and ecological criteria.

Under the regulations, a hedgerow is regarded as important on archaeological or historical grounds if it:

- marks a pre-1845 parish or township boundary;
- incorporates an archaeological feature;
- is part of, or associated with, an archaeological site;
- marks the boundary of, or is associated with, a pre-1600 estate or manor, or
- forms an integral part of a pre-Parliamentary enclosure field system (DOE, 1997).

An archaeological site is defined as a Scheduled Ancient Monument (SAM) or a site recorded in a County Sites and Monuments Record (SMR).

The Hedgerow Act defines a pre-Parliamentary enclosure field system as any field boundary predating the *General Enclosure Act of 1845*.

**Impact:** Forty-one boundaries, crossed by the proposed route, are historic according to the above criteria (Appendix E, Maps 1-2). Thirty-seven of these historic

boundaries are represented by hedgerows and are therefore protected by the hedgerow regulations.

**Recommendations:** The construction programme should aim to minimise the disturbance of historic boundaries, by reducing the working width for those which are unavoidable, and by sensitive reinstatement. Where possible, a cross section of any banks, ditches, archaeological layers and deposits should be recorded during the course of an archaeological watching brief. Provision should be made for the sampling of archaeologically significant layers sealed beneath banks.

## **8.4 Other Field Boundaries**

### **8.4.1 Existing field boundaries**

A number of existing boundaries correspond to the positions of field boundaries marked on maps pre-dating 1845, and can therefore be considered 'historic'. However, they are not marked by hedgerows, and therefore do not fall under the protection of the hedgerow regulations.

**Impact:** The proposed pipeline route crosses four existing 'historic' boundaries (Plots 45/46, 53/54, 55/56, and 58/59), which are not marked by hedgerows. Each boundary is represented by one of the following: a track, a post and wire fence, a ditch, and a small stream. A relatively small cross section of each boundary will be affected.

**Recommendations:** Cross sections of the boundaries could be recorded during the course of a watching brief. Archaeologically significant layers sealed beneath banks may require sampling.

### **8.4.2 Former Field Boundaries**

The possibility that some former field boundaries represent ancient land boundaries means they should be regarded as potentially important historic landscape features. They are significant because they give an indication of past land division and land use. Approximately two hundred and forty-seven former field boundaries have been recorded within the study corridor. The boundaries were seen on tithe maps, early OS maps, aerial photographs, and were also recorded by a field reconnaissance survey. The boundaries are recorded as solid blue lines on the constraint maps.

**Impact: Direct, minor;** Fifty-four former field boundaries are crossed by the proposed pipeline route. Of six former boundaries recorded by the field reconnaissance survey (discussed in section 8.5.5, below), four corresponded with ones found by desk based research. Some of the former field boundaries may be ancient and should be regarded as potentially important historic landscape features.

**Recommendations:** It would be appropriate to record a section through any ancient bank and ditch remains during a construction watching brief.

## 8.5 Site-specific Impacts and Recommendations (see Appendices C and D)

In an ideal situation, all known archaeological constraints would be avoided. However, this is impractical and in the case of linear landscape features such as roads and trackways, impossible. For this reason, the known sites have been graded A-E, and the level of impact assessed for each site in order to provide an indication as to the significance of the sites within the study corridor (see Section 6). This information is summarised below in Table 2:

Grade	Description	Total no. sites recorded	Total no. sites within study corridor	Total no. sites indirectly and possibly affected by the pipeline	Total no. sites crossed by proposed working width
A	Legally protected site	23	20	0	0
B	Nationally important site, currently not legally protected	5	3	0	0
C	Regionally important site	30	27	3	2
D	Locally important site	48	45	2	13
E	Other site	61	57	3	18
<b>TOTALS</b>		167	152	8	33

Table 4: Total number of sites recorded, those within study corridor, those indirectly and possibly affected by pipeline construction, and those crossed by proposed pipeline working width (\* excludes field boundaries)

The following sections (8.4.1 to 8.4.5) deal in category order with sites that are directly or indirectly affected by the pipeline.

### 8.5.1 Category A Sites

Twenty legally protected sites are located within the study corridor. None of these is affected by the proposed pipeline (Table 4).

### 8.5.2 Category B Sites

Three regionally or nationally important sites (not legally protected) are located within the study corridor. One may be indirectly affected by the proposed pipeline (Tables 4 & 5).

#### SMR 0571.1/2 (Sheet 2, NGR 378700 227800)

Gloucestershire SMR showed the extent of the shrunken medieval village of Oridge as a roughly rectangular block extending northwards, away from a minor road. Further buildings (DBA:AH) were observed on the Corse tithe map. These buildings, most of which are no longer extant, were located along the north side of the minor road, to the east of the area outlined by the SMR. A field system (DBA:AM), probably associated with the medieval village of Oridge, was located to the north of DBA:AH. Medieval village sites tend to have been peripatetic, and it is possible that the centre of Oridge has changed several times in the past. No evidence for settlement remains was



discovered during the field reconnaissance survey of the proposed route, although a former field boundary was noted (see 8.4.5).

**Impact: Indirect, uncertain;** The shrunken medieval village of Oridge is located less than 80m south of the proposed pipeline route. Further, as yet unknown remains of the village could extend into the area crossed by the proposed pipeline. These remains could include settlement remains, industrial remains and particularly field systems.

**Recommendations:** The fields to the north of the settlement are arable, and therefore will be suitable for fieldwalking survey. Fieldwalking and geophysical surveys (see appendix A) should aim to locate any remains associated with the village, which are crossed by the proposed route. Further mitigation measures, such as avoidance or trial trenching, may be recommended on the basis of the field survey results.

Reference	Description	Category	Sheet	National Grid Reference	Impact
SMR 0571.1/2	deserted medieval village	B	2	378700 227800	I-unc

Table 5: Summary of impact rating for directly and indirectly affected Category B sites

### 8.5.3 Category C Sites

Twenty-seven category C sites are located within the study corridor, two of which are directly affected by the proposed pipeline. The proposed pipeline has an uncertain impact on three other sites (Tables 4 & 6).

#### SMR 04418.1/2 (Sheet 4, NGR 373100 228100)

A curving linear cropmark, extending northwards from Newbarn Farm, was visible on aerial photographs taken by the RAF in 1946 (106GUK1852 4122-3). The cropmark may represent a ditched feature. Further marks indicated an extension, giving the impression of a sub-circular enclosure, parts of which have been re-used by later boundaries. However the first cropmark may simply be a former field boundary or track, as the latter cropmarks are dubious.

**Impact: Uncertain;** The proposed pipeline crosses the northern part of the field in which the cropmarks are located. The true nature and extent of the marks has not yet been established. No earthworks or cropmarks were noted during the field reconnaissance survey. If all of the cropmarks are genuine, the proposed pipeline will pass within 20m of the site. There may be further features, which did not show as cropmarks or earthworks, which extend across the path of the proposed pipeline.

**Recommendations:** The field is improved grassland, and is therefore not suitable for fieldwalking, but the geophysical surveys should aim to establish the presence or absence of further archaeological remains within the path of the proposed pipeline. Further measures such as evaluative trenching in advance of construction may be recommended on the basis of the results of the geophysical surveys.

#### SMR 05312.1-3 (Sheet 3/4, NGR 374900 229000)

Earthworks, visible on aerial photographs taken by the RAF in 1946, created a pattern of thin, rectangular land parcels to the south of St John's church, and east of Pauntley Court. The earthworks have been interpreted as either the remains of Pauntley deserted medieval village, or a temporary village for workmen employed to construct the Worcester, Dean Forest and Monmouth Railway. However, the earthworks were

not conclusively settlement related. The possible remains of a former railway (see 8.4.4) were the only earthworks observed in this area, along the proposed pipeline, during the field reconnaissance survey.

**Impact: Indirect, uncertain;** The proposed pipeline passes uphill, less than 40m to the south of the designated edge of the deserted village. It is possible that remains associated with the village extend as far as the proposed pipeline. These remains could include settlement remains, industrial remains and particularly field systems. Recent arable agriculture has probably slighted the earthworks.

**Recommendations:** Field walking and geophysical surveys (see appendix A) should aim to locate remains associated with the settlement, which are crossed by the proposed route. Field walking will be possible when crops are removed from the field in which the purported deserted village is located, however, improved grassland to either side of the site, will make fieldwalking unfeasible in these areas. Trench evaluation, or mitigation measures may be recommended on the basis of the field survey results.

#### **SMR 07677.1/2** (Sheet 5, NGR 380000 219170)

There is evidence of a Roman road, which probably headed north west from Gloucester. Roman paving was traced for 216m along Dymock's main street (c. NGR 369900 231200). However, the course of the road between Gloucester & Dymock is uncertain. The road may have avoided low, flood prone ground near the River Leadon by heading in a northerly direction, and then veering west. The road may have connected with an east to west route. The course of the road is marked in places by hedgerows with traces of the agger causing a rise between the fields on each side. Paved sections of the road, measuring about 5.7m in width, have been exposed. No evidence of the road was observed during the field reconnaissance survey.

**Impact: Direct; Minor;** A relatively small cross section of this purported road will be affected by the proposed pipeline. However there is the potential for a metalled surface (*agger*), and ditches (*fosse*) relating to the road to be encountered during topsoil stripping or trench excavation.

**Recommendations:** The geophysical surveys should aim to locate remains of the road. Fieldwalking will not be possible, as the area is improved grassland. Provision should be made for the investigation and recording of any road remains including *fosse* and *agger*. This could be accommodated during the course of a watching brief, but ideally would be recorded in advance of construction.

#### **SMR 20731.1** (Sheet 3, NGR 376420 228400)

This is possibly the site of Ragman's Castle. The site was observed on the Staunton parish tithe map. In 2000, when members of a local archaeological group made a site visit, a small tump, which could be the remains of an early castle site, was noted on the ground.

**Impact: Indirect, uncertain;** The edge of the site lies less than 100m north of the proposed pipeline centreline. Peripheral archaeological remains, associated with the site, could feasibly extend as far south as the proposed pipeline's working width, however, only springs or dew ponds and a former field boundary were noted during the course of the field reconnaissance survey.

**Recommendations:** Geophysical surveys (see appendix A) should aim to locate any remains associated with the castle, which are crossed by the proposed route. This is an

area of improved grassland where fieldwalking will not be possible. Evaluation and / or mitigation measures may be recommended on the basis of the field survey results.

**DBA:AE** (Sheet 2, NGR 377556 228220)

The site of former building, plotted from a 1903 Ordnance Survey map, lies on the edge of the proposed pipeline working width. No evidence of the building was recorded during the field reconnaissance survey.

**Impacts: Uncertain;** The site appears to be crossed by the north edge of the proposed working width, although it may lie just beyond the development area.

**Recommendations:** Fieldwalking and geophysical survey (see appendix A) of this arable field should aim to locate the remains of the building, and to establish its extent, date and purpose. Evaluation, and / or mitigation measures may be recommended on the basis of the field surveys.

Reference	Description	Category	Sheet	National Grid Reference	Impact
SMR 04418.1/2	cropmarks	C	4	373100 228100	D-unc
SMR 05312.1-3	deserted medieval village	C	3/4	374900 229000	I-unc
SMR 07677.1/2	Roman road	C	5	380000 219170	D-min
SMR 20731.1	?site of Ragman's Castle	C	3	376420 228400	I-inc
DBA: AE	site of former building	C	2	377556 228220	Unc

Table 6: Summary of impact rating for directly and indirectly affected Category C sites

#### 8.5.4 Category D Sites

Forty-five category D sites are located within the study corridor, of which thirteen are directly affected by the proposed pipeline and a further two are possibly affected (Tables 4 and 7):

**SMR 05303.1** (Sheet 5, NGR 370300 230400)

The former Hereford and Gloucester canal runs for thirty-four miles, roughly from north to south. The canal was begun in 1795, and was 34 miles long. It opened between Gloucester & Ledbury in 1798, but its completion was delayed until 1845, due the construction of three tunnels along its length. One of these was the Oxenhall Tunnel immediately to the south of the proposed study corridor. The canal was closed in 1881 when the Gloucester/ Newent railway was constructed on part of its bed.

Aerial photographs taken by the RAF (106GUK1652 5126-7), show the north extension of canal (NGR 370310 230270 to 370070 230900) visible as a gently curving double line of trees across pasture. The point at which the proposed pipeline crosses the course of the former Hereford and Gloucester canal appears to lie along the boundary between two fields. Field reconnaissance recorded the boundary as a 2m wide, 'U' shaped ditch, 1.2m deep, with a 1.5m high bank on its west side. Although not substantial, the ditch could be the partially filled in remains of the canal. However, it is possible that the remains of the canal are entirely filled in, and are actually slightly offset from the field boundary.

**Impact: Direct, minor;** The proposed pipeline should only affect a relatively small cross section of this linear landscape feature. There may also be associated infrastructure such as locks, lock houses, drawbridges and mile posts, although none of these were observed during the field reconnaissance survey.

**Recommendations:** Geophysical survey should aim to accurately locate the canal if it is actually offset from the field boundary. A cross section of the remains can be recorded during the course of a watching brief.

