CAP CULVER ARCHAEOLOGICAL PROJECT

BRIDGE FARM EXCAVATIONS

Health & Safety Risk Control and Action Plan

Risk assessments are a statutory requirement. The aim of this document is to identify any Health and Safety risk that may arise from undertaking archaeological works on the site. An assessment has been undertaken to identify, rate and highlight both the general and site-specific hazards inherent in the fieldwork which is to be undertaken. For those hazards identified this safety plan has been prepared for implementation to control known risks to an adequate level, or better.
Particular responsibilities are assigned to specific individuals but all participants are responsible for each other's safety, as well as their own. A copy of this document and the Risk Assessment will be kept on-site and will be freely available on request to supervisors, students, volunteers or visitors.

Safety Management Structure
The Project Director, Rob Wallace, is ultimately responsible for the Health and Safety of all those working on the project. He is required to understand the broad requirements of relevant legislation and ensure that responsibility for health and safety matters is properly assigned and accepted at all levels.
The Site-Supervisors are responsible for health and safety matters on site, and for those members or their immediate team. In their absence they are also responsible for nominating an appropriate person to be responsible for safety matters. Site supervisors will be introduced at site induction sessions. All site workers are responsible for ensuring that the project is safe for themselves, their fellow workers (archaeological and non-archaeological) and the public at large.

Pre-Project Checklist

Risk of striking existing services:	**Risk assessment level 5 - Adequate**
Electricity search:	**Yes**
Services Present:	**No**
Live:	**No**
Type and Location	Not applicable
Depth:	Not applicable
Action: No underground services present.	
Gas search:	**Yes**
Services present:	**No**
Live:	**No**
Type and Location:	Not applicable
Depth:	Not applicable
Action: No underground services present.	
Telecommunications search:	**Yes**
Services present:	**No**
Live:	**No**
Type and Location:	Not applicable
Action: No underground services present.	
Water Search:	**Yes**
Services Present:	**No**
Live:	**No**
Type and Location:	Not applicable

Depth:	Not applicable
Action: No underground services present.	
Sewage and Drains search:	**Yes**
Services Present:	**Yes**
Live	**Yes**
Type and Location:	Not applicable
Depth:	Not applicable
Action: Agricultural field drains present, excavations are unlikely to extend to their depth. If field drains are encountered excavation will accommodate them.	
Overhead cables:	**No**
Services Present:	**No**
Live:	**No**
Type and Location:	Not applicable
Depth:	Not applicable
Action: No overhead cables present over the excavation site.	

Proximity to Structures

Risks from proximity to structures	**Risk assessment level 4 - acceptable**
Is work within a building?	**No**
Is the building safe to work in?	Not Applicable
Are their adjoining buildings or walls?	**No**
Are their nearby roads?	**No**
Has an engineer checked possible effects of an excavation?	**Unknown**
Action: Roads are not of a near enough to present an immediate danger. Excavation trenches over or near to any public footpath will be fenced off and appropriate diversion provided.	

Site Occupation

Risks from site occupation	**Risk assessment level 6 - adequate**
Will other people (members of the public, residents etc) be on site?	**Yes**
Will other projects be operating on site?	**No**
Are there any livestock on site?	**Yes: There may be cattle in the surrounding pastures but any excavation areas in these fields will be enclosed by standard agricultural barbed wire fencing.**
Are work areas and accesses clearly marked?	**Yes**
Are there any restrictions on work due to presence of others?	**No**
Will visitors be able to view the works?	**Yes**
Do public rights of way exist over the site?	**Yes**
Action: Any excavation area that is over or near to a public foot path will be fenced off and appropriate diversion provided. All open areas will be clearly marked and non-archaeological persons will not be permitted within 1m of the trench edge. Livestock will be prevented from entering work areas at all times by appropriate fencing.	

Public Liability

Risks of Public Liability	**Risk assessment level 4 – acceptable**
Is perimeter securely fenced?	**Yes**
Will warning signs be needed?	**Yes**
Are shallow trenches/areas to be cordoned	**Yes**
Are deep trenches to be protected by barriers?	**Yes**
Action: Barrier fencing will be erected at all times around trenches in close proximity to any public footpath. Fencing will be erected around all open areas at those times when work is not in progress. Barbed wire fencing will be used around the trenches in the pastures.	

Contamination

Risks due to contamination	**Risk Assessment level 5 - adequate**
Risk of presence of contaminated soil:	**Low**
Risk of hazard to health of personnel:	**Low**
Risk of presence of soil gas:	**Low**
Presence of unexploded bombs/ammunition:	**Low**
Have ground contamination tests been undertaken?	**Unknown**
Have archive searches of bomb damage been undertaken?	**Unknown**
Is the previous site use known If so does this indicate possible hazards?	**Yes** **No**
Is the site a landfill site?	**No**
Is part of the site likely to be waterlogged?	**Yes**
Action: No known contaminants. All work to cease if any hazardous substances are encountered. Shoring will be used once a depth of 2 metres below open area excavation level has been reached or below ground level if trench at baulk.	

