

ARCHAEOLOGICAL MONITORING REPORT

SCCAS REPORT No. 2014/120	Parish: Elveden
Tree House Lodges, Center	Client: Center Parcs
Parcs, Interim Report	HER Event No.: ELV 082
Address:	Grid Reference: TL 79181 80340
Tree House Lodges Site, Center Parcs,	
Elveden Forest, Brandon, Suffolk, IP27 0YZ	Date of visits: 10th October, 2014

Introduction

A visit was made to the site to record the foundation trenching for the construction of Plant Room 2. This formed the first part of a series of works associated with the Tree House Lodges building project in the south-west corner of the Center Parcs site. This is an interim report that does not cover any of the other groundworks that are required for the project. These include trenching for further Plant Rooms, stripping for the road expansion and another area for car parking, and foundations for the lodges. The trenching was excavated to the south of the existing concrete track, which is to be widened as a part of the later works (Figs. 1 and 2). The work was part of an archaeological condition raised by Dr. Abby Antrobus of the Suffolk County Council Archaeological Service Conservation Team. An OASIS form has been completed for the project (reference no. suffolkc1-193625, Appendix 1) and a digital copy of the report submitted for inclusion on the Archaeology Data Service database (http://ads.ahds.ac.uk/catalogue/library/greylit).

The area of proposed new car parking lies immediately south of a mound, thought to be the remnants of a WWII munitions dump, although prehistoric flints have also been recovered from the area. The creation of the artificial lake on the Center Parcs site also reportedly uncovered a human skeleton.



Figure 1. Site location (red)

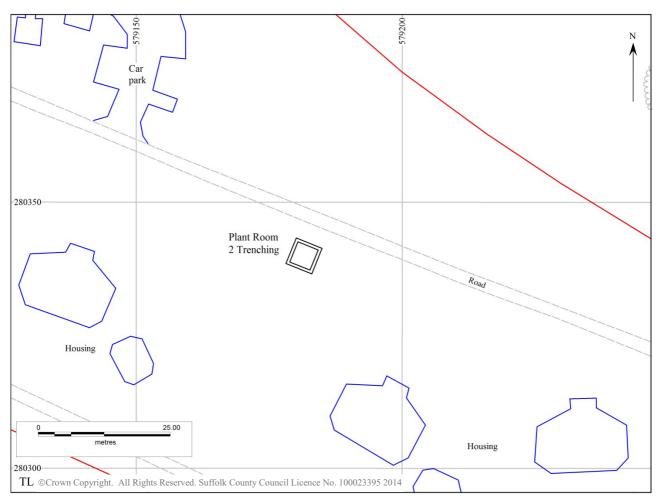


Figure 2. Plant Room 2 trenching, site outline (red) and development outlines (blue)



Plate 1. Soil profile, 1m scale, facing southeast

Groundworks

The total area of the Plant Room trenching measured 23sqm (Fig. 2). The trenching was 0.45m-0.55m wide x 0.8m-1m deep.

Results

No archaeological features or finds were recorded in the trenching recorded in this report. The soil profiles consisted of *c*.0.2m of topsoil with frequent roots, above a 0.25m-0.7m deep mixed layer of mid orangish-brown friable sand with common small rounded to angular flints (Pl. 1). This layer was interpreted as a disturbed subsoil/superficial geological deposit, which overlaid a bedrock geological deposit of chalk that was at least 0.1m-0.55m deep.

© SCCAS Field Team

Recorded by: Rob Brooks	Date: 28/10/2014

Appendix 1. OASIS form

OASIS DATA COLLECTION FORM: England

List of Projects | Manage Projects | Search Projects | New project | Change your details | HER coverage | Change country | Log out

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OASIS ID: suffolkc1-193625

Project details	
Project name	ELV 082 Tree House Lodges Monitoring, Center Parcs, Elveden
Short description of the project	Trenching for Plant Room 2 was monitored as part of the Tree House Lodges construction project in the south-west corner of the Center Parcs site. This OASIS report covers the interim report for these ground works, which does not cover the rest of project. No features or finds were recorded during the monitoring. A layer of topsoil, overlaid subsoil/superficial geological horizon, which in turn was above chalk bedrock.
Project dates	Start: 10-10-2014 End: 10-10-2014
Previous/future work	Yes / Yes
Any associated project reference codes	ELV 082 - HER event no.
Any associated project reference codes	ELV 082 - Sitecode
Any associated project reference codes	2014/120 - Contracting Unit No.
Any associated project reference codes	F/2011/0420 - Planning Application No.
Type of project	Recording project
Current Land use	Woodland 4 - Coniferous plantation
Monument type	NONE None
Significant Finds	NONE None
Investigation type	"Watching Brief"
Prompt	Direction from Local Planning Authority - PPS

Project location

Country England

Site location	SUFFOLK FOREST HEATH ELVEDEN ELV 082, Tree House Lodges Monitoring, Center Parcs
Postcode	IP27 0YZ
Study area	23.00 Square metres
Site coordinates	TL 79181 80340 52.3912763615 0.633557330001 52 23 28 N 000 38 00 E Point
Project creators	
Name of Organisation	Suffolk County Council Archaeological Service
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	Dr Abby Antrobus
Project director/manager	David Gill
Project supervisor	Rob Brooks
Type of sponsor/funding body	Land owner
Name of sponsor/funding body	Center Parcs
Project archives	
Physical Archive Exists?	No
Digital Archive recipient	Suffolk County Council Archaeological Service
Digital Archive ID	ELV 082
Digital Contents	"Survey","other"
Digital Media available	"Images raster / digital photography","Spreadsheets","Survey","Text"
Paper Archive recipient	Suffolk County Council Archaeological Service
Paper Archive ID	ELV 082
Paper Contents	"other"
Paper Media available	"Context sheet", "Report", "Section"
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological Monitoring Report, Tree House Lodges, Center Parcs, Interim
	Report

Other bibliographic details	SCCAS Report No. 2014/120
Date	2014
Issuer or publisher	SCCAS
Place of issue or publication	Bury St Edmunds
Description	A4, short report, stapled, in colour, with single appendix.
Entered by	Rob Brooks (rob.brooks@suffolk.gov.uk)
Entered on	28 October 2014

OASIS:

Please e-mail English Heritage for OASIS help and advice

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ARCHAEOLOGICAL MONITORING REPORT DRAFT