**SMR 05893.1** (Sheet 5, NGR 370070 230039)

The former Gloucester to Ledbury Railway connected the Hereford to Worcester railway with the South Wales line, and closely followed the course of the Hereford and Gloucester Canal (SMR 05303). The railway was largely laid over the canal bed between Newent and Gloucester. The railway which opened in 1885, was closed to passenger traffic in 1959 and to goods traffic in 1964. The railway was corroborated by observations during the field reconnaissance survey, which found it to be represented by a gravel track, c. 10m wide by 1.5m high.

**Impacts: Direct, minor;** A small cross section of the railway is affected by the proposed pipeline.

**Recommendations:** A cross section of the remains can be recorded during the course of a detailed watching brief.

**SMR 09957.1** (Sheet 3/4, NGR 374600 228100)

This deep railway cutting runs along the western edge of Collinpark Wood. The cutting was made in the 1860s for the Worcester and Dean Forest Railway, which was never completed. The railway cutting was no longer visible, but field reconnaissance found a short length of low bank along the approximate location of the railway.

**Impacts: Direct, minor;** A relatively small cross section of the cutting will be affected.

**Recommendations:** Geophysical survey should aim to accurately locate the railway cutting. A cross section of the remains can be recorded during the course of a watching brief.

**DBA:DM** (Sheet 5, NGR 369920 230360)

Ridge and furrow earthworks were plotted from aerial photographs taken in 1962 and 1971. The field reconnaissance survey did not corroborate the ridge and furrow. However, earthwork visibility was low due to the growth of oil seed rape and maize crops at the time of the survey. It is also likely that arable agriculture in this field has slighted any earthworks.

**Impact: Direct, minor;** The working width of the proposed pipeline will cross a relatively small portion of this area.

**Recommendations:** Field reconnaissance and geophysical survey, when the field is bare, should aim to establish the presence and condition of ridge and furrow remains in this field. It would be reasonable to record a cross section of any deposits relating to the ridge and furrow during the course of a construction watching brief.

**Three parish boundaries (not marked by stream courses) are crossed by the proposed pipeline:**

**DBA:BX** (Sheet 3, NGR 375860 228270)

The parish boundary between Upleadon and Pauntley is represented by a c. 2m wide by 1m deep ditch with a hedge on its east side.

**DBA:CC** (Sheet 3/4/5, NGR 373910 228620)

The parish boundary between Pauntley & Newent is crossed twice by the proposed route. At the first crossing, the boundary is represented by a small, c. 0.8m wide by 0.5m deep ditch, with a hedge on the east side. At the second crossing, the boundary is represented by a hedge.

**DBA:CP** (Sheet 5, NGR 371400 229560)

The parish boundary between Pauntley & Dymock is marked by a modern post and wire fence with a scrub and thorn hedge.

**Impact: Direct, minor;** Only a small cross section of each boundary will be crossed, and they are unavoidable.

**Recommendations:** All of the boundaries pre date 1845 and are represented by hedges. This means that they conform with at least one of the five criteria for archaeological and historical importance (The Hedgerow Regulations, 1997), which establish antiquity (see above, *Hedgerow Regulations*). Provision should be made for palaeoenvironmental sampling and assessment and radio carbon dating of deposits buried beneath banks. It would be appropriate to record a section through any extant, ancient bank and ditch remains. This could be undertaken during a construction watching brief. Any earthworks (e.g. banks and ditches) and hedges should be reinstated.

**Five potential sites are indicated by field names noted on tithe maps:**

**SMR 09543.1** (Sheet 5, NGR 370550 230360)

Field name: 'Windmill Field' near Whittingtree is the likely site of a windmill. Earlier mill buildings, outbuildings or infrastructure associated with the mill, may extend into the area crossed by the pipeline route. No evidence of this was noted during the field reconnaissance survey, although long grass provided moderate conditions for earthwork visibility.

**DBA:BY** (Sheet 3, NGR 375750 228300)

Field names: 'Great and Little Park' may refer to an area of formerly enclosed parkland, although no features indicating that landscaping had taken place were noted during the field reconnaissance survey.

**DBA:BZ** (Sheet 3/4, NGR 375260 228480)

Field name: 'Brick Field' may refer to a place where bricks were made, or where many bricks have been found, perhaps due to the demolition of a building which could have stood in the field.

**DBA:CE** (Sheet 4, NGR 372548 228799)

Field name: 'Little Berrow Field' may stem from the Old English *Beorg*, meaning 'the hill(s) or the mound(s)', and could refer to burial mounds. No earthworks or vegetation marks of such features were observed in this field of improved grassland during the field reconnaissance survey.

**DBA:CF** (Sheet 4, NGR 372510 228930)

Field name: 'Great Berrow Field' could also refer to burial mounds. No earthworks or cropmarks were noted during the field reconnaissance survey of this field. This may partly have been due to poor earthwork visibility caused by a wheat crop, as well as the slighting of earthworks by ploughing.

**Impacts: Direct, uncertain;** Although the fields are directly crossed by the proposed pipeline, the impact on the potential archaeology is uncertain because the evidence is ambiguous, and the exact location of the sites unknown.

**Recommendations:** A fieldwalking survey of the two arable fields, and geophysical survey of all five fields (see appendix A) should aim to locate extant archaeological remains within the proposed working width. Further measures, such as avoidance or trial trenching, may be recommended on the basis of the field survey results.

**DBA:AJ** (Sheet 1/2, NGR 379980 228430)

A former track, plotted from an enclosure map dating to 1798, is crossed by the proposed pipeline. No evidence of the track was discovered during the field reconnaissance survey. This may in part have been due to long grass coverage, which slightly obscured earthwork visibility.

**Impact: Direct, minor;** Only a small cross section of the track will be crossed.

**Recommendations:** Geophysical surveys should aim to locate the remains of the track. It would be appropriate to record a section through any extant remains during the course of a construction watching brief.

**DBA:DP** (Sheet 3, NGR 376450 228170)

A series of linear and rectilinear cropmarks were plotted from aerial photographs. Some of the cropmarks were oriented towards the River Leadon, indicating that they were drains. Another cropmark is interpreted as a possible former track. Overall, the cropmarks appear to be the remains of a former field system. None of these cropmarks were visible during the field reconnaissance survey, although there were possible natural dew ponds which appeared to have been adapted for use (see 8.4.5).

**Impact: Direct, minor;** Four of the linear marks are crossed by the proposed pipeline. A small cross section of each linear will be affected.

**Recommendations:** Geophysical surveys may be able to locate the linear cropmarks if they are genuine. It would be appropriate to record a section through any remains crossed during the course of a construction watching brief.

Reference	Description	Category	Sheet	National Grid Reference	Impact
SMR 05303.1	former Hereford and Worcester canal	D	5	370300 230400	Unc
SMR 05893.1	former railway marked by gravel track c. 10m wide by 1.5m high	D	5	370070 230039	D-min
SMR 09957.1	railway cutting	D	3/4	374600 228100	D-min
SMR 09543.1	field name: 'Windmill Field'	D	5	370550 230360	I-unc
DBA:AJ	former track	D	1/2	379980 228430	D-min
DBA:BX	Upleadon & Pauntley parish boundary	D	3	375860 228270	D-min

Reference	Description	Category	Sheet	National Grid Reference	Impact
DBA:BY	Field names: 'Great Park' and 'Little Park'	D	3	375750 228300	D-unc
DBA:BZ	Field names: 'Brick Field'	D	3/4	375260 228480	D-unc
DBA:CC	Pauntley & Newent parish boundary	D	3/4/5	373910 228620	D-min
DBA:CE	field name: 'Little Berrow Field'	D	4	372548 228799	D-unc
DBA:CF	field name: 'Great Berrow Field'	D	4	372510 228930	D-unc
DBA:CP	Pauntley & Dymock parish boundary	D	5	371400 229560	D-min
DBA:DJ	cropmark: linear - ?former track	D	3	375880 228270	D-min
DBA:DM	Earthworks: ridge and furrow	D	5	369920 230360	D-min
DBA:DP	cropmarks: linears and rectilinears - ?former field system including drains & track	D	3	376450 228170	D-min

Table 7: Summary of impact rating for directly affected Category D site

### 8.5.5 Category E Sites

Fifty-seven category E sites are located within the study corridor, of which eighteen are directly affected by the proposed pipeline route (Tables 4 & 8). In addition, seventy-eight existing, and fifty-two former field boundaries are crossed by the proposed route (see 9.3).

**Two parish boundaries are represented by natural stream courses:**

**DBA:AZ** (Sheet 2/3, NGR 378140 227950)

The parish boundary between Corse & Staunton is located on the Glynch Brook. The point at which it is crossed is about 5m wide and up to 2.5m deep, with hedges on either side.

**DBA:BO** (Sheet 3, NGR 376270 228250)

The parish boundary between Staunton and Upleadon is located on the River Leadon. The point at which it is crossed by the proposed pipeline measures c. 25m wide by c. 3m deep, and has a hedge on either side.

**Impact: Direct, minor;** The parish boundaries are unavoidable, and a small cross section of each will be crossed by the proposed pipeline. Rivers and streams were probably used opportunistically in order to delimit parishes, as they are existing barriers which require no human effort to construct or maintain. There is no reason for significant archaeological activity to be focused at the crossing points of this type of boundary. However, both boundaries pre date 1845 and are emphasised by hedges. This means that they conform with at least one of the five criteria for archaeological and historical importance (The Hedgerow Regulations, 1997), which establish antiquity (see above, *Hedgerow Regulations*). Former channels, on either side of the boundaries, may also contain organic deposits of palaeoenvironmental and/or archaeological significance

**Recommendations:** The boundaries should be subject to detailed monitoring during the course of a watching brief. As there is the possibility of finding deposits of palaeoenvironmental potential, provision should be made for samples to be taken for analysis.

**Seven former orchards/woods were plotted from tithe or first edition Ordnance survey maps:**

**DBA:AW** (Sheet 2, NGR 378690 228120)

**Impacts: Direct, Major;** The proposed pipeline will affect a large percentage this field.

**DBA:AV** (Sheet 1/2, NGR 379600 228250)

**DBA:BD** (Sheet 2/3, NGR 377206 228211)

**DBA:BT** (Sheet 3/4, NGR 374850 228660)

**DBA:BU** (Sheet 4, NGR 373920 228620)

**DBA:DC** (Sheet 5, NGR 370700 230430)

**DBA:DE** (Sheet 5, NGR 370410 230420)

**Impacts: Direct, Minor;** The proposed pipeline will affect a relatively small proportion of each of the above five fields crossed.

**Recommendations:** None at present

**DBA:DD** (Sheet 5, NGR 370434 230368)

A tree circle was plotted from aerial photographs taken in 1966 (OS/66066 192), and it was thought that the trees might surround a pond. However, no pond was noted during field reconnaissance, and the tree circle had also disappeared.

**Impacts: Uncertain;** The true nature and significance of the former tree circle is presently unknown. The feature lies on the very edge of the proposed pipeline working width, and at the current map scale it is not possible to determine the full impact of the proposed pipeline.

**Recommendations:** Detailed monitoring, with provision for recording archaeological deposits, should take place during the course of an archaeological watching brief.

**DBA:DQ** (Sheet 4, NGR 374240 228640)

Curvilinear and rectilinear cropmarks, located to the south west of Pauntley deserted medieval village, were plotted from aerial photographs taken for Transco in the summer of 1999. The general appearance of the cropmarks indicates that they are most likely to be natural geological phenomena, but their overall layout suggests the remains of a former field system. At the time the field reconnaissance took place, there was poor earthwork visibility due to long grass coverage of the field, and no archaeological evidence was noted.

**Impacts: Direct, uncertain;** The cropmarks are crossed by the proposed pipeline, however their full nature and significance are not known.

**Recommendations:** As the field is now an area of improved pasture, it is unlikely that fieldwalking will be possible. However, geophysical survey should aim to determine the nature and significance of the cropmarks. If they are significant, it is likely that they will be able to be dealt with during the course of an archaeological watching brief (stage 6 - see Appendix A).



**FRS:AA** (Sheet 1, NGR 380840 229150)

A sub-circular vegetation mark, measuring about 30m wide by 40m long was observed during the field reconnaissance survey. The change in vegetation may be indicative of past disturbance in this area.

**Impacts: Direct, severe;** The proposed pipeline directly crosses the centre of the vegetation mark.

**Recommendations:** Geophysical surveys in this area should aim to locate the vegetation mark and provide an indication of its nature and archaeological significance. It is unlikely that fieldwalking will be feasible in this area, as it is improved pasture. Detailed monitoring should take place during the course of an archaeological watching brief.

**FRS:AG** (Sheet 3, NGR 376410 228140)

Two oval hollows, which were joined by a gully, appeared to be natural dew ponds or springs which had been adapted for human use. The hollows were very regular, with uniform sides. The largest measured c. 30m in diameter and 3m deep.

**Impacts: Direct, major;** The centre of the larger of the two hollows is crossed by the proposed pipeline.

**Recommendations:** Geophysical surveys in this area should aim to locate the vegetation mark and provide an indication of its nature and archaeological significance. It is unlikely that fieldwalking will be feasible in this area, as it is improved pasture. Detailed monitoring should take place during the course of an archaeological watching brief.

