

**Ministry of Defence
(MoD), Metrix Ltd. and
Sodexo Ltd. /Welsh
Assembly
Government**

**Defence Technical
College and
Aerospace Business
Park - St Athan**

Project Design for Archaeological
Investigation

July 2009

Entec UK Limited

Proposal for

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Non-Technical Summary

This document is a Project Design for archaeological investigation at the site of the proposed Defence Technical College and Aerospace Business Park at St Athan, Vale of Glamorgan. It provides an outline research and detailed project design for a programme of archaeological evaluation and recording, as well as setting out the project management structures for this work.

It also provides information on which tenders from Archaeological Contractors wishing to undertake the works are requested.

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1. The Project

1.1 Introduction

This document has been prepared by Entec UK Ltd on behalf of Metrix. It details the project design and an outline research framework to support and guide a programme of archaeological investigations to take place on land at St Athan, Vale of Glamorgan in advance of the construction of the Defence Training College, Service Family Accommodation and Aerospace Business Park. It also provides information on which tenders from Archaeological Contractors wishing to undertake the works are requested.

The Vale of Glamorgan contains low-lying fertile land alongside an extensive coastline. This resource rich environment has been exploited by local communities over a timeline of at least 6,500 years. It is clear that throughout this period cultural activity has been a major aspect of landscape dynamics, creating a distinctive local historic environment and making a significant contribution to the quality and character of the landscape, which combines contrasting elements that can be regarded as rural, in the traditional agrarian sense, alongside the more recent developments, including the prominent military estate at MoD St Athan.

Metrix, the Welsh Assembly Government and the Ministry of Defence (MoD) have submitted planning applications for the major redevelopment of MoD St Athan. The proposals include a Defence Technical College (DTC) and Service Families' Accommodation (SFA), submitted by Metrix and the MoD, and an Aerospace Business Park (ABP) submitted by the Welsh Assembly Government. The proposals also include infrastructure associated with both planning applications, such as off-site highway works, improvements to the Llantwit Major sewage treatment works and the installation of a rising main.

The proposed development includes the current military base, plus additional land around the airfield, either already acquired or in the process of being acquired by the Welsh Assembly Government. In addition land further away from the airfield is required in connection with improvements to highway infrastructure.

This Project Design provides information that informs and specifies a programme of archaeological evaluation.

1.2 Planning Background

A planning application has been submitted to the Vale of Glamorgan on the 12 May 2009, who is currently undertaking consultation as part of the determination process. The application is supported by an Environmental Statement¹, which includes an assessment of the historic

¹ Entec UK Ltd 2009 *Ministry of Defence (MoD), Metrix Ltd. and Sodexo Ltd /Welsh Assembly Government Defence Technical College and Aerospace Business Park - St Athan: Environmental Statement*
http://www.valeofglamorgan.gov.uk/living/planning/planning_applications/defence_technical_college/environmental_statement.aspx

environment². The Statement recognises that additional archaeological baseline information will be required in order that the Vale of Glamorgan can provide an informed planning decision. It is recognised that limited understanding of the survival of archaeological features on the site also has implications for defining the research aims and estimating resourcing requirements for the proposed environmental measures, specifically the excavations that will be required in advance of construction.

This Project Design details the trial trench investigation that will complete the baseline investigation. The results should allow further consideration of development effects and inform further stages of proposed archaeological investigations, which constitute environmental measures that are an integral part of the development scheme and are likely to be subject of a condition in the event of planning permission.

1.3 Landscape Context

The development sites are located in the Vale of Glamorgan (Bro Morgannwg), a lowland plateau of slightly undulating hills and valleys dissected by streams and small rivers, which extends from the Cardiff Basin in the east to Port Talbot in the west. The Bristol Channel coast defines the southern maritime limits of the Vale, whilst the northern limits are defined by the Pennant Sandstone scarp (Blaenau Morgannwg) which is the southern expression of the upland plateau of central Wales.

Less dramatic contrasts in topography further subdivide the Vale into the Border Vale, which fringes the Blaenau north of the A48 (the route established by the Romans as the principal road between Caerleon and Carmarthen, which later became known in the medieval period as Port Way) and the Vale Proper; an area between the rivers Ewenni in the east and the Ely in the east, which contains shallow free-draining soils, which are amongst the most fertile in south Wales. The physical division of upland:lowland is associated with cultural distinctions manifest in the archaeological monuments, settlement patterns and historic landscapes.

1.4 Site Location and Description

The application site, based around MoD St Athan, comprises c 400ha of land located within the Vale Proper, c 1.3km from the coast and c 5km south of the A48 (Figure 1). With the exception of Picketston, the site area is loosely bound by local natural drainage features. The steep-sided River Thaw and its equally incised tributary, the east flowing Rills, together indicate the limits to the east and south; the River Hoddnant and its south-west flowing tributary, the Boverton Brook, broadly demarcate the limits to the west; whilst the Nant-y-Stepsau, another east flowing tributary of the River Thaw, partly defines the northern limits. In addition to surface runoff, these watercourses are fed by various springs, which occur in the valley bottoms and sides where they cut through the alternating bands of limestone and shale. These various aspects of the local relief further influence the distribution and character of archaeological and historic features, whilst the springs themselves have acquired cultural significance, often as holy wells,

² *ibid* Chapter 9 Historic Environment

sometimes commemorating named individuals (Howell's Well, St John's Well, Gregory's Well, etc), that may reflect local traditions that originate in the prehistoric or early medieval periods³.

The current landuse is varied, comprising the existing MoD St Athan, originally an RAF airfield used for aircraft repair and maintenance, along with areas currently in agricultural, both pasture and arable, use.

1.5 Geological and Topographical Background

The geology of the Vale, comprising alternating bands of hard limestone and soft shales (Lower Lias limestones with subordinate mudstones – Porthkerry Formation of the Jurassic Period: Bridgend (Sheet 262 – Solid and Drift Edition, 1:50:000 BGS 1989), is exposed in the line of vertical coastal cliffs up to 60m high, which is intermittently broken by small steep sided valleys.

The site is wholly underlain by the Lower Lias Porthkerry Formation. No drift deposits are indicated. Ground investigation data indicates that clayey topsoil overlies silty clay which grades into a weathered limestone with depth. The depth to limestone bedrock is generally less than 2m. Observations at the National Museum of Wales investigations at Llanmaes reveal a bedrock surface of a character similar to limestone pavements, with grike and clints, the former infilled with silty clay, which could contain archaeological material. In some areas, deeper solution features are present with the depth to bedrock in excess of 4m below ground level, which could be important sources of palaeoenvironmental data. Made Ground is also likely to be encountered particularly within the airfield, due to the present and historic activities.

1.6 Summary of Previous Work

Previous work has informed a local historic environment model⁴, which is to be tested and further developed through the programme of field investigation. The use of a narrative baseline model, expressed in spatial terms, provides a dynamic means of assessment and facilitates linkages with wider cultural values, especially literary and artistic aspects of the Historic Environment that are important both locally and nationally. This link is an important aspect of the local and national heritage, as it is an enduring and accessible form of social memory⁵ (collective representations of the past and associated social practice rather than personal recollection). The values considered in the ES are principally based on this definition of social memory.

³ Edwards Dr N 1994 *Holy Wells in Wales and Early Christian Archaeology*

<http://people.bath.ac.uk/liskmj/living-spring/sourcearchive/ns1/ns1ne1.htm>

⁴ *ibid*, 9.4

⁵ Holtorf C and Williams H 2006 'Landscapes and Memories' in Hick D and Beaudray M *Cambridge Companion to Historical Archaeology*, Cambridge:Cambridge University Press, 235-254
http://works.bepress.com/howard_williams/18

1.6.1 Desk Study

An archaeological desk study (DBA)⁶ by Cotswold Archaeology, on behalf of the Welsh Assembly Government, was prepared following the guidelines of the Institute for Archaeology⁷. This examined a main study area of 22.5km², along with an area of 40ha on the western periphery of Barry. It included a review of:

- Glamorgan and Gwent Archaeological Trust Historic Environment Record (HER);
- Cartographic and historic documents;
- Aerial photographs;
- Registers of designated features;
- Database of wartime defensive sites (Defence of Britain Project⁸).

The DBA also considers the results of archaeological field investigations undertaken within the site in advance of previous development, which illustrates the potential for previously unrecorded aspects of the historic environment at St Athan⁹.

1.6.2 Geophysical Survey

Previous geophysical investigations undertaken at MoD St Athan were restricted to works associated with the construction of the Red Dragon Hangar¹⁰. Subsequently an initial trial exercise¹¹, to investigate a range of geophysics prospection techniques, was carried out in order to determine the most appropriate strategy for geophysical survey in relation to the current schemes. Based on the results of this trial and taking into consideration the previous investigations a two phase geophysical survey has been completed. Phase 1 comprised a reconnaissance magnetic susceptibility survey, which was undertaken across the entire area of the application site, except where logistical factors, such as the presence of buildings and hard landscaping, were a constraint. Phase 2 comprised the detailed imaging of target areas identified

⁶ Cotswold Archaeology 2007 *MoD St Athan, Vale of Glamorgan Historic Environment Assessment* (CA Report 07178) unpublished

⁷ Institute for Archaeology 2008 *Standards and Guidance for Desk Based Assessment*

⁸ <http://ads.ahds.ac.uk/catalogue/collections/blurbs/324.cfm>

⁹ Barber A, Cox S & Hancocks A 2006 *A Late Iron Age and Roman Farmstead at RAF St Athan, Vale of Glamorgan. Evaluation and Excavation 2002-03*, *Archaeologia Cambrensis* 155, 49-115

Cotswold Archaeology 2003 *Land at Eglwys Brewis, RAF St Athan, Vale of Glamorgan: Stage II Archaeological Evaluation* (CA Report 03025), unpublished.

