THE CHILTERNS GATEWAY CENTRE DUNSTABLE DOWNS BEDFORDSHIRE

ARCHAEOLOGICAL FIELD EVALUATION

Document: 2004/97 Project: CGC973

19th October 2004

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Preface

Every effort has been made in the preparation of this document to provide as complete an assessment as possible, within the terms of the specification. All statements and opinions in this document are offered in good faith. Albion Archaeology cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party, or for any loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in this document.

This report has been prepared by Dan Hounsell (Archaeological Supervisor) and Jeremy Oetgen (Project Manager). The trial trenching was undertaken by Dan Hounsell, Adam Lee, Lawrence Coalter (Assistant Supervisors) and Martin Sterry (Archaeological Technician). The figures were prepared by Joan Lightning (CAD Technician). The artefact summary was prepared by Jackie Wells (Finds Officer). The project was under the overall management of Drew Shotliff (Operations Manager).

Very valuable advice on the interpretation of geophysical survey data was given by Alistair Webb (Archaeological Services WYAS).

Albion Archaeology is grateful to Doug Howlett of Hannah Reed and Associates Ltd for commissioning the project on behalf of the Dunstable and Whipsnade Downs Gateway Partnership. Thanks are also extended to the staff of the National Trust – Jeremy Sutton (Estate Manager) and Angus Wainwright (Regional Archaeologist) for their advice and assistance during the evaluation. We would also like to acknowledge the comments of Martin Oake, County Archaeological Officer who monitored the site on behalf of Bedfordshire County Council.

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19th October 2004

Structure of this Report

Section 1 serves as an introduction to the site, describing its location, archaeological background and the aims of the project. The methodology and results of the trial trenching are discussed in section 2, while section 3 provides a synthesis of the results, and states their significance within the surrounding landscape. Section 4 is a bibliography and the subsequent appendices contain summary information on artefacts and descriptions of the contexts contained in each trench.



Key Terms

Throughout this report the following terms or abbreviations are used:

Albion Archaeology

BCC Bedfordshire County Council

BLARS Bedfordshire and Luton Archives and Records Service

CAO County Archaeological Officer

Client Hannah – Reed Associates Ltd

EIA Environmental Impact Assessment

HER Bedfordshire's Historic Environment Record

IFA Institute of Field Archaeologists

NMR English Heritage's National Monuments Record

Procedures Manual Procedures Manual Volume 1 Fieldwork, 2nd edn, 2001

Albion Archaeology



Non-Technical Summary

The Dunstable and Whipsnade Downs Gateway Partnership are investigating the renovation of the visitor facilities on the Dunstable Downs. Following an initial selection study, the favoured option is to demolish and re-landscape the current facility and construct an entirely new, purpose built, facility a little to the south. As part of a larger Environmental Impact Assessment for the selected site, Albion Archaeology was commissioned to undertake an archaeological field evaluation within the footprint of the proposed new development area, in order to consider the impact of the proposed development on the cultural heritage (archaeological remains and historic buildings) of Dunstable Downs.

Dunstable Downs are rich in archaeology, dating from the Palaeolithic period, through to the 20th Century. The scheduled Bronze Age burial mounds known as the 'Five Knolls' (which were re-used during the Anglo-Saxon period) are located near to the site, as is the ancient and nationally significant trackway known as the 'Icknield Way'. Surface finds of Roman coins have been made in the locality, and early medieval rabbit warrens (also scheduled ancient monuments) are also close by. The Downs also have a significant recent military history. The remains of the Rifle Volunteers rifle range (established 1851) lie a little to the west, while there is documentary evidence that an Admiralty telegraphy signalling station (dating from the Napoleonic period) may have existed within the Study Area itself.

For the evaluation, twelve trenches were excavated between the 16th and 30th September 2004, A number of these trenches were targeted over suspected pits/structures and areas of magnetic enhancement identified in an earlier geophysical survey (undertaken as part of the Environmental Impact Assessment).

Despite the archaeological potential of the area, little of archaeological significance was discovered. In total 15 features were recorded. The majority were small pits of uncertain function and date, which did not yield any artefacts. Several small and poorly defined linear features are interpreted as modern plough scars. One large amorphous feature is most likely to have been a backfilled, post-medieval/modern chalk quarry pit. A cluster of geophysical anomalies adjacent to the Chute Farm access road were tested and the results suggest that these comprise a group of refuse pits containing coal ash and other modern debris.

These archaeological remains are of low significance. The post holes and plough scars are probably traces of centuries of agricultural and land-management operations. There was no structural evidence relating to the documented Napoleonic War period Admiralty telegraph station, although it is probable that some of the post-medieval debris in the vicinity was brought to the site at that time. A cluster of refuse pits beside the farm access road may be associated with the construction or occupation of the station, but this is not proven conclusively.



1. INTRODUCTION

1.1 Planning Background

During 2004 the Dunstable and Whipsnade Downs Gateway Partnership were investigating the renovation of the visitor facilities on the Dunstable Downs. Initially the partnership was considering two options. Option one was to renovate and rebuild the current facility. Option two was to demolish and landscape the current facility and completely re-build at a location slightly to the south east. In July 2004 Albion Archaeology was commissioned to contribute to a site selection study which considered the respective impacts of the two options on the cultural heritage (archaeological remains and historic buildings) of the Dunstable Downs. Subsequently, the second option (demolition of the old centre and construction of a new, purpose built, centre) was chosen to be taken forward as a planning application. In support of this application, Albion Archaeology was commissioned to prepare the cultural heritage chapter of an Environmental Impact Assessment Report for the development.

Bedfordshire County Council's, County Archaeological Officer (BCC CAO) had indicated that existing knowledge of the archaeology of the proposed site was not sufficient to enable the impact to be assessed. The CAO therefore advised that the EIA should include provision for archaeological field evaluation of the land within the footprint of the proposed new visitor building and associated car parking. It was agreed that the EIA should include a report on the results of a geophysical survey (detailed magnetometer survey) and an agreed method statement for trial trench excavation.

In order to avoid undertaking trial excavation on the downs during the busy summer period, it was agreed that the trial trenching could be undertaken in the early autumn, after submission of the EIA, but before the planning application was determined.

As a result a Project Design for this fieldwork was appended to the Albion Archaeology Impact Assessment (Albion Report 2004/73, appendix 8).

1.2 Site Location and Description

The proposed development relates to the open area of land at the top of Dunstable Downs (Figures 1 and 2), which is owned by Bedfordshire County Council and the National Trust, and is managed by the Trust on behalf of the County Council. The proposed new visitor centre and car parking areas are to be located on land beside the access road to Chute Farm, at grid reference TL 008 190. The land is at an average height of 241.67m AOD. The southern half of the area that was evaluated (the Study Area) lay within an area of fallow agricultural fields (owned and farmed by the National Trust and with restricted public access) while the northern half the Study Area lay within the grassland of the Dunstable Downs (free public access).

To the north, south and west the Study Area is surrounded by National Trust land (the Dunstable Downs), while to the east the Study Area is bounded by the B4541



(concealed by a mature hedge line which bordered the site to the east). The Study Area is irregular in shape (following the footprint of the proposed new visitor centre and car park), approximately 2ha in size and *c*. 2km south of the centre of modern Dunstable.

The underlying geology consisted of solid chalk, overlain to the south of the Study Area by clay-with-flints (British Geological Survey 2001).

1.3 Archaeological Background

The archaeological and historical background of the Study Area, and how it fits into the wider historic environment has been discussed in detail in Albion's contribution to the Environmental Impact Assessment (EIA). A thorough and detailed archaeological background to Dunstable as a whole is presented in Albion Archaeology's *Extensive Urban Survey for Bedfordshire: Dunstable Archaeological Assessment* (Albion report 2001/03). A summary of the relevant information from these two sources as pertaining to the Study Area is presented below.

1.3.1 Prehistoric (pre AD 43)

The Study Area is set in an environment which is rich in archaeology, dating from the Palaeolithic period, through to the 20^{th} Century. The finds from the earliest periods are limited to finds spots of stone tools, in particular Neolithic hand axes (such as HER12149 and 13575). However, there is much more significant evidence for the later prehistoric periods. This includes the 'Five Knolls' (HER138/SAM20422), a group of Bronze Age burial mounds which consists of two bowl barrows and three bell barrows c. 1.5 km to the north of the Study Area. Theses are associated with two further pond barrows – visible as hollows beside the mounds and representing a very rare type of archaeological monument.

The Study Area also lies near to the route of a significant ancient trackway know as the Icknield way (HER 353). This trackway is believed to have existed, and have been actively used, from the Neolithic period right through to the late medieval period. This way is believed to have run from the Thames at Goring (Oxfordshire) to the Wash, and is best perceived as a broad corridor within which a number of ancient roads and tracks existed, which were navigated by the traveller to achieve regional/national movement. A section of this way has been identified as running close to the current Study Area (*c.* 100m to the west), just off the chalk scarp, and has also been positively identified via excavation in Dunstable itself, including an excavation recently undertaken by Albion (Albion report 2004/76).