**Three possible tracks are crossed by the proposed pipeline:**

**DBA:DJ** (Sheet 3, NGR 375880 228270)

A linear cropmark plotted from aerial photographs indicates the location of a former track, but no evidence for the track was found by the field reconnaissance survey.

**FRS:AC** (Sheet 2/3, NGR 377150 228100)

A track, oriented north east to south west, was observed during field reconnaissance.

**FRS:AF** (Sheet 3, NGR 376820 228000)

A track, oriented north to south, was observed during field reconnaissance.

**Impact: Direct, minor;** The tracks are crossed by the proposed pipeline. However, only a relatively small cross section of each will be affected.

**Recommendations:** The geophysical surveys may be able to locate the cropmark track (DBA:DJ). It would be appropriate to record a section through any remains crossed during the course of a construction watching brief.

**Six former field boundaries were recorded during the field reconnaissance survey:**

**FRS:AB** (Sheet 2, NGR 378400 228000)

A north north-east to south south-west oriented linear depression and line of trees observed during field reconnaissance, correlates with a former boundary on an enclosure map of 1798

**FRS:AD** (Sheet 2/3, NGR 377000 228150)

The continuation of the remains of a north west to south east oriented field boundary was marked by a tree. The former boundary correlates with a tithe map of 1843, and an aerial photograph taken in 1946.

**FRS:AI** (Sheet 5, NGR 370160 230620)

A line of trees oriented north north-east to south south-west, indicated a former field boundary.

**FRS:AJ** (Sheet 5, NGR 370010 230320)

A line of trees oriented north north-east to south south-west, indicated a former field boundary.

**Impacts: Direct, minor;** A relatively small proportion of each of these boundaries will be affected by the proposed pipeline.

**Recommendations:** Detailed monitoring and recording during the course of a watching brief.

**FRS:AE** (Sheet 3, NGR 376820 228000)

A line of trees oriented north to south, indicated a former field boundary.

**FRS:AH** (Sheet 3, NGR 376410 228140)

A line of trees oriented north west to south east correlates with a boundary on a tithe map of 1843, and an aerial photograph taken in 1946.

**Impacts: Uncertain;** It is unknown whether the former boundaries continue into the path of the proposed pipeline.

**Recommendations:** Detailed monitoring during the course of a watching brief.

Reference	Description	Category	Sheet	National Grid Reference	Impact
DBA:AV	former orchard	E	1/2	379600 228250	D-min
DBA:AW	former orchard	E	2	378690 228120	D-maj
DBA:AZ	Corse & Staunton parish boundary	E	2/3	378140 227950	D-min
DBA:BD	former orchard	E	2/3	377206 228211	D-min
DBA:BO	Staunton and Upleadon parish boundary	E	3	376270 228250	D-min
DBA:BT	former orchards	E	3/4	374850 228660	D-min
DBA:BU	former orchard	E	4	373920 228620	D-min
DBA:DC	Field name: 'Great Orchard'	E	5	370700 230430	D-min
DBA:DD	tree circle: ?pond	E	5	370434 230368	Unc
DBA:DE	former orchard	E	5	370410 230420	D-min
DBA:DQ	cropmarks: linears - ?geological / field system	E	4	374240 228640	D-unc
FRS:AA	VM: patch of weeds indicating disturbance	E	1	380840 229150	D-sev

DBA:BT	former orchards	E	3/4	374850 228660	D-min
FRS:AB	EW: remains of field boundary; ditch and hedge trees - correlates with boundary on enclosure map of 1798	E	2	378400 228000	D-min
FRS:AC	track	E	2/3	377150 228100	D-min
FRS:AD	line of former field boundary marked by tree, correlates with a tithe map of 1843, and AP taken in 1946.	E	2/3	377000 228150	D-min
FRS:AE	?line of former field boundary marked by trees - in line with former DBA boundary	E	3	376820 228000	Unc
FRS:AF	track	E	3	376820 228000	D-min
FRS:AG	oval hollows joined by a gully	E	3	376410 228140	D-maj
FRS:AH	?line of former field boundary marked by trees - correlates with tithe map of 1843 and AP taken in 1946	E	3	376410 228140	Unc
FRS:AI	?line of former field boundary marked by trees	E	5	370160 230620	D-min
FRS:AJ	?line of former field boundary marked by trees	E	5	370010 230320	D-min

**Table 8: Summary of impact rating for Category E sites**

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## **11 STATEMENT OF INDEMNITY**

Every effort has been taken in the preparation and submission of this report in order to provide as complete an assessment as possible within the terms of the brief, and all statements and opinions are offered in good faith. Network Archaeology Ltd. cannot accept responsibility for errors of fact or opinion resulting from data supplied by any third party, or for any loss or other consequences arising from decisions or actions made upon the basis of facts or opinions expressed in this report and any supplementary papers, howsoever such facts and opinions may have been derived, or as a result of unknown and undiscovered sites of artefacts.

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## **Appendices**

<b>APPENDIX A</b>	<b>- Explanation of Phased Approach to Mitigation Measures</b>
<b>APPENDIX B</b>	<b>- List of Abbreviations</b>
<b>APPENDIX C</b>	<b>- Gazetteer of Archaeological Sites</b>
<b>APPENDIX D</b>	<b>- Archaeological Constraint Sheets 1-5</b>
<b>APPENDIX E</b>	<b>- Historic Land Boundaries - Figures 2-3</b>
<b>APPENDIX F</b>	<b>- Past and Present Land Use - Figures 4-5</b>
<b>APPENDIX G</b>	<b>- Gazetteer of Plot Data</b>

# **Appendix A**

## **EXPLANATION OF PHASED APPROACH TO MITIGATION**

TRANSCO'S PHASE OF WORK	CORRESPONDING ARCHAEOLOGICAL STAGES
<i>feasibility assessment</i>	<p><i>Stage 1</i>  <i>feasibility study of route corridor option(s) -</i>  an appraisal of archaeological potential</p>
<i>conceptual design</i>	<p><i>Stage 2</i>  <i>desk-based assessment of route corridor -</i>  a thorough synthesis of available archaeological information including field reconnaissance survey of entire proposed route</p>
<i>detailed design</i>	<p><i>Stage 3</i>  <i>field surveys -</i>  field reconnaissance survey - new areas encountered by route changes  field walking - entire route  geophysical survey - entire route  (metal detector survey) - entire route  (auger survey) - entire route</p> <p><i>Stage 4</i>  <i>field evaluation of targeted areas along preferred pipeline route -</i>  machine-excavated trenches  hand-dug test-pits</p> <p><i>Stage 5</i>  <i>excavation -</i>  detailed excavation of those sites which it is not possible to avoid or desirable to preserve</p>
<i>construction</i>	<p><i>Stage 6</i>  <i>watching brief -</i>  permanent presence monitoring of all ground disturbing activities</p>
<i>post-construction</i>	<p><i>Stage 7</i>  <i>archive and publication -</i>  synthesis and dissemination of results, leading on from each of the stages outlined above</p>

## **Explanation of Phased Approach to Mitigation**

Network Archaeology Ltd recognise seven main phases of work in the archaeological investigation of pipelines:

### **Stage 1 Feasibility Study**

An appraisal of archaeological potential

### **Stage 2 Desk-based Assessment**

A thorough synthesis of available information, as in this report, including a field reconnaissance survey (rapid walkover) of the entire route in order to record the following:

- location and character of unrecorded earthworks
- the level of preservation of known earthworks (eg. ridge-and-furrow)
- the occurrence of soil and vegetation changes which could indicate the presence of archaeological deposits
- land-use
- topographic variations
- visible geology
- health and Safety implications
- project specific requirements

### **Stage 3 Non-intrusive Field Survey**

#### *3a Field Reconnaissance Survey (rapid walkover)*

This involves a visual inspection (as in Stage 2) of new areas encountered due to route changes.

#### *3b Field walking*

Field walking involves the systematic recovery of artefacts (pottery, tile, glass, slag, coins *etc.*) from the surface of ploughed fields. This exercise is intended to:

- determine the date and spatial extent of *known* sites on the proposed route which could not be avoided by route modifications.
- determine if any *known* sites lying close to the proposed route extend into it.
- locate, delimit and date previously *unknown* sites, lying in the course of the proposed route.

Field walking needs bare earth, ideally ploughed, harrowed and weathered. Late autumn and winter is the optimum time for this work.

### 3c *Metal Detector Survey*

Metal detecting can be carried out on all types of land. Ideally, detectorists with local experience are used. This exercise:

- complements field walking in arable areas.
- provides the only means of obtaining dating evidence in pasture, fen, moss and woodland areas.
- identifies and date sites that may not be archaeologically visible by field walking (eg. metal hoards, fair/trading sites, accompanied burials)

### 3d *Earthwork survey*

This work is undertaken to produce a topographic record of extant earthworks. These sites might include *known* earthworks identified by the Desk based Assessment, or previously *unknown* earthworks found during the Field Reconnaissance Survey. The sites may include settlement earthworks or agricultural earthworks (such as, ridge and furrow and lynchets).

Two methods are commonly employed; plane table survey which obtains a hachure survey, or total-station theodolite survey which produces a close contour plot.

### 3e *Auger Survey*

The retrieval of sub-surface soil samples can be used to determine the presence or absence, nature, extent and state of preservation of known or potential archaeological deposits. This may be appropriate in areas sealed by peat or alluvium, or on sensitive sites such as earthworks. Areas requiring auger survey can be identified during or shortly after the field reconnaissance and field walking surveys. This information can be crucial for determining areas suitable for geophysical survey.

### 3f *Geophysical Survey*

Geophysical survey can be used to:

- determine the character and spatial extent of *known* sites on the proposed route which can not be avoided by route modifications.
- determine if any *known* sites lying close to the proposed route extend into it.
- locate, delimit and determine the character of previously *unknown* sites lying in the course of the proposed route.

There are a number of available techniques, the most appropriate of which are *magnetometry*, *magnetic susceptibility* and *resistivity*.

#### *Magnetometry*

This technique detects local variations in the earth's magnetic field, resulting from anthropogenic changes to soil. These variations are often caused by the presence of buried archaeological deposits (eg. ditches, pits, buildings, *etc.*). This survey technique uses hand-held equipment, usually a Geoscan FM 35 Fluxgate Gradiometer.

The instrument can be used to scan large areas before focusing on smaller areas for detailed gridded survey, usually at 1m transect separation. Scanning is often used in tandem with magnetic susceptibility (see below) to identify areas of potential for detailed survey.

Magnetometry is most suited to shallow archaeology up to c.1-1.5m below ground level. It can operate in all weathers and is not prone to seasonal effects. In general, boulder clay and alluvium tend to be poorly responsive, whilst other solid geologies and riverine gravels are relatively conducive to magnetometry, although local iron concentrations can sometimes give spurious results. It can also be affected by magnetic fields (eg. pylons). This technique is quick and cost-effective.

#### *Magnetic susceptibility*

This technique records variations of magnetic susceptibility within topsoil and subsoil. Enhanced susceptibility is often a sign of past human activity. It differs from magnetic scanning in that it locates areas of *archaeological activity* rather than discrete *features*. Magnetic susceptibility is often used in tandem with magnetic scanning to identify areas of potential for detailed survey.

#### *Resistivity*

In this method, an electric current is passed through the ground between a pair of mobile electrodes. The current passes more easily through soil which has a lower resistance (eg. ditch fills), but is impeded by buried walls and road surfaces, which have a higher resistance. Survey involves pushing a pair of electrodes into the ground along transects 1m apart. A Geoscan RM15 resistivity meter with twin electrode configuration is commonly applied. A new attachment called a 'multi-plexer', and a technique called 'resistivity profiling' allows readings to be taken from multiple levels at the same time.

Resistivity is most suited to shallow archaeology up to c.1m below ground level. The technique is slower than magnetometry and can be hampered by hard ground; ideally the probes need soft damp soil for good conductivity. Resistivity is affected by seasonal variability of groundwater. Saturated soils or soils with a high saline content are likely to produce poor results. Natural geological variations can also make interpretation difficult. This type of survey can show greater detail than magnetometry.

# **Appendix B**

## **LIST OF ABBREVIATIONS**

## ABBREVIATIONS

AGI	Above Ground Installation
AOD	Above Ordnance Datum
CUCAP	Cambridge University Collection of Air Photographs
DBA	Site identified during the Desk-Based Assessment by Network Archaeology Ltd (largely from aerial photographs, and old map sources)
EH	English Heritage
FRS	Site identified during the field reconnaissance survey by Network Archaeology Ltd
SMR	Sites and Monuments Record - information on archaeological sites by county
LB	Listed structures
MON	MONARCH data base (National Monuments Records from the RCHME)
OS	Ordnance Survey, followed by the year the map was published
SAM	Scheduled Ancient Monument. Records held by English Heritage
T.	Tithe map. This prefix is followed by the year of the map



# Appendix C

## GAZETTEER OF ARCHAEOLOGICAL SITES

## Gazetteer of Archaeological Sites: Explanatory Notes

The gazetteer records the sites and findspots/scatters identified during the archaeological Desk-Based Assessment. They are listed by archaeological constraint map number. Since there is a slight overlap from one map to another, some sites are repeated, both on the maps themselves, and in the gazetteer. Below is a brief explanation of abbreviations and conventions used in the gazetteer.