Cotswold Archaeology 2002 *Land at Eglwys Brewis, RAF St Athan, Vale of Glamorgan: Archaeological Evaluation* (CA Report 02024), unpublished

¹⁰ Stratascan 2003 *Geophysical Survey at Eglwys Brewis, RAF St Athan, Vale of Glamorgan*, Unpublished Report Ref 1715

Stratascan 2003 *Geophysical Survey carried out at DARA, St Athan, Vale of Glamorgan* Unpublished Report Ref 1726

¹¹ Geotec, May 2008, *RAF St Athan Geophysical Survey Trial Report*, Unpublished Report ref 0804s008

on the basis of interpretation of the Phase 1 data using magnetometry. This comprised an area equivalent to 27.5% of the total Phase 1 sample area.

Phase 1 (Reconnaissance Survey)

Phase 1 of the survey was carried out over 15 areas covering a total area of 290 ha, which represented the maximum area suitable for magnetic susceptibility survey out of a total site area of c400ha.

TerraDat, in association with the Client's archaeological consultant, presented the results of the Phase 1 investigation¹² and the recommendations for the phase 2 investigations to the Vale of Glamorgan archaeology advisor and arranged works to be viewed during survey operations.

Phase 2 (Targeted Magnetometer Survey)

A strategic approach was undertaken in the selection of Phase 2 survey areas, based on the following criteria:

- Examining 'hot spots' shown in the Phase 1 magnetic susceptibility survey;
- Examining potential archaeological features identified in the Cotswold Archaeology DBA;
- Sampling each of the 'character zones' identified in the Phase 1 magnetic susceptibility survey;
- Maximising sampling areas available on-base
- Sampling areas in close spatial relationship with the area studied by the National Museum of Wales, where enhanced data sets were available to aid interpretation of survey results.

In response to initial survey results, areas were expanded to fully investigate anomalies that were of particular interest. In total the area of the magnetic survey comprised 80ha (27.5% of the total Phase 1 magnetic susceptibility survey area).

Various anomalies were identified, as detailed in Appendix 1 and shown in Figures 2-5.

1.7 Archaeological and Historical Background

1.7.1 Summary

A full description of the historic environment baseline is detailed in section 9.4 of the Environmental Statement¹³. This describes the presence of archaeological and historic features

¹² Young Dr T P, February 2009, *Report on the EM38 Magnetic Susceptibility Survey with Recommendations for the Initial Phase 2 Magnetometer Surveys, DTRP, St Athan, Vale of Glamorgan*, Unpublished GeoArch Report 2009/03

¹³ Entec UK Ltd 2009 *Ministry of Defence (MoD), Metrix Ltd. and Sodexo Ltd /Welsh Assembly Government Defence Technical College and Aerospace Business Park - St Athan: Environmental Statement*
http://www.valeofglamorgan.gov.uk/living/planning/planning_applications/defence_technical_college/environmental_statement.aspx

that are characteristic of the Vale, where, on a number of levels, the historic environment is distinctive in a way that marks this part of Wales as culturally atypical of the rest. In contrast with immediately adjoining areas, the historic environment of the Vale, from an early stage, reflects cultural influences that highlight associations beyond what might be perceived today as the cultural boundaries of Wales, with apparent connections extending to Ireland, Brittany and southwest England:

- The nearby presence of a causewayed enclosure at Flemingston, a Neolithic monument class more typical of southern and eastern Britain, may simply reflect a common cultural response in similar lowland topographies where fertile soils favourable to the early agricultural practices were available. This contrasts with the predominantly upland character of Wales, where stone built megalithic structures are the more typical class of Neolithic monument. However, there is also the prospect of cultural contact between Neolithic and Bronze Age communities of the Vale and southwest Britain, given that the Bristol Channel may have been a significant seaway at this time, perhaps the route used to transport the Preceli Bluestones from the source in Pembroke to Salisbury Plain for use in the construction of Stonehenge. Whilst there are no known features of this period located within the application sites, the potential remains a consideration;
- The late Bronze Age/early Iron Age midden site at Llanmaes is comparable to sites largely restricted to Salisbury Plain and its associated valleys, such as Chisenbury, All Cannings Cross, Potterne and Westbury, which have been described as ‘ceremonial feasting places’¹⁴. Whilst the midden site does not extend into the development sites, contemporary remains can be expected to further clarify the context in which the feasting activities occurred. The widespread occurrence of linear and curvilinear anomalies, especially in the vicinity of Batslays Farm, may prove significant in this regard (eg. see ES, Figure 9.5b Appendix J, MAG10);
- The Vale has the highest concentration of Roman villas and farmsteads in Wales. Recent studies have suggested that an apparent paucity of ceramic material associated with Romano-British settlement in south east Wales¹⁵ may indicate a relatively poor material culture in comparison with lowland Romano-British settlement beyond Wales. Again the evidence from the Vale appears to run counter to this view, with significant ceramic and other artefact assemblages collected during excavations by the National Museum of Wales at Llanmaes and recent observation, during the Phase 2 geophysical survey, of surface finds of Roman ceramic material associated with the rectilinear enclosure at Castleton (see ES, Figure 9.7 Appendix J, MAG19). The geophysical survey has identified small scale rectilinear field patterns at Tremains Farm (see ES, Figure 9.4 Appendix J, MAG15) and Batslays Farms (see ES, Figure 9.5b Appendix J, MAG07), which are provisionally interpreted as Romano-

¹⁴ David McOmish "[East Chisenbury: ritual and rubbish at the British Bronze Age-Iron Age transition](http://findarticles.com/p/articles/mi_hb3284/is_n267_v70/ai_n28668303/)". Antiquity.FindArticles.com. 08 Apr, 2009.

http://findarticles.com/p/articles/mi_hb3284/is_n267_v70/ai_n28668303/

¹⁵ Evans E M 2001 *Romano-British South East Wales Settlement Survey: Final Report*, GGAT unpublished report no 2001/023

British, again features which are not commonly encountered in Wales (Mark Lodwick *pers comm.*);

- The medieval settlement pattern is generally untypical of Wales, reflecting more the landscapes across the border in England, which is unsurprising given that these areas experienced the full influence of Norman feudalism, in contrast to interior and upland Wales. Proposed development works in the vicinity of St Brise Church at Eglwys Brewis will affect residual features of a settlement, whose foundation may pre-date the 12th century, but was clearly affected by the imposition of feudal rule. Surviving buildings, comprising solely the 12th/13th century church and the former Eglwys Brewis Farmhouse and associated buildings and structures (probably later 18th century), represent the settlement in its latest form prior to incorporation within the airbase. The archaeological evidence for buried medieval remains strongly indicates that previously there may have been a more extensive settlement. There is a need to further consider the origins and development of this settlement, at least for the period since the Norman Conquest.

These aspects highlight how former communities of the Vale, specifically those in the vicinity of MoD St Athan, have existed as part of a wider cultural milieu. These aspects of the archaeology do not necessarily relate to modern definitions of national identity or geographic/political boundaries. Indeed it would be surprising if this were the case, as such definitions are inevitably fluid over the timescales represented by the archaeological evidence.

Other aspects of the historic environment do reflect insular traditions that are specific local expressions of processes that either originate in Wales, or make a distinct contribution to common contemporary perceptions of the historic dimension of Welsh cultural identity:

- The character of the early medieval aspect of the historic environment in the vicinity of St Athan reflects an insular response to the departure of the Roman administration in AD410. This contrasts with the effects of the incoming pagan Anglo-Saxon culture, which was to dominate much of southern, eastern and northern Britain at this time. The insular Christian cultural identity of the Vale in this period appears to have been particularly prominent, perhaps due to the strength of previously established local Romano-British institutions;
- The emergence of the local gentry and yeoman classes as a significant force for economic change within the Vale during the 16th, 17th and 18th centuries influenced major changes in agricultural practice and gives rise to local vernacular architectural styles. Change during this period was not restricted to economic and social factors, but embraced religious and political radicalism. This included non-conformity and nationalism, traditions defined in the 18th and 19th centuries, which either contribute to the historic environment or form part of the values against which the historic environment can be understood. These factors are briefly outlined in the discussion of historical values set out below.

Finally, the baseline information also highlights apparent patterns in the distribution of archaeological sites within the local landscape:

- There is a clear concentration of major enclosures (see ES, Figure 9.7 Appendix J, MAG16, MAG17, MAG18 & MAG 25), possibly spanning the late prehistoric to early medieval period, along the western edge of the scarp of the Thaw

valley in the proposed Castleton Field Training Area (FTA). The monuments identified within the application sites overlook the confluence of the Thaw and Rills valley, which may afford a relatively high degree of natural protection. These are only part of a distribution that occurs along the top of the scarp on both sides of the Thaw. This distribution is given added significance as the Thaw represents a well established historic boundary between adjacent administrative or political units, established by at least the early post-Roman period. The distributions may, therefore, indicate the Thaw Valley as contested space. Development proposals in Castleton FTA are limited to change of use and no constructions works are proposed. Consequently further investigations are not proposed in the FTA, but the FTA geophysical results provides important context, which may affect interpretations of trial trench works undertaken elsewhere;

- Locations within the shallow valleys of the Vale appear to have been densely settled since the late prehistoric or Roman period, with evidence of significant medieval settlement within both the Llanmaes Brook and the Rills valleys. This aspect of the historic environment would seem to be particularly relevant to development works proposed at Tremains Farm (see ES, Figure 9.4 Appendix J, MAG15) and Batslays Farm (see ES, Figure 9.5b Appendix J, MAG07).