1.3.2 Romano-British (AD 43–410)

The modern town of Dunstable has its origins in the Roman period during which a small town, known as *Durocobrivis*, developed at the crossroads of a Roman road known as Watling Street (now approximated by the line of High Street North and High Street South) and the Icknield Way (now defined by the line of Church Street and West Street). However, there is little evidence of the Roman period associated with the Study Area. There have been a number of surface finds of Roman coins



from nearby and there are earthworks of Roman date on the scarp of the Downs (HER 5114) is some evidence that a small Roman settlement may have existed c. 0.9km to the east (HER 1465). There is evidence of late Roman or early Saxon reuse of the Five Knolls for burial purposes.

1.3.3 Anglo Saxon (AD 410-1066)

The only evidence for this period on Dunstable Downs consists of nearly 100 burials cut into the sides of the early 'Five Knolls' 'mound' barrows. This is a highly localised phenomenon, clearly centred on the ancient mounds. Saxon burials are not therefore expected within the present Study Area.

1.3.4 Medieval to Modern

Population pressure from the 11th century AD onwards led to woodland clearance as the need for arable farmland grew. The lynchets on Dunstable Downs (HER2604 and 13581) may be the result of attempts to extend the cultivable area onto the steeper slopes of the chalk uplands. In general, however, this land was more suitable for sheep pasture. The only other evidence for the medieval period, associated with the Study Area consists of two rabbit warrens, which attest to the Norman introduction of this alien species. These warrens are scheduled ancient monuments (SAM 24409). Near the Study Area, there is some evidence for the Down's military history. The remains of the Rifle Volunteers Rifle range (established 1851) lie a little to the west (just beyond the scarp), and there is documentary evidence that a Admiralty Telegraphy signalling station (dating from the Napoleonic period) may have existed within the Study Area itself (HER 11211; NMR 359480; Lutt, p19). This station was part of the Yarmouth line and was abandoned in 1814. A watercolour in the collections of the Luton Museum and Art Gallery (Figure 10) is dated 1819, but it is thought that this was painted from memory.

The Study Area is very close to the London Gliding Club (c. 0.75km to the west). Its landing ground was first shown on the Ordinance survey map of 1937, and today part of the northern half of the site is designated as an emergency landing area for the gliders.

1.3.5 Previous Archaeological Work

No prior Archaeological work has been undertaken within the Study Area. Much work has been undertaken around the area – specifically within Dunstable itself. These works are detailed in Albion Archaeology's *Extensive Urban Survey for Bedfordshire: Dunstable Archaeological Assessment*. A geophysical survey was undertaken for the EIA by Archaeological Services WYAS.



2. TRIAL TRENCH EXCAVATION

2.1 Introduction

The trial trenching took place between the 16th and 30th September 2004. Twelve trenches were opened, each approximately 30m long by 1.8m wide, and comprising a total area of *c*. 648m². Figure 2 illustrates the location of these trenches within the footprint of the proposed development. A number of the trenches (numbers 8, 9 and 3) was placed so as to target areas of magnetic enhancement, including a potential pit alignment, which were picked up during prior geophysical survey work undertaken as part of the Impact Assessment (Archaeological Services WYAS). Trenches 11 and 12 were placed to target the potential location of the Napoleonic signalling station, as identified in an OS map of 1804–15. The remaining trenches were located to provide a broad general coverage of the site.

2.2 Aims and Method Statement

Throughout the project the standards set out in the following documents were adhered to:

- IFA's Standard and Guidance for Field Evaluation;
- Albion Archaeology's *Procedures Manual for Archaeological Fieldwork and the Analysis of Fieldwork Records* (1996);
- IFA's Code of Conduct;
- English Heritage's Management of Archaeological Projects (1991).

The original location of Trench 12 was altered due to the presence of a copse of mature trees. This change was discussed with, and approved by, BCC's CAO. Figure 2 illustrates the final location of this trench. Appendix 1 defines the main objectives of the individual trenches. In summary, these were designed to gain information on:

- the location, extent, nature and date of any archaeological features or deposits that might be present;
- the integrity and state of preservation of any archaeological features or deposits that might be present.

Topsoil and modern overburden were mechanically removed by a tracked 360° mechanical excavator fitted with a toothless ditching bucket. This was conducted under close archaeological supervision. These deposits were removed down to the top of the archaeological deposits, or undisturbed geological deposits, whichever was encountered first. The project design proposed the dry sieving of a sample of the subsoil from each trench (to be taken at 5m intervals down the length of each trench). However these samples were proving to be barren and, following a site inspection by the BCC CAO, this work was deemed unnecessary and discontinued. The spoil heaps were scanned for artefacts, by eye and with a metal detector.

The bases and sections of all trenches were cleaned by hand. The deposits and any potential archaeological features were noted, cleaned, excavated by hand and



recorded using Albion Archaeology's *pro forma* sheets. The trenches were subsequently drawn, and photographed as appropriate. All deposits were recorded using a unique recording number sequence commencing at 100 for Trench 1, 200 for Trench 2 and so on.

The trenches were inspected by BCC's ACAO prior to being backfilled. The National Trust's Regional Archaeologist was unable to visit the site, but was informed of progress.

2.3 Trench Location Strategy

Trenches 1, 2, 4–7, and 10 were not targeting any previously identified features and were therefore evenly spaced to give broad coverage. A weak south-east to north-west trend of magnetic enhancement identified by the geophysical survey (EIA, Appendix 3) crossed **Trench 5**, but this was thought unlikely to be archaeologically significant. A baulk was left in the middle of Trench 6 to avoid the need to dismantle the field boundary fence.

Trenches 8 and 9 tested a possible pit group or structure beside the access road, which had been identified by the geophysical survey.

Trench 3 was L-shaped and intended to look for evidence for structural form in the centre of the area of magnetic enhancement identified by the geophysical survey. This was thought likely to have been relatively modern bonfire residue, although it could have been caused by ancient hearths or pyres.

Trenches 11 and 12 were located to check for any buried remains of structures adjacent to the public highway, which is the most likely site of the Napoleonic telegraph station that is shown on the early OS map. **Trench 12** was realigned to avoid interfering with a farm access route.

2.4 Results

The trial trench evaluation revealed only a very few archaeological features, 15 in total, in seven trenches (see Table 1 below). The majority of these were small pits of uncertain date and function and, small, poorly defined, linear features (likely to have been plough scars). A number of more modern features (a pit and a ditch) are also included in this number. A single, extremely large feature was noted in **Trench 6**, the nature and function of which remained unclear. These features, grouped by type, are discussed in more detail below and illustrated in Figures 4–9; detailed technical information on each trench can be found in Appendix 1.

2.4.1 Deposit Model

The overburden was fairly homogenous across the site (see Figures 3–6). A moderately thick topsoil (varying between 0.20m - 0.40m thick), consisting of a loose mid brown slightly clayey silt, typically directly overlay the natural drift geology. Usually this was solid chalk, however in places this chalk gave way to a compact and plastic, dark-red clay which contained numerous, large, chalk and flint inclusions ('clay-with-flints'). A thin, silty-clay subsoil overlay this claywith-flints and sondages through it confirmed that it overlay solid chalk at a depth



of between 0.40m - 0.80m. Clay-with-flints dominated **Trenches 8, 9, 10 and 11**, and was present as sporadic patches in **Trenches 5, 7 and 12**.

Trench	Feature	e types		
No.	Pits	Furrows	Amorphous]
1	V	V		1
2	1			No archaeological features
3	~			were identified in
4		V		Trench 7 and
5	V	~		Trenches 9–12
6			✓	7
8			V	7

Table 1: Distribution of archaeological features by type

2.4.2 Pits

Trenches 1, 2, 3 (Figure 4) and **Trench 5** (Figure 5)all contained small pits of varying size and definition. **Trench 1** contained four small, roughly circular pits ([103], [105], [107] and [109]), while a single, small, more oval pit was seen in **Trench 2** ([204]). All of these demonstrated a slightly irregular, concave and generally 'bowled' profile. They all also contained a dark red, silty clay fill, similar to the clay subsoil noted above. In addition to a small oval pit (**Trench 2**) also contained a larger (c. 1.15m x >0.75m x 0.12m) more circular pit, which extended beyond the edge of excavation. This feature demonstrated a straighter steeper profile, a flatter base and a fill similar to the other pits noted in **Trenches 1** and 2. None of fills of these features contained any artefacts. As a result of this combined with the seemingly random scatter of the features and their general nature (small, poorly defined and containing a single natural infill), the function of these pits remains unclear. All of these features did however appear to be sealed by the topsoil, indicating that they were unlikely to be of a very modern date.