### *'Reference', 'Cross Reference' and 'Source' columns:*

CUCAP	Cambridge University Collection of Air Photographs
DBA	Site identified during the Desk-Based Assessment by Network Archaeology Ltd (largely from aerial photographs, and old map sources)
EH	English Heritage
FRS	Site identified during the Field Reconnaissance Survey by Network Archaeology Ltd
SMR*	Sites and Monuments Record - information on archaeological sites by county (*used to prefix Gloucestershire's SMR numbers)
LB*	Listed structures
MON*	MONARCH data base (National Monuments Records from the RCHME)
OS	Ordnance Survey, followed by the year the map was published
SAM*	Scheduled Ancient Monument. Records held by English Heritage
T.	Tithe map. This prefix is followed by the year of the map

\* This convention was adopted for ease of reference during the assessment; it is not a term used by the respective data-holding bodies.

### *'Description' Column:*

AP	- Aerial photograph
CM	- Crop Mark
EW	- Earthwork
SM	- Soil Mark
VM	- Vegetation mark
PB	- Parish Boundary

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Sheet	Reference	Source	Cross References	Description	Period	Category	Distance from Working W (km)	Quarter Sheet	National Grid Reference	Impact Reliability	
										L	I
3	FRS:AE	Net. Arc		?Former field boundary	Undetermined	E	0	SO 72NE	3767 2279	D-min	
5	SAM 28863	GCC	SMR 00387.1-6	Motte and bailey, well & hundred meeting	Medieval	A	0.5	SO 72NW	3711 2293	-	H H
3	LB 10/142	GCC	SMR 12191.1	Evere's Farmhouse	Post Medieval	A	0.5	SO 72NE	3760 2288	-	H H
2/3	LB 10/220	GCC	SMR 13785.1	Stanbrook Farmhouse, Newent Road, Staunton	Post Medieval	A	0.5	SO 72NE	3775 2279	-	H H
2	LB 10/49	GCC	SMR 12991.1	Store : former part of House, Oridge Street	Post Medieval	A	0.5	SO 72NE	3782 2276	-	H H
1	LB 11/56	GCC	SMR 12998.1	Milestone	Post Medieval	A	0.5	SO 82NW	3807 2289	-	H H
1/2	LB 14/35	GCC	SMR 12970.1	The Cottage, Gloucester Road, Corse	Post Medieval	A	0.5	SO 72NE	3792 2285	-	H H
1/2	LB 14/36	GCC	SMR 12980.1	Hazeldene - Corse	Post Medieval	A	0.5	SO 72NE	3792 2285	-	H H
1/2	LB 14/37	GCC	SMR 12981.1	The Byways - Corse	Post Medieval	A	0.5	SO 72NE	3792 2284	-	H H
1/2	LB 14/38	GCC	SMR 12982.1	Rylenby- Corse	Post Medieval	A	0.5	SO 72NE	3792 2284	-	H H
1/2	LB 14/39	GCC	SMR 12983.1	The Forge, Corse	Post Medieval	A	0.5	SO 72NE	3793 2283	-	H H
1/2	LB 14/46	GCC	SMR 12988.1	Kilmorie, Corse	Post Medieval	A	1	SO 72NE	3791 2285	-	H H
1/2	LB 14/47	GCC	SMR 12989.1	Long Course, Corse	Post Medieval	A	0.5	SO 72NE	3791 2284	-	H H
1/2	LB 14/48	GCC	SMR 12990.1	Robwood, Corse	Post Medieval	A	0.5	SO 72NE	3792 2284	-	H H
1/2	LB 14/55	GCC	SMR 12997.1	The Bungalow, School Crescent, Corse	Post Medieval	A	1	SO 72NE	3795 2287	-	H H
3/4	LB 3/199	GCC	SMR 08376.1	St John's Church Pauntley	Medieval	A	0.5	SO 72NW	3748 2289	-	H H
3/4	LB 3/204	GCC	SMR 12025.1	Pauntley Court	Post Medieval	A	0.5	SO 72NW	3749 2291	-	H H
3/4	LB 3/205	GCC	SMR 12026.1	Dovecote at Pauntley Court	Post Medieval	A	0.5	SO 72NW	3748 2290	-	H H
3/4	LB 3/206	GCC	SMR 12027.1	Stables, 46m south of Pauntley Court	Post Medieval	A	0.5	SO 72NW	3749 2290	-	H H
3/4	LB 4/207	GCC	SMR 07363.1/2	Pauntley watermill, commill	Medieval	A	0.5	SO 72NE	3751 2290	-	H H
5	LB 5/57	GCC	SMR 5305	Boyce Court - country house	Post Medieval	A	0.5	SO 72NW	3702 2299	-	H H
-	LB 5/58	GCC	SMR 09542	Callow Farm	Post Medieval	A	1	SO 73SW	3721 2312	-	H H
5	LB 5/61	GCC	SMR 05353.1	Gamage Hall manor site	Medieval	A	0.5	SO 73SW	3710 2305	-	H H
5	LB 9/10	GCC	SMR 13007.1	Castle Tump house	Post Medieval	A	0.5	SO 72NW	3711 2293	-	H H
4	SMR 04417.1	GCC		enclosure W of Brand Green	Undetermined	C	0.5	SO 72NW	3736 2280	-	H H
4	SMR 04418.1/2	GCC		cropmarks N of Newbarn Farm	Undetermined	C	0	SO 72NW	3731 2281	D-unc	H H
5	SMR 05303.1	GCC		former Hereford & Gloucester Canal	Post Medieval	D	0	SO 73SW	3702 2304	unc	H H
5	SMR 05305.2	GCC		water feature at Boyce Court	Post Medieval	D	0.5	SO 70SW	3702 2029	-	H H
3/4	SMR 05312.1-3	GCC	MON 113393	DMV, Pauntley	Med/PM	C	0.5	SO 72NW	3749 2290	I-unc	H H

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Sheet	Reference	Source	Cross References	Description	Period	Category	Distance from Working W (km)	Quarter Sheet	National Grid Reference	Impact Reliability		
										L	I	
2/3	SMR 05314.1-2	GCC		?site of settlement and bridge	Undetermined	D	0.5	SO 72NE	3777 2279	-	M	H
-	SMR 05543.1/2	GCC		The Naight moot	Saxon	D	5	SO 82NE	3867 2297	-	H	H
2	SMR 05715.1/2	GCC	MON 11369	Oridge shrunken village & ridge and furrow	Med/PM	B	0.5	SO 72NE	3787 2278	-	H	H
5	SMR 05718.1	GCC	MON 113628	flint scatter	Mesolithic	C	0.5	SO 73SW	3720 2301	-	H	H
1/2	SMR 05878.1/2	GCC		house: Chartist settlement at Snigs End	Post Medieval	B	1	SO 72NE	3792 2286	-	H	H
2	SMR 05882.1-3	GCC		Pitt's Mill	Post Medieval	B	0.5	SO 72NE	3786 2277	-	H	H
5	SMR 05893.1	GCC		The Gloucester to Ledbury Railway	Post Medieval	D	0	SO 73SW	3700 2304	D-min	H	H
1	SMR 06764.1/2	GCC		Long Pond	Undetermined	E	1	SO 83SW	3813 2301	-	H	H
1	SMR 06765	GCC		?moat/ fish ponds	Undetermined	D	1	SO 83SW	3806 2301	-	H	H
5	SMR 06808.1/2	GCC		site of beacon, Bockens Hill	Medieval	D	0.5	SO 73SW	3708 2300	-	H	H
-	SMR 06811.1/2	GCC		mine workings: ironstone mine & colliery	Undetermined	C	0.5	SO 72NW	3712 2293	-	H	H
5	SMR 07265.1	GCC		cider making equipment	Undetermined	D	0.5	SO 72NW	3729 2293	-	H	H
4	SMR 07268.1	GCC		cider making equipment	Undetermined	D	0.5	SO 72NW	3730 2289	-	H	H
5	SMR 07677.1/2	GCC		road	Roman	C	0	SO 73SW	3704 2304	D-min	H	H
4	SMR 09410.1	GCC		placename: Botloe Green; ?barrow	Prehistoric	C	0.5	SO 72NW	3720 2280	-	H	H
4	SMR 09411.1	GCC		Hundred Meeting Place at Botloe Green	E Medieval	D	0.5	SO 72NW	3720 2280	-	H	H
5	SMR 09543.1	GCC	T. 1847	?Site of windmill	Undetermined	D	0	SO 73SW	3705 2304	I-unc	H	H
4/5	SMR 09951.1	GCC		Chapel	Post Medieval	B	0.5	SO 72NW	3728 2294	-	H	H
3/4	SMR 09957.1	GCC		railway cutting in Collingpark Wood	Post Medieval	D	0	SO 72NW	3749 2286	D-min	H	H
1	SMR 11265	GCC		The Hawthorns, moated site	Medieval	B	1	SO 83SW	3803 2301	-	H	H
5	SMR 13195.1	GCC		Fishponds at Gamage Hall, Dymock	Med/PM	D	0.5	SO 73SW	3710 2306	-	H	H
2	SMR 16947.1	GCC		Rising Main Replacement -watching brief	Modern		0	SO 72NE	3786 2281	-	H	H
3	SMR 20731.1	GCC		EW: tump; ?site of castle at Ragman's Castle	Med/PM	C	0.5	SO 72SE	3764 2208	I-unc	H	H
4	SMR 20944.1	GCC		Botloe's village green	Multi Period	D	0.5	SO 72NW	3720 2280	-	H	H
4	SMR 20944.2	GCC		holloways at Botloe's Green	Multi Period	D	0.5	SO 77NW	3720 2780	-	H	H
4	MON 1053613	EH		implements	Palaeolithic	E	1	SO 72NW	3740 2280	-	M	H
2/3	MON 113360	EH		RB pottery sherds and quern stone	Roman	D	1	SO 72NE	3781 2272	-	H	H
-	MON 113367	EH		site of chapel	Med/PM	C	1	SO 72NE	3753 2296	-	H	H
5	MON 113374	EH		site of moat	Med/PM	C	1	SO 73SW	3709 2291	-	H	H

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Sheet	Reference	Source	Cross References	Description	Period	Category	Distance from Working W (km)	Quarter Sheet	National Grid Reference	Impact Reliability	
										L	I
-	MON 113398	EH		flint scatter	Bronze Age	C	1.5	SO 72NW	3732 2272	-	H
4	MON 113402	EH		Elizabethan deer park	Post Medieval	D	0.5	SO 72NW	3730 2290	-	H
5	MON 113604	EH		findspot: flint arrowhead	Bronze Age	E	0.5	SO 73SW	3700 2310	-	L
5	MON 113608	EH		findspot: Gaulish gold coin	Iron Age	E	0.5	SO 73SW	3700 2310	-	L
5	MON 1326928	EH		EW: boundaries, R&F, ponds, enclosures.	Med/PM	D	0.5	SO 73SW	3704 2301	-	H
5	MON 1326931	EH		ridge & furrow visible on APs	Med/PM	D	0.5	SO 73SW	3701 2305	-	H
4	MON 763015	EH		findspot: quartzite pebble tool	?Palaeolithic	E	1	SO 72NW	3740 2280	-	M
5	MON 763081	EH		artefacts	Mesolithic	E	0.5	SO 73SW	3700 2310	-	L
-	MON 763085	EH		occupation site	Roman	C	0.5	SO 73SW	3703 2310	-	H
1/2	DBA:AA	E 1798	T 1890	former Ferris Cottage and garden plots	Undetermined	C	0.5	SO 72NE	3799 2285	-	H
2/3	DBA:AB	OS 1891		former building	Undetermined	C	0.5	SO 72NE	3780 2283	-	H
2/3	DBA:AC	E 1798		former buildings	Undetermined	C	0.5	SO 72NE	3779 2275	-	H
2/3	DBA:AD	E 1798		former building & garden	Undetermined	C	0.5	SO 72NE	3777 2277	-	H
2/3	DBA:AE	OS 1903		former building	Post Medieval	C	0.5	SO 72NE	3775 2282	unc	H
2/3	DBA:AF	OS 1889		placename: Tump Farm	Undetermined	C	0.5	SO 72NE	3775 2280	-	H
2/3	DBA:AG	OS 1889		former buildings	Undetermined	C	0.5	SO 72NE	3773 2277	-	H
1	DBA:AI	E 1795		Tirley and Corse parish boundary	Undetermined	D	0.5	SO 82NW	3815 2296	-	H
1/2	DBA:AJ	E 1798		former track	Undetermined	D	0	SO 72NE	3799 2284	D-min	H
1/2	DBA:AK	AP 1946	106G/UK/1488 4095	former agricultural buildings	Modern	D	0.5	SO 72NE	3797 2286	-	H
2	DBA:AL	E 1798		former track	Undetermined	D	0.5	SO 72NE	3790 2277	-	H
2	DBA:AM	E 1798		early field system	?Medieval	D	0.5	SO 72NE	3789 2279	-	H
2	DBA:AN	OS 1891		former quarry & smithy	Undetermined	D	0.5	SO 72NE	3783 2275	-	H
2/3	DBA:AO	E 1798	T. 1890	Corse & Harbury parish boundary	Undetermined	D	0.5	SO 72NE	3778 2276	-	H
1	DBA:AP	OS 1891	AP 1946	former orchards	Undetermined	E	0.5	SO 82NW	3815 2294	-	H
1	DBA:AQ	OS 1891		former orchard	Undetermined	E	1	SO 82NW	3806 2294	-	H
1	DBA:AR	OS 1891		former well	Undetermined	E	0.5	SO 82NW	3802 2290	-	H
1/2	DBA:AS	OS 1891		former orchard	Undetermined	E	0.5	SO 82NW	3802 2284	-	H
1/2	DBA:AT	OS 1891		former orchard	Undetermined	E	0.5	SO 72NE	3799 2287	-	H
1/2	DBA:AU	OS 1891	AP 1946	former orchard	Undetermined	E	0.5	SO 72NE	3799 2285	-	H