1.7.2 Values

Proper understanding of the archaeological effects of development will require an awareness and further consideration of the wider cultural associations. All works should address key historic environment values, including evidential, historical, aesthetic, and communal considerations. During the preparation of the ES a number of local values were identified, although these are not considered definitive and additional issues are likely to emerge and should be identified during the evaluation programme:

Evidential

The summary historic environment baseline statement highlights various themes that, at least in part, correspond to some aspects of the strategic research topics identified within the recently published Research Framework for Archaeology in Wales. Individually the archaeological and historical sites identified provide evidential material, which in isolation is unlikely to result in major advances of understanding. They are best regarded, therefore, as a source of evidence that can contribute information as part of the wider data sets that are required to meet the high level strategic research aims defined in the Research Framework. Research Framework for Archaeology in Wales. The preceding paragraphs outline provisional themes within which the research aspects of the proposed trial trench investigations should be considered.

Historical

18th and 19th Century Radicalism

- Iolo Morganwg: Forger, Antiquarian and Druid

The discovery, during the geophysical survey, of what appear to be an extensive Romano-British field system on the south bank of Llanmaes Brook (ES Figure 9.4 Appendix J MAG14) corresponds to the location of the remains of masonry buildings

first recorded in the 18th century by Edward Williams, a stone mason who worked in Flemingston. Best known by his bardic name Iolo Morganwg, his antiquarian interests were central to his bardic vision which continues to influence Welsh life¹⁶.

Iolo made a major contribution to the cultural life of Glamorgan and Wales, through a complex historical and creative synthesis of the history and significance of Wales, for which he relied in part on the forgery of documents he claimed to be historic manuscripts containing, amongst other things, the poetry of the medieval poet Dafydd ap Gwilm. He was a founder member of the Unitarian movement in Wales, but his most notable legacy is the creation of the Gorsedd of the Bards of the Isle of Britain, which he convinced contemporaries was an authentic institution with direct links to the Celtic Druids. Since 1789 the Gorsedd has been linked with the eisteddfod traditions. The Llangollen Eisteddfod in 1858, attended by Chief Druid Dr William Price, established the integration of the eisteddfod and Gorsedd which resulted two years later in the first National Eisteddfod. The Gorsedd ceremony remains central to this internationally important cultural institution.

The apparent confirmation of his archaeological observations at Llanmaes throws light on aspects of his works which remain controversial nearly two hundred years after his death in 1826.

- Eglwys Brewis Farm Cremation and the 1902 Cremation Act.

If an 18th century ceramic vessel apparently containing human cremated bone found during Cotswold Archaeology's investigations at Eglwys Brewis Farm is correctly identified, this is an unusual find, if not a bit of a mystery. It may be the remains of an individual cremated since the 1902 Cremation Act, which were placed within an earlier ceramic vessel and interred in a private garden, which would itself be unusual. But it might also represent a rare example of cremation at a time before this was recognised as a legally accepted practice, in which case its presence at the farm may represent an illicit act of burial.

Apart from being a member of the Gorsedd responsible for the establishment of the National Eisteddfod and numerous other eccentricities, the notorious Dr William Price of Llantrisant was a serious radical political and social campaigner, with close links to the Chartist movement¹⁷. The 1902 Cremation Act followed a *cause celebre* involving Dr Price, whose trial in 1884, for the thwarted attempt to publicly cremate his recently deceased infant son, established, for the first time in the modern period, that cremation was not an illegal act in the UK.

Given the potential that the Eglwys Brewis Farm cremation is contemporary with and close to locations associated with both Iolo Morganwg and Dr Price, key promoters of the 18th and 19th century neo-druid movement, adds to the potential cultural significance of the cremation burial found at Eglwys Brewis Farm.

¹⁶ Humphreys E 1983 (3rd edition) *The Taliesin Tradition*, Seren, 106-114

¹⁷ *ibid*, 141-156

Aesthetic

A literary legacy parallels some aspects of the earlier archaeological interest in the St Athan area, which represent a particularly enduring and accessible form of social memory relevant to the study area, as well as contributing to the wider sense of Welsh and British national identity¹⁸:

- The late Bronze Age/Early Iron Age evidence for feasting and the presence of bronze cauldrons at Llanmaes reveals material remains that resonate with aspects of traditional ‘celtic’ tales. The mythical association of the cauldron and rebirth is a feature common to early Irish and Welsh myth, such as *The Book of Taliesin* and is a motif, in the form of the Holy Grail, which features in Arthurian literature dating from the 12th century;
- Surviving medieval transcriptions of the lives of early British saints include accounts of St Illtud and various saints taught at the early medieval monastery at Llantwit Major. Whilst these contain highly modified historic accounts and only a limited grasp of the topographic setting, they reveal apparent relationships, at least in part arising from the spread of the early medieval church, which links the cultural traditions of western Britain, Ireland and Brittany. They often share magical literary motifs that characterise traditional secular tales, such as *The Mabinogion* and *The Book of Taliesin*. Furthermore, the Lives of St Illtud and St Gildas, the latter written at the early Christian monastery at nearby Llancarfan, are 12th century sources referring to King Arthur¹⁹ which are taken up by Geoffery of Monmouth in his *History of the British Kings*, a work that had a major influence on the emergence of the European tradition of Arthurian Romances²⁰.

Amgueddfa Cymru – National Museum Wales has explored these associations by means that have included a contemporary art project. A multimedia collaboration, involving the artist Sean Harris, the Museum and primary school children²¹, resulted in a 12-minute film *Dadeni* (rebirth)²² that fused art, archaeology, poetry, music and folklore, which was premièred at the National Museum Wales in February 2007. This art project has formed part of the National Museum’s wider programme of community engagement in the archaeological work at Llanmaes and has also raised awareness of its important prehistoric collections (Adam Gwilt, National Museum of Wales *pers comm.*). Opportunities exist to address similar community engagement issues during the evaluation programme (see section 7).

¹⁸ Humphreys E 1983 (3rd edition) *The Taliesin Tradition*, Seren

¹⁹ Doel F, Doel G & Lloyd T 1999 *Worlds of Arthur: King Arthur in History, Legend and Culture*, Tempus, 75-78

²⁰ *ibid*, 89-97

²¹ Portable Antiquities Scheme 2007 *Annual Report 2006*; 12

²² Can be viewed on <http://www.oncommonground.co.uk/dare.htm>

Communal

Clearly, the wartime role of RAF St Athan is an important consideration for local communities and those that did military service at the airbase, which forms part of a wider national response to the global conflicts of the 20th century.

Scientists developing airbourne radar who were posted at St Athan formed a very specialised community, who achieved widespread acclaim, not only for the work on radar during the War, but also for the success individual members achieved when they resumed research careers once the conflict had been resolved. Notably Sir Alan Lloyd Hodgkin, who worked on the development of radar at St Athan under the project leader Edward George Bowen in 1940, was to be jointly awarded the 1963 Nobel Prize in Physiology and Medicine²³. Both Bowen and Hodgkin describe their time at St Athan, in autobiographies that provide a unique first hand account of the conditions experienced by civilian scientists who worked at the airbase during WWII.

²³ Hodgkin A 1994 *Chance and Design: Reminiscences of Science in Peace and War*, CUP

2. Aims and Scope of Fieldwork

2.1 Aim of Evaluation Fieldwork

The current ES baseline relies on the desk based research and geophysical survey results, which provide a relatively comprehensive baseline for the purpose of defining the principal archaeological features likely to be affected by the scheme and establishing initial environmental measures. However, further information is required.

The aim of the fieldwork is to examine and record an adequate sample of the target archaeological resource of the sites, sufficient to provide an interpretative account of the archaeology affected by the development schemes, in order to:

- clarify the baseline assessment set out in the ES, and:
- establish further refinements of the proposed environmental measures, in accordance the reasonable requirements of the Local Planning Authority Archaeologist:
- to accurately plan the specific research aims and resources that might form the basis of detailed mitigation proposals.

It is important, therefore that the programme of evaluation works provide:

- additional detailed information, especially confirmation of dates for the features identified during the geophysical survey, to provide a fully informed assessment of significant effects and if necessary further consideration of the proposed environmental measures, as set out in Table 1;
- clarification and characterisation of the major historic landscape elements, such as previous field system patterns, to include details of spatial and chronological relationships, which might inform further strategic sampling decisions;
- sufficient understanding of the archaeological stratigraphy and potential associated artefactual and environmental assemblages to establish a clear definition of appropriate areas and resources that may enable pursuit of potential research objectives through the environmental measures:
- further definition of principal potential research themes.

These outcomes should provide a clear perspective on the opportunity to contribute to research priorities, including, but not restricted to the Research Framework for Archaeology in Wales, with particular consideration of the themes outlines in 1.7 and the ongoing National Museum of Wales research programme at Llanmaes.

It is anticipated that implementation of environmental measures will, as appropriate, involve strategic landscape scale sampling, targeting key elements through strip, map and sample methods. Other strategic approaches will also be considered, according to the results of the trial trenching.

2.2 Proposed trenching design

The proposed programme of trial trench works for the areas described in Table 1 are shown in Figures 2-5, with area specific issues described in 3.1. The geophysical survey indicates there may be multiple phases of field systems present. Consequently the evaluation strategy is geared toward analysis of successive phases of land divisions and associated settlement or other features, in order to establish an understanding the landscape framework, in terms of its date and character. The following design criteria have also been taken into account:

- target interpretations and recommendations arising from the geophysical survey;
- avoid locations likely to encounter services, or where there may be previous disturbance of archaeological deposits;
- ground truth areas where the geophysical results suggest an absence of archaeological features, despite relatively limited evidence for truncation or other forms of disturbance, ie Picketston;
- investigate areas that were unsuitable for geophysical survey, especially locations where HER data suggests the presence of archaeological remains, such as the area adjacent to St Brise Church and the limekiln in East Camp;
- apply sample levels that are appropriate to the potential presence of significant archaeology, taking into consideration how this presents risk that could affect construction works.

