Goldenhill Park, Clydebank:

Archaeological Support for design of Access Improvements

Risk Assessment Method Statement

by Thomas Rees

issued 28th September 2016

on behalf of West Dunbartonshire Council

RATHMELL ARCHAEOLOGY LTD

Quality Assurance

This report covers works which have been undertaken in keeping with the issued brief as modified by the agreed programme of works. The report has been prepared in keeping with the guidance of Rathmell Archaeology Limited on the preparation of reports. All works reported on within this document have been undertaken in keeping with the Chartered Institute for Archaeologists' Standards and Policy Statements and Code of Conduct.

Signed  Date …28th September 2016..

In keeping with the procedure of Rathmell Archaeology Limited this document and its findings have been reviewed and agreed by an appropriate colleague:

Checked  Date …28th September 2016....

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Introduction

1. This Risk Assessment Method Statement (RAMS) describes methodology and health and safety considerations related to the archaeological support required for testing the suitability of design for access and management improvements within Goldenhill Park.

2. These works will comprise the excavation of eight test pits.

3. The works are within a Scheduled Monument, designated under the terms of the Ancient Monuments and Archaeological Areas Act 1979. The designated site is Golden Hill Park Roman fort, annexe and bathhouse (Index No 7070). Further this site is an element of the Frontiers of the Roman Empire (Antonine Wall) World Heritage Site, recognised to be of International significance. The works detailed within this document can only be conducted where valid Scheduled Monument Consent is held.

4. Within this document there are two main sections:

   - Archaeological Method Statement – detailing the archaeological work to be conducted to satisfy the client; and
   - Project Management – explaining site management issues and how a safe working environment will be delivered.

5. Both sections are supported by Appendices and other supporting documentation.

Rathmell Archaeology

6. Rathmell Archaeology Ltd through our offices in Ayrshire and Dundee provide a wide range of archaeological services throughout Scotland to developers, their agents, conservation groups and government agencies. Established in February 2003 we are a growing service provider bringing enthusiasm and innovation to our industry, underpinned by our professional experience.

7. Rathmell Archaeology has a strong reputation for delivering works to a high standard and to schedule. All team members are used to successfully working to set schedules to meet our client's needs. Our project team has considerable cumulative experience that will prove invaluable in delivering the project competently and to schedule.

8. Our staff have a broad range of experience, and as an organisation we have, in addition, a proven track record in running complex projects which span multiple years as well as the analysis of the materials from such sites and their publication.

Standards

9. This methodology has been designed in accordance with current best archaeological practice and the appropriate national and regional standards and guidelines including:

   - Code of Conduct (Chartered Institute for Archaeologists 2000);
   - Standard and Guidance (Chartered Institute for Archaeologists);
   - Treasure Trove in Scotland: A code of Practice (Scottish Government 2008)

10. The archaeological works will be carried out with due regard to all appropriate health, safety and environmental legislation and guidance, including:

    - Health and Safety at Work Act 1974
    - Avoiding Danger from Underground Services HSG47
    - FAME Safety Manual

Archaeological Method Statement

11. All works will comply with the Chartered Institute for Archaeologists' Standards and Policy Statements and Code of Conduct and Historic Scotland Policy Statements.

Test Pits

12. Each test pit will be 0.5m by 0.5m in plan unless otherwise agreed with Historic Environment Scotland. Test pits will be marked out at the agreed location prior to excavation and enclosed within an appropriately sized fence, typically formed of road pins driven into the ground and orange mesh fencing. Tarpaulins will be laid for spoil management within the fenced enclosure. The test pit location will be scanned with a Cable Avoidance Tool (CAT) prior to excavation and then again during excavation.

13. The turf will be lifted and laid aside within the spoil management area. Hand excavation will then be conducted to reduce the level of the pit to the shallower of: the upper surface of the natural subsoil, the upper surface of a significant archaeological horizon or 1000mm from the current ground surface.

14. On completion of the excavation and recording of the test pit, it will be reinstated with the arisings from the excavation, compacted and then the turf reinstated.

Recording Methodology

15. The recording system will be based on the Museum of London's *Archaeological Site Manual* (1994). All recording will be in keeping with the recording system which will, at minimum, detail that:

- all contexts, small finds and environmental samples will be given unique numbers;
- small finds will be individually bagged and then located by context and by test pit; and
- all recording of contexts, samples and activities will be undertaken on *pro forma* record sheets.

16. The location of the work area will be surveyed after opening to record its location. All survey data will be three-dimensional, to an appropriate resolution for purpose.

17. Plans of archaeological features will be recorded with sufficient accuracy to depict general layout at 1:100. Additionally 1:20 plans of all the individual features will be prepared and sections drawn at 1:10. Spot heights and those of individual features will be recorded relative to Ordnance Datum. Representative measured sections of the side of the test pit will be prepared as appropriate showing the sequences and depths of deposits.