SCCAS REPORT No. 2015/066	Parish: Elveden
	Planning Application No.:
Tree Houses	2011/0420
ELV 082	OASIS No. Suffolka1-121337
	HER Event No.: ELV 082
Address: New Tree House Access Road,	Grid Reference: TL 7910 8050
Centre Parcs, Elveden Forest, Brandon, Suffolk, IP24 3TR	Number of Site visits: 7 Date of visits: 25/08 - 23/10/2015

Seven monitoring visits were made to view the road strip and foundation holes for the construction of new 'tree house' accommodation at Centre Parks, Elveden, Suffolk. The new access road replaced part of an existing concrete track (related to WWII activity within the woodland, possibly including a dispersed munitions store) while the tree houses were created within the forested area, amongst mature trees. A series of eleven foundation holes were excavated around each set of three

A series of eleven foundation noies were excavated around each set of three existing piles for a single dwelling. The excavations were c. 1.3m wide square or triangular shaped holes to a maximum depth of 0.8m cutting into the natural geology.

A 500m length of access road was widened to c.6.0m, excavated to a maximum depth of c.0.2m. Most of this ran along the route of a previous footpath/concrete road so the area of new disturbance was only approximately half this width, and the concrete track was a slightly greater depth than the new excavations.

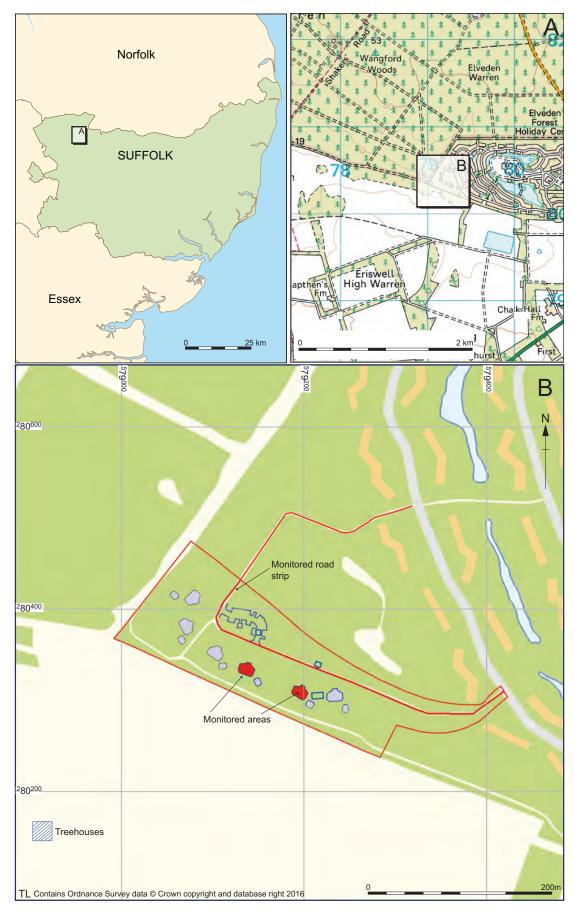


Figure 1. Location of site

Results:

Spoil was examined and the sections of each hole were observed for the treehouse footings. A total of 0.2m of mid brown silty sand topsoil was seen overlaying the natural geology of mixed chalk and yellow sand. No archaeological features or finds were present.

The new access road included the route of an existing concrete road, between c.2.5 and 3m wide which ran down the middle of the new route. The concrete was removed as part of the stripping process, which revealed natural yellow sand and chalk and no archaeological deposits at a depth of c. 0.2m below existing ground level. The strip either side of this width did not reach archaeological levels.

Photographs:



Plate 1. Sample treehouse footing



Plate 2. Sample of road strip

Finds: None.

Retained N/A

Recorded by: Simon Cass/Mike Green

Date: 19/01/2016

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OASIS ID: suffolkc1-121337

Project details

Project name	ELV 082 Center Parcs Tree Houses Monitoring
Short description of the project	Monitoring of new access road and foundations for new Tree House accomodation at Centre Parcs in late 2015. No finds or features of archaeological relevance were observed.
Project dates	Start: 25-08-2015 End: 23-10-2015
Previous/future work	Yes / No
Any associated project reference codes	F/2011/0420 - Planning Application No.
Any associated project reference codes	ELV 082 - HER event no.
Any associated project reference codes	ELV 082 - Sitecode
Any associated project reference codes	suffolkc1-193625 - OASIS form ID
Type of project	Recording project
Site status	None
Current Land use	Woodland 7 - Scrub
Current Land use	Woodland 3 - Mixed
Monument type	NONE None
Significant Finds	NONE None
Investigation type	"Watching Brief"
Prompt	Direction from Local Planning Authority - PPS

Project location

Country	England
Site location	SUFFOLK FOREST HEATH ELVEDEN ELV 082 Center Parcs Tree House Lodges Monitoring

Study area	600 Square metres
Site coordinates	TL 791 803 52.390943706898 0.632346787139 52 23 27 N 000 37 56 E Point

Project creators

Name of Organisation	SACIC
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	Rachael Abraham
Project director/manager	Jo Caruth
Project supervisor	Simon Cass
Project supervisor	Mike Green
Type of sponsor/funding body	Developer
Name of sponsor/funding body	Centre Parcs

Project archives

Physical Archive Exists?	No
Digital Archive recipient	Suffolk County SMR
Digital Contents	"Stratigraphic"
Digital Media available	"Images raster / digital photography","Text"
Paper Archive recipient	Suffolk County SMR
Paper Contents	"Stratigraphic", "other"
Paper Media available	"Notebook - Excavation',' Research',' General Notes", "Photograph", "Plan", "Report"

Project bibliography 1

	Grey literature (unpublished document/manuscript)
Publication type	
Title	Tree Houses, ELV 082 Archaeological Monitoring Report
Author(s)/Editor(s)	Cass, S.
Other bibliographic details	2015/066
Date	2015
Issuer or publisher	SACIC
Place of issue or publication	Needham Market

Description	A short report in house style documenting the results of the monitoring of both the new access road and foundation construction for the new tree houses.
Entered by	Simon Cass (Simon.cass@suffolkarchaeology.co.uk)
Entered on	27 January 2016

OASIS:

Please e-mail Historic England for OASIS help and advice

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Tree House Lodges, Center Parcs, Elveden