It should be noted that the trench layout shown in Figures 2-5 are indicative and takes account of available information on buried services and other constraints. However, this information will need to be confirmed or assessed on-site and the precise location and size of individual trenches may need to be amended accordingly.

Table.1 Scope of Evaluation

Potential Receptor	Predicted Changes and Potential Effects	Incorporated Measure	Location and Timing of Evaluation Trial Trenching
Defence Training College			
Iron Age and undated enclosures (Castleton MAG16, 18 & 25) and associated field systems (MAG 19)	Three enclosures have been provisionally identified from aerial photographs and magnetometry survey within the proposed Field Training Area (FTA) at Castleton. There are no proposals to undertake construction within the FTA and no trial trenching is proposed.	It is proposed that the location of the enclosures is detailed as part of the Environmental Management Plan for the FTA. Intrusive activities will be restricted within the sensitive location of the enclosure.	No further works
Iron Age settlement (Red Dragon Hangar site)	The full extent of the Iron Age settlement revealed during construction of the Red Dragon Hangar has not yet been determined, pending trial trench investigation. Geophysical survey (Phase 1 magnetic susceptibility) highlights the extensive nature of disturbance within the airbase and it is likely that archaeological traces of features associated with the Iron Age enclosure survive in a fragmentary condition. As in the case of the Red Dragon Hangar, construction of the DTC may result in the loss of these surviving elements.	It is proposed that, subject to the results of the evaluation trial trench survey, any surviving archaeological remains are excavated and recorded in advance of construction works.	East Camp Area 4 (Figure 5) Pre-determination
Romano-British settlement (Red Dragon Hangar site)	The full extent of the Romano-British settlement revealed during construction of the Red Dragon Hangar has not yet been determined, pending trial trench investigation. Geophysical survey (Phase 1 magnetic susceptibility) highlights the extensive nature of disturbance within the airbase and it is likely that archaeological traces of features associated with the Iron Age enclosure survive in a fragmentary condition. As in the case of the Red Dragon Hangar, construction of the DTC may result in the loss of these surviving elements.	It is proposed that, subject to the results of the evaluation trial trench survey, any surviving archaeological remains are excavated and recorded in advance of construction works.	East Camp Area 4 (Figure 5) Pre-determination

Potential Receptor	Predicted Changes and Potential Effects	Incorporated Measure	Location and Timing of Evaluation Trial Trenching
Putative Cowbridge to East Aberthaw Roman road	As yet no evidence for the presence of the Roman Road has been identified, and, should it exist, it is likely to follow the route of the local highway.	Identifying the putative Roman Road will be considered as part of the trial trench survey conducted within the application site. Any surviving archaeological remains identified that might be affected by construction works will be excavated and recorded in advance of these works.	East Camp Area 3 (Figure 5) Pre-determination
Romano-British settlement and field system south east of Llanmaes (MAG14 & 15)	Construction of the northern access road will result in the disturbance of buried evidence of the field systems and possible associated masonry building.	It is proposed that, subject to the results of the evaluation trial trench survey, any surviving archaeological remains are excavated and recorded in advance of construction works.	Tremains Farm (Figure 3) Pre-determination
Possible early Medieval church and Ilan (MAG 17 Castleton)	There are no proposals to undertake construction within the FTA and no trial trenching is proposed.	It is proposed that the location of the enclosure is detailed as part of the Environmental Management Plan for the FTA. Intrusive activities will be restricted within the sensitive location of the enclosure.	No further evaluation work
Medieval Church of St Brise (Listed Grade II)	The Church of St Brise will be incorporated into the DTC scheme design and will be subject to a programme of renovation works.	The Church will become a key feature at the entrance to DTC, located adjacent to other faith and cultural buildings in an area that will be accessible to the public. The conservation architect practice Caroe and Partners has been appointed to produce an assessment and schedule of repair and maintenance works.	No further evaluation work currently identified
Medieval settlement (Eglwys Brewis)	Evidence of earlier phases of building at the site of the surviving 13 th Church, which is to be retained, is unlikely to be affected by construction works.	Design measures to retain and present the 13 th century Church of St Brise, will take account of existing ground levels and avoid intrusive operations where possible. Elsewhere, it is proposed that, subject to the results of the evaluation trial trench survey, any surviving archaeological remains are excavated and recorded in advance of construction works.	East Camp Area 1 (Figure 5) Pre-determination
Eglwys Brewis Farm and the former site of St Brise Rectory	Whilst the stone barn may be retained alongside the Church of St Brise, the former farmhouse, which has been converted to offices, will be demolished.	A basic investigative record of the 18 th century buildings should be compiled both prior to and during demolition, in accordance with published technical guidance. Subject to the results of the evaluation trial trench survey, any surviving archaeological remains of earlier buildings on or at the site of the Farmhouse and adjoining areas, including the nearby remains of the former Rectory will be excavated and recorded in advance of construction works.	East Camp Area 1 (Figure 5) Post-determination Pre-determination
Limekiln (East Camp)	Remains of the former limekiln is likely to be affected by construction of the DTC.	It is proposed that, subject to the results of the evaluation trial trench survey, any surviving archaeological remains are excavated and recorded in advance of construction works.	East Camp Area 2 (Figure 5) Pre-determination

Potential Receptor	Predicted Changes and Potential Effects	Incorporated Measure	Location and Timing of Evaluation Trial Trenching
Aerospace Business Park			
Romano-British settlement (Batslays Farm MAG7)	Potential impacts from construction of ABP.	It is proposed that, subject to the results of the evaluation trial trench survey, any surviving archaeological remains are excavated and recorded in advance of construction works.	Batslays (Figure 2) Pre-determination Phase 2 Post-determination
Batslays Farm (Listed Grade II)	Batslays Farm and associated historic curtilage buildings will be incorporated into the ABP scheme design and converted to appropriate office use.	The historic Farm buildings will become a key feature and resource, as part of the office provision within the ABP. Further assessment of the building will be required to inform detailed designs for refurbishment .	Batslays Phase 2 – Post-determination
Service Families' Accomodation (Tremains Farm)			
Romano-British field systems south east of Llanmaes (MAG14 &15)	Construction of the residential accommodation at Tremains Farm will result in the disturbance of buried evidence of the field systems and possible associated building.	It is proposed that, subject to the results of the evaluation trial trench survey, any surviving archaeological remains are excavated and recorded in advance of construction works.	Tremains Farm (Figure 3) Pre-determination
Possible mill leat south east of Llanmaes	Construction of the residential accommodation at Tremains Farm could result in the disturbance of buried evidence of the former mill leat or fish pond outfall.	It is proposed that, subject to the results of the evaluation trial trench survey, any surviving archaeological remains are excavated and recorded in advance of construction works.	Tremains Farm (Figure 3) Pre-determination
Possible limekiln south east of Llanmaes	Construction of the residential accommodation at Tremains Farm may result in the disturbance of buried evidence of the former limekiln and associated trackway.	It is proposed that, subject to the results of the evaluation trial trench survey, any surviving archaeological remains are excavated and recorded in advance of construction works.	Tremains Farm (Figure 3) Pre-determination
Rising Main			
Romano-British field systems south east of Llanmaes (MAG14 &15)	Construction of the rising main in the vicinity of Tremains Farm will result in the disturbance of buried evidence of the field systems and possible associated building.	It is proposed that, subject to the results of the evaluation trial trench survey, any surviving archaeological remains are excavated and recorded in advance of construction works.	Tremains Farm (Figure 3) Pre-determination
Waycocks Cross			
Undated geophysical anomalies (MAG 33 & £4)	Construction of road improvements could result in disturbance of possible archaeological features	It is proposed that, subject to the results of the evaluation trial trench survey, any surviving archaeological remains are excavated and recorded in advance of construction works.	Waycocks Cross (Figure 6) Pre-determination

Potential Receptor	Predicted Changes and Potential Effects	Incorporated Measure	Location and Timing of Evaluation Trial Trenching
All Areas of Development			
Unidentified Archaeological Remains	The evaluation proposals target known or anticipated archaeological remains, it should also be recognised that as yet unidentified archaeological remains may exist within and beyond the areas identified.		

2.3 Building Recording

A programme of historic building recording works will be separately arranged. This does not form part of this Project Design, but should be noted as associated works likely to be carried out in the near future. These separate works are likely to include:

- Rapid photographic survey of the military airbase, to be undertaken by RCAHMW;
- Assessment of Batslays Farmhouse, to inform detailed refurbishment proposals;
- Assessment and recording of the former Eglwys Brewis Farmhouse and associated structures in advance of demolition;
- Assessment and recording of two pillboxes, which form part of the WWII airfield ground defences, one at Picketston and the other at Batslays also in advance of demolition.

2.4 Environmental Considerations

2.4.1 Biodiversity

Populations of Great Crested Newt, a Protected Species, have been identified at various locations within the airbase. Mitigation measures will need to be undertaken in advance of and during the archaeological evaluations works. Arrangements will be made to carry out the necessary newt mitigation works, based on Countryside Council for Wales guidance (Appendix C). This will be implemented by project ecologists in accordance with a detailed method statement, which is currently in preparation.

It is anticipated that machine excavation at various locations (East Camp Areas 1-4) to be evaluated during trial trenching operations within the airbase will need to be monitored by an ecologist, who will be responsible for identifying and removing newts, should they be encountered (destructive clearance). It is anticipated that immediately prior to the excavation of each trench in these locations, an area extending to the trench and adjoining spoil storage areas (approx 20x9m) will be machine scraped with a toothed bucket to a depth of c.200mm. Any newts will be recovered and removed prior to machine excavation of the archaeological trench.

It is anticipated that the Phase 2 trial trenching works at Batslays will commence following a 'fence trap and capture' operation to remove newts in advance of archaeological trial trenching.