Sources of Vibration

Risk due to vibration	**Risk assessment level 6 - adequate**
Is the site close to major roads, railways lines, air fields or premises where vibration occurs?	**No**
Will the excavation stability be affected by sources of vibration?	**No**
Will there be any piling in progress during the archaeological work?	**No**
Will there be a generator used on site	**Yes**
Action: Generator to be away from main working areas and switched off when not in use	

Geology

Risks due to geology and soil type	Risk assessment level 4 - acceptable
Is a geotechnical survey report available?	**No**
Risk of collapse of sides?	**Low**
Type of material present?	**Sandy silt topsoil on gleyic argillic brown-earths and pelo-alluvial gley alluvium overlying second terrace valley gravels on Wealden clay and Lower Greensand.**
Is the material stable?	**Yes**

Is there any made ground?	**No**
Are there any potential loose pockets in otherwise stable ground?	**Unknown**
Is there likely to be inflowing water?	**Yes**
Is there a possibility of standing water in the excavations?	**Yes**
Is site close to water course?	**Yes**
Will pumping be necessary?	**Yes**
Action: Stability of excavation trench sides to be monitored. Some deeper excavations may penetrate the standing water level and pumps will be provided to temporarily clear such excavations of water whilst being investigated. Excavation will cease if inflow of water is deemed to be a risk to any workers safety.	

Timing of Works

Duration of works:	**Public 6 weeks / staff 12 weeks**
Length of time each area open:	**Variable with some areas likely to remain open for duration. Areas will be opened and closed as swiftly as circumstances allow.**

Access and Plant Delivery

Risks due to delivery of plant	**Risk assessment level 1 - acceptable**
What access arrangements need to be made?	**None**
Has landowner been informed?	**Yes**
Is site locked?	**No**
Is site wide enough for plant access?	**Yes**
Is access off a main road?	**No**
Will traffic cones be needed or restricted arrival/departure times be required?	**No**
Will ramps/sleepers/boards be needed?	**No**
Do any authorities need informing?	**No**
Action: Excavation on privately owned farmland with permission of landowner. Site not in close proximity to main area of farm traffic. Plant access will be responsibility of the provider.	

Type of Excavation

Risks due to type of Excavation	**Risk assessment level 6 - adequate**
Risk of collapse of sides	**Low**
Risk of persons falling into excavations	**Low**
Risk of plant and materials falling into excavations	**Low**
Risk of flooding of excavations	**Moderate**
Risk of presence of hazardous atmospheres	**Low**
Trench/area/pit?	**Large open area excavation of up to 1600sqm. And possible smaller test trenches.**
General depth	**Unknown. Estimated at 1m**
Greatest depth expected	**Unknown, Estimated at 2m**
Deeper than width?	**Yes**

Deeper than 1.2m?	**Yes**
Distance from load bearing structure?	**Not Applicable**
Distance from spoil heap or dumper run?	**>1m**
Is depth greater than distance from load bearing structure, spoil heap or dumper run?	**No**
Will stratigraphy require the sides to be kept vertical?	**Unknown**
Is shoring needed?	**No**
Is work to be carried out in potential confined areas?	**No**
Action; Stability of sides to be monitored. Any features that go below 1 meter in depth will be reassessed at the time. Any trenches deeper than 2m will be stepped or shored.	

Site Accommodation

Risks due to site accommodation	**Risk assessment level 4 - acceptable**
Is accommodation available?	**No**
Is cabin hire required?	**No**
Is toilet available on site?	**Yes**
Is toilet hire required?	**No**
Will washing facilities be provided?	**Yes**
Is there clean running water on site?	**Yes**
Action: Camping: Bring your own tent. Mains water, toilets & showers are a short walk from the excavation and the camping area. Camping area cleared of tall vegetation and grass areas topped. Ditch fenced and/or marked. 'Be aware of farm traffic' signs erected.	