Written Scheme of Investigation and Risk Assessment Archaeological Monitoring

Client: Jackson Design Associates Ltd

Suffolk County Council Archaeological Service Field Team Author: Rob Brooks September 2014

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Appendix 2. WSI Register

Project details

Planning Application No:	F/2011/0420	
Curatorial Officer:	Dr Abby Antrobus	
Grid Reference:	TL 791 803	
Area:	N/A	
HER Event No/Site Code:	ELV 082	
Oasis Reference:	suffolkc1-121337	
Project Start date:	твс	
Project Duration:	Duration of building groundworks	
Client/Funding Body:	Jackson Design Associates Ltd	
SCCAS/FT Project Manager:	David Gill	
SCCAS/FT Project Officer:	Rob Brooks	
SCCAS/FT Job Code:	ELVE/THL/002	

Glossary of abbreviations

EAA	East Anglian Archaeology
HER	Historic Environment Record
IFA	Institute for Archaeologists
PPS 5	Planning Policy Statement 5: Planning for the Historic
	Environment
SCCAS/FT	Suffolk Archaeological Service Field Team
SCCAS/CT	Suffolk Archaeological Service Curatorial Team
LPA	Local Planning Authority
ICON	The Institute of Conservation

Project Contacts

SCCAS/FT

SCCAS/FT Manager	Dr Rhodri Gardner	01473 265879
SCCAS/FT Project Manager		01284 741247
SCCAS/FT Finds Dept	Richenda Goffin	01284 741233
SCCAS/FT H&S	Stuart Boulter	01473 265877
SCCAS/FT EMS	Jezz Meredith	01473 265883

Emergency services

Local Police	6 High Street,	101
	Brandon,	
	IP27 0AQ	
Local GP	Dr Hadley-Brown & Partners, School Lane Thetford	01842 753115
	Norfolk IP242AG	
Location of nearest A&E	Hardwick Lane, Hardwick Lane, Bury St. Edmunds,	01284 713000
	Suffolk, IP33 2QZ	
Environment Agency	Customer Services Line (8am to 6pm)	03708 506 506
	24 hour Emergency Hotline	0800 807060
Essex and Suffolk Water	24 hour Emergency Hotline	0845 782 0999
National Gas Emergency Service	Gas emergency hotline	0800 111 999
UK Power Networks	East England electricity emergency hotline	0800 783 8838
Anglian Water	24 hour Emergency Hotline	08457 145 145

Client contacts

Client	Tony Hardie	01623 863222
Client Agent	Jackson Design Associates Ltd on behalf on	
-	Center Parcs	
Site landowner	Center Parcs	
Developer	Jackson Design Associates Ltd on behalf on	
·	Center Parcs	

Archaeological contacts

Curator	Dr Abby Antrobus	01284 741231
Consultant	N/A	
EH Regional Science Advisor	Zoe Outram	01223 582707

Sub-contractors

Plant hire	To be supplied by Center Parcs	
Misc. Equipment hire	N/A	
Toilet/facilities hire	Center Parcs welfare facilities	

Other

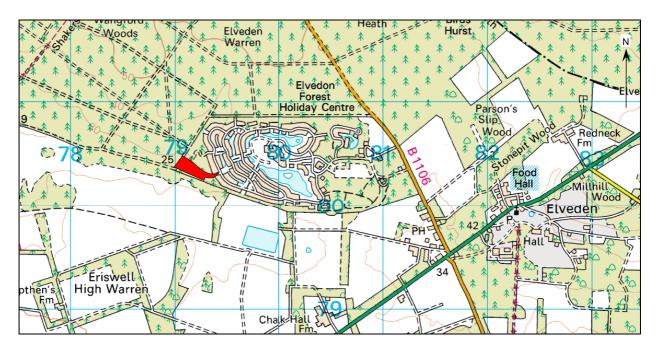
SCC Fleet Maintenance		01359 270777
SCC Environment Strategy Manager	Emma Flint	01473 264810
SCC Health and Safety Advisor	Martin Fisher	264299
(ESE)		

1. Introduction

- A program of archaeological monitoring is required as a condition on planning application F/2011/0420 for housing and road development at Center Parcs, Elveden (Fig. 1), in accordance with policy HE 12.3 of PPS 5.
- Initially the original Brief (dated 28/07/2011, by Dr Abby Antrobus of SCCAS Conservation Team) called for evaluation of the site through a series of four trial trenches. However this methodology was revised after the site was found to have been disturbed to a point (namely by WWII related activity) that left the site unsuitable for evaluation at that time (fieldwork carried out 04/09/2014). Subsequently a programme of monitoring was agreed with Dr Abby Antrobus, as well as Tony Hardie of Jackson Design Associates Ltd.
- SCCAS Field Team has been contracted to carry out the project. This document details how the requirements of SCCAS Conservation Team (SCCAS/CT 2011) will be met, and has been submitted to Dr Abby Antrobus for approval on behalf of the LPA. It provides the basis for measurable standards and will be adhered to in full, unless otherwise agreed with SCCAS/CT.
- It should be noted by the client that further reporting and publication may be required if archaeological deposits are identified. Such works could have time and cost implications for the development and the client. SCCAS/FT will provide quotes for any further works required on request.

2. The site

- The site is currently within the Warren Woods pine plantation that makes up the Center Parcs site. Trees are to be felled prior to the development and monitoring within the development areas (Fig. 2). An existing WWII track way also runs through the site.
- The site is relatively flat and lies at c. 28-29m above the Ordnance Datum.
- The geology of the area consists of bedrock deposits of Lewes nodular chalk formation, Seaford chalk formation, Newhaven chalk formation and Culver chalk formation. Whilst there are no recorded superficial deposits, other works around Elveden generally reveal sandy deposits uppermost.
- Six lodges tree house lodges and associated access (including a widened stretch of road), car parking and services. It is the access road, car parking and service building that are likely to cause most damage to the archaeological layers and as such these areas will be most closely monitored during the groundworks (Fig. 2). The houses are to be mounted on stilts, rather than using traditional strip foundations.