2.4.2 Geotechnical

A programme of site investigation (SI) will be in progress broadly concurrent with the archaeological evaluation works. The Archaeological Contractor should liaise, in accordance with the instruction of the Consultant Archaeologist, with the SI engineer as necessary to advise on potential archaeological material encountered during the SI operations. In addition arrangement for data exchange should be agreed, specifically the supply of OD information on the bedrock surface from locations at either end of each archaeological evaluation trench.

2.5 Programming evaluation fieldwork

Where possible the proposed trench locations attempts to address various logistical factors that might influence the timing of trial trenching, include the demolition of existing structures. This has been a particular issue within the airbase, and the current proposals represent an attempt to secure early evaluation without requiring prior demolition of structures. The degree to which this might influence the reliability of the evaluation process will be reviewed during and following the evaluation works, with consideration given to the need for supplementary investigation when constraints have been resolved.

As it currently stands, it is intended to undertake all evaluation trial trench works prior to demolition with the exception of the trenches identified as Phase 2 in the Batslays area (Figure 2). Here, following discussions with the LPA Archaeological Advisor, evaluation works have been deferred to post-determination in response to landownership and ecological issues. Table 2 includes this area, but the grey tone denotes that this aspect of the evaluation project will not, as yet, form part of the current stage of evaluation works and will be subject to a separate tender exercise.

Given the total evaluation trenching proposal comprises a number of discrete packages, it is anticipated that works at each location will be undertaken concurrently in order to achieve the earliest possible date for completion.

Tenderers are required to provide an indicative programme for the completion of all field and post-excavation works.

3. Research Context

The results of archaeological work cannot be seen in a vacuum, as there are wider cultural themes which can be informed by, and which can in turn modify, understanding of the results of archaeological work on the site.

To this end, it is fundamental to clearly understand the terms of reference, including the research opportunities, of the project as a whole, even though these will be reviewed, refined or modified where appropriate at defined stages within the project.

Geographic based research themes focused on the Vale are not specifically considered in Research Framework for Archaeology in Wales However section 1.7 outlines provisional themes within which the research aspects of the proposed trial trench investigations will initially be considered.

It is important to consider, during the course of the investigation, sources of additional data, particularly in the interpretation of the field results. This might include information from other excavated sites within the Vale, especially from the National Museum investigations at Llanmaes. Also the use of graphic, cartographic and documentary sources should be consulted to help interpret and add detail to archaeological observations and hence add to the potential research value of the archaeological data.

3.1 Area Specific Issues

3.1.1 Batslays Farm (Figure 2)

This area includes the Grade II Listed Batslays Farm, which is to be retained as office facilities within the ABP scheme. The distribution of trenches reflects the widespread occurrence of geophysical anomalies in the Batslays area, with a suggestion of at least four phases of activity - prehistoric, Romano-British, medieval and post-medieval. In some instances the anomalies resolve themselves into reasonably clear patterns, such as the small rectilinear field system that is likely to be of Romano-British date, but many are less clear. The extensive distribution of trenches is intended to resolve this uncertainty.

An informed predictive approach is proposed; utilizing a grid based sampling strategy as a means of testing apparent distributions of archaeological geophysical anomalies. A decision has been made to sample across the area of archaeological potential identified, rather than strictly linking trench locations to individual buildings as shown on the development masterplan. Flexibility is preferable at what is an outline planning stage, as there is a need to anticipate the range of construction activities that might be expected but not yet detailed, including construction compounds/ haul roads, services and possibly landscaping works, which could affect archaeological remains beyond the building footprint. It may also prove useful, in the event that significant archaeological remains are identified, to understand what options for re-positioning might be available through a degree of re-configuration of the masterplan arrangement, which could secure archaeological preservation in situ.

3.1.2 Tremains Farm (Figure 3)

There is an apparent distribution of Romano-British settlement, along with the known later medieval settlements, within the shallow valleys in the vicinity of MoD St Athan, such as the Llanmaes Brook and the St John's Valley. Evidence from Llanmaes Brook includes the extensive pattern of small rectilinear fields revealed by geophysical survey. These may be associated with Iolo Morganwg's description of a masonry building he observed close to the bank of Llanmaes Brook, which he compared to the Llantwit Major Roman villa at Caer Mead.

The proscribed areas of development in this location means it is unlikely that we can fully explore the potential for important Roman buildings, but examination of the field systems is probable. It should also be possible to consider the potential condition of surviving archaeology beneath material dumped during the construction of the Llantwit bypass, which could clarify whether anything of the remains described by Iolo might actually survive beyond the site boundary.

Other phases of activity that need to be considered are the potential medieval and post-medieval remains, part of a once extensive estate, now represented by the Scheduled ruins at Bedford Castle. Evidence may include water management features, a trackway and an associated lime kiln.

For the same reasons as apply to Batslays, the decision has been made to sample across the area of archaeological potential identified, rather than strictly linking trenching locations with buildings as shown on the development masterplan.

3.1.3 Picketston (Figure 4)

Geophysical survey did not indicate the presence of archaeological anomalies nor did it indicate the area to be disturbed. A grid based trial trench sampling strategy is proposed as a control sample designed to test the reliability of these geophysical survey results.

3.1.4 MoD St Athan East Camp (Figure 5)

Four discrete areas are to be evaluated:

- East Camp Area 1 - Comprises the historic settlement of Eglwys Brewis, centred on the Grade II Listed St Brise Church, with specific focus on the former Eglwys Brewis Farm. Evaluation will be required to examine evidence for the origin and development of the medieval and later settlement, and should establish the date at which the current settlement form, ie isolated arrangement of farm and church, became established. In addition it will be necessary to re-excavate the cremation burial previously identified by Cotswold Archaeology;
- East Camp Area 2 – Comprises land in the vicinity of a former lime kiln, presumably within the former landholding attached to Eglwys Brewis Farm;
- East Camp Area 3- Comprises land immediately adjoining Cowbridge Road, which has been suggested may follow the line of a Roman road connection Cowbridge with a small port at Aberthaw;
- East Camp 4 – Comprises an area where various geophysical anomalies may indicate the presence of surviving archaeological features, possibly of prehistoric date.

3.1.5 Waycocks Cross (Figure 6)

Geophysical anomalies suggest the possible presence of archaeological features.

4. Project Management

A phased programme of investigation is anticipated, broadly operating according to English Heritage Guidance on the management of archaeological projects (EH 1991, 2006) and existing planning guidance (Welsh Office Circular 60/96). At the completion of each phase of fieldwork, a formal project review will be carried out to allow the production of a revised project design which reflects the enhanced understanding of the archaeological resource. The scope of further work is likely to be subject to agreements, secured by planning conditions, which should meet the reasonable requirements of the LPA Archaeologist. In addition future works will be tested against the stated aims of the project as set out in the Project Design and subsequent revisions, to ensure that all work is relevant and fully justified. The stages of the project, with key deliverables are detailed below. The current proposal, on which tenders are sought, is limited to Phase 1.

Table 4 Intended Overarching Project Structure

Phase	Stage	Description	Deliverable
Fieldwork	1	Phase 1 Evaluation	Excavation of trial trenches Public Engagement Programme Report on Phase 1 trial trenching
	2	Phase 2 Evaluation	Excavation of trial trenches Public Engagement Programme Report on Phase 2 trial trenching
	3	Mitigation	Project Design for Excavation Excavation fieldwork
Post-excavation	4	Post-excavation assessment of potential for analysis	Post-excavation Assessment Report Revised Project Design
	5	Archive Report	Technical Archive Report Publication Proposal
	6	Publication and archiving	Publication Report Archive Deposition

4.1 Project Roles

The Consultant Archaeologist will:

- report to Metrix, Welsh Assembly Government and Ministry of Defence on all aspects of the archaeological investigations works;
- provide Metrix, Welsh Assembly Government and Ministry of Defence with planning and design guidance on all archaeological matters arising from the submitted planning applications;
- prepare all Project Designs and Up-dated Project Designs;
- undertake Health and Safety responsibilities relevant to the design of archaeological investigations;
- monitoring implementation of all archaeological designs;
- review professional and technical aspects of the Archaeological Contractors operations and project outputs;
- liaise with the LPA Archaeologist;
- consult external bodies, including Cadw, RCAHMW, the National Museum of Wales, the Treasure Coroner and other academic or regulatory interests, and;
- co-ordinate public engagement arrangements.

The Archaeological Contractor will:

- undertake Health and Safety responsibilities relevant to the work of the Archaeological Contractor, including the preparation and implementation of a Health and Safety risk assessment;
- implement archaeological project designs, as approved by the LPA Archaeologist;
- programming and resourcing field and post-excavation operations;
- immediately inform the Consultant Archaeologist of a significant archaeological discovery;
- prepare progress reports for submission to the Consultant Archaeologist, and;
- assist, as reasonable, in the provision of information and support, the Archaeological Consultant deliver public engagement activities.

4.1.1 Progress Reports

The Archaeological Contractor will provide a weekly progress report and prepare a monthly summary. Both weekly and monthly reports will include a breakdown of resource utilisation, a budget review and programme update.

4.2 Monitoring of Archaeological Works

4.2.1 Local Authority Archaeologist

The LPA Archaeologist (Neil Maylan, Glamorgan Gwent Archaeological Trust (GGAT)) will be given at least five working days' notice of the start of archaeological fieldwork and will thereafter be permitted to visit the site for the purpose of monitoring and inspection during normal working hours at their reasonable discretion. Monitoring arrangements will follow GGAT Monitoring Guidance (Appendix B) and will be co-ordinated by Entec UK. GGAT may require meetings with identified individuals or the production of specific documents or other material. Subject to Entec approval, the appointed Archaeological Contractor will comply with such requests within a period of notice of not less than three working days.

4.2.2 Client

The client or representative nominated by the client will be given at least five working days' notice of the start of archaeological fieldwork and will thereafter visit the site for the purpose of monitoring and inspection during normal working hours at their reasonable discretion. Requests for meetings with identified individuals or production of specific documents or other material will require a period of notice of not less than three working days.