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Sheet	Reference	Source	Cross References	Description	Period	Category	Distance from Working W (km)	Quarter Sheet	National Grid Reference	Impact Reliability		
										L	I	
2	DBA:AV	OS 1891		former orchard	Undetermined	E	0	SO 72NE	3796 2282	D-min	H	H
2	DBA:AW	OS 1891		former orchard	Undetermined	E	0	SO 72NE	3786 2281	D-maj	H	H
2/3	DBA:AX	E 1843		former mill dyke 'The Dyke'	Undetermined	E	0.5	SO 72NE	3784 2284	-	H	H
2	DBA:AY	OS 1891		former orchards	Undetermined	E	0.5	SO 72NE	3782 2276	-	H	H
2/3	DBA:AZ	E 1798		Corse & Staunton parish boundary	Undetermined	E	0	SO 72NE	3781 2279	D-min	H	H
2/3	DBA:BA	E 1798		foremr Stanbridge orchard	Undetermined	E	0.5	SO 72NE	3778 2279	-	H	H
2/3	DBA:BB	E 1843		Staunton & Hartpury parish boundary	Undetermined	E	0.5	SO 72NE	3774 2276	-	H	H
2/3	DBA:BC	OS 1889		former orchard	Undetermined	E	0.5	SO 72NE	3773 2278	-	H	H
2/3	DBA:BD	OS 1889		former orchard	Undetermined	E	0.5	SO 72NE	3772 2282	D-min	H	H
2/3	DBA:BE	E 1843		fieldname: Pit Ground	Undetermined	E	0.5	SO 72NE	3771 2277	-	M	H
2/3	DBA:BF	T 1842		fieldname: Four Acre Orchard; former orchard	Undetermined	E	0.5	SO 72NE	3770 2274	-	H	H
3	DBA:BG	E 1843		former buildings	Undetermined	C	0.5	SO 72NE	3763 2284	-	H	H
3	DBA:BH	OS 1889		former building	Undetermined	C	0.5	SO 72NE	3755 2281	-	H	H
4	DBA:BI	T 1840		former building	Undetermined	C	0.5	SO 72NW	3739 2287	-	H	H
4	DBA:BJ	T 1840		former building	Undetermined	C	0.5	SO 72NW	3739 2287	-	H	H
3	DBA:BK	OS 1889	AP 1946	former orchard	Undetermined	E	0.5	SO 72NE	3767 2280	-	H	H
3	DBA:BL	E 1843		former pond & well	Undetermined	E	0.5	SO 72NE	3767 2284	-	H	H
3	DBA:BM	T 1840		Redmarley D'Abitot & Staunton parish boundary	Undetermined	E	0.5	SO 72NE	3764 2286	-	H	H
3	DBA:BN	OS 1889		former orchard	Undetermined	E	0.5	SO 72NE	3763 2284	-	H	H
2/3	DBA:BO	E 1843		Staunton & Upleadon parish boundary	Undetermined	E	0	SO 72NE	3762 2282	D-min	H	H
3	DBA:BP	T 1840		Redmarley D'Abitot & Unleadon parish boundary	Undetermined	E	0.5	SO 72NE	3761 2284	-	H	H
3	DBA:BQ	T 1843		former orchard	Undetermined	E	0.5	SO 72NE	3759 2286	-	H	H
3	DBA:BR	T 1840		Redmarley D'Abitot & Pauntley parish boundary	Undetermined	E	0.5	SO 72NE	3754 2289	-	H	H
3	DBA:BS	OS 1889		old sand pit	Undetermined	E	0.5	SO 72NE	3753 2288	-	H	H
3/4	DBA:BT	OS 1889		former orchards	Undetermined	E	0	SO 72NW	3748 2286	D-min	H	H
4	DBA:BU	T 1840	OS 1889	former Jones's Orchard	Undetermined	E	0	SO 72NW	3739 2286	D-min	H	H
4	DBA:BV	OS 1889		former orchards	Undetermined	E	0.5	SO 72NW	3738 2282	-	H	H
4/5	DBA:BW	T 1840		fieldname: Sawpit Ground & former orchards	Undetermined	E	0.5	SO 72NW	3735 2289	-	H	H
3	DBA:BX	T 1842		Upleadon & Pauntley parish boundary	Undetermined	D	0	SO 72NE	3758 2282	D-min	H	H

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Sheet	Reference	Source	Cross References	Description	Period	Category	Distance from Working W (km)	Quarter Sheet	National Grid Reference	Impact Reliability		
										L	I	
3	DBA:BY	T 1840		fieldnames: Great & Little Park	Undetermined	D	0	SO 72NE	3757 2283	D-unc	H	H
3/4	DBA:BZ	T 1840		fieldnames: First/Middle/Far & Little Brick Field	Undetermined	D	0	SO 72NE	3752 2284	D-unc	H	H
3/4	DBA:CA	T 1840		fieldname: The Tump	Undetermined	D	0.5	SO 72NW	3747 2291	-	H	H
4	DBA:CB	AP 1946	106G/UK/1652 4121	?former agricultural building	Modern	D	0.5	SO 72NW	3741 2287	-	H	M
4/5	DBA:CC	T 1840		Pauntley & Newent parish boundary	Undetermined	D	0	SO 72NW	3739 2286	D-min	H	H
4	DBA:CD	AP 1946	106G/UK/1460 4093	former agricultural building	Modern	D	0.5	SO 72NW	3733 2281	-	H	H
4/5	DBA:CE	T 1840		fieldname: Little Berrow Field	Undetermined	D	0.5	SO 72NW	3725 2287	D-unc	H	H
4/5	DBA:CF	T 1840		fieldname: Great Berrow Field	Undetermined	D	0	SO 72NW	3725 2289	D-unc	H	H
4/5	DBA:CG	T 1840		former track	Undetermined	D	0.5	SO 72NW	3723 2295	-	H	H
4	DBA:CH	T 1840		former building	Undetermined	C	0.5	SO 72NW	3721 2287	-	H	H
4	DBA:CI	T 1840		former building	Undetermined	C	0.5	SO 72NW	3721 2286	-	H	H
4/5	DBA:CJ	T 1840		former building	Undetermined	C	0.5	SO 72NW	3721 2288	-	H	H
4/5	DBA:CK	T 1840		former farm building	Undetermined	C	0.5	SO 72NW	3717 2292	-	H	H
5	DBA:CL	AP 1962	58/5516 64	EW: enclosure/moat	Undetermined	C	0.5	SO 73SW	3716 2303	-	H	M
5	DBA:CM	AP 1962	58/5516 64	SM: ?ditch/enclosure	Undetermined	C	0.5	SO 73SW	3714 2303	-	H	M
5	DBA:CN	T 1847		former barn	Undetermined	C	0.5	SO 73SW	3706 2306	-	H	H
5	DBA:CO	AP 1962	58/5516 74	EW: holloway	Undetermined	D	0.5	SO 73SW	3715 2302	-	H	H
5	DBA:CP	T 1840		Pauntley & Dymock parish boundary	Undetermined	D	0.5	SO 72NW	3714 2295	D-min	H	H
5	DBA:CQ	T 1837		former track	Undetermined	D	0.5	SO 73SW	3712 2305	-	H	H
5	DBA:CR	T 1840		Newent & Dymock parish boundary	Undetermined	D	0.5	SO 72NW	3711 2292	-	H	H
5	DBA:CS	OS 1903		former saw pit	Post Medieval	D	0.5	SO 73SW	3709 2303	-	H	H
4/5	DBA:CT	OS 1891		former orchard	Undetermined	E	0.5	SO 72NW	3722 2294	-	H	H
4/5	DBA:CU	T 1840		former Stockley Orchard	Undetermined	E	0.5	SO 72NW	3720 2291	-	H	H
4/5	DBA:CV	T 1840		former pond	Undetermined	E	0.5	SO 72NW	3720 2291	-	H	H
5	DBA:CW	AP 1962	58/5516 74	EW: former pond	Undetermined	E	0.5	SO 73SW	3718 2301	-	H	H
5	DBA:CX	AP 1962	58/5516 74	EW: former pond	Undetermined	E	0.5	SO 73SW	3718 2301	-	H	H
5	DBA:CY	OS 1891		former orchard	Undetermined	E	0.5	SO 73SW	3717 2303	-	H	H
5	DBA:CZ	T 1847		fieldname: Colepit Field	Undetermined	E	0.5	SO 72NW	3713 2297	-	H	H
5	DBA:DA	OS 1891	AP 1962	former orchard	Undetermined	E	0.5	SO 73SW	3711 2300	-	H	H

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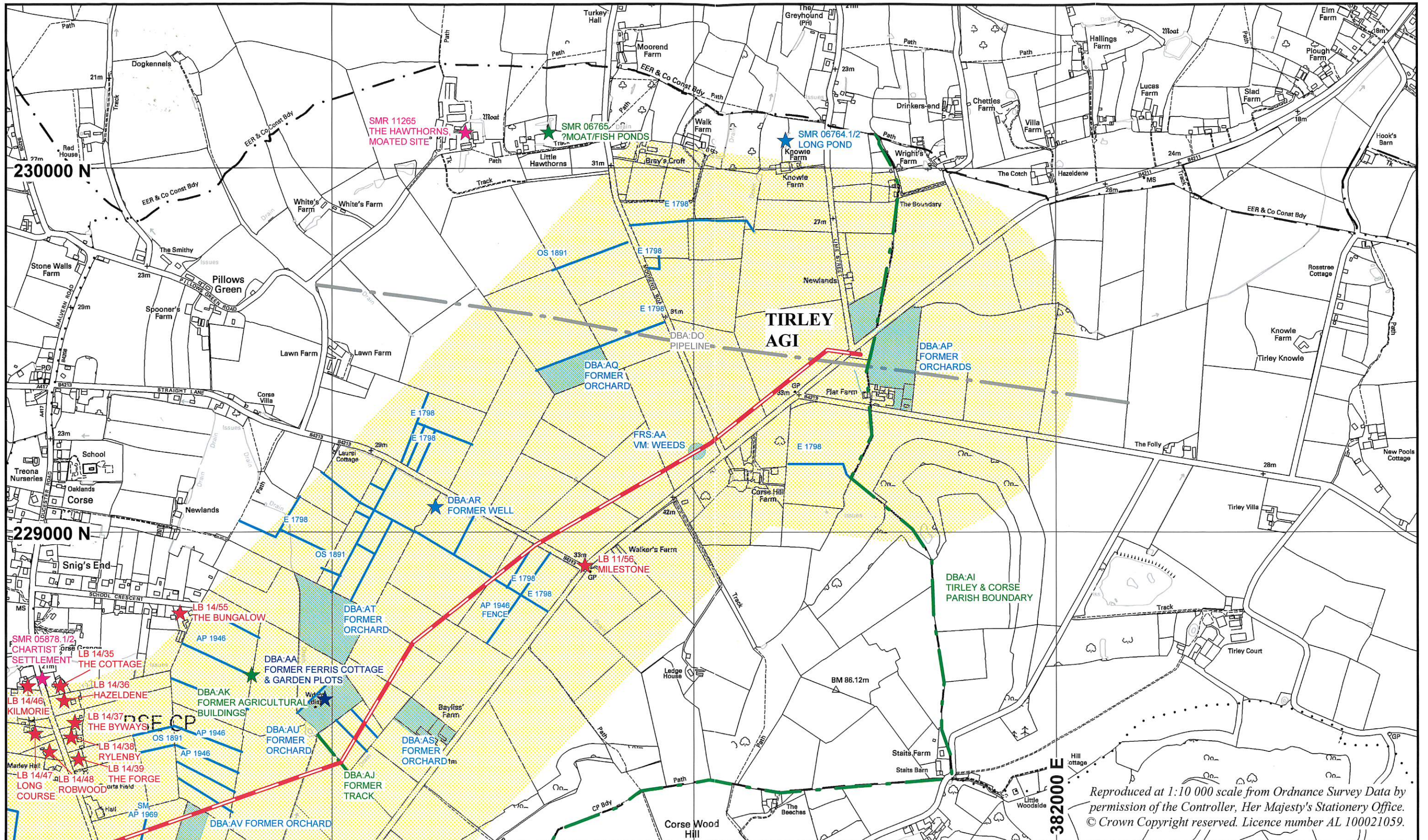
APPENDIX C