© Crown Copyright. All rights reserved. Suffolk County Council Licence No. 100023395 2014. Figure 1. Location map with site development area (red)

3. Archaeological and historical background

- The condition has been placed as the site lies within the Breckland, which is rich in prehistoric activity.
- A skeleton was reportedly found by workmen immediately east of the development area, during construction works (ELV 012). A further skeleton were also found by workmen further to the east (ELV 011), and near to this prehistoric flints and a pot sherd were also recovered (ELV 010).
- A large bank, ELV 032, runs through the site on the east side of the existing concrete roadway within the area of the proposed new road layout. This bank is tentatively dated as a WWII feature related to the use of Warren Wood as a World War II munitions dump. Prehistoric burnt and struck flints have been recovered from the top of this bank, possibly representing residual prehistoric archaeology in the area. Metal detection of the site and the mound during the initial site evaluation revealed that there was a large spread of metal work over the majority of the site, the majority of which was established as WWII material.
- To the north of the site an undated sub-circular mound is present (ELV 031) and this may represent a further WWII feature or potentially a prehistoric earthwork, although this too produced an intense concentration of metalwork detector signals.

4. Project Objectives

- The aim of the monitoring is to record any archaeological deposits that may be present on the site so that a written archive can then be created.
- The monitoring will:
- Establish whether any archaeological deposits exist in the application area.

- Where possible identify the date, form and function of any archaeological deposits within the application area.
- Record the impact of past land uses.
- Sample any suitable archaeological contexts for environmental evidence.
- Assess the potential of the site to address research aims defined in the Regional Research Framework for the Eastern Counties (Brown and Glazebrook, 2000, and Medlycott, 2011).
- Provide sufficient information for the completion of an archive and site report.

5. Archaeological method statement

5.1 Management

- The project will be managed by SCCAS Field Team Senior Project Officer David Gill in accordance with the principles of MAP2 (English Heritage, 1991).
- SCCAS/CT will be given five days notice of the commencement of the fieldwork and arrangements made for SCCAS/CT visits to enable the works to be monitored effectively.
- Full details of project staff, including sub-contractors and specialists are given in section 6 below.

5.2 Project preparation

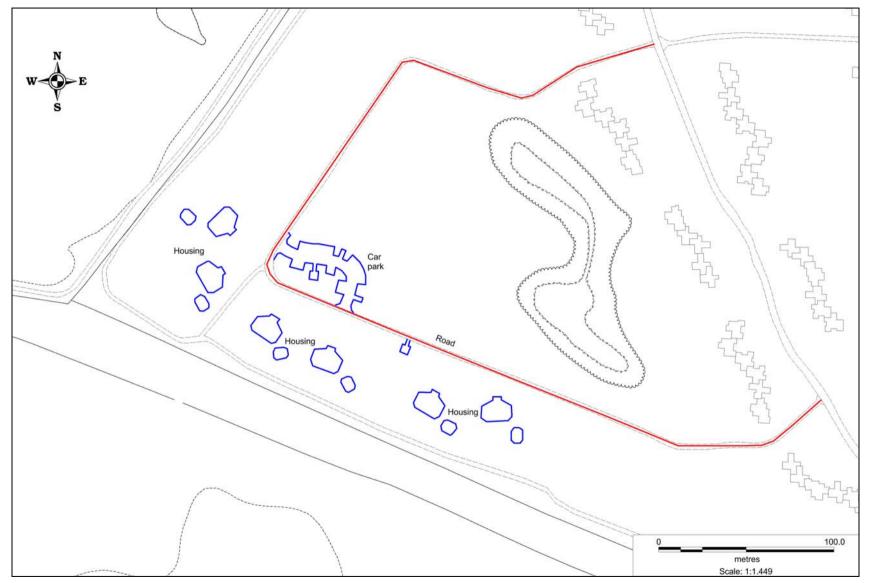
- An event number has been obtained from the Suffolk HER Officer (ELV 082) and will be included on all future project documentation.
- An OASIS online record has been initiated (ref: suffolkc1-121337) and key fields in details, location and creator forms have been completed.
- A pre-site inspection and Risk Assessment for the project has been completed (see Appendix 1).

5.3 Fieldwork

- Fieldwork standards will be guided by 'Standards for Field Archaeology in the East of England', EAA Occasional Papers 14.
- The archaeological fieldwork will be led by a Project Officer from SCCAS/FT. The fieldwork team will be drawn from a pool of suitable staff at SCCAS/FT.
- The project requires that the area of the new access road, car parking and plant rooms to be monitored.
- The machining will be carried out under the supervision of an archaeologist. This will involve the controlled removal of an estimated 0.3m of topsoil until the first visible archaeological surface or subsoil surface is reached, to allow the archaeologist time to record any features or finds present. Further excavation can then take place if required by the construction works. The groundworks that will require the most intensive monitoring will be for the new car park and the widening of the roadway (which is to be widened by c.0.6m). The houses will require less archaeological work because they are to be mounted on stilts, rather than using strip foundations.
- Spoil heaps will be examined for archaeological material.

- The exposed archaeological surfaces will be cleaned by hand as necessary to identify archaeological deposits and artefacts and allow decisions to be made on the method of further investigation by the Project Officer. Further use of the machine, i.e. to investigate thick sequences of deposits by excavation of test pits etc, may be undertaken as necessary after consultation with SCCAS/CT.
- Typically 50% of discrete features such as pits and 1m slots across linear features will be sampled by hand excavation, although in some instances 100% may be removed, with the aim of establishing date and function. All identified features will be investigated by excavation unless otherwise agreed with SCCAS/CT. Significant archaeological features such as solid or bonded structural remains, building slots or postholes will be fully excavated if possible.
- Sieving of deposits using a 10mm mesh will be undertaken if they clearly appear to be occupation deposits or structurally related. Other deposits may be sieved at the judgement of the excavation team or if directed by SCCAS/CT.
- Any fabricated surface (floors, yards etc) will be fully exposed and cleaned.
- The depth and nature of colluvial or other masking deposits across the site will be recorded.
- Metal detector searches of archaeological deposits may take place throughout the works by an experienced SCCAS/FT metal-detectorist, depending on the viability of this due to the high level of modern metal work in the area.
- An overall site plan feature positions, sections and levels will be made by hand using a Total Station Theodolite. Individual feature plans will be recorded by hand at 1:10, 1:20 or 1:50 as appropriate to complexity. All excavated sections will be recorded at a scale of 1:10 or 1:20, also as appropriate to complexity. All such drawings will be in pencil on gridded permatrace sheets. All levels will refer to Ordnance Datum. Section and plan drawing registers will be maintained.
- All trenches, archaeological features and deposits will be recorded using standard pro forma SCCAS/FT registers and recording sheets and numbering systems. Record keeping will be consistent with the requirements of the Suffolk HER and will be compatible with its archive.
- A photographic record, consisting of high resolution digital images, will be made throughout the monitoring. A photographic register will be maintained.
- All pre-modern finds will be kept and no discard policy will be considered until all the finds have been processed and assessed. Finds on site will be treated following appropriate guidelines (Watkinson & Neal 2001) and a conservator will be available for consultation as required.
- All finds will be brought back to the SCCAS/FT finds department at the end of each day for processing, quantifying, packing and, where necessary, preliminary conservation. Finds will be processed and receive an assessment during the fieldwork phase.
- Environmental sampling of archaeological contexts will, where possible, be carried out for palaeoenvironmental remains and will follow appropriate guidance (English Heritage 2011). In order to obtain palaeoenvironmental evidence, bulk soil samples (of at least 40 litres each, or 100% of the context) will be taken using a combination of judgement and systematic sampling from selected archaeological features or natural environmental deposits, particularly those which are both datable and interpretable. All samples will be retained until an appropriate specialist has analysed them for palaeoenvironmental remains.
- If necessary, for example if waterlogged peat deposits are encountered, then advice will be sought from the English Heritage Regional Advisor for Archaeological Science (East of England) on the need for specialist environmental techniques such as coring or column sampling.