4.2.3 Specialist Advisors

The Archaeological Contractor will be expected to involve all members of their specialist team before the start of fieldwork and through the duration of the excavation. In particular, the environmental specialist will be consulted in drawing up a detailed sampling policy, which will be agreed with the LPA Archaeologist before the start of fieldwork.

4.3 Contingency Arrangements

The following should be provided:

- a fieldwork contingency equivalent to an additional 10% of the total trenching specified. This contingency will be invoked at the discretion of the client taking into account the views of the LPA Archaeologist. Reasons for drawing down this contingency could include (but are not restricted to) the presence of significant archaeological deposits requiring extension of one or more trenches to fully understand specific features, the presence of significant archaeological features not previously identified, or the identification of areas of particularly significant archaeological preservation;

- a separate contingency sum, including a breakdown specifying quantities, to cover enhanced sampling procedures for artefact, environmental or scientific dating material and provisions to cover anticipated on-site conservation procedures;
- a contingency to cover anticipated inputs to community engagement activities (see 7.1).

5. Evaluation Methodology

5.1 Archaeological Evaluation

5.1.1 General Principles and Standards

The purpose of the project is to investigate the archaeology of the development area as outlined in the preceding section and as detailed below. The locations of the trial trenches are as laid out in Figures 2 -5.

Archaeological evaluation will be aimed at ascertaining the character, extent, and quality of archaeological features on the site and to inform the research aims set out above. All evaluation fieldwork will conform to the standards laid out by the Institute for Archaeologists (IfA) as laid out by the *Code of conduct* (2008), the *Standard and guidance for field evaluation* (2008) and the *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (2008).

In particular, all staff will be suitably qualified and experienced for their project role, and will familiarise themselves with the results of the EIA and the project design before the commencement of the archaeological excavation.

5.1.2 Evaluation trenches

Evaluation trenches will typically measure 25x2m, although individual trenches may require amendment in response to localized constraints. The following arrangements are currently proposed, as detailed in Figures 2-5:

Batslays	123 trenches
Tremains Farm	67 trenches
Picketston	25 trenches
MoD St Athan Area 1	12
Area 2	3
Area 3	2
Area 4	8
Waycocks Cross	3

5.1.3 Machine Excavation

Removal of topsoil and overburden to the first significant archaeological horizon will be undertaken by a back-acting mechanical excavator with a wide toothless bucket under the continuous supervision of an experienced and competent archaeologist with the authority to halt and direct machine excavation. Spoil will be temporarily stockpiled on site at a safe distance from the trenches.

Following completion of archaeological investigation, each trench will be backfilled with the spoil and compacted by machine to level fill. No allowance for further reinstatement is required, pending specific instructions.

5.1.4 Excavation, recording and sampling methodology

General Methods

The first significant archaeological horizon and all subsequent archaeological deposits will be cleaned by hand. Excavation of any archaeological deposits identified will proceed by hand except where specifically agreed with the Consulting Archaeologist, following consultation with the LPA Archaeologist. Excavation and recording procedures will be based on the Museum of London Excavation Manual, unless stipulated otherwise. All contexts will be recorded with a single-context system and stratigraphic relationships recorded on a 'Harris' matrix. All suitable deposits will be subject to an environmental sampling strategy, as outlined below.

Sample Excavation

Cut features will be sectioned and recorded in plan. The principal aim is to characterise and evaluate features and as a result it is not anticipated that deposits and features will be fully excavated. However, it is recognised that in some cases, evaluation trenches will represent the only archaeological intervention, and that a sufficient level of excavation and recording should take place to allow any archaeological sequences observed to be understood. Typically, 10% of linear features will be excavated, and discrete cut features such as pits and post-holes will be half-sectioned. Deposits such as occupation layers, floor surfaces and dumps will be sufficiently excavated to free up underlying features or where human or animal burials or other significant archaeological material is encountered.

Site Drawings

An overall plan of the site shall be drawn at a scale of not less than 1:200 to show the location of the trenches in relation to existing features visible on the ground. Plans of individual features or groups of features will be drawn at a scale of 1:20, sections at a scale of 1:10. Trench sections will be hand cleaned and drawn to provide a record of deposits removed by machine excavation.

Each plan and section will be located in plan by reference to an established site grid and in elevation by levels above Ordnance Datum. Site temporary benchmark(s) (TBM) will be established either by closed traverse from an OS Benchmark or by survey-grade GPS (i.e. capable of measurement of elevation to an accuracy of +/-20mm).

Levels will be taken on modern ground level adjacent to the trench edges.

Stratigraphic Recording

All contexts will be given an individual number and recorded on a pro-forma sheet. A separate block of numbers will be allocated to each trench. The stratigraphic matrices will be established on site during the course of the works.

Small Finds

The locations of small finds will be recorded. Where the specific location of individual objects other than small finds might provide useful interpretive data, their location will be recorded in three dimensions, either as coordinates or on a plan as appropriate.

Photography

Photography will be by 35mm colour transparency and monochrome; a digital photographic record will also be maintained and images may be included in the report as appropriate. Photographs should be used to record interpretive data (e.g. groups of features and the

relationships between them rather than individual features) and important artefacts in situ where possible; other than 'working' shots they should include clear metric scales and should only be taken after the relevant features/areas have been hand cleaned.

Environmental sampling

A detailed sampling policy will be provided by the project environmental specialist and agreed with the Consultant Archaeologist, in consultation with the LPA Archaeologist. This will detail specific features of interest and will be intended to support the research aims set out in the Project Design. In general, bulk samples of 20-30l will be collected from the fills of cut features, and from any other securely stratified deposits that have the potential to provide environmental or economic information, such as occupation layers or material accumulating on use surfaces. Particular emphasis will be placed on contexts that may supply material suitable for scientific dating of potential early medieval and prehistoric features.

Due consideration will be given to the collection of samples suitable for plant microfossil analysis and other specialised analysis from contexts which appear to have accumulated over long periods of time to allow study of changing habitat and environmental conditions over time. Apparently waterborne deposits including water holes or wells fills will be sampled for foraminifera and diatom analysis to provide an assessment of water quality and conditions. Waterlogged and cess deposits will be specifically sampled for microfaunal and invertebrate analysis.

The on-site sampling policy will be deliberately inclusive as the true significance of individual features may not be fully understood until a wider area has been opened up. Conversely, it is possible that no further excavation may take place and it will be important to retain sufficient material to be able to understand isolated features. The final sampling and discard policy will be agreed with the Consultant Archaeologist, in consultation with the environmental specialist and the LPA Archaeologist.

Industrial residues and waste from craft and manufacturing processes will also be routinely sampled.

Artefact recovery

The recovery of material that can adequately date major archaeological phases is a key requirement. It is recognised that the incident of artefacts may limit the quality of datable assemblages, however this remains the most useful source of dating information.

Bulk finds such as pottery and animal bone will normally be collected by context. Where it is appropriate and following additional instruction, soil samples will be also be recovered for sieving, specifically for the purpose of:

- Providing statistically controlled samples;
- Enhanced recovery techniques.

Finds will be temporarily stored on site and removed from site to a secure location as required.

A discard policy acceptable to the National Museum of Wales will only be implemented following quantification, assessment and recommendation from artefactual and environmental specialists. All finds that are retained will be washed, marked and bagged in a manner suitable for long-term storage.

Any items deemed as treasure which are recovered will be subject to the provisions of the Treasure Act 1996. Such material shall normally be removed from site to a secure location at the end of the working day on which it is found. The National Museum of Wales' Portable Antiquities Officer (Mark Lodwick) should be informed immediately.

Conservation

Procedures for the recovery, packing and transportation of artefacts will follow *First Aid for Finds* (2nd Edition) and UKIC's Conservation Guidelines No. 2. Where delicate artefacts are uncovered, appropriate immediate measures will be taken, and the artefacts transferred to the Project Conservator. Should particularly complex conservation requirements become apparent, the conservator will be called to site to excavate and package the object.

Scientific dating

Samples of material suitable for scientific dating techniques including AMS C14 dating, archaeomagnetism (for example, charred seeds or *in situ* burnt clay from appropriate contexts) or thermoluminescence will be collected where appropriate. Given the possible paucity of dateable artefact material, careful consideration should be given to alternative scientific dating opportunities.

Human remains

If such finds are made the appropriate authorities (the client, the coroner and the LPA Archaeologist) will be informed and remains will not be removed unless this is absolutely necessary. Where it is essential that the remains are lifted, appropriate permissions will be obtained from the Ministry of Justice before any further action is taken is begun.

5.2 Evaluation Report and Revised Project Design

5.2.1 Evaluation Report

The project specification calls for the production of an interim report within three weeks of the completion of fieldwork. This will include:

- non-technical summary;
- summary introductory statements;
 - purpose of evaluation;
 - methodology;
- objective summary statement of results:
 - a summary description of the archaeological sequence of each area;
 - spot dating of pottery recovered during the evaluation;
 - other comments on recovered archaeological material by the relevant project specialist as appropriate; and
- Conclusions:
 - summary statement of significance of observed archaeological features; and
 - suggested revisions with rationales to the agreed Project Design;

Given the timescale, this will not represent a full evaluation report, but the aim is to provide sufficient information to allow additional inputs to the planning application and for a revised project design to be drafted and agreed, with minimum delays to the overall project.