Trench 4 contained a single small, circular, pit ([402]) (Figure 5). This feature demonstrated straight, near vertical sides and a flat base, which had a narrow V-shaped hollow in it. This feature may well have been a post hole, possibly indicating the post line of an earlier boundary fence (the feature is *c*. 10m south of the current post line). The hollow in the base possibly represents a tool mark left by the spade used to cut the pit. The fill was a loose, dark silt, very like the topsoil – indeed it appeared to merge into, rather than be sealed by, the topsoil – indicating a more recent date. No organic matter (i.e. decayed post remains) was present in the fill, and no artefacts were found.

A large pit (extending beyond the edge of excavation) was also present in **Trench 3** ([302]). However, excavation of this feature uncovered a number of modern (20th century) artefacts, including pottery and glass and the remains of tin cans. As a result excavation was halted before the feature was completely excavated. It is worth noting that it was probably the contents of this pit that resulted in the enhanced magnetic reading of the geophysical survey in this area.



2.4.3 Furrows

Trenches 1, 4 and 5 all contained similar linear features ([111], [404], [406] and [503]) (Figure 8). These feature were all narrow (<0.20m) and shallow (<0.15m) with irregular V-shaped profiles and topsoil type fills which merged into the overburden. Those present in **Trenches 1 and 4** were aligned north-east to southwest while that seen in **Trench 5** was aligned perpendicular to these, north-west to south-east. These features probably represent plough scars or furrows, and are indicative of the agricultural legacy of the Study Area.

2.4.4 Amorphous Features

Trenches 6 and 8 contained features which did not easily fall into either of the categories above. Trench 6 was dominated by a single large feature which extended beyond the bounds of the trench ([605]) (Figure 5 and 9). As a result only a relatively small sample profile of the feature could be examined, from a box slot excavated on its southern edge. This slot demonstrated a gradually sloping, very irregular profile and a highly irregular base. The visible section of the slot illustrated the presence of a number of distinct fills within the feature. These consisted of an early deposition of badly weathered chalk (loose, yellow and broken) followed by successive, alternate, fills of less weathered (whiter and more solid) chalk, and dark red/brown clay, with inclusions of stone and chalk (similar to a re-deposited form of the natural clay seen in this and other trenches – section 2.3.1 above). Tip lines in the fill were visible in the trench baulk, along the entire length of the trench and within the subsoil, indicating not only that the feature extended beyond the bounds of the trench, but also that the feature was sealed by topsoil only.

A small number of artefacts were recovered from the fills of this feature, including pottery and corroded wrought-iron items. These appeared to indicate a post medieval / modern date for the feature. The exact nature of this feature was unclear, however its apparent size (>30m long and >2m wide) indicated a substantial feature that must have been some form of quarry or marling pit. Chalk quarrying is known to have commonly taken place across the Chilterns, although this explanation would appear to be at odds with the presence of chalk tip lines – indicating chalk being dumped back into the feature.

The upper fills of the feature had, at the northern end of the trench, been truncated by a small, irregular L-shaped pit ([603]), the topsoil type fill of which contained the corroded remains of a relatively modern iron boot heel.

It is notable that when the topsoil from this trench was scanned a large number of modern nails were found – as well a scraps of metal cans and a small part of a vehicle chassis. It is likely that it was these items which accounted for the magnetic enhancement in this area. The geophysical survey did not specifically identify feature [605], but this may be because it was masked by the general spread of anomalies and 'iron spikes' in the vicinity.

Trench 8 contained a single feature, [803]. In plan this appeared to be an irregular linear feature. However it extended beyond the boundaries of the trench and thus its true form could not be ascertained. Excavation revealed that the feature was



shallow with irregular and asymmetrical sides and a slightly concave base. The feature contained three fills. The lower fill was a dark brown, silty fill that contained a number of modern artefacts, including glass and a brick (unfrogged). In addition to these items this fill also contained a great deal of slag and numerous fuel waste inclusions – fragments of spent coke – as well as a few fragments of an unidentified pink-coloured material (see Figure 9e). The latter looked like burnt chalk, but was unusually heavy and smelled of linseed oil. It was possibly some kind of putty or mastic sealant. The natural chalk that this fill sat on did not, however, show any indication of having been heated. Thus it would appear that the fill was representative of waste material dumped from some other site where the original heating had taken place. Above this fill there was a small layer of fairly clean, dumped, sand and then a layer of material which appeared to represent a backfilled, re-deposited, subsoil.

The interpretation of this feature is unclear. It may simply have been a pit dug to dispose of residue from a fire, although the presence of coke or coal would suggest this was more than a bonfire.

The presence of the burnt fill material – at a relatively shallow depth below the ground surface would account for the magnetic enhancement noted in this area. It is therefore probable that the similar magnetic anomalies recorded in the area were caused by features of similar nature, and this suggests that feature [803] forms one of a series of ash-filled pits clustered around a sub-rectangular area. **Trench 9** was also targeted on this area. This trench was blank, indicating that the anomalies are discrete features with nothing in between them.

It is possible that this group of features may have been associated with the Napoleonic telegraph station: they perhaps contain ash derived from coal fires used for cooking and heating by the men stationed there. However there is insufficient dating evidence to confirm this, and the ash may equally well have come from raking out the firebox of an agricultural steam engine, or similar.



3. SYNTHESIS

3.1 Significance of Results

The archaeological features identified by trial trenching are of negligible or very low significance, and the majority were probably traces of sporadic and not very intensive agriculture and general land management activities over a long period.

Three undiagnostic flint flakes recovered from topsoil are likely to represent nothing more than 'background scatter'. The ridge of the Downs provides excellent views over the surrounding countryside, and it is to be expected that it was frequented by early prehistoric hunters, migrants and travellers. Occasional finds of lost or discarded artefacts are therefore highly likely.

A number of smaller pits are possibly of quite ancient date, although there was no artefactual evidence to prove this. Further archaeological investigation of a wider area may, however, reveal additional isolated features and enable the identification of any patterns of distribution that might may assist interpretation. Other features (post holes and plough scars) are probably fairly recent indicators of the agricultural nature of the land.

No structural remains of the Napoleonic War period telegraph station were identified in the trenches. This suggests either that it was not located within the Study Area or that it must have been a very insubstantial installation which was completely dismantled, leaving little or no trace on the ground.

It is possible that some of the post-medieval artefacts and waste materials found on the site are relics of this early nineteenth-century occupation, and the group of magnetic anomalies tested by Trenches 8 and 9 could possibly mark the perimeter of the site of the telegraph itself. This is a very speculative interpretation, however, and more extensive investigation in the area of these anomalies may provide tighter, more conclusive dating evidence.

The telegraph is depicted in a watercolour, now in the Luton Museum and Art Gallery (see Figure 10). This is considered to be a fairly faithful representation, although it was probably painted from memory, giving rise to one or two inaccuracies.

The watercolour seems to show that the station comprised a wooden gantry c. 10m tall, mounted on the apex of a single-storey gable-roofed hut. The hut appears to have measured about 7m square, with a lean-to shed on one side. One wall of the hut is drawn with vertical lines that possibly represent staves of timber cladding. There is a single (?red brick) chimney stack that appears to be separate from the main structure, providing further evidence that the hut was constructed of timber. Comparative illustrations (see Figure 11) support the view that the telegraph was probably a largely self-supporting timber structure that may well have been built on sleepers and therefore had very little impact on the ground.



The large pit observed in Trench 6 is most likely to have been a quarry, possibly to obtain chalk for use in marling the fields on the clay-with-flints to the south. As such, this feature is representative of minor industrial activity in the Chilterns in the last 200 years or so.

The remaining magnetic anomalies noted by the geophysical survey are accounted for by modern features and/or scatters of modern material in the topsoil.

3.2 Summary

The Study Area is located in a landscape rich in archaeological remains of most periods, and existing records indicated that it may have been the site of an early nineteenth-century Admiralty telegraph station. Detailed geophysical survey of the entire Study Area had also identified a small number of anomalies that may have been of archaeological origin, along with several more areas of magnetic disturbance within a general background of readings indicative of modern contamination.

The trial excavation of c. 3% of the Study Area targeted the key geophysical anomalies and sampled the apparently blank areas to test for remains that were not susceptible to magnetic survey. However, the only archaeological features encountered in the trenches were either undated or post-medieval/modern in date. Based on the evidence so far revealed, these features are of negligible or low archaeological or historical significance, although further archaeological investigation of larger areas may reveal additional evidence that might assist more specific interpretation and dating.

No structural remains of the telegraph station were found, but the presence of post-medieval/modern artefacts and refuse deposits in the south of the Study Area suggests that further archaeological investigation would have a fairly high potential to yield artefacts and features associated with this period. Such archaeological evidence would be important as it may enhance and corroborate the evidence of historical sources, particularly if it were to confirm that the Study Area was indeed the site of the telegraph.