18. A photographic record (SLR colour digital, >7 megapixel resolution) will be maintained during the course of the fieldwork with the addition of colour print photographs taken of significant archaeological features. Each image of an archaeological detail will include an appropriate scale, north arrow and header board. The topic of images will include:

- the site prior to commencement of fieldwork;
- the site during work, showing specific stages of fieldwork;
- the layout of archaeological features;
- individual features and, where appropriate, their sections; and
- groups of features where their relationship is important.

19. All finds (artefacts and ecofacts) visible during on-site works will be collected and

processed. Finds will be appropriately packaged and stored under optimum conditions, as detailed in the RESCUE/UKIC publication First Aid for Finds (Watkinson and Neal 1998).

20. Archaeological deposits will be sampled systematically in accordance with Rathmell Archaeology Limited standard environmental sampling practice. All investigated features believed to be significant and of anthropic origin will be sampled along with a selection of natural features and topsoil to provide control samples. Bulk samples, a minimum of 10 litres but up to 30 litres if possible, will be taken for wet sieving and flotation.

21. Should the potential archaeological features identified include funerary deposits (i.e. human skeletal material regardless of whether cremated or not) then all works on that area will be halted with the local constabulary, Client and Archaeological Curator notified. Sites with buried human skeletal material are protected. The removal of a body from the grave is not considered theft; rather Scots common law recognises the offence of *crimen violati sepulchre* (violation of sepulchre). In essence, the crime is the disturbance of the corpse without permission. Hence, excavation will only proceed with the agreement of all parties.

Technical site reporting

22. The preliminary reporting of the on-site works will be as follows:

    a. Data Structure Report presenting the results of the on-site archaeological works and incorporating assessment of the materials recovered. In addition a narrative would explain the character of the archaeology investigated and compare this to comparable archaeology;

    b. Preparation of a DES entry and OASIS form including grey literature upload; and

    c. Preparation of the project archive including finds.

23. The Data Structure Report detailing the findings of the archaeological works will be prepared within four weeks of the completion of each stage of works and will consist of:

    - a non-technical summary of the findings of the excavation;
    - a descriptions of the methodologies, geology and findings of the excavation;
    - location plan, area plans and sections of the excavated archaeological features;
    - interpretation of the archaeological features exposed and their context;
    - photographs to include general site images and key archaeological features; and
    - recommendations for analysis and publication of the material recovered.

24. A full draft of each version of the Data Structure Report will be circulated to the Client and Archaeological Curator (Historic Environment Scotland) for comment. The OASIS online report form for the fieldwork will be updated but only completed on the conclusion of all on-site works. A digital copy of the final version of the report will be uploaded to the OASIS site.

25. Following completion of fieldwork and acceptance of the final version of the report, an ordered archive of both object and paper elements will be prepared according to the recommendations in *Archaeological Archives A guide to best practice in creation, compilation, transfer and curation* (Brown 2007) and *Standards in the Museum Care of Archaeological Collections* (Museums and Galleries Commission 1992). The archive will be created in accordance with the identified repository's deposition and archiving standards. The procedures of documentations and declaration to the Treasure Trove Unit will be followed in keeping with their Practice Guide for reporting artefacts recovered. These tasks will be concluded within 3 months of the completion of the on-site works.

Project Management

Management of Health, Safety and Environment

26. Overall responsibility for health, safety and environment lies with the Project Manager. The Senior Archaeologist shall manage health, safety and environment on a daily basis on site, and will update the Project Manager on the progress of the works on (at least) a daily basis. Prior to the commencement of any works, all site staff and sub-contractors will receive a local induction and shall be informed of the identified hazards at the site.

27. All sub-contractors shall be expected to carry out their activities in accordance with the site rules and good industry practice. The Project Manager is responsible for ensuring that all accidents, incidents and near misses are reported and, investigated, and that any necessary changes are made to this document.

28. The archaeological works shall be overseen by a Senior Field Archaeologist from Rathmell Archaeology Ltd, who will be in full time attendance for the duration. The Senior Field Archaeologist will be the central point of liaison between all parties for the archaeological field team.

29. Prior to commencement of the excavation the Senior Archaeologist shall re-asses the hazards to ensure that each location is safe to excavate and shall ensure that service clearance has been undertaken. Once this has been undertaken the Senior Archaeologist shall instruct the excavation to proceed.

Risk Assessment

30. The activities that require risk assessment in relation to the activities of Rathmell Archaeology Ltd personnel have been identified and a project specific risk assessment has been undertaken (see Appendix A below).

Inspection and Certification

31. The Senior Field Archaeologist will obtain and collate copies of CSCS Cards and other relevant certificates for equipment and staff. All such certificates will be held by the Senior Archaeologist.