Sheet	Reference	Source	Cross References	Description	Period	Category	Distance from Working W (km)	Quarter Sheet	National Grid Reference	Impact Reliability	
										L	I
5	DBA:DB	OS 1891		former orchards	Undetermined	E	0.5	SO 73SW	3709 2304	-	H H
5	DBA:DC	T 1847		fieldname: Great Orchard	Undetermined	E	0	SO 73SW	3707 2304	D-min	H H
5	DBA:DD	AP 1966	OS/66066 192	tree circle, ?pond	Undetermined	E	0.5	SO 73SW	3704 2303	unc	H M
5	DBA:DE	OS 1891		former orchard	Undetermined	E	0	SO 73SW	3704 2304	D-min	H H
5	DBA:DF	T 1837		former ponds	Undetermined	E	0.5	SO 63SE	3698 2302	-	H H
5	DBA:DG	OS 1891	AP 1952	former orchards	Undetermined	E	0.5	SO 62NE	3698 2299	-	H H
5	DBA:DH	T 1837		fieldname: Orchard Field	Undetermined	E	0.5	SO 63SE	3696 2306	-	H H
5	DBA:DI	AP 1971	OS/71069 187	SM: former ridge and furrow	Undetermined	D	0.5	SO 72NW	3700 2298	-	H M
3	DBA:DJ	AP 1992	RC8kn-DL 78	CM: Trackway	Undetermined	D	0	SO 73SW	3758 2282	D-min	H H
5	DBA:DK	T 1847		fieldname: Brick Field	Undetermined	D	0.5	SO 73SW	3702 2301	-	H H
5	DBA:DL	T 1847		fieldname: Moat Meadow	Undetermined	D	0.5	SO 73SW	3702 2302	-	H H
5	DBA:DM	AP 1962	58/5516 73	EW: ridge & furrow	Undetermined	D	0	SO 63SE	3699 2303	D-min	H H
5	DBA:DN	AP 1952	58/898 5045	SM: former ridge & furrow	Undetermined	D	0.5	SO 73SW	3700 2301	-	H M
1	DBA:DO	AP 1976	MAL/76020 1	SM: pipeline	Modern		0.5	SO 82NW	3813 2294	-	H H
3	DBA:DP	AP 1985	RC8-HO 191	CM: ?Trackway and rectilinear ?drains	Undetermined	D	0	SO 72NE	3764 2281	D-min	H M
1	FRS:AA	Net. Arc		VM: Patch of weeds	Undetermined	E	0	SO 82NW	3810 2292	D-sev	H H
2	FRS:AB	Net. Arc		EW: former field boundary	Undetermined	E	0	SO 72NE	3790 2281	D-min	H H
2/3	FRS:AC	Net. Arc		Track	Undetermined	E	0	SO 72NE	3770 2281	D-min	H H
2/3	FRS:AD	Net. Arc		Former field boundary	Undetermined	E	0	SO 72NE	3769 2281	D-min	H H
3	FRS:AE	Net. Arc		?Former field boundary	Undetermined	E	0.5	SO 72NE	3767 2279	unc	H H
3	FRS:AF	Net. Arc		Track	Undetermined	E	0	SO 72NE	3768 2280	D-min	H H
3	FRS:AG	Net. Arc		Oval hollows and gully	Undetermined	E	0	SO 72NE	3764 2281	D-maj	H H
3	FRS:AH	Net. Arc		?Former field boundary	Undetermined	E	0.5	SO 72NE	3764 2281	unc	H H
5	FRS:AI	Net. Arc		?Former field boundary	Undetermined	E	0	SO 73SW	3703 2303	D-min	H H
5	FRS:AJ	Net. Arc		Former field boundary	Undetermined	E	0	SO 73SW	3700 2304	D-min	H H



**Appendix D**

**ARCHAEOLOGICAL CONSTRAINT SHEETS 1-5**



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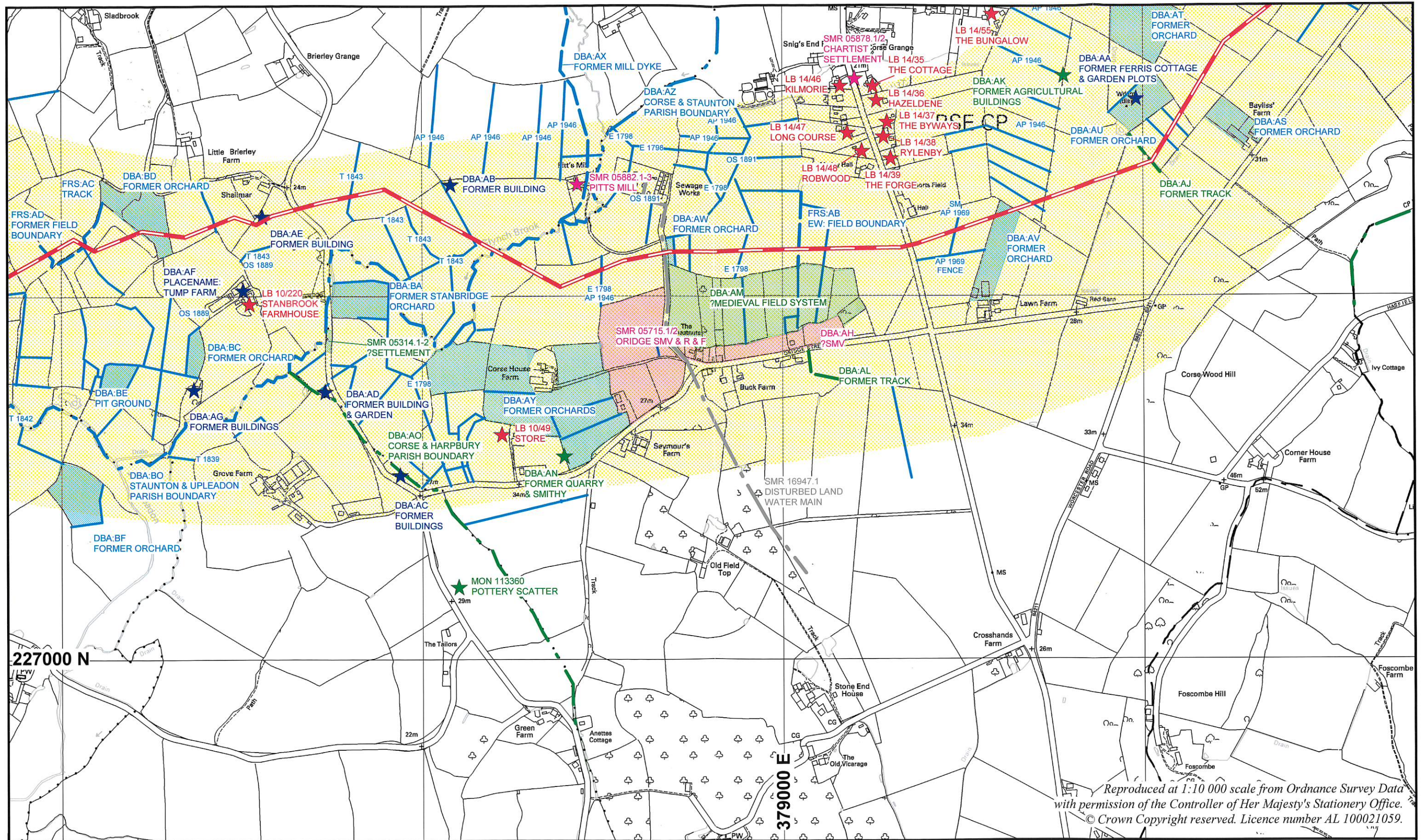
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Conceptual Design Study  
Archaeological Constraints

July 2001

SHEET 1



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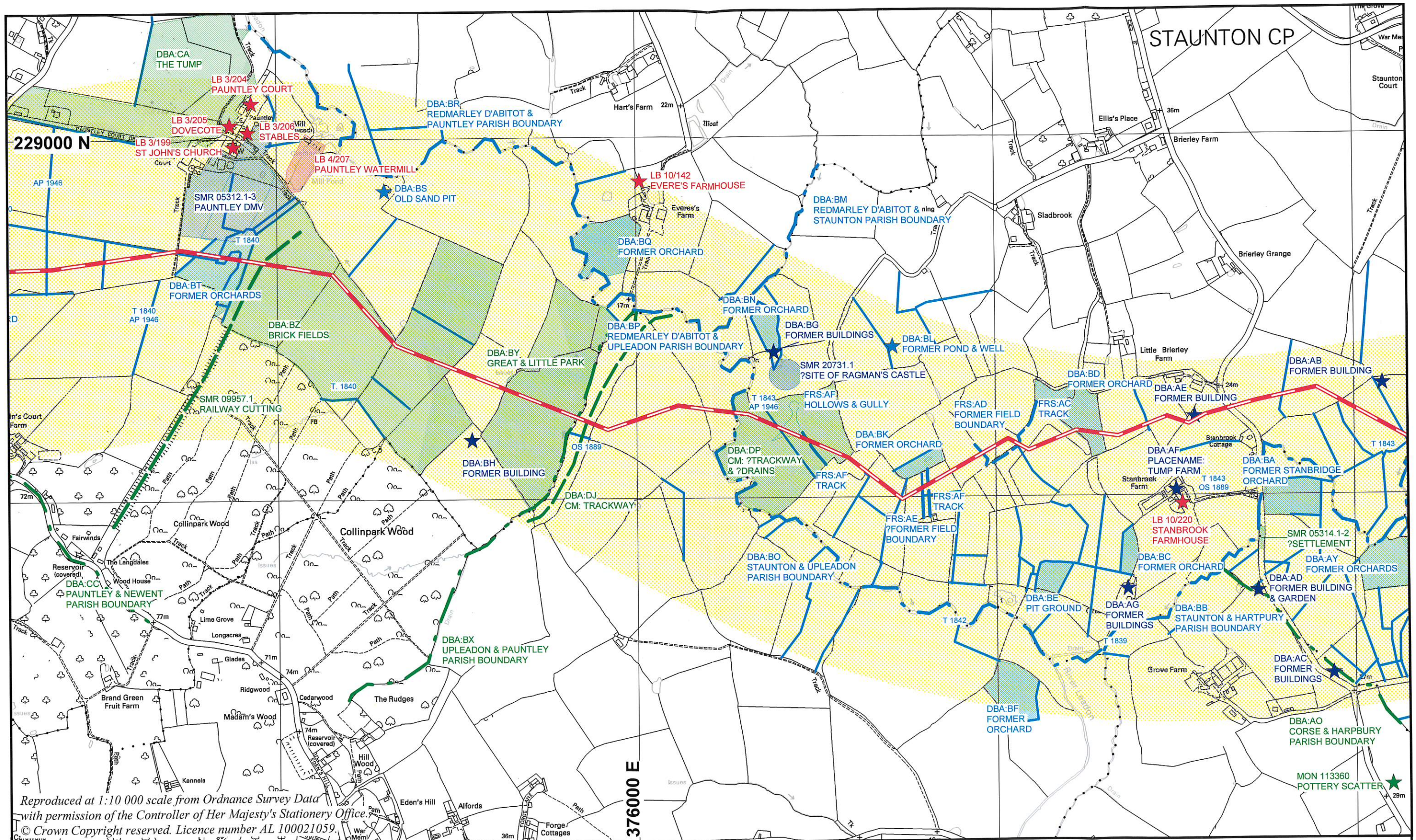