5.2.2 Revised Project Design

Following the submission of the Evaluation Report, a revised Project Design for Archaeological Excavation will be produced detailing any further works, specifically environmental measures that will be undertaken post-consent. This may contain outline proposals for any further investigations, including strip, record & sample, open area excavation or watching brief, as appropriate, under the following headings:

- Non-technical summary
- Site location and description
- Planning background
- Geological and topographical background
- Archaeological and historical background
- Purpose and aims of the fieldwork

- Field methodology
- Post-fieldwork methodologies
- Report preparation, contents and distribution
- Copyright
- Archive deposition
- Publication and dissemination
- Timetable
- Staffing
- Health and Safety statement
- Monitoring procedures required by the curatorial archaeologist
- Contingency arrangements

This up-dated project design will be agreed before the commencement of archaeological excavation.

5.2.3 Site Summary

A site summary (typically c. 250 words descriptive text) suitable for inclusion within the Sites and Monuments Record, National Monuments Record and the appropriate Period Journal(s) will be produced.

5.2.4 Copyright

Copyright in this tender submission and subsequent reporting rests with the client unless specific arrangements are made for its assignment elsewhere. The authorship of individuals will be recognised in any published material. Transfer of title of all excavated archaeological material to National Museum of Wales is pending client/landowner approval.

The Archaeological Contractor and any other named individuals or organisations will retain the right to be identified as the author of project documentation and reports as defined in the Copyright, Designs and Patents Act 1988 (Chapter IV, s.79).

5.2.5 Archive Deposition

Deposition of Archive

The archive will be deposited at the completion of all post-excavation works including the production of the publication report with the National Museum of Wales (contact Elizabeth Walker). The precise timetable for deposition will be identified in subsequent revisions of the Project Design, when the full scope of archaeological works to be undertaken in relation to the current planning applications has been defined.

Content of Archive

The Archive will comprise three principal elements:

- primary archaeological records:
 - this type of material includes all primary records produced during the evaluation, typically (but not restricted to) context records, plans, sections and photographs; and
 - primary records about the archaeological material (x-radiographs, catalogues of finds and samples, documentation of discard, all records associated with post ex sampling and processing)
- archaeological material:
 - This comprises all of the excavated material (e.g. bulk finds and small finds, soil samples, flots, residues) that has not been discarded under the provisions of a stated and agreed discard policy.
- digital data:
 - This comprises digital records of the archaeological resource such as raw and processed data from total station surveys, digital photographs and other records held in digital formats.

Project management records, material subject to commercial confidence and other material not comprising records of the archaeological resource will not be included as elements of the archive.

Format of Archive

The project archive will be prepared to the standard specified in Appendix D, which sets out the archaeological archiving policy and guidelines of the National Museum of Wales, and in accordance with *the Guidelines for the Preparation of Archaeological Archives for Long Term Storage* (UKIC 1990) and the *Draft Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives* (2008).

5.3 Timetable and Staffing

5.3.1 Timetable

It is anticipated that evaluation work will commence as soon as possible after the award of the contract.

5.3.2 Staffing

Detailed information about the experience and qualifications of the key project team are to be provided.

Project Management

Overall archaeological Project Management will be by Entec UK Ltd. The Project Director will be Ken Whittaker and the Project Manager will be Steve Townend.

Site Supervision and Excavation Team

The day to day operation of the archaeological excavations will be managed by the Archaeological Contractor. The name and short CV for the following should be provided:

- Unit Director
- Project Manager
- Project Officer/Site Supervision

Specialist Assessment and Analysis

The Archaeological Contractor should provide details, including a short CV of the specialists to be engaged in the treatment and assessment of finds, environmental and scientific dating, including:

- Palaeoenvironmental archaeology: including;
 - Macroscopic plant remains;
 - Soils and sediments analysis;
 - Mammal and bird bone;
- Human remains;
- Conservation;
- Building material;
- Lithics;
- Prehistoric pottery;
- Roman pottery;
- Medieval and post-medieval pottery;
- Metal;
- Glass;
- Scientific dating.

6. Health, Safety and Welfare

6.1 General Statement

All archaeological works will be carried out in accordance with relevant Health and Safety legislation and guidance as embodied in the Health and Safety policies of the appointed Archaeological Contractor. Site specific risk assessments will be produced by the appointed Archaeological Contractor, which are to be submitted for review by the Consultant Archaeologist before the start of fieldwork. It should be noted that a 'Permit to Dig' system operates within the boundary of MoD St Athan and further documentation may be required.

6.2 Site-Specific Hazards

The Archaeological Contractor should secure the site perimeter with block and mesh fencing. Excavation areas within the site will be fenced with high-visible mesh fencing. Plant access routes will be designated and marked as appropriate.

The archaeological works area will be clearly designated and physically separated from any other works on the site as appropriate.

All trench locations will be CAT scanned prior to excavation.

6.3 Welfare Arrangements

The Archaeological Contractor will provide secure temporary mess and office facilities separate from tool storage and sufficient toilet and washing facilities for the size of team employed.

7. Community Engagement

7.1 Community Engagement

As the study of the material remains of the past, archaeology has a unique role in informing and inspiring an interest in the past and public engagement with the archaeological process can improve life chances. Any major archaeological project presents opportunities to engage local communities and is a significant resource, not only in terms of education, but also in engaging the public with the aims of a project and its outcomes.

Providing physical public access to the site during the investigation may be impracticable, but there are alternative ways in which the ongoing process and results of fieldwork could be disseminated more widely and used to enlighten and inspire.

Detailed proposals have not been prepared at this stage, as it is more appropriate to define a framework within which specific initiatives can be developed. Wherever possible we propose to support existing strategies in partnership with organisations from the public and voluntary sector. Our objective is to offer local service providers, who already benefit from established links to the community, the opportunity to secure an effective return on their existing and proposed investment in community, educational and wider cultural activities, by providing access to relevant information and materials.

We have identified a number of provisional aims:

- **Developing the quality of life** – by creating opportunities to participate we can promote an inclusive and wide ranging approach to learning about the environment in which people work and live;
- **Stewardship of the environment** – access to the excavation will provide opportunities to learn in, with and about the historic environment, and its protection and conservation;
- **Promoting involvement, participation and partnership to create strong communities**- promoting the involvement of local schools and voluntary organisations will encourage a community focus and a greater sense of citizenship.

In accordance with these aims we propose a plan of action that widens the opportunities for access to the cultural and archaeological resource through local community initiatives. We shall provide information over the duration of the planned investigations, which will give participants a chance to develop and review knowledge and understanding as the project progresses. Subject to resources, local initiatives might include:

- *Bulletin* sheet, email up-date, etc;
- National Museum of Wales Website Blog;
- Student placements on excavation and post-excavation projects;
- Public site tours;

- Information boards;
- Finds displays;
- Talks, lectures and seminars on local cultural themes to community and amenity groups;
- Production of popular forms of interpretative literature.

We will seek partners who can support development of this action plan, including:

- National Museum of Wales;
- RCAHMW;
- Cadw;
- Vale of Glamorgan Council;
- GGAT.

We will also support the involvement of suitable participants, which may include:

- Local schools;
- WEA and further educational colleges;
- County and Local Archaeological Societies;
- Local Metal Detector Groups;
- Local amenity societies;
- Local newspapers.

Our primary contribution will be information resulting from the scientific investigation process, but understand that participants are likely to benefit from a broader cultural and creative experience. We would be keen to explore opportunities at the interface of the scientific and creative cultural spheres, perhaps employing approaches developed in contemporary art, most obviously in the 'epic archaeological excavations' of Mark Dion, e.g. *History Trash Dig*(1995), *Raiding Neptune's Vault* (1997/8) and *Tate Thames Dig* (1999). These projects involved the public as performers in three linked events (the dig; cleaning, cataloguing and conservation; and display). The event employed classification systems that were site specific, employing laws of formal resemblance rather than stratigraphy, as an alternative to traditional scientific approaches. This could be particularly useful in assisting participants explore social and cultural relationships with the historic environment.

7.2 Media

Metrix will take responsibility for issuing media and press releases. Entec will assist with the content of these releases. The appointed Archaeological Contractor will be offered an

opportunity to see and comment on all such documents in draft before their release and to be present at any live interviews.

8. Assumptions and Clarifications

8.1 Archaeological Conditions

8.1.1 Nature of the Archaeological Resource

Depth of Excavation

It is anticipated that the trenches will not need to be carried out at depths below 1.2m. Therefore there is no requirement for shoring and battering/stepping trench edges.

Trench plans

Where ground conditions (e.g. buried services) make the excavation of trenches in their intended locations unsafe, the trench locations will be changed in consultation with the LPA Archaeologist and following instruction from the Consultant Archaeologist.

Specialist Analysis

The contingency provisions (4.3) should include a detailed estimate of the requirement for specialist processing, conservation, assessment and analysis, including all categories identified under 5.3.2.

In addition estimates for additional historical research and pottery illustrations should be supplied.

Sampling Policy

Alterations to all agreed sampling arrangements, as set out in this or any supplementary/revised Project Designs, either during the fieldwork or analysis stage, must be on the approval of the LPA Archaeologist and the instruction of the Consultant Archaeologist, once client approval has been secured for any additional works, storage or transport costs.

8.2 Site Conditions

8.2.1 Contamination

No allowance has been made in this project design for excavation and disposal of contaminated soils or for the provision of special precautions, equipment and safe working practices to safeguard staff, visitors to the site and the general public in the event of site contamination being an issue.

8.2.2 Reinstatements

All arisings will be stored on site adjacent to the archaeological trenches. Evaluation trenches will be backfilled with arisings which will be compacted to level fill.

8.3 Access to site

8.3.1 Adverse Weather

No provision has been made for delays caused to the programme by adverse weather conditions making the site unsafe to work. Where possible, staff should be diverted to alternative projects or tasks, including finds processing or post-excavation, but where this is not possible, any such delays will be recorded and staff time and hire costs itemised for consideration as a charge against the contingency provisions (see 4.3).

8.3.2 Contractual delays

Where dates of appointment, approval of project plans or receipt of information/consents are delayed, additional costs and delays incurred as a result should be itemised for consideration as a charge against the contingency provisions (see 4.3).