- If human remains are encountered guidelines from the Ministry of Justice will be followed. Human remains will be treated at all stages with care and respect, and will be dealt with in accordance with the law and the provisons of Section 25 of the Burial Act 1857. Any human remains will be lifted after a Ministry of Justice license for their removal has been obtained. In such cases appropriate guidance (McKinley & Roberts 1993, Brickley & McKinley 2004) will be followed and, on completion of full recording and analysis, the remains, where appropriate, will be reburied or kept as part of the project archive.
- In the event of unexpected or significant deposits being encountered on site, the client and SCCAS/CT will be informed. Such circumstances may necessitate changes to the monitoring methodology, in which case a new archaeological quotation will have to be agreed with the client, to allow for the recording of said unexpected deposits. If the monitoring is aborted, i.e. because unexpected deposits have made development unviable, then all exposed archaeological features will be recorded as usual prior to backfilling and a report produced.



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Figure 2. Areas to be monitored (car park and houses in blue, road in red)

5.4 Post-excavation

- The post-excavation finds work will be managed by the SCCAS/FT Finds Team Manager, Richenda Goffin, with the overall post-excavation managed by David Gill. Specialist finds staff, whether internal SCCAS/FT personnel or external specialists, are experienced in local and regional types and periods for their field.
- All finds will be processed and marked (HER site code and context number) following ICON guidelines and the requirements of the Suffolk HER. For the duration of the project all finds will be stored according to their material requirements in the SCCAS Archaeological Stores at Bury St. Edmunds or Ipswich. Metal finds will be stored in accordance with ICON) guidelines, *initially recorded and assessed for significance* before dispatch to a conservation laboratory within 4 weeks of the end of the excavation. All pre-modern silver, copper alloy and ferrous metal artefacts and coins will be x-rayed if necessary for identification. Sensitive finds will be conserved if necessary and deposited in bags/boxes suitable for long term storage to ICON standards. All coins will be identified to a standard acceptable to normal numismatic research.
- All on-site derived site data will be entered onto a digital (Microsoft Access) SCCAS/FT database compatible with the Suffolk HER.
- Bulk finds will be fully quantified and the subsequent data will be added to the digital site database. Finds quantification will fully cover weights and numbers of finds by context and will include a clear statement for specialists on the degree of apparent residuality observed.
- Assessment reports for all categories of collected bulk finds will be prepared inhouse or commissioned as necessary and will meet appropriate regional or national standards. Specialist reports will include sufficient detail and tabulation by context of data to allow assessment of potential for analysis and will include non-technical summaries.
- Bulk soil samples will be processed by wet sieving and flotation in-house in order to recover any environmental material which will be analysed by SCCAS/FT or by external specialists as necessary.
- All hand drawn site plans and sections will be scanned.
- All raw data from GPS or TST surveys will be uploaded to the project folder, suitably labelled and kept as part of the project archive.
- Selected plan drawings will then be digitised as appropriate for combination with the results of digital site survey to produce a full site plan, compatible with MapInfo GIS software.
- All hand-drawn sections will be digitised using AutoCAD software.
- Digital photographs will be allocated and renumbered with a code from the Suffolk HER photographic index.

5.5 Report

 A full written report on the fieldwork will be produced, consistent with the principles of MAP 2 (English Heritage 1991), to a scale commensurate with the archaeological results. The report will contain a description of the project background, location plans, methodology, a period by period description of results, finds report and a full inventory of finds and contexts. The report will also include scale plans, sections drawings, illustrations and photographic plates as required.

- The objective account of the archaeological evidence will be clearly separated from an interpretation of the results, which will include a discussion of the results in relation to relevant known sites in the region that are recorded in the Suffolk HER and other readily available documentary or cartographic sources.
- The report will include a statement as to the value and significance of the site.
- The report will contain sufficient information to stand as an archive report.
- The report will include a summary in the established format for inclusion in the annual 'Archaeology in Suffolk' section of the Proceedings of the Suffolk Institute of Archaeology and History.
- A copy of this Written Scheme of investigation will be included as an appendix in the report.
- The report will include a copy of the completed project OASIS form as an appendix.
- An unbound draft copy of the report will be submitted to SCCAS/CT for approval within 6 weeks of completion of fieldwork.