Hand-tools

General assessment on risk from hand tools	**Risk assessment level 4 - acceptable**
Eye Injury	**Low**
Injury to hands, feet and body	**Low**
It is recognised that for all types of fieldwork hand tools will be used. All hand tools will be kept in good condition and checked regularly. Damaged tools will be repaired or replaced. When not in use they will be stored under cover so as to prevent deterioration, and so as not to cause a tripping hazard by leaving them loose on site. Eye protection is to be provided and used wherever work is done where there is a risk of flying particles or pieces of the tool breaking off. Sharp tools are to be carried and used in a way so as not to cause injury to the user or others. Insulated tools must be used where there is a possibility of live electrical work.	
Action: Introductory safety on site sessions will be offered to all new and inexperienced workers	
Buckets	
These can fail at the handle attachment point and will be checked regularly. They should never be over-filled and always be filled to take account of the abilities of the user, and the distance and gradient to be travelled. Buckets should be lifted keeping the back of the carrier straight so that the legs rather that the back provide the lifting force.	
Shovels and Spades	
These should be used from a firm, stable standing position which uses the legs rather than the back to the lift the weight. The surrounding areas are to be kept clear of obstructions and other personnel.	
Picks and Mattocks	

When using a pick or mattock, the user's legs must be placed apart to obtain a firm footing, and the picks wielded so that the point of contact is within easy reach, but not too close to the feet. Where possible the weight of the tool should be used to provide the necessary force. The surrounding area, including overhead, is to be kept free of obstructions and other personnel. Suitable foot-wear to be worn.
Trowels
As trowels have a point, especially sharp when new, care is required when carrying and using them. They will never be placed in pockets or other parts of clothing.
Grid Pegs
Metal Grid pegs will be fitted with plastic caps or similar covers to protect against contact injuries.
Wheelbarrows
These will be loaded only to the lifting and pushing capabilities of the operator, taking account of the weight, moisture level and bulk of the material, and of the route to be travelled. The operator should maintain a straight back during all lifting and pushing operations so that the legs rather than the back provide the force.
Wheelbarrow Runs
Wheelbarrow runs will be established where necessary. These will be firmly bedded to avoid movement of boards during use. Where runs are on gradients suitable grip will be provided by the use of the barrow boards. A sufficient width of run will be used to ensure ease of passage and balance of user. Runs will not be constructed over drops without suitable handrails and kickboards.
Surveying Staff
Telescopic surveying staffs will not be carried in the extended position. This applies particularly when working in the vicinity of railways, roads and power lines.

Ladders

Risk due to use of ladders	**Risk assessment level 3 - acceptable**
Falls of persons from ladders	**Low**
Ladder slipping	**Low**
Objects dropped by ladder user	**Low**
Ladders are used very infrequently and only when use is deemed unavoidable and/or beneficial. Ladders will be checked before use to ensure correct length, type and condition. They will be subject to routine inspection. Ladder work is restricted to access and egress of archaeological trenches only. No work will be carried out from ladders. Over-reaching from ladders will be avoided. The ground base for the ladder must be firm and level. The ladder must be of sufficient length to extend 1.5m above the step-off point when used as access to a scaffold or other platform or floor. The correct angle of rest for a ladder is 75^0 or a base to height ration of 1:4. Ladders must be secured against slipping, by tying at the top or at the bottom. Ladders may only be footed as a sole precaution against movement if less than 5m high.	

Personal Protective Equipment

Hard Hats
Safety hats provided by the project will be worn at the following times: whenever a mechanical excavator is present on the site (all team members and any visitors); by any person working with their head below ground level and/or when the site has been declared a hard hat area.

Hearing Protection
Ear defenders will be provided for the use of personnel working in the vicinity of operating plant. The defenders will be of a type which can be worn with safety helmets.
Footwear
All persons are advised that when working on site they should wear stout footwear. This reflects the nature of the site which is farmland and could be uneven.
High Visibility Clothing
When necessary team members will be issued with high visibility clothing. These occasions will include: the machine supervisor; when other staff are working in close proximity to working plant or routes used by plant; when staff are working in close proximity to roads.
Action: All volunteers and supervisors will adhere to the above guidelines.

Manual Handling

Risk due to manual handling	**Risk assessment level 4 - acceptable**
A considerable amount of manual handling is involved in archaeological work. This includes loading and unloading equipment, lifting, wheelbarrows and buckets, shovelling, and lifting soil samples.	
Consideration must always be given to whether the load in question can be lifted by other means, e.g. mechanical means can be supplied for large quantities of spoil unless the archaeological considerations dictate otherwise.	
Team members will not be asked to lift loads beyond their capabilities. Manual lifting will be carried out carefully, and in a manner calculated not to cause injury to the lifter. In general, for the type of loads predicted, this means a lift carried out with the load close to the body.	
Action: Where manual handling of spoil is necessary (in this case, all spoil movement), care will be taken by all staff and volunteers in doing so.	

Machining

Risks due to machining on site	**Risk assessment level 5 - acceptable**
Risk of shovel or load dropping inadvertently?	**Low**
Risk of overturning machine?	**Low**
Risk of materials dropping from shovel or bucket?	**Low**
Risk of persons being struck by machine?	**Low**
Risk of restriction of driver's vision?	**Low**
Type of excavator:	**13 ton tracked**
Action: Appropriate safety measures will be observed at all times during the course of machining. Only select individuals wearing appropriate High Visibility and Safety Equipment will be permitted within the immediate vicinity, and always at a safe distance. Driver must have appropriate qualification.	