4. BIBLIOGRAPHY

- Albion Archaeology, 2000, Procedures Manual, Volume 1: Fieldwork. 2nd Edition
- Albion Archaeology, 2003, Extensive Urban Survey For Bedfordshire: Dunstable Archaeological Assessment, Albion Archaeology Report 2001/03
- Albion Archaeology, 2004, Land At Victoria Allotments, West Street, Dunstable, Bedfordshire: Archaeological Field Evaluation, Albion Archaeology Report 2004/76
- Albion Archaeology, 2004, *The Chilterns Gateway Centre, Dunstable Downs, Bedfordshire: Impact Assessment for Archaeology and Cultural Heritage*, Albion Archaeology Report 2004/73
- Archaeological Services WYAS, 2004, Chilterns Gateway Centre, Dunstable Downs, Bedfordshire: Geophysical Survey, ASWYAS Report no.1273
- Harrison, S, 2003, 'The Icknield Way: Some Queries'. *Archaeological Journal*. Vol.160.
- Hindle, P, 1998, Medieval Roads and Tracks. Shire Archaeology Books.
- Lutt, N, 1997, *Bedfordshire at War* (Britain in Old Photographs series), Sutton Publishing
- Royal Signals, 2001, *The Royal Signals Org.UK Datasheets .. Mechanical Telegraphy Page 1* [online], available http://www.royal-signals.org.uk/telegraph.php.htm (accessed 20/07/04)
- Smith, W G, 1904, Dunstable: Its History and Surroundings
- West End Local History Society, [not dated], *Local History Shutter Telegraph Station* [online], available: http://www.hants.org.uk/westendlhs/telegraph (accessed 20/07/04)



5. APPENDIX 1 – ARTEFACT SUMMARY

5.1 Introduction

The evaluation produced an artefact assemblage comprising pottery, roof tile, worked flint, glass and metalwork. The material was scanned to ascertain the nature, condition and, where possible, date range of the artefact types present. No finds were recovered from trenches 1, 7 or 9-12.

Trench	Feature	Type	Context	Spotdate*	Pottery**	Other finds
2	200	Topsoil	200	-		Flint flake (8g)
3	300	Topsoil	300	-		Flint flake (5g)
	302	Pit	303	Modern	11:107	Bottle glass (90g), Tin can fragments
4	400	Topsoil	400	Modern	1:7	
5	500	Topsoil	500	Post-medieval	2:13	Flint flake (5g)
6	603	Pit	604	Modern		Shoe iron
	605	Pit	608	Modern		Flat roof tile (42g), Fe ?handle
	605	Pit	610	-		Fe nail shank
8	803	Ditch	804	Modern	3:6	Brick fragments (1028g),
						dense putty-like material (440g)
				Total	17:133	

^{*} spotdate based on date of latest artefact in context

Table 2: Artefact summary by trench and context

5.2 Pottery

Seventeen pottery sherds, weighing 133g were recovered. These were examined by context and quantified using minimum sherd count and weight. Fabrics are of post-medieval and modern date, and comprise 17th–18th century glazed earthenware, modern flower pot, and teapot fragments (*c*. 1950's).

5.3 Other finds

With the exception of three worked flints, all other finds are modern in date. They include green, brown and clear bottle glass, tin can fragments, brick and tile and miscellaneous iron objects.

The origin of the putty-like material from Trench 8 is unknown. It's composition has not been analysed, but its smell suggests that is linseed-oil based and its relatively high mass implies that it contains a very dense (lead?) filler. See Figure 9e

^{** [}sherd/frag count]:[weight in grammes]



6. APPENDIX 2 – TRENCH AND CONTEXT SUMMARIES



Max Dimensions: Length: 30.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.27 m. Max: 0.38 m.

OS Co-ordinates: Ref. 1: TL7458950925 Ref. 2: TL7758350916 Reason for trench: Testing area where geophysical survey was relatively blank

Context:	Type:	Description: Exca	avated: Finds	Present:
100	Topsoil	Loose mid brown silt frequent small-medium chalk, moderate small-large stones Max depth 0.30m	✓	
101	Subsoil	Firm mid grey brown chalky silt frequent small-large chalk, occasional small-medium stones Max depth 0.30m	V	
102	Natural	Compact light grey white chalk moderate small-large stones Natural Chalk and Flint		
103	Pit	Circular profile: concave base: concave dimensions: max breadth 0.5m, max deptl 0.23m, max length 0.5m	1	
104	Fill	Plastic dark red brown silty clay moderate small chalk, frequent medium-large stones Depth 0.23m	✓	
105	Pit	Sub-oval profile: 45 degrees base: v-shaped dimensions: max breadth 0.52m, max depth 0.2m, max length 0.78m	V	
106	Fill	Plastic dark red brown silty clay moderate small chalk, frequent small-large stones Depth 0.2m	✓	
107	Pit	Sub-circular profile: 45 degrees base: uneven dimensions: max breadth 0.37m, madepth 0.19m, max length 0.5m North side is steep, straight and near vertical, south side is irregular and 45 degrees.		
108	Fill	Plastic dark red brown silty clay moderate small chalk, frequent small-large stones Depth 0.19m	✓	
109	Pit	Circular profile: concave base: flat dimensions: max breadth 0.5m, max depth 0.12m, max length 0.47m	V	
110	Fill	Plastic dark red brown silty clay Depth 0.12m	~	
111	Furrow	Straight linear profile: near vertical base: flat dimensions: max breadth 0.25m, max depth 0.15m, max length 2.55m	V	
112	Fill	Friable dark brown silt frequent small chalk, frequent small stones Depth 0.15m	✓	



Max Dimensions: Length: 30.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.18 m. Max: 0.32 m.

OS Co-ordinates: Ref. 1: TL7984052190 Ref. 2: TL7975049196 Reason for trench: Testing area where geophysical survey was relatively blank

Context:	Type:	Description: Excav	vated:	Finds Present:
200	Topsoil	Loose mid brown silt frequent small-medium chalk, moderate small-large stones Max depth 0.24m	✓	✓
201	Natural	Compact light grey white chalk moderate small-large stones Natural chalk and flint		
202	Pit	Sub-oval profile: concave base: flat dimensions: max breadth 0.75m, max depth 0.12m, max length 1.15m Partially obscured by bulk	✓	
203	Fill	Friable dark red brown clay silt occasional flecks chalk, frequent small stones Depth 0.12m	✓	
204	Pit	Oval profile: concave base: concave dimensions: max breadth 0.45m, max depth 0.15m, max length 0.57m	✓	
205	Fill	Friable dark brown clay silt frequent small chalk, frequent small stones Depth 0.15m	✓	



Max Dimensions: Length: 35.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.17 m. Max: 0.19 m.

OS Co-ordinates: Ref. 1: TL8219651768 Ref. 2: TL8161149270

Reason for trench: L-shaped trench to testing large area of magetic enhancement

Context:	Type:	Description:	Excavated:	Finds Present:
300	Topsoil	Loose mid brown silt frequent small-medium chalk, moderate small-large stones depth 0.20m	Max	V
301	Natural	Compact light grey white chalk moderate small-large stones Natural chalk and fl	int 🗆	
302	Pit	Sub-circular profile: concave dimensions: max breadth 1.4m, max length 2.6 Feature not fully excavated, believed to be modern. Partially obscured by bat		
303	Fill	Friable dark brown clay silt frequent small-medium chalk, frequent small-large st Visible portion of the feature is 2.60m x 1.40m, depth unknown	ones	✓



Max Dimensions: Length: 30.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.33 m. Max: 0.36 m.

OS Co-ordinates: Ref. 1: TL7556447413 Ref. 2: TL7568544423 Reason for trench: Testing area where geophysical survey was relatively blank

Context:	Type:	Description: Excav	ated:	Finds Present:
400	Topsoil	Firm mid brown clay silt frequent small-medium chalk, frequent small-large stones $$ Max depth $0.26m$	✓	✓
401	Natural	Compact light grey white chalk moderate small-large stones Natural chalk and flint		
402	Posthole	Circular profile: near vertical base: uneven dimensions: max breadth 0.3m, max depth 0.22m, max length 0.34m Base is flat with a V shaped indentation in the centre, possibly a spade mark. Possibly posthole for earlier fence line.	✓	
403	Fill	Compact dark brown clay silt moderate small-medium chalk, moderate small-medium stones Depth 0.22m. No evidence for a rotted post and fill not very humic.	✓	
404	Furrow	Linear profile: 45 degrees base: v-shaped dimensions: max breadth 0.1m, max depth 0.03m, max length 1.9m	✓	
405	Fill	Friable mid brown clay silt moderate small-medium chalk, moderate small-medium stones. Very simlar to topsoil and feature may run into or through topsoil, difficult to tell as fills so similar. Max depth 0.03	✓	
406	Furrow	Linear profile: near vertical base: flat dimensions: max breadth 0.2m, max depth 0.11m, max length 2.7m	✓	
407	Fill	Friable mid brown clay silt moderate small-medium chalk, moderate small-medium stones. Very simlar to topsoil and feature may run into or through topsoil, difficult to tell as fills so similar. Max Depth 0.11m	✓	



Max Dimensions: Length: 30.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.26 m. Max: 0.3 m.