32. Any equipment that has been identified as unsafe will be removed from site and replaced.

Timetable

33. The timetable for the works will be notified to all parties when it has been developed. Historic Environment Scotland will be provided with 2 weeks' notice of any works within the Scheduled Monument. The West of Scotland Archaeology Service will also be kept informed of the progress of works.

34. The reporting would be completed within four weeks of the completion of on-site works. The full draft of the report will be circulated digitally to all parties for comment prior to being finalised.

Project team

35. The lead field archaeologist for the project from Rathmell Archaeology Ltd will be Mr Thomas Rees, an experienced field archaeologist. The archaeologist responsible for supervising the field team and undertaking the excavation will be Mr Liam McKinstry, and experienced field archaeologist.

36. Before commencing work on site all staff will undertake Induction – covering the review of this RAMS document. Site safety Tool Box Talks will be undertaken every Tuesday morning before the commencement of site works while volunteer staff will be given an induction refresh every morning. All professional site staff will hold a valid CSCS card. The minimum Personal Protective Equipment requirement is:

- ❖ Hi-visibility clothing – double banded yellow hi-visibility vest to EN471;
- ❖ Safety Helmets to comply with EN 397 where appropriate;
- ❖ Robust work boots; and
- ❖ Protective gloves EN388.

37. Additional to these mandatory items additional task specific PPE shall be worn when specified within the task specific method statement.

Welfare and the Control and Disposal of Waste

38. Welfare will be provided through the use of public facilities.
39. Due to the nature of the work little to no waste should be produced.

Insurance

40. Rathmell Archaeology is fully indemnified and all necessary insurances can be presented on request. A summary of insurances held is presented below:

- ❖ *Public Liability Insurance* - A policy with a limit of indemnity of £5,000,000 is held with Towergate;
- ❖ *Employer's Liability Insurance* - A policy with a limit of indemnity of £10,000,000 is held with Towergate; and
- ❖ *Professional Indemnity Insurance* - A policy with a limit of indemnity of £1,000,000 is held with Hiscox.

Working Arrangements

41. Working hours will be between 08:00 and 17:00 hours. Access to all work areas will be via an agreed route on site.
42. Welfare facilities are available as listed below:

Equipment/Facility	Location
First Aid Kit	First Aid kit will be held with the senior archaeologist
Mobile Phone	All Rathmell personnel to have phones with them
Clean Water Supply	Bottled water held on-site
Toilet & Hand Washing Facilities	Local public facilities
Storage / Changing Facilities	Not required

Fire and Emergency

43. In the event of a fire the alarm will be raised verbally:

- ❖ Alert everyone on the site and retreat to a pre-determined muster point. Muster point will be determined on site at commencement of works; and
- ❖ Call the emergency services.

Security

44. Access to the site when not in use will be restricted by the secure fencing, warning signs alerting the public to the danger of deep excavations will be erected on the boundary.

Storage and use of Hazardous Substances

45. No hazardous substances are anticipated to be used on site.

Incident Reporting and Emergency Plan

46. In the event of a significant accident, incident, including environmental incident or near miss (i.e. injury, illness due to contaminant exposure, damage to underground services) occurring on site, the following additional procedures will be followed:

- If minor injury remove casualty (if applicable) to a safe area and treat with first aid or remove to local A&E Department;
- If major injury or incident call the emergency services;
- Inform the Senior Field Archaeologist of the problem and record incident in local accident book (if available); and
- Notify the Rathmell Archaeology Ltd Project Manager by the quickest possible means, who will identify if there is a need to notify the HSE or other parties (i.e. Client, sub-contractor organisation).

47. Everyone on site will be encouraged to report all near misses and hazards, using the local accident book.

Health, Safety and Environmental Responsibilities

48. Any person found to be interfering with or abusing any item provided for health, safety and welfare, or indulging in horseplay, may be liable for dismissal from site or disciplinary action. This also applies where interference or recklessness relating to environmental control measures leads to environmental damage or harm.

49. The use of drugs and alcohol are strictly prohibited. Any person found under the influence of drugs or alcohol at any point during the working day will be asked to leave the site.

Appendix A - Site Risk Management

50. Rathmell Archaeology Ltd applies the following risk management approach:

- Eliminate the hazard;
- Reduce the hazard;
- Isolate the hazard from people;
- Control through safe working practice;
- Personal protective equipment; and,
- Discipline through audits and monitoring.

51. Risks are considered by determining a risk rating. The managed risk is that which remains after the implementation of risk abatement and control measures.

52. All staff (professional and volunteer) must be given an induction prior to commencement of works which will be recorded. Through signing the safety induction sheet staff concur that this has taken place and they have been made aware of the hazards (known and inferred) and how they must respond.