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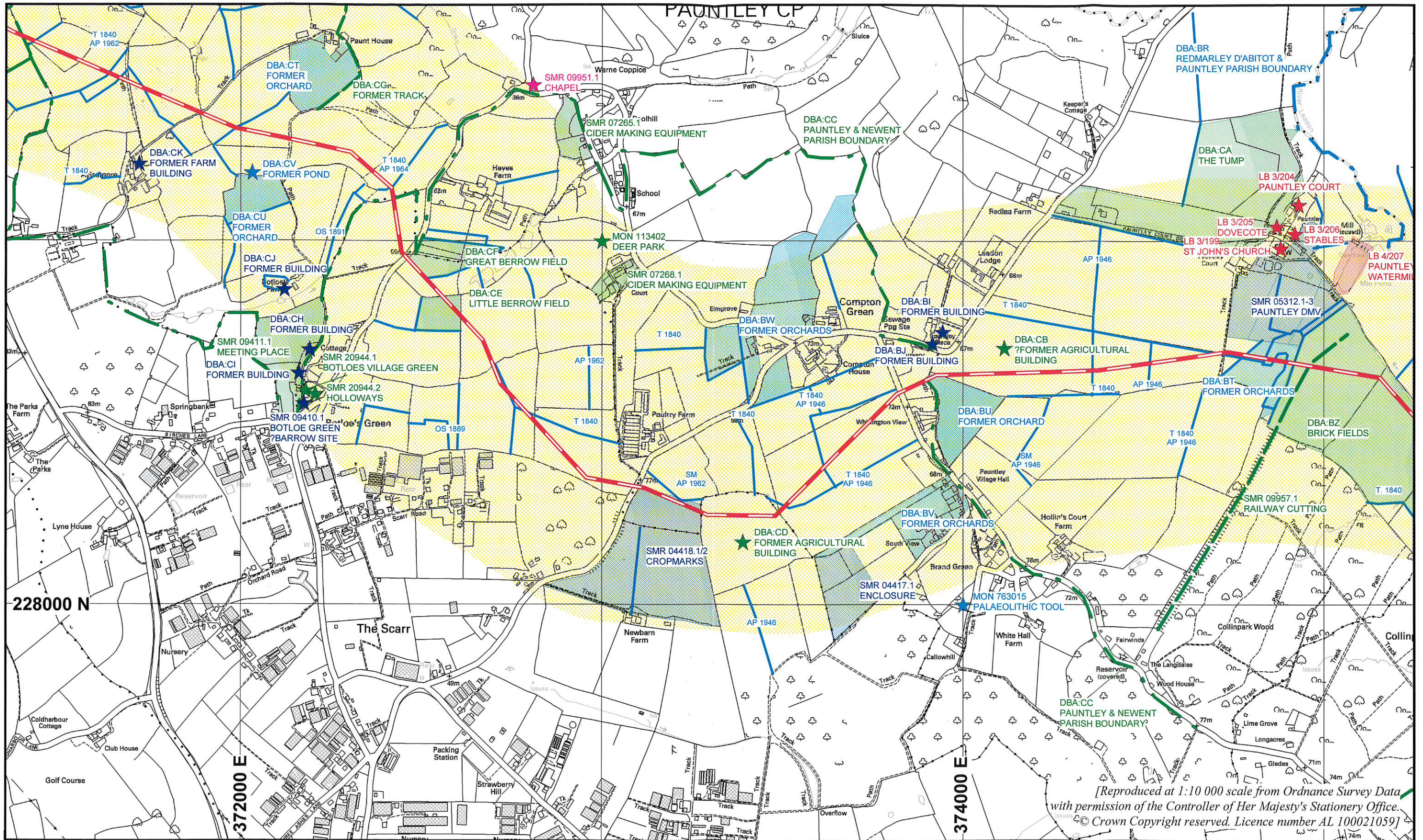
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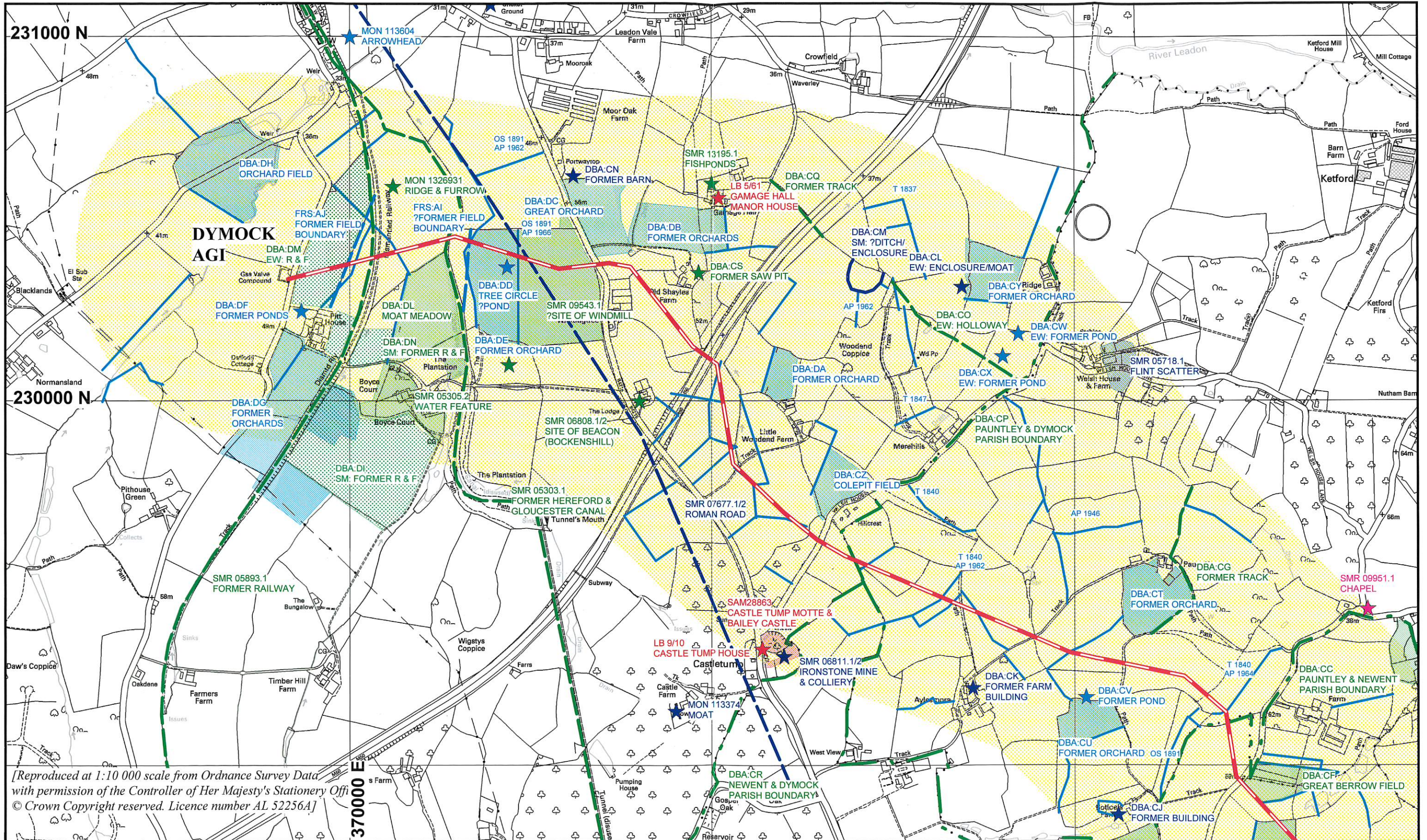