OS Co-ordinates: Ref. 1: TL7783045985 Ref. 2: TL8082546053

Reason for trench: Testing area where geophysical survey was relatively blank and a slight trend in lesser

anomalies

Context:	Type:	Description: Excav	vated: Finds	s Present:
500	Topsoil	Firm mid brown clay silt frequent small-medium chalk, frequent small-medium stones Max depth 0.24m	✓	✓
501	Subsoil	Firm mid orange brown silty clay occasional small-medium chalk, frequent small-large stones Max depth 0.13m	✓	
502	Natural	Compact light grey white chalk moderate small-large stones Max depth 0.13m		
503	Furrow	Linear profile: near vertical base: v-shaped dimensions: max breadth 0.12m, max depth 0.04m, max length 3.6m Natural chalk and silt	✓	
504	Fill	Friable dark brown silt frequent small chalk, frequent small stones Very like topsoil. Max depth 0.04m	✓	



Max Dimensions: Length: 30.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.18 m. Max: 0.25 m.

OS Co-ordinates: Ref. 1: TL8399347325 Ref. 2: TL8409444124 Reason for trench: Testing area where geophysical survey was relatively blank

Context:	Type:	Description: Excav	ated:	Finds Present:
600	Topsoil	Firm mid brown clay silt frequent small-medium chalk, frequent small-large stones $$ Max depth $0.32m$	✓	
601	Subsoil	Firm mid orange brown silty clay frequent small-medium chalk, frequent small-large stones Max depth 0.18m	✓	
602	Natural	Compact light grey white chalk moderate small-large stones Natural chalk and flint		
603	Pit	Irregular profile: concave base: flat dimensions: max breadth 0.57m, max depth 0.06m, max length 1.14m L - shaped pit, probably modern. Probably sitting inside extent of pit [605]	✓	
604	Fill	Firm mid brown silty clay occasional small chalk, frequent small-medium stones modern fill. Max depth $0.06\mathrm{m}$	✓	✓
605	Pit	Profile: 45 degrees dimensions: max breadth 3.4m, max depth 1.32m Shape and sides unclear as no edges visible, base not excavated. Possible chalk pit of possible post-medieval period. Extent probably lies outside trench 6	✓	
606	Fill	Firm light orange brown silty clay frequent small-large chalk, occasional small-medium stones Width $2.10 \mathrm{m}$, depth $0.18 \mathrm{m}$	✓	
607	Fill	Firm light brown grey silty clay frequent small-large chalk, occasional small-medium stones Width 0.85m, depth 0.16m. Chalk tip.	✓	
608	Fill	Firm dark orange brown sandy clay frequent small-medium chalk, occasional flecks charcoal, moderate small-medium stones Width 3.4m, depth 0.4m	✓	\checkmark
609	Fill	Firm light brown grey silty clay moderate small-large chalk, occasional small-medium stones Width 2.00m, depth 0.17m. Chalk tip.	✓	
610	Fill	Firm dark orange brown silty clay moderate small-large chalk, occasional flecks charcoal, frequent small-large stones Width 1.86m, depth 0.62m	✓	V
611	Fill	Firm light brown grey silty clay frequent small-large chalk, occasional small-large stones Width 0.36m, depth 0.16m. Chalk tip.	✓	
612	Fill	Firm light brown grey silty clay frequent small-large chalk, occasional small-large stones Width 0.89m, depth 0.05m. Chalk tip.	✓	
613	Fill	Firm dark orange brown silty clay moderate small-large chalk, frequent small-large stones Width 0.57m, depth 0.15m	✓	
614	Fill	Loose light yellow brown silty clay frequent small-large chalk, occasional small-large stones Weathered chalk. Width 3.4m, depth 0.3m	✓	
615	Fill	Loose light yellow brown silty clay frequent small-large chalk, frequent small-large stones Weathered Chalk looser than (614). Width 1.05m, depth 0.19m	✓	



Max Dimensions: Length: 30.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.25 m. Max: 0.28 m.

OS Co-ordinates: Ref. 1: TL7918742829 Ref. 2: TL7921539839 Reason for trench: Testing area where geophysical survey was relatively blank

Context:	Type:	Description:	Excavated:	Finds Present:
700	Topsoil	Firm mid brown clay silt frequent small-medium chalk, frequent small-large sto Depth 0.22m	nes Max	
701	Subsoil	Firm mid orange brown silty clay occasional small-medium chalk, frequent smal stones Max Depth 0.19m	l-large	
702	Natural	Compact light grey white chalk moderate small-large chalk Natural chalk and it	lint	



Max Dimensions: Length: 30.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.49 m. Max: 0.51 m.

OS Co-ordinates: Ref. 1: TL8105740070 Ref. 2: TL8404440264

Reason for trench: Testing a possible pit group or structure identified by the geophysical survey

Context:	Type:	Description: Ex	cavated:	Finds Present:
800	Topsoil	Firm mid brown clay silt moderate small-medium chalk, frequent small-large stones Max depth $0.27\mathrm{m}$	✓	
801	Subsoil	Firm mid orange brown clay occasional small-medium chalk, frequent small-large stones Max depth 0.43	✓	
802	Natural	Compact light grey white chalk moderate small-large stones Natural chalk and flint with gaps between chalk filled with mid orange brown clay.		
803	Ditch	Straight linear profile: concave base: flat dimensions: max breadth 1.8m, max diameter 0.14m, max length 2.m Extent partially obscured by baulk	✓	
804	Fill	Compact dark brown clay silt frequent small-medium chalk Frequent small-medium coke/coal and slag inclusions. A burnt fill containing modern material. Depth 0.14m, width 1.8m.	✓	✓
805	Fill	Loose yellow sand occasional small chalk Length 0.3m, width 1.6m, depth 0.1m	✓	
806	Subsoil	Compact dark red brown silty clay frequent small-medium chalk, frequent small-med stones A re-deposited subsoil type material which appears to seal the feature	ium 🗸	



Max Dimensions: Length: 30.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.35 m. Max: 0.4 m.

OS Co-ordinates: Ref. 1: TL7987138285 Ref. 2: TL8286038479

Reason for trench: Testing a possible pit group or structure identified by the geophysical survey

Context:	Type:	Description:	Excavated: Finds	s Present:
900	Topsoil	Firm mid brown clay silt moderate small-medium chalk, frequent small-large sto Max depth $0.4\mathrm{m}$	nes 🗸	
901	Natural	Firm mid orange brown clay occasional small-medium chalk, frequent small-larg stones Some patches of rounded pebbles	je 🗌	



Max Dimensions: Length: 30.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.22 m. Max: 0.25 m.

OS Co-ordinates: Ref. 1: TL8468637721 Ref. 2: TL8266935513 Reason for trench: Testing area where geophysical survey was relatively blank

Context:	Type:	Description:	Excavated:	Finds Present:
1000	Topsoil	Firm mid brown clay silt occasional small chalk, frequent small-large stones M 0.20m	ax depth	
1001	Natural	Firm mid orange brown clay occasional small-medium chalk, frequent small-lar stones	ge \square	



Max Dimensions: Length: 30.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.23 m. Max: 0.24 m.

OS Co-ordinates: Ref. 1: TL8590539634 Ref. 2: TL8880540383

Reason for trench: Testing potential site of Napoleonic period Telegraph station

Context:	Type:	Description:	Excavated:	Finds Present:
1100	Topsoil	Firm mid brown clay silt occasional small chalk, frequent small-large stones M 0.23m	ax depth	
1101	Subsoil	Firm mid orange brown clay occasional small-medium chalk, frequent small-lar stones Max depth 0.52m	ge 🗸	
1102	Natural	Compact light grey white chalk frequent small-large stones Natural chalk and f between chalk filled with mid orange brown clay.	lint, gaps	



Max Dimensions: Length: 30.00 m. Width: 1.80 m. Depth to Archaeology Min: 0.25 m. Max: 0.36 m.