COSHH Statement

Petrol/Diesel
Reserves of fuel are the responsibility of the mechanical plant operator. They must be stored in suitable metal containers on the existing concrete hard standing and in positions well away from site accommodation.

Exhaust Gases
Those given off by a mechanical excavator or other plant are toxic if inhaled as they contain partly burnt hydrocarbons, oxides and nitrogen, carbon monoxide and other chemicals. The risk is greater if the engine is poorly adjusted. Carbon monoxide is particularly dangerous, as it is colourless, odourless and de-oxygenates the blood when inhaled.
Substances which will or may be encountered on the site: **Unknown**
Risk Assessment 3 - acceptable
Action: Machine will be scheduled for use when site closed to the public. Staff will keep safe distance from machine and wear protective clothing.

Noise

Activities and areas identified by the team, supervisors and others, as noise zones will be clearly indicated. Specific assessments of risks to hearing will be carried out by persons competent to do so and appropriate control measures implemented. Where practicable, these will begin with the reduction of the risk at source by engineering or other physical measures, with use of personal protective equipment as the last resort or as part of an appropriate control system where physical measures alone are insufficiently effective.
Action: Noise levels to be monitored, no major risk should arise.

First Aid

Trained first aid personnel will be included within the on-site team.
A clearly marked First Aid Kit will be kept on site. All members of the team will be made aware of where it is kept.
Action: Project Director (Robert Wallace) is a qualified first aider. A first aid kit will be kept and maintained by the First Aider and located in the Site Office.

Vehicle Use

Action: Ensure the vehicle is road worthy and properly licensed. Ensure loads are safe and secure. Do not overload. Current driving laws must be adhered to. Only carry the number of passengers that you have seats and insurance for.

Walking and driving in farm area

Risk from walking and driving in farm area	**Risk assessment level 8 - adequate**
Action: Personal responsibility to keep alert for farm vehicles especially around the buildings and main farm drive. Remember you can see and hear them much more easily than they can see you. Take care on exiting the farm as this minor road can be busy at times and traffic unexpectedly fast.	

Slip, trip or fall on slippery or uneven ground

Risks due slipping or falling	**Risk assessment level 6 - adequate**
Risk of slipping on wet boards and slopes	**Moderate**
Risk of tripping over pegs, tapes and strings	**Moderate**
Risk of falling into excavation trenches	**Low**
Action: Introductory H&S session. Excavation to stop if paths and boards become hazardous. Deep trenches to be surrounded by safety fence or hazard warning tape.	

Falling Objects (from trees and buildings)

Risks due to falling objects	**Risk assessment level 8 - adequate**
Risk from falling objects off trees	**Low**
Risk from falling objects off buildings	**Low**
Action: Site not close to any trees or buildings. Access around farm buildings kept to minimum.	

Protruding branches

Risks due to protruding branches	**Risk assessment level 6 - adequate**
Risk from branches on trees	**Low**
Risk from branches on hedges	**Low**
Action: Site not close to any trees or hedges.	

Temperature and extremes of weather

Risks due to extremes of weather	**Risk assessment level 6 - adequate**
Risk from cold	**Low**
Risk from heat	**Moderate**
Risk from sun stroke and sunburn	**Moderate**
Action: Introductory H&S session. Vigilance and individual responsibility. Recommendation of suitable clothing. Drinking water and shade provided.	

Fire

Risks due to fire	**Risk assessment level 4 - acceptable**
Risk from equipment	**Low**
Risk from smoking	**Low**
Action: Site is open with few flammable items. No smoking allowed on site or in CAP offices	

Alcohol, drug and substance abuse

Risks due to alcohol, drug and substance abuse	**Risk assessment level 4 - acceptable**
Risk from alcohol	**Low**
Risk from drug and substance abuse	**Low**
Action: No alcohol to be consumed on site. No possession or use of recreational drugs or abusive substances to be tolerated anywhere under CAP control. Anyone found to be intoxicated or under the influence of any drug will be excluded from the site and CAP offices.	

Tiredness or feeling unwell

Risks due to tiredness or feeling unwell	**Risk assessment level 4 - acceptable**
Risk from tiredness	**Low**
Risk from feeling unwell	**Low**
Action: All personnel should self-monitor for tiredness and symptoms of ill-health as well as being aware of symptoms in others. Take regular break periods and if condition persists inform a supervisor and stop work so that your condition can be assessed and appropriate action taken. A tired or ill worker is prone to making mistakes and is potentially a danger to self and others. Never feel obliged to match other workers efforts especially if unused to manual labour.	