5.6 Project archive

- On approval of the report a printed and bound copy will be lodged with the Suffolk HER. A digital .pdf file will also be supplied, together with a digital and fully georeferenced vector plan showing the application area and groundwork locations, compatible with MapInfo software.
- The online OASIS form for the project will be completed and a .pdf version of the report uploaded to the OASIS website for online publication by the Archaeological Data Service. A paper copy of the form will be included in the project archive.
- A second unbound copy of the report will be included with the project archive (see below).
- Two printed and bound copies of the approved report will be supplied to the client, together with our final invoice for outstanding fees. A digital .pdf copy will be supplied on request.
- The project archive, consisting of the complete artefactual assemblage, and all paper and digital records, will be deposited in the SCCAS Archaeological Store at Bury St Edmunds within 6 months of completion of fieldwork. The project archive will be consistent with MAP 2 (English Heritage 1991) and ICON guidelines. The project archive will also meet the requirements of SCCAS (SCCAS/CT 2010).
- All physical site records and paperwork will be labelled and filed appropriately. Digital files will be stored in the relevant SCCAS archive parish folder on the SCC network site.
- The project costing includes a sum to meet SCCAS archive charges. A form transferring ownership of the archive to SCCAS will be completed and included in the project archive.
- If the client, on completion of the project, does not agree to deposit the archive with, and transfer to, SCCAS, they will be expected to either nominate another suitable depository approved by SCCAS/CT or provide as necessary for additional recording of the finds archive (such as photography and illustration) and analysis. A duplicate copy of the written archive in such circumstances would be deposited with the Suffolk HER.
- Exceptions from the deposition of the archive described above include:
- Objects that qualify as Treasure, as detailed by the Treasure Act 1996. The client will be informed as soon as possible of any such objects are discovered/identfied and the find will be reported to SCCAS/CT and the Suffolk Finds Liaison Officer and

hence the Coroner within 14 days of discovery or identification. Treasure objects will immediately be moved to secure storage at SCCAS and appropriate security measures will be taken on site if required. Any material which is eventually declared as Treasure by a Coroners Inquest will, if not acquired by a museum, be returned to the client and/or landowner. Employees of SCCAS, or volunteers etc present on site, will not eligible for any share of a treasure reward.

- Other items of monetary value in which the landowner or client has expressed an interest. In these circumstances individual arrangements as to the curation and ownership of specific items will be negotiated.
- Human skeletal remains. The client/landowner by law will have no claim to ownership of human remains and any such will be stored by SCCAS, in accordance with a Ministry of Justice licence, until a decision is reached upon their long term future, i.e. reburial or permanent storage.

6. Project Staffing

6.1 Management

SCCAS/FT Manager	Rhodri Gardner
SCCAS/FT Project Manager	David Gill
SCCAS/FT Finds Dept	Richenda Goffin
SCCAS/FT Graphics Dept	Simon Cass

6.2 Fieldwork

The fieldwork team will be derived from the following pool of SCCAS/FT staff.

Name	Job Title	First Aid	Other skills/qualifications	
David Gill	Senior Project Officer		Surveryor	
Rob Brooks	Project Officer	Yes	Surveyor, CSCS card	
John Sims	Supervisor	Yes	CSCS card	
Tim Carter	Project Assistant		Metal detectorist, CSCS card	

6.3 Post-excavation and report production

The production of the site report and submission of the project archive will be carried out by the field team. The post-excavation finds work will be managed by Richenda Goffin. The following SCCAS/FT specialist staff will contribute to the report as required.

Graphics	Simon Cass, Beata Wieczorek-Oleksy
Illustration	Donna Wreathall
Post Roman pottery and CBM	Richenda Goffin
Roman pottery	Cathy Tester, Stephen Benfield
Post-medieval finds	Richenda Goffin
Environmental sample processing	Anna West

Finds Processing	Jonathan Van Jennians
Archiving	Ellie Hillen

SCCAS also uses a range of external consultants for post-excavation analysis who will be sub-contracted as required.

7. Health and safety

7.1 Introduction

- The project will be carried out following Suffolk County Council Health and Safety Policies at all times, as well as those of the main building contractor at the time of the groundworks.
- All staff will be aware that they have a responsibility to:
 - Take care of their own health and safety and that of others who maybe affected by what they do, or fail to do, at work.
 - Follow safe systems of work and other precautions identified in the risk assessment.
 - Report any changes to personal circumstances that may affect their ability to work safely.
 - Report potential hazards, incidents and near misses to the Project Officer/supervisor.
- Applicable SCCAS/FT Risk Assessments for the project are included in Appendix 3.
- All SCCAS/FT staff are experienced in working on a variety of archaeological sites and permanent staff all hold a CSCS (Construction Skills Certification Scheme) card. All staff have been shown the SCCAS Health and Safety Manual, copies of which are held at the SCCAS/FT offices in Ipswich and Bury St Edmunds. All staff will read the site WSI and Risk Assessments (see below), and will receive a site safety induction from the construction manager prior to starting work, and sign the WSI register (Appendix 2). All staff will be issued with appropriate PPE.
- From time to time it may be necessary for site visits by other SCCAS/FT staff, external specialists, SCCAS/CT staff or other members of the public. All such staff and visitors will be issued with the appropriate PPE and will undergo the required inductions.
- Site staff, official visitors and volunteers are all covered by Suffolk County Council insurance policies. SCC also has professional negligence insurance. Copies of these policies are available on request.

7.2 Specific site issues

Welfare facilities

• Due to the limited nature of the project, it is proposed that SCCAS/FT staff will work from their vehicle and use client welfare facilities if available. If not staff will be able to travel to public facilities. Additional facilities, toilet, site accommodation etc, will be

provided if the project is extended. Fresh, clean water for drinking and hand washing is carried in SCCAS vehicles. A vehicle will be on site at all times.

Buried munitions

• There is a potential that the mound recorded as ELV 012 is part of a WW2 munitions dump and there is potential to discover buried ordnance across the Elveden site. As such, measures as outlined in risk assessment 6 will be followed, including the specific Center Parcs safe working practices.

First Aid

A member of staff with the First Aiders at Work qualification will be on site at all times. A First Aid kit and a fully charged mobile will also be in vehicle/on site at all times.

Site access and security

- Access to the site is via the road network that runs throughout the Center Parcs site.
- Access to and fencing of the site will be the responsibility of the building contractors.

Deep excavation

• Due to Health and Safety considerations, no excavations below a maximum depth of 1.2m below existing ground level will be entered unless the hole is stepped or shored.

Contaminated ground

- Details of any ground contamination have not been provided by the client. If any such is identified then groundworks will cease until adequate safety and environmental precautions are in place.
- Advice will be sought from HSE and relevant authorities if required concerning any of these issues.

Hazardous Substances

• No hazardous substances are specifically required in order to undertake the archaeological works.

Underground services

Details of one known service have been provided by the client. This runs close to the
existing roadway and is demarcated by a line of street lights. Use of a CAT for cable
scanning will be the responsibility of the building contractors, but if any services are
identified by SCCAS/FT these will be reported to the site manager/supervisor
immediately.