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SHEET 4



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SHEET 5

# Appendix E

HISTORIC LAND BOUNDARIES - FIGURES 2-3

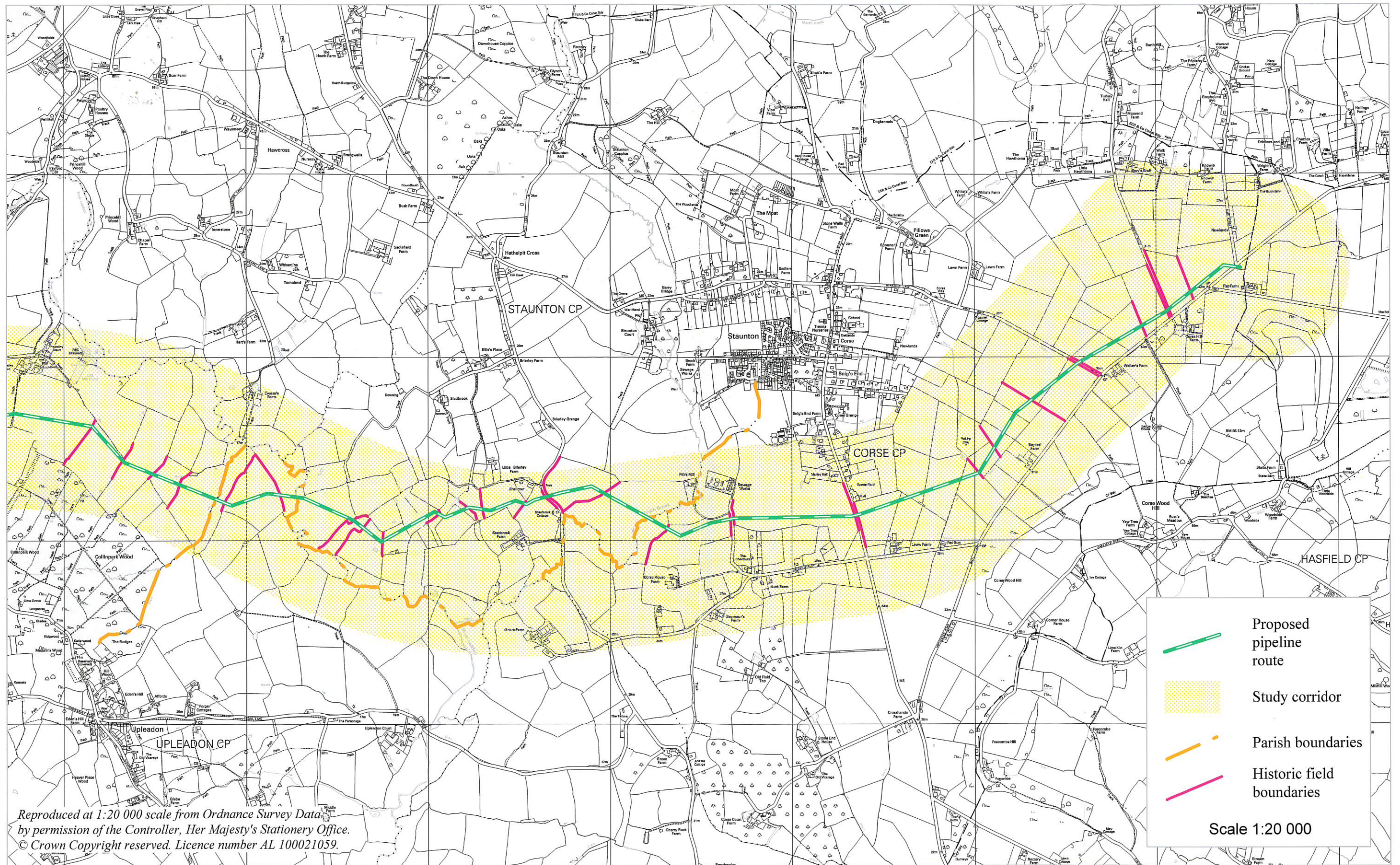


Figure 2: Historic Field Boundaries; east end of route



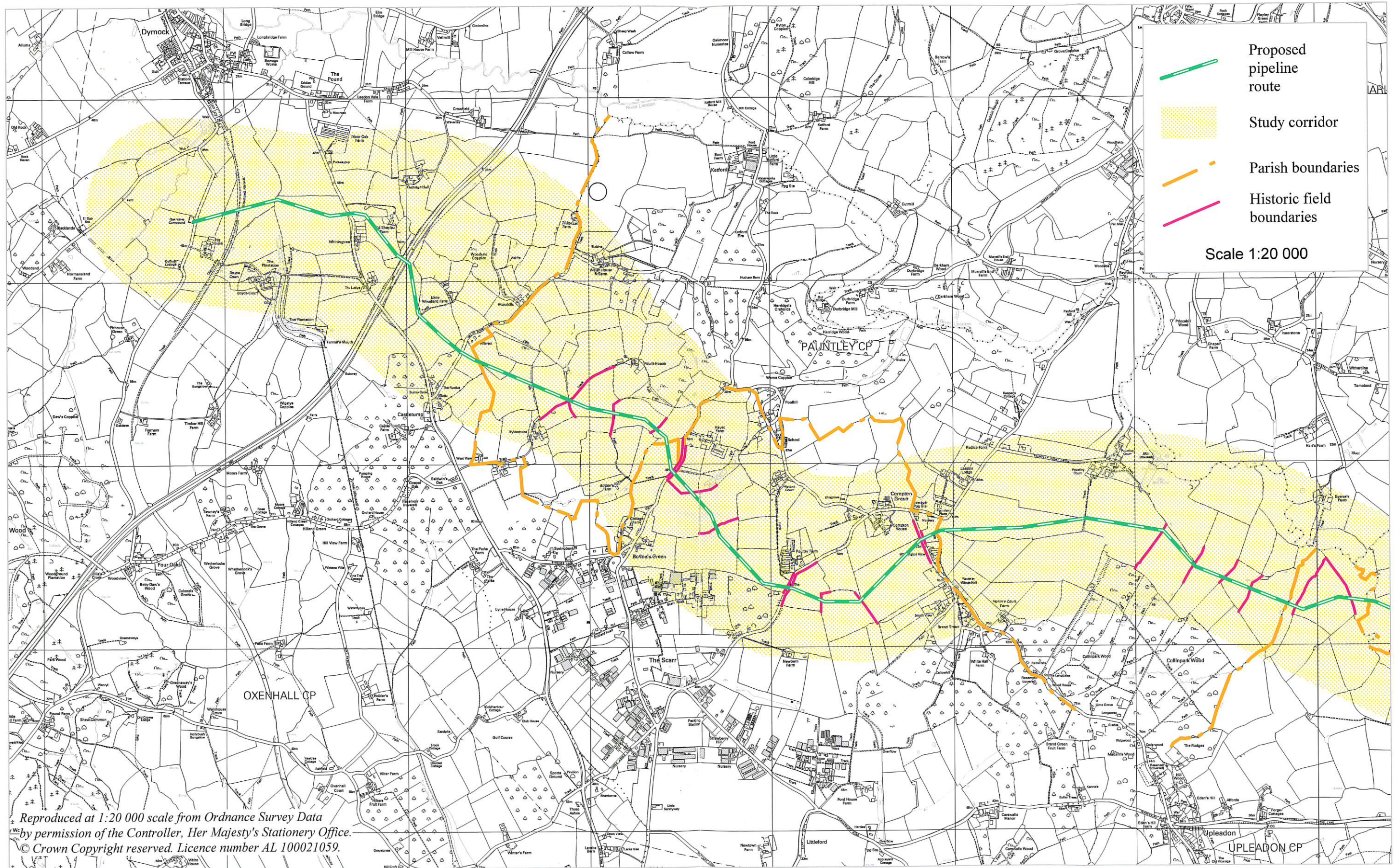
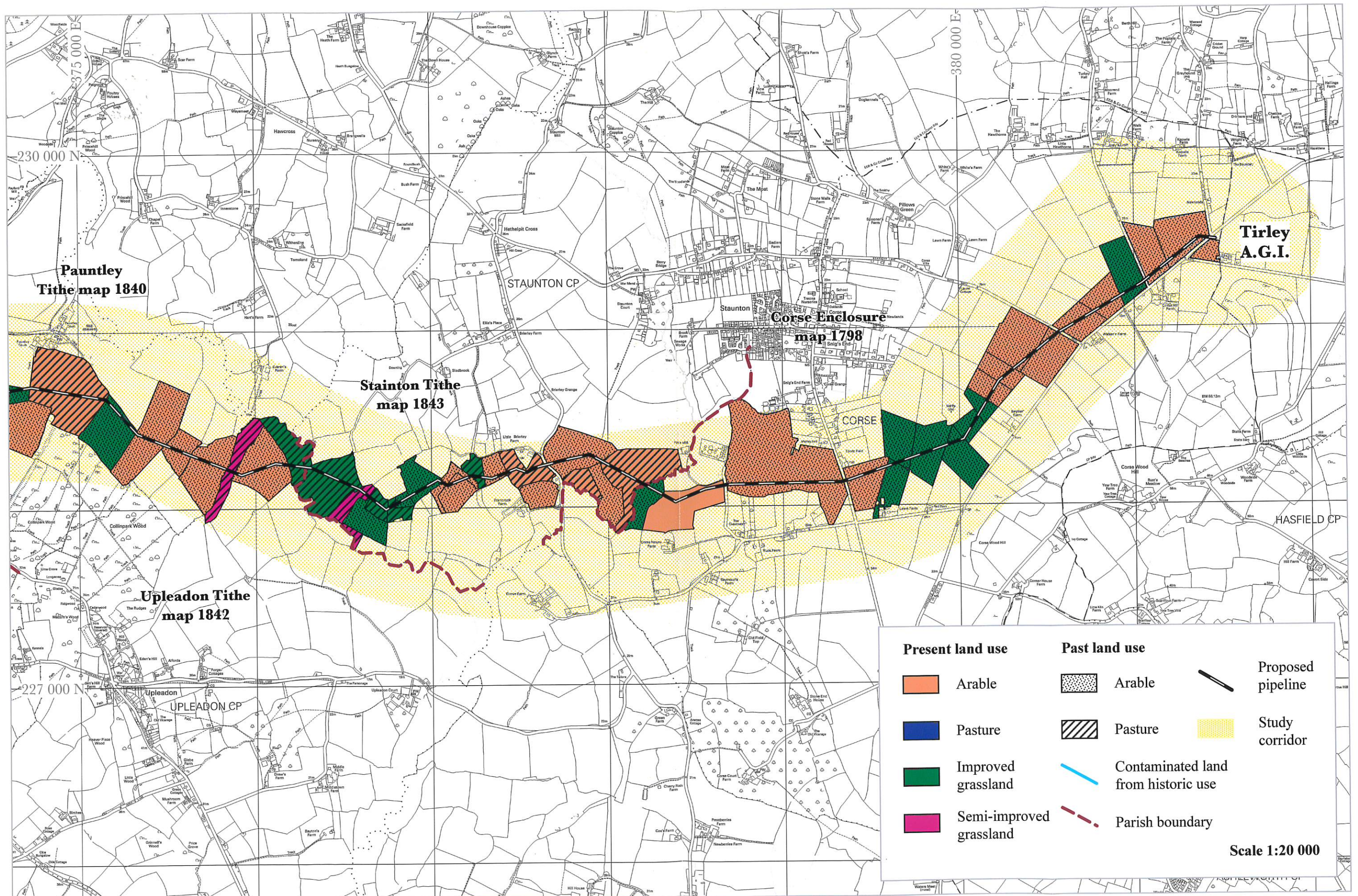


Figure 3: Historic Field Boundaries; west end of route

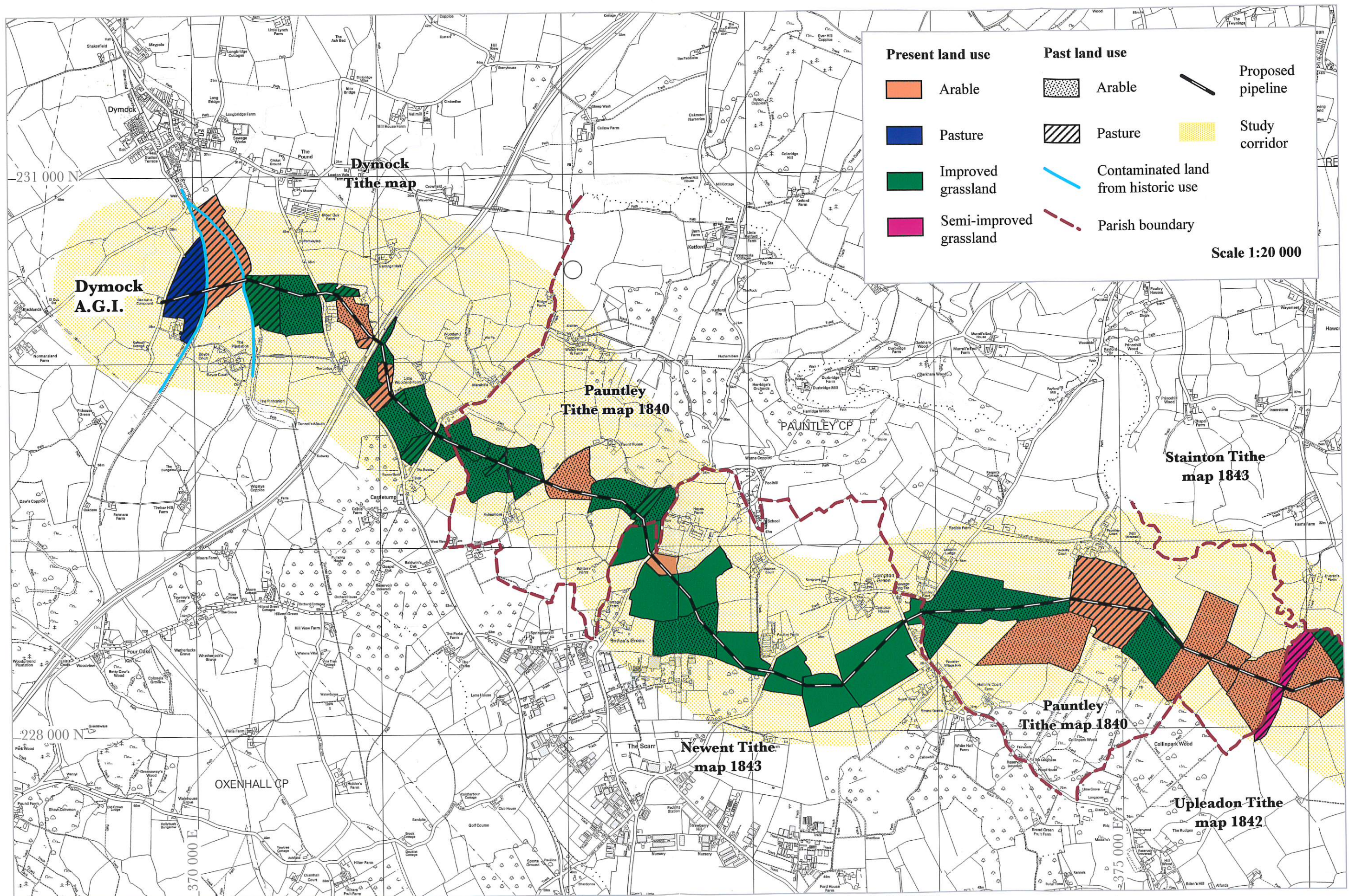
# Appendix F

PAST AND PRESENT LAND USE - FIGURES 4-5



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Figure 4: Past and Present Land Use, eastern half of route



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Figure 5: Past and Present Land Use, western half of route

# Appendix G

## GAZETTEER OF PLOT DATA

**APPENDIX G: Tirley to Dymock - Gazetteer of Plot Data**

Plot no.	Land use	Field condition and cover	Earthwork visibility	Ground visibility	Grid reference
1	AGI		poor	<25 %	SO 8142 2941
2	arable	full crop	poor	<25 %	SO 8127 2950
3	arable	full crop	poor	<25 %	SO 8109 2939
4	pasture	long cover	moderate	<25%	SO 8095 2927
5	arable	stubble/stalks	moderate	<25%	SO 8083 2913
6	arable	stubble/stalks	moderate	<25%	SO 8069 2901
7	arable	shoots	poor	25-50%	SO 8051 2881
8	arable	shoots	poor	25-50%	SO 8033 2890
9	set-aside	grass/junk	good	25-50%	SO 8024 2874
10	set-aside	remnant crop/grass/junk	moderate	25-50%	SO 8017 2865
11	pasture	short cover	good	<25%	SO 8013 2854
12	pasture	short cover	good	<25%	SO 8006 2844
15	pasture	short cover	moderate	<25%	SO 7965 2835
16	pasture	short cover	good	<25%	SO 7963 2813
17	arable	shoots	good	<25%	SO 7947 2811
18	arable	full crop	poor	<25%	SO 7901 2819
19	arable	full crop	poor	<25%	SO 7840 2798
20	pasture	long cover	poor	<25%	SO 7819 2801
21	arable	full crop	moderate	<25%	SO 7805 2812
22	arable	full crop	poor	<25%	SO 7780 2830
23	arable	full crop	poor	<25%	SO 7760 2812
24	arable	full crop	poor	<25%	SO 7741 2823
25	pasture	long cover	poor	<25%	SO 7724 2819
26	woodland	thick undergrowth	poor	<25%	SO 7708 2815
27	arable	full crop	poor	<25%	SO 7713 2807
28	arable	full crop	poor	<25%	SO 7691 2816
29	pasture	short cover	moderate	<25%	SO 7681 2799
30	pasture	long cover	moderate	<25%	SO 7665 2797
32	pasture	long cover	moderate	<25%	SO 7643 2816
33	pasture	ong cover	moderate	<25%	SO 7622 2831
34	arable	full crop	poor	<25%	SO 7604 2825
35	pasture	short cover	moderate	<25%	SO 7586 2823
36	arable	full crop	poor	<25%	SO 7573 2823
37	arable	full crop	poor	<25%	SO 7557 2833
38	arable	full crop	poor	<25%	SO 7539 2840
39	pasture	long cover	poor	<25%	SO 7517 2843
40	arable/set-aside	full crop/grass/junk	moderate	<25%	SO 7493 2868
41	pasture	long cover	poor	<25%	SO 7426 2866
42	pasture	long cover	poor	<25%	SO 7398 2853
43	pasture	short cover	moderate	<25%	SO 7387 2863
44	pasture	long cover	moderate	<25%	SO 7367 2835
45	pasture	short cover	moderate	<25%	SO 7338 2819
46	pasture	long cover	poor	<25%	SO 7319 2830
47	pasture	long cover	poor	<25%	SO 7294 28431
48	pasture	short cover	moderate	<25%	SO 7265 2852
49	pasture	short cover	moderate	<25%	SO 7272 2877
50	pasture	short cover	good	<25%	SO 7248 2872
51	arable full	crop	poor	<25%	SO 7253 2890
52	pasture	long cover	poor	<25%	SO 7239 2902

Plot no.	Land use	Field condition and cover	Earthwork visibility	Ground visibility	Grid reference
55	arable	full crop	poor	<25%	SO 7204 2935
57	pasture	short cover	moderate	<25%	SO 7158 2942
58	pasture	short cover	moderate	<25%	SO 7148 2955
59	pasture	long cover	moderate	<25%	SO 7133 2956
60	pasture	long cover	moderate	<25%	SO 7121 2956
61	pasture	long cover	moderate	<25%	SO 7115 2972
63	arable	full crop	poor	<25%	SO 7092 3010
64	arable	full crop	poor	<25%	SO 7088 3023
65	pasture	long cover	poor	<25%	SO 7077 3038
66	pasture	long cover	moderate	<25%	SO 7047 3032
67	arable	full crop	poor	<25%	SO 7016 3058
68	arable	full crop	poor	<25%	SO 6998 3041

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