OS Co-ordinates: Ref. 1: TL8362743904 Ref. 2: TL8596942037 Reason for trench: Testing potential site of Napoleonic period Telegraph station

Context:	Type:	Description:	Excavated: Fi	inds Present:
1200	Topsoil	Firm mid brown clay silt moderate small-medium chalk, frequent small-large sto Max depth 0.36m	nes	
1201	Natural	Compact light grey white chalk moderate small-large stones		



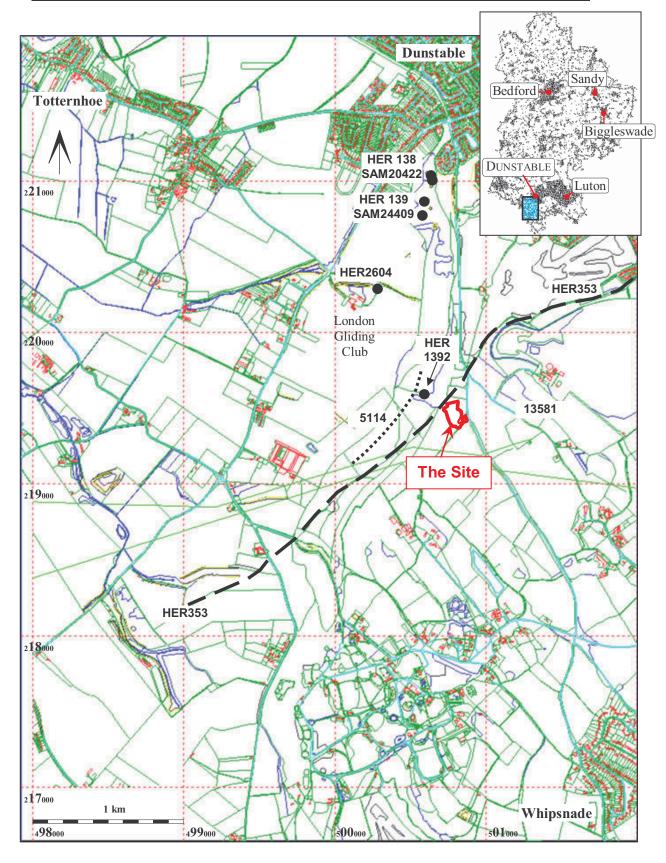
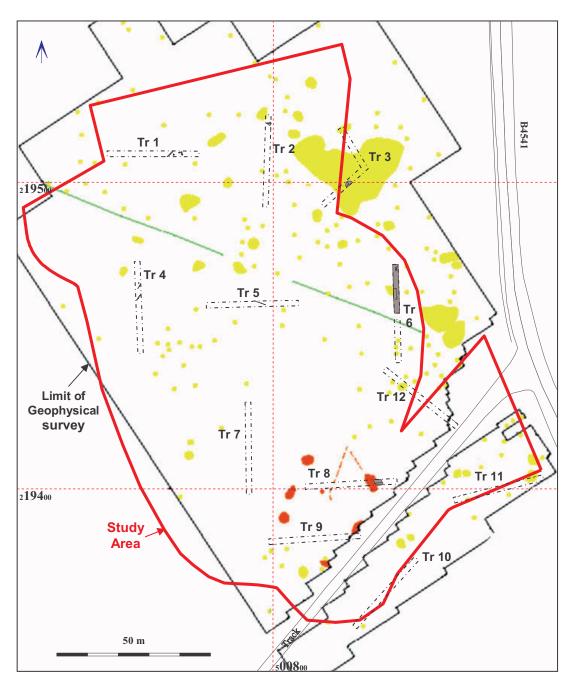


Figure 1: Site location

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TYPE OF ANOMALY		INTERPRETATION	
	DIPOLAR, ISOLATED	FERROUS MATERIAL	
	AREA OF MAGNETIC DISTURBANCE	FERROUS MATERIAL	
_	LINEAR TREND	MODERN/AGRICULTURAL	
	AREA OF MAGNETIC ENHANCEMENT	ARCHAEOLOGY?	
	LINEAR TREND	ARCHAEOLOGY?	

Figure 2: Location of trenches in relation to geophysical survey results

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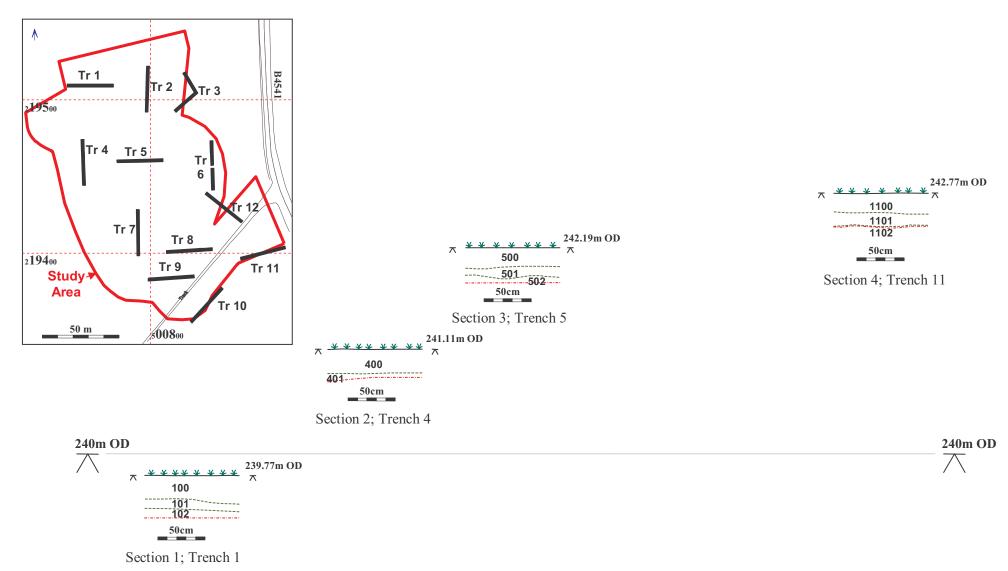


Figure 3: Deposit model

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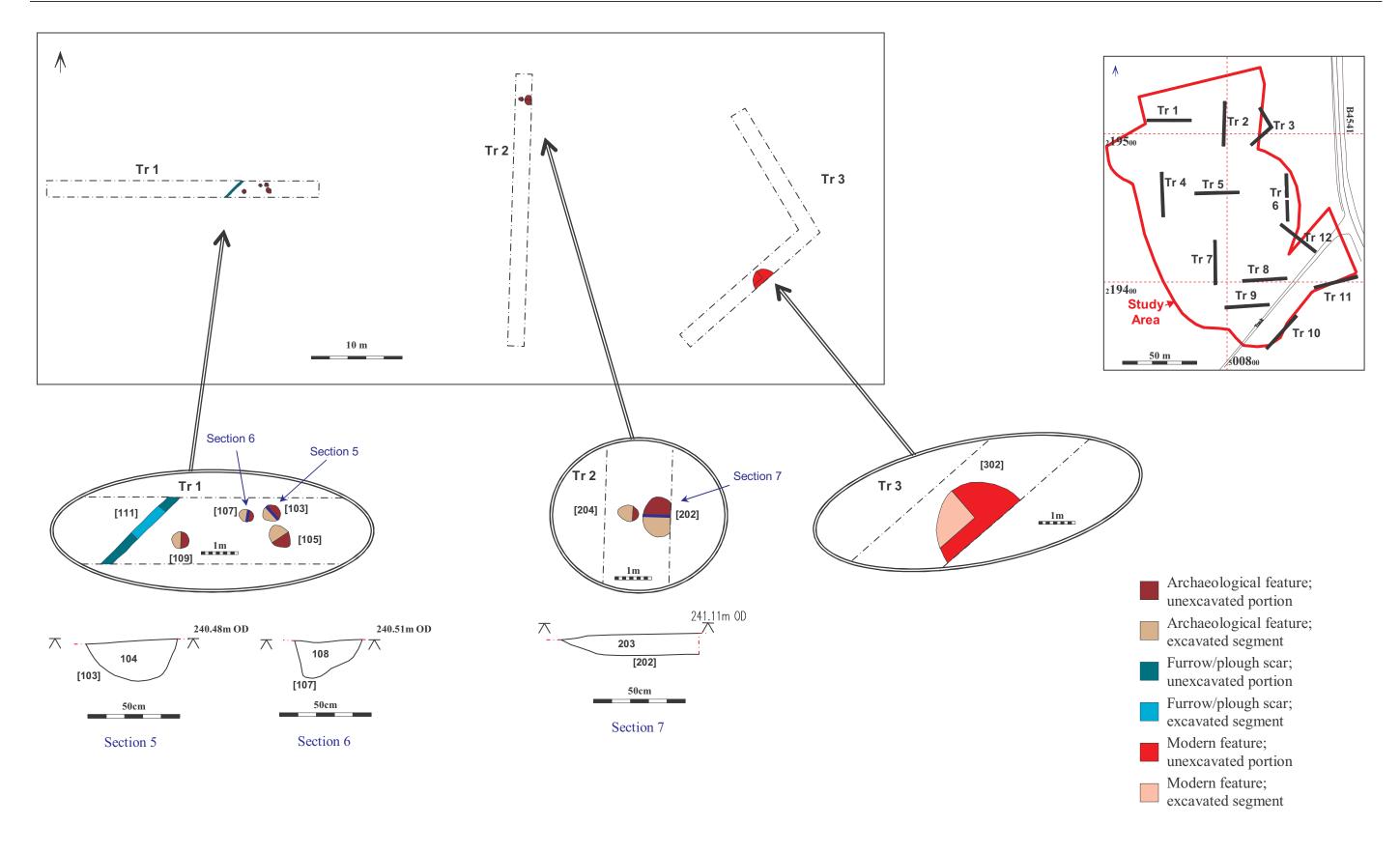