Overhead Power lines

• No overhead power lines cross the site.

Personal Protective Equipment (PPE)

- The following PPE is issued to all site staff as a matter of course. Additional PPE will be provided if deemed necessary.
 - P Hard Hat (to EN397).
 - High Visibility Clothing (EN471 Class 2 or greater).
 - Safety Footwear (EN345/EN ISO 20346 or greater to include additional penetration-resistant midsole).
 - Gloves (to EN388).
 - Eye Protection (safety glasses to at least EN 166 1F).

Environmental impact/constraints

- Suffolk County Council maintains an internal Environmental Management System run in accordance with the ISO14001 standard by a dedicated EMS officer. The council has a publicly available <u>Environment Policy</u>, which commits us to meeting all relevant regulatory, legislative and other requirements, preventing pollution, and to continually improving our environmental performance.
- All existing and new SCCAS subcontractors are issued annually with the SCC Environmental Guidance Note For Contractors.
- On site the SCCAS Project Officer will monitor environmental issues and will alert staff to possible environmental concerns.
- The client and landowner have not informed SCCASFT of any environmental constraints directly upon the development area.
- All rubbish will be bagged and removed either to areas designated by the client or returned to SCCAS for disposal.
- Water will not be pumped into any water course, storm drain etc without prior consent from the Environment Agency. Procedures for dealing with contamination from fuel spills or sediments will be closely followed.
- All trenching will avoid the 'precautionary area' of any trees, this being the distance from the tree equal to 4 times the circumference of the tree at a height of 1.5m above ground level (National Joint Utilities Group 1995).

8. Bibliography

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SCCAS/CT, 2011, Requirements for Trenched Archaeological Evaluation 2011, ver 1.2.

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A pre-site inspection and assessment has been made of the site and the following SCCAS/FT Risk Assessments apply to the project and are included below. If any further risk assessments are specified by the construction site manager/supervisor then these will be adhered to.

SCCAS/FT RA1	General outdoor working
SCCAS/FT RA2	Manual excavation
SCCAS/FT RA3	Machine excavation, site stripping, other mechanical excavation
SCCAS/FT RA4	Forest work
SCCAS/FT RA5	Use of specific equipment
SCCAS/FT RA6	Buried ordnance

Risk assessment 1 - General outdoor working

Potential hazard	Risks	Who's at	Like-	Severity	Risk	Control	Action	Mitigated
		risk	lihood	rating	rating	measures		risk rating
1. Lone working (not	1.1 Injury or accident	Staff,	2	4	8 Med	Lone working	Staff will always carry a fully charged mobile phone	Low
anticipated on this	1.2 Confrontation	contractors	1	4	4 Low	procedures	Staff will use a 'buddy' system with an office based	
site)	1.3 Getting lost	and public	1	4	4 Low	Mobile phone	worker to communicate their location and planned	
							progress	
2. Weather conditions	2.1 Exposure	Staff	1	3	3 Low	Protective	Staff will be supplied with waterproof clothing	Low/medium
	2.2 Heatstroke and		2	3	6 Med	clothing	Staff will be advised of the risks from the sun	
	sunstroke		1	3	3 Low	Awareness of	Drinking water and shelter from the elements will be	
	2.3 Frostbite					the risks	available	
						Water and		
						shelter		
3. Uneven ground	3.1 Injury from tripping	Staff	3	3	9 Med	Secure footwear	Staff will wear safety footwear with ankle support	Low
						Awareness of	Staff will be aware of the risks and take care	
						surroundings		
4. Strangers/public	4.1 Confrontation	Staff	1	4	4 Low	Non	Staff will treat all people with respect	Low
			2	3	6 Med	inflammatory		
						behaviour		
5. Rights of	5.1 Risk of injury to the	Public	1	5	5 Low	Personal	Staff will be aware of the location of a Right of Way and	Low
way/roads/paths	public					warning	not impede it	
around the complex						Warning	Staff will warn members of the public of any hazards	
						tape/fencing	Warning tape or fencing will be erected if unattended	
							depending on the nature of the work	
6. Roads and Traffic	6.1 Injury from collision	Staff and	1	5	5 Low	High visibility	Staff will wear high visibility clothing and be aware of	Low
	with vehicles	public	2	5	10 Med	clothing	traffic risks	
	6.2 Distraction to drivers		2	5	10 Med	Safe working	Staff will work efficiently and quickly to minimise	
	6.3 Hazards in the road					practices	distraction in the road	
							Staff will not leave anything in the road and will clearly	
							cone off any holes etc.	
7. Driving	7.1 Crashes	Staff and	3	5	15 High	Skills	Staff driving larger vehicles will be assessed as	Low
		public					competent	
							Staff will abide by SCC driving rules and the law.	

Risk rating with control measures actioned- acceptable Yes

Risk assessment 2 -	manual	excavation
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Potential hazard	Risks	Who's at	Like-	Severity	Risk	Control	Action	Mitigated
		risk	lihood	rating	rating	measures		risk rating
1. Manual use of	1.1 Physical injury from	Staff	3	3	9 Med	Skilled staff	Staff to be trained in the use of unfamiliar tools	Low
tools	over/incorrect use					Protective clothing	Staff to be advised to be aware of own limits	
	1.2 Being hit by others		3	3	9 Med	High visibility	PPE to be issued and worn (boots, hi-vis vests, hard	
	using tools					clothing.	hats, ear defenders gloves and goggles) as appropriate.	
	1.3 Cuts from flints etc.		4	1	4 Low	Awareness of the	Staff encouraged to be aware of each other	
						danger		
2. Uneven surfaces	2.1 Tripping	Staff,	3	1	3 Low	Tidy site	Site to be kept tidy at all times, no unnecessary objects	Low
		contractors				Correct footwear	to be left lying around.	
		and public				Clear marking	Non removable hazards to be clearly marked.	
						Protective	Sticking up spikes etc. to have visible protective caps.	
						coverings		
3. Deep holes	3.1 Trench collapse	Staff,	3	5	15 High	Fencing and	No deep holes to be left unattended unless fenced	Low
	3.2 Falling into the hole	contractors	3	4	12 Med	covering	and/or covered to prevent access	
	3.3 Deep water	and public	3	4	12 Med	Shoring and	No deep holes to be entered unless shoring erected by a	
	3.4 Standing water		3	4	12 Med	shuttering	suitably competent person.	
	containing bacteria and					Awareness of safe	All staff to be aware of the risks of waterborne diseases,	
	diseases					practice	no open wounds to be allowed on site, gloves to be worn	
							and washing facilities available.	
4. Live services	4.1 Striking underground	Staff and	2	5	10 Med	Cable detection	All sites will be cable detected prior to excavation	Low
	cables	contractors				Safe working	All cables and pipes will be assumed to be live unless	
	4.2 Damage to		3	3	9 Med	practices	confirmed otherwise	
	underground pipes						Located cables and pipes will be clearly marked.	
							Care will be taken not to strike live cables and pipes with	
							hand tools.	
5. Contaminated	5.1 Artificial contaminants	Staff and	2	4	8 Med	Protective clothing	All staff will be supplied with gloves and specialist	Low
ground		contractors				Access to soil	clothing as appropriate	
						reports	Hand washing facilities will be provided in the vans	
							Soil reports and information about the risks of soil	
							contamination will be obtained from developers	