Anticipated Ground and Groundwater Conditions

53. No particular ground stability issues are anticipated, although the presence of soft spots cannot be ruled out.

Potential Contaminants and Risk of Exposure

54. No significant forms of contamination are anticipated. Given the method of investigation and the appropriate use of PPE the risks from potential contaminants are expected to be low.

Obstructions and Services

55. Obstructions in the ground are not expected. No underground or overhead services, both statutory & private, are known to be present at the site. Copies of statutory service plans will be held on site and will be made available on site. All excavation locations will be cleared for services prior to excavation using CAT surveying.

Contacts and Emergency Provisions

	Key Contacts	Person or Agency	Contact Details
Rathmell Archaeology Ltd	Consultant Archaeologist	Thomas Rees	07817 334907 (01294 542484)
Client	West Dunbartonshire Council	Donald Petrie	07917 235456 (01389 608407)
Services	Electricity	SP Energy Networks	Emergency 0800 092 9290
	Gas	National Grid Gas	Emergency 0800 111 999
	Water	Scottish Water	Emergency 0845 600 8855
	Sewerage	Scottish Water	Emergency 0845 600 8855
	BT	BT Openreach	Line Damage 0800 023 2023
Emergency/First Aid Provisions			
	Police		999
	Fire		999
	A&E Hospital		999
	First Aid (Appointed Person)	Liam McKinstry	
	First Aid Kits	In van	
	Environmental Protection Agency	SEPA	Environment Impact 0800 807060

Assessment of Risk and Actions

	Potential Hazard	Unmanaged Risk	Actions	Risk Group	Managed Risk
1	Utilities; strike hazard (underground)	**High**	a. Ensure staff check service drawings to locate underground services prior to excavation; b. A 2m buffer zone either side of any underground services to maintained where no works happen; c. Buffer zone to be achieved by marking out prior to excavation; d. Check with CAT all ground before machining commences; e. Assume all services exposed are live; f. No services (i.e. cables) are to be handled or touched; g. Staff to follow *HSE Working Sheet 1 – Utilities* (attached to this RAMS);	Staff	Low
2	Excavation edge collapse	**High**	a. Stability of all edges to the excavation to be assessed on individual basis for stepping or battering during excavation; b. Regardless of (a) above, no excavation is to be cut deeper than 1m without stepping or battering; c. Staff member must assess stability of test pits before entering at any depth.	Staff	Low
3	Excavation flooding	Moderate	a. Staff member must assess presence or absence of water before entering any excavation; b. Do not enter excavations where the bed of the area is not visible; c. Do not enter water; d. Where flooding occurs excavation areas should be pumped dry and filled in as a matter of priority.	Staff	Low
4	Public Roads; hazard	Low	a. Care to be taken when joining / leaving public	Staff	Very low

	from movement			roads; b. Staff will ensure they have changed out of inappropriate PPE to ensure safe driving.		
5	Trip/Fall, uneven ground	Moderate	a	Walk with care and ensure appropriate footwear is worn.	Staff	Low
6	Manual Handling; impact from manual labour	Moderate	a b. c. d. e.	All Staff to receive Manual Handling training prior to the commencement of work; Professional staff to supervise volunteers staff to ensure training on safe use of site equipment is delivered prior to use and reviewed during use; Staff will be reviewed during the works to recognise manual handling risks; Staff will wear appropriate PPE; Staff to follow *HSE Working Sheet 9 – Manual Handling* (attached to this RAMS);	Staff	Low
7	Buildings; impact from excavation	Low	a. b. c.	A 2m buffer zone around two storey or higher standing buildings and structures to be maintained with no works within; A 1m buffer zone around one storey standing buildings and structures to be maintained with no works within; Buffer zone to be achieved by marking of all trenches prior to excavation.	Environment	Very Low
8	Public; hazard to self	Low	a.	Public will be excluded through use of a fence.	Public	Very Low
9	Other Site users; hazard from operations	Low	a.	Project officer will liaise with other land users to ensure no overlap of site use.	Staff	Very low
10	Danger of infection from rats or vermin	Moderate	a. b.	Staff will wear gloves as appropriate, wash hands before and after working; Wash hands before eating;	Staff	Low
11	Danger of adverse impact on ecology	Low	a. b.	Ensure any wild animal activity reported; Do not disturb hedgerows or standing trees.	Environment	Low

Appendix B – Supporting Documents and References

Supporting Document

HSE Working Sheet 1 – Utilities

HSE Working Sheet 9 – Manual Handling

Appendix C – Contact Details

61. Rathmell Archaeology can be contacted at our Registered Office or through the web:

Ayrshire Office:

Rathmell Archaeology Ltd
Unit 8 Ashgrove Workshops
Kilwinning
Ayrshire
KA13 6PU

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t.: 01294 542848
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