Figure 4: Detail of trenches 1, 2, and 3



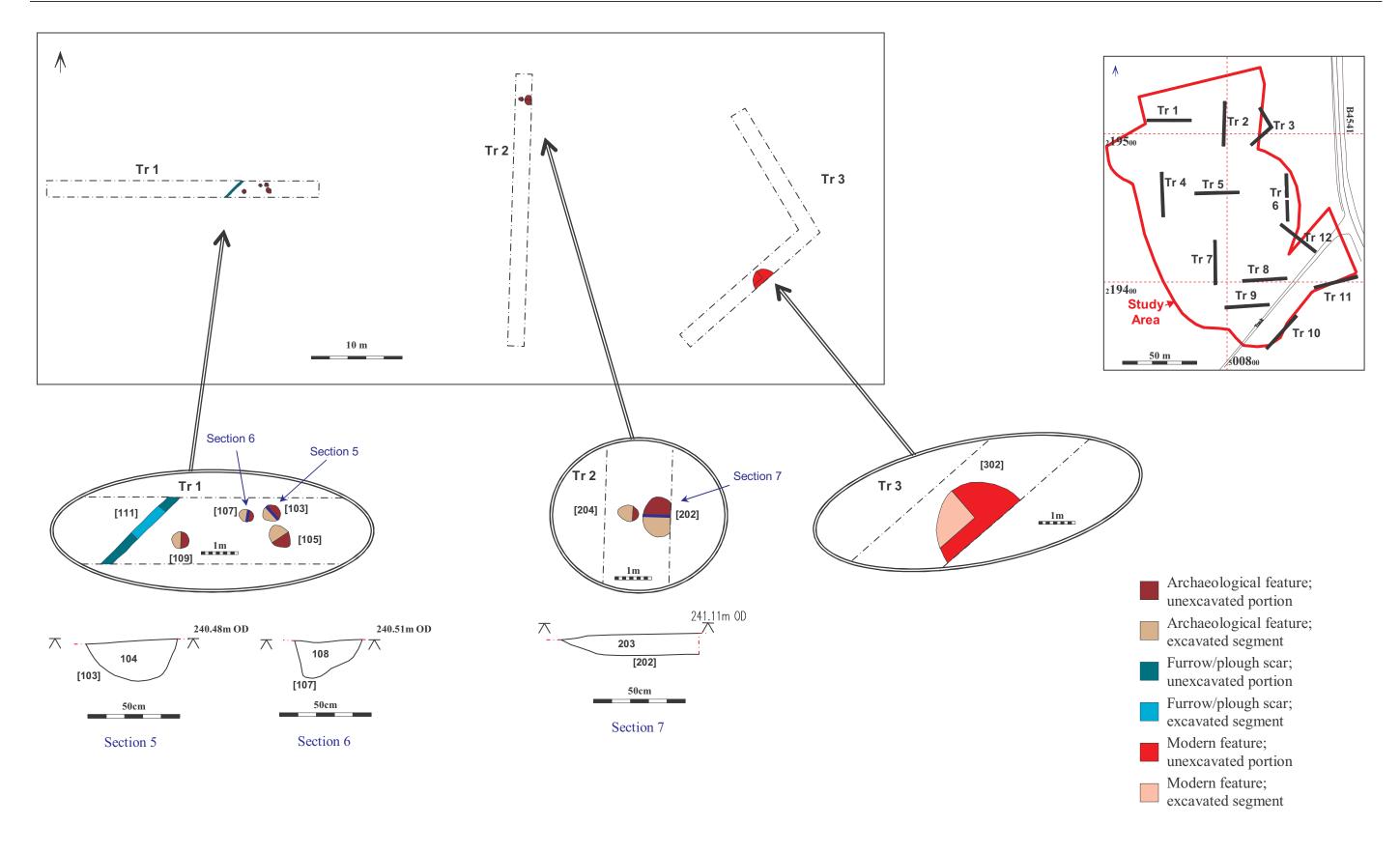
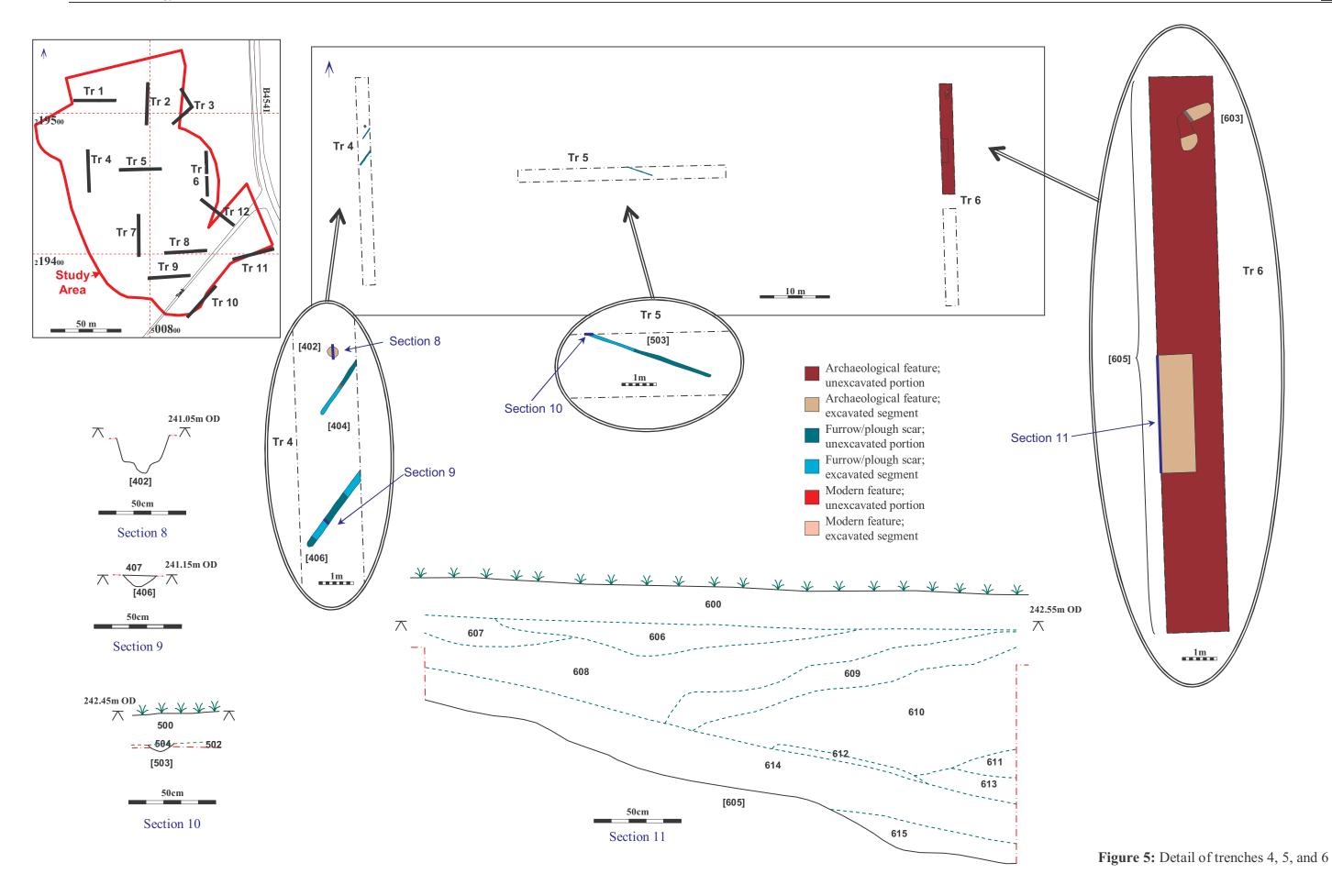
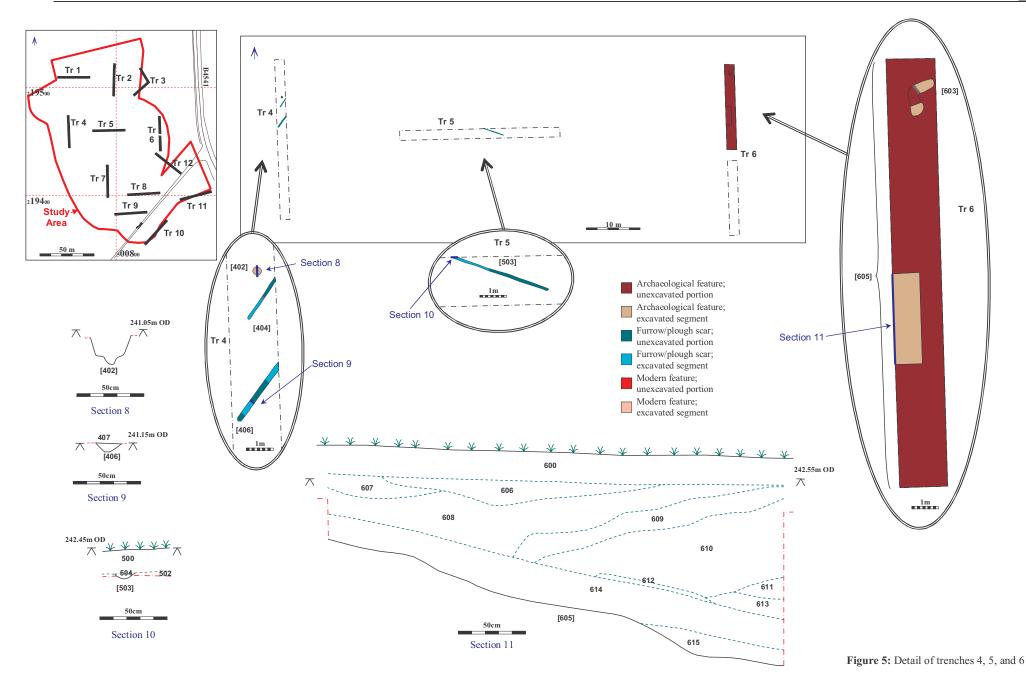