Risk rating with control measures actioned– acceptable Yes

Mitigated
risk rating
Low/medium
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Risk assessment 3 - machine excavation, site stripping, other mechanical excavation

Risk rating with control measures actioned– acceptable Yes

Risk assessment 4 - Forest work

Potential hazard R	Risks	Who's at	Like-	Severity	Risk rating	Control measures	Action	Mitigated
		risk	lihood	rating				risk rating
1. Diseases	1.1 Lymes disease	Staff	2	4	8 Med	Awareness	Staff will fill in an Incident Report Form if bitten by ticks	Low
	1.2 Tetanus		1	4	4 Low	Innoculation	and report immediately to a doctor if they fall ill soon	
			1	4	4 Low		after the incident or suffer from the following symptoms.	
							Any flu-like symptoms; a red spot around the location of	
							the tick's bite.	
							All staff will have up to date tetanus jabs	
2. Wild animals	2.1 Bee and wasp stings	Staff	1	5	5 Low	Protective clothing	Staff will wear safety boots and long trousers.	Low
	2.2 Snake bites – only		1	3	3 Low	Sensible	Nests will not be deliberately disturbed	
	adders are considered					behaviour	Basic snake identification information will be provided	
	dangerous		1	3	3 Low		and if bitten by an adder staff will immediately phone for	
	2.3 Bat bites may also carry						assistance.	
	diseases						Staff will not deliberately disturb any wild animals.	
							Bites from bats are highly unlikely but if they do occur	
							should be reported and appropriate action taken.	
							No staff with known allergies to bites and stings will be	
							employed in this work.	
3. Wild plants	ken spores	Staff	3	1	3 Low	Sensible	Staff will not eat or touch unnecessarily any wild plants	Low
	s from nettles etc.		3	1		behaviour	Staff with known allergies to stings will not be used in	
			3	1	3 Low		this work	
							Staff will carry a mobile phone and GPS at all times	
4. Uneven ground	4.1 Injury from tripping	Staff	2	3	6 Med	Secure footwear	Staff will wear safety footwear with ankle support	Low
						Awareness of	Staff will be aware of the risks and take care	
						surroundings		
5. Trees	5.1 Injury from overhanging	Staff	2	3	6 Med	Awareness	Staff will be encouraged to be aware of their	Low
	branches						surroundings and watch out for low or loose branches	
	5.2 Falling branches and		1	5	5 Low	Good project	No work in forests will take place during or immediately	
	trees					planning	after high winds	

Risk rating with control measures actioned- acceptable Yes

Additional information for Forest Work

Further information about Lymes disease.

Lymes disease is caused by bites from ticks, which are often found in long grasses or bracken, typically present in forests. The spot from such bites will gradually grow bigger, often with a pale area in the middle. This symptom is called erythema migrans. Erythema migrans can also appear at other places on the body where the tick has not bitten. Some people get many red spots. Usually one to four weeks will pass between the bite and when erythema migrans appears.

Further information about Bracken spores.

These have been shown to be carcinogenic in mice, however whilst staff should be aware of this risk there is no evidence that occasional contact with Bracken poses a threat to human health.



Adder up to 60cm long

Grass snake up to 150cm long

Risk assessment 5 – Use of specific equipment

Potential hazard	Risks	Who's at risk	Like-	Severity	Risk rating	Control measures	Action	Mitigated
			lihood	rating				risk rating
1. Survey equipment	1.1 Injury from carrying	Staff	2	2	4 Low	Training	Staff carrying equipment will be aware of their limitations	Low
	1.2 Injury from laser		1	2	3 Low	Good project	and take rests as necessary.	
	beam					planning	Equipment will be transported as close as possible to the	
							survey site by vehicle	
							Staff will be trained in the use and risks from the	
							equipment	

Risk rating with control measures actioned– acceptable Yes

Risk assessment 6 – Buried ordnance

Potential hazard	Risks	Who's at risk	Like-	Severity	Risk rating	Control measures	Action	Mitigated
			lihood	rating				risk rating
1. Buried ordnance	1.1 Buried unexploded	Staff and	2	5	10 Med	Awareness	Former military sites should be identified at Project	Med
	devices and live	contractors				Metal detecting	Initiation Stage	
	munitions					Good project	All staff will be forewarned if buried munitions is a	
	1.2 Contamination					planning	possibility	
						Protective clothing	Where excavations will be taking place metal detecting	
							will be carried out and signals marked and carefully	
							exposed if deemed safe to do so	
							If buried munitions are identified the site will be closed,	
							staff evacuated and site security called on 01842	
							894111	
							Staff will wear gloves during excavation works on these	
							sites.	
							Handwashing facilities will be provided	

Risk rating with control measures actioned– acceptable Yes

Appendix 2. WSI Register

Center Parcs – Tree House Lodges Monitoring, ELV 082

I acknowledge that I have read the Written Scheme of Investigation and Risk Assessments for the site. This does not constitute a site induction, which will be carried out by the construction site manager/supervisor.

Name (Print)	Employer	Signature	Date

Center Parcs – Tree House Lodges Monitoring, ELV 082

I acknowledge that I have read the Written Scheme of Investigation and Risk Assessments for the site. This does not constitute a site induction, which will be carried out by the construction site manager/supervisor.

Name (Print)	Employer	Signature	Date



Archaeological services Field Projects Team

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- Historic Building Recording
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- Graphics design and illustration

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