Figure 4: Detail of trenches 1, 2, and 3











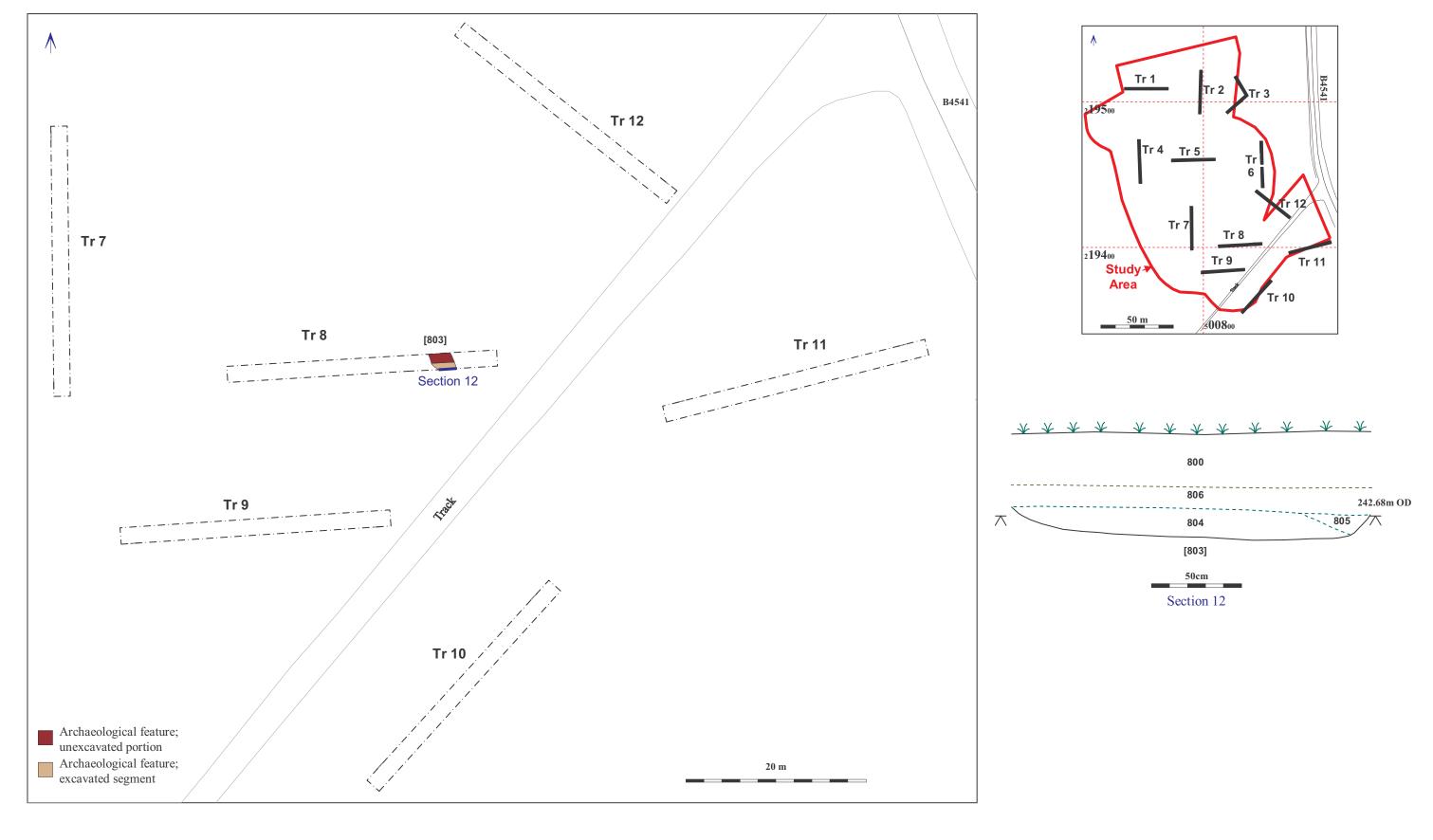


Figure 6: Detail of trenches 7 to 12



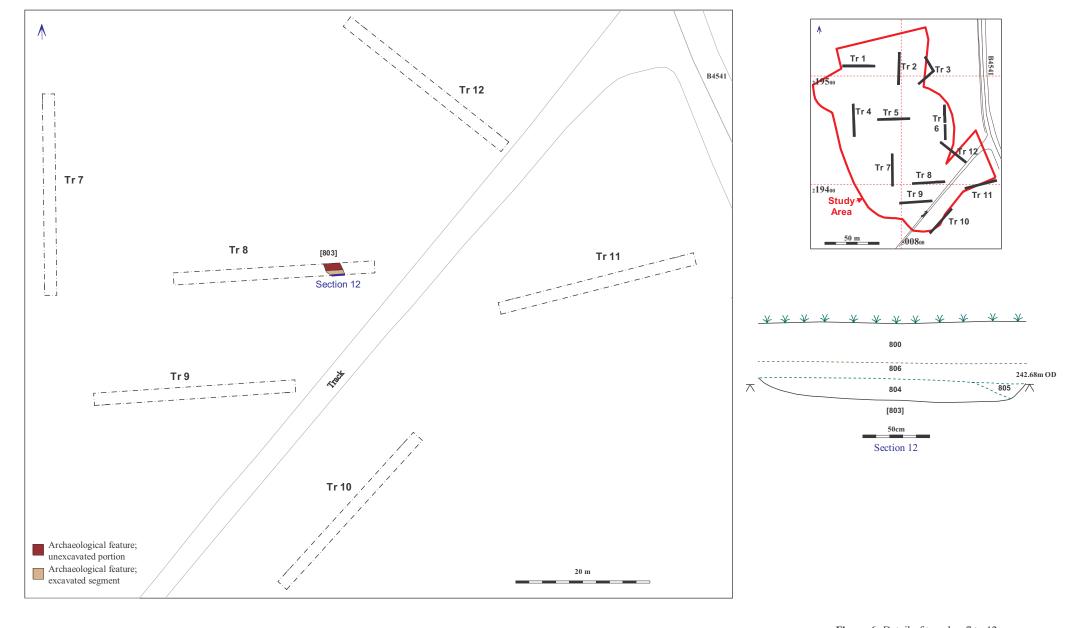


Figure 6: Detail of trenches 7 to 12





Figure 7a: Feature [103]



Figure 7b: Feature [105]



Figure 7c: Feature [107]



Figure 7d: Feature [109]



Figure 7e: Feature [204]



Figure 7f: Feature [402]

Figure 7: Pits and post-holes





Figure 8a: Feature [111]



Figure 8b: Feature [404]



Figure 8c: Feature [406]



Figure 8d:Feature [503]

Figure 8: Linear features





Figure 9a: Feature [605]



Figure 9b: Feature [605]



Figure 9c: Feature [603]



Figure 9d: Feature [803]



Figure 9: Archaeological features and finds

Figure 9e: Putty-like material from Feature [803]





 $\label{eq:Figure 10: The telegraph on Dunstable Downs', dated 1819, by George Shepherd. \\ \textit{Reproduced with permission of Luton Museum and Art Gallery (accession no 172/33)} \ \textit{from BLARS slide no. 1566}$

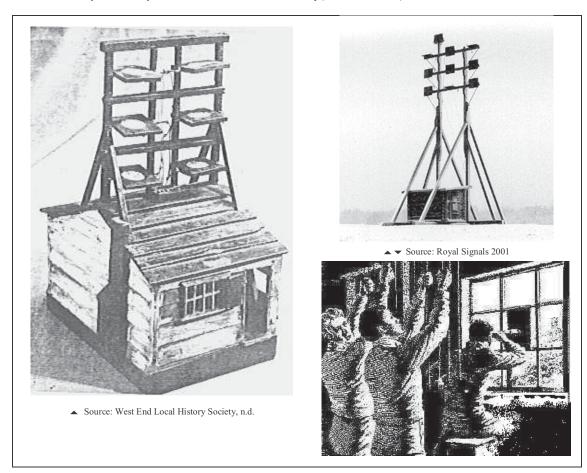


Figure 11: Comparative illustrations of the Murray telegraph and its operation From images posted on the World Wide Web