9. Tender Requirements

Tenderers are required to provide the following information which will be used to select the project Archaeological Contractor:

- A statement of compliance with the Project Design, to include full details of any proposed variations;
- Details of requested CVs (5.3.2);
- Detailed cost breakdown, using the format provided in Appendix E, of resources required to complete:
 - Fieldwork, to include staff, plant, fencing, accommodation, subsistence, etc;
 - Post-excavation work.
- A provisional programme detailing the earliest anticipated completion of both the fieldwork and post-excavation stages of the proposed Phase 1 evaluation works.

Tenderers are invited to submit tenders by 12 noon 20th July 2009.

Appendix A Results of Phase 2 Geophysical Survey

2 Pages

Survey Area	Reference	Description	Date
Area B	MAG01	Curvilinear field boundary	Undated
	MAG02	Possible enclosure and associated double ditch linear feature	Undated
G1	MAG03	Possible ridge and furrow	Medieval
	MAG04	Possible field boundary	Undated
F33-34	MAG05	Possible pill box (removed)	20 th century
	MAG06	Trackway	Undated
	MAG07	Rectilinear field system	Roman (possible)
	MAG08	Linear feature	Undated
	MAG09	Linear feature	Undated
	MAG10	Linear feature	Undated. Possibly prehistoric
Froglands	MAG11	Possible ditched enclosure	Medieval
Llanmaes	MAG12	Trackway (possibly associated with nearby limekiln)	Post-medieval
	MAG13	Possible mill race/fish pond outfall	Post-medieval
	MAG14	Field system	Roman (probable)
	MAG15	Rectangular enclosure associated with probable Roman field system	Roman (probable)
Castleton (South)	MAG16	Circular enclosure and associated linear features	Undated
	MAG17	Circular enclosure and associated linear features	Undated
	MAG18	Rectilinear enclosure and associated ring ditch	Undated (probably)

Survey Area	Reference	Description	Date
			Roman)
	MAG19	Field system associated with WAG18 enclosure	Undated (probably Roman)
M1	MAG20	Trackway	Undated
	MAG21	Possible ridge & furrow	Medieval
M2	MAG22	Linear feature	Undated
M3	MAG23	Linear feature, possible field wall/bank	Undated
	MAG24	Possible linear feature	Undated (possibly prehistoric)
M6	MAG25	Circular enclosure	Undated
M11	MAG26	Linear feature	Undated
N1	MAG27	Curvilinear feature	Undated
	MAG28	Linear feature	Undated
N2	MAG29	Curvilinear features	Undated (possibly prehistoric)
N4	MAG30	Linear features	Undated
	MAG31	River accretion surfaces/palaeochannel	Undated
W1	MAG32	Circular enclosure	Undated
W2	MAG33	Curvilinear feature	Undated
	MAG34	Linear feature	Undated

Appendix B Glamorgan-Gwent Archaeological Trust Monitoring Guidelines

2 Pages

Monitoring of Evaluations

In general the purposes of monitoring by the regional archaeological curator on behalf of the Local Planning Authority, may be summarised as follows: -

To ensure the maintenance of high archaeological standards and best practice based on the Standards in British Archaeology issued by the Institute of Field Archaeologists (copies available on request).

To ensure compliance with planning regulations and requirements.

To ensure compliance with the brief provided by the archaeological curator and the Specifications submitted by the applicant for the approval of the Local Planning Authority.

To ensure the relevance of the further information gained by the work to the on-going planning process.

To ensure that any recommendations made by the archaeological contractor are reasonable in planning terms.

To ensure that any further recommendations resulting from the work that are made by the Local Planning Authority (based on the advice of their curatorial archaeological advisers) are founded on detailed knowledge and are reasonable in planning terms.

To help formulate, where required, an archaeological mitigation strategy, which could protect the archaeological resource whilst enabling the permitted development.

Monitoring is carried out by the Curatorial Division of the Glamorgan-Gwent Archaeological Trust, in their recognised role as the archaeological advisors to all the regional Planning Authorities. All of its work is carried out to the Welsh Archaeological Trusts' *Curator's Code of Conduct* (copies of which are available on request). Officers undertaking monitoring work will have appropriate experience and will be available to discuss any aspect of monitoring.

Monitoring will normally consist of a site visit by one of the Division's Officers (although more than one visit may be made on larger evaluations) who will inspect the on-going work and the exposed archaeological resource. The visit will enable them to ensure that the work is in compliance with the approved specification, to provide local knowledge to the archaeological contractor and discuss any additional evaluation work or variances to the specification that may be required.

In normal circumstances a report on the monitoring, copied to the Local Planning Authority, will be sent to the developer inside 48 hours of the visit. This report will give a short summary of the exposed archaeological resource and recommend any additional works or variations from the specifications which should be carried out whilst the archaeological contractor is still on site. The applicant will be informed of any breaches to the specification, which may invalidate the results of the evaluation.

Appendix C

CCW Mitigation Guidelines for Common Reptiles (draft Feb 2005)

7 Pages

For any development site which supports reptiles, or which contains habitats with the potential to support reptiles, CCW recommends detailed survey at an early stage. Where suitable survey information is unavailable, however, or where there is insufficient time to carry out the necessary surveys, it should be assumed that any habitats on the site which are suitable for reptiles do indeed support reptiles, and mitigate accordingly.

Legislation

The four most common British reptiles (comprising grass snake, adder, slow-worm and common lizard) are afforded so-called 'partial protection' under the Wildlife and Countryside Act 1981 (as amended). This protects individuals of all species from 'intentional' or 'reckless' killing and injury, but does not confer any direct protection to the habitats which support them.

Where it can reasonably be predicted that reptiles could potentially be killed or injured by activities such as site clearance, earthworks or construction operations etc, to carry out such activities in the absence of appropriate mitigation could legally constitute intentional or reckless killing or injuring, and could result in prosecution.

Where reptiles (other than sand lizard, smooth snake and turtles, all of which are subject to additional restrictions under the law) are present, or potentially present, on a development site, the developer should consider the need for mitigation at an early stage in the development programme. The presence of reptiles on a development site will not necessarily prevent the development from taking place, but it means that 'reasonable' mitigation measures must be put in place to prevent, as far as possible, the killing or injuring of any reptiles.

It is not necessary to obtain a licence to carry out works which affect reptiles, but it is always advisable to seek guidance in any case where a development could potentially cause impacts to reptiles, and to obtain advice regarding what would constitute 'reasonable' mitigation, although it is ultimately up to the developer to decide what is 'reasonable' (and to accept any consequences which may ensue). In most cases, the services of an appropriately qualified and experienced reptile consultant will be required.

The remainder of this document sets out the main elements of a typical reptile clearance strategy. It is recognised, however, that not all of the elements listed below will be necessary or appropriate in all cases, and that individual strategies will vary from site to site.

Reptile Clearance Methodology

If reptiles are confirmed as being present (or are assumed to be present, for example from habitat assessment) then measures should be put in place to avoid or minimise the killing and injuring of reptiles as a result of development operations. Ideally, a 'Reptile Mitigation Strategy' should be drawn up for the site by a suitably qualified person, and agreed in advance with either the CCW or the relevant Local Authority Ecologist.

Wherever possible, reptiles should be accommodated within the site, or on one or more adjacent or nearby site. The translocation of reptiles to a different site which lies at a distance from the development site should only be undertaken as a last resort. Where reptiles cannot be accommodated within the site, a suitable receptor site should be identified in advance and surveyed for suitability. If a reptile population already exists on the receptor site, then advance enhancement works to increase the 'carrying capacity' of the receptor site may be necessary. Adequate time should be allowed in the development programme for the safe clearance of reptiles ahead of any potentially harmful works using suitable means, which may vary from site to site.

It should be noted that the clearance of reptiles from a site can only be undertaken when the reptiles are active (ie, during the spring, summer and autumn months) and should never be attempted during the winter hibernation period (which runs approximately from November to March inclusive). This constraint may lead to conflict with other issues – the presence of nesting birds, for example, all species of which are protected against disturbance – which will also need to be taken into account and mitigated for accordingly²⁴.

Mitigation measures should apply to all areas of the site which will be subject to potentially harmful impacts, including the laying of haul routes, siting of contractors' compounds and the bulk storage of materials and soils etc. It should be remembered that reptiles may be present beneath the soil at depths of up to 250mm or more, as well as in locations such as amongst tree roots or buried rubble and brick waste etc.

Typical Mitigation Procedure

1. Where there are suitable receptor sites adjacent to the development site, mitigation should commence with the removal of tall vegetation from all areas affected by development to make them less attractive to reptiles, and to encourage them to move away voluntarily into adjacent habitats. Vegetation should initially be cut to a height of about 200mm, starting furthest away from the adjacent habitats and working towards them, so as to drive any reptiles which may be present towards the receptor habitats. All cutting must be done by hand (eg by strimmer or brush-cutter), rather than by tractor-drawn mowers, so as to minimise the risk of causing reptile casualties. All arisings should be removed immediately from the site following cutting.

After a maximum of two days, the vegetation of the site should be cut again in a similar pattern to a height of about 50mm, taking great care to avoid injuring any reptiles which may be present and with all arisings again being removed from the site. The vegetation of the site should then be maintained in this short condition for a minimum of two further days before proceeding to Step 2.

In some rare situations this staged cutting, coupled with the careful removal of any structures which may be used by sheltering reptiles (eg rubble piles, timber piles, drystone walls etc – see Step 3 below) may be sufficient to achieve 'clearance' of the site by rendering it so unsuitable for reptiles that no further measures are required. In these circumstances, the site should then be maintained in this unsuitable condition until the commencement of development works, which should then be preceded by 'destructive searching' (see Step 8 below). These situations are likely to be very unusual, however, and will require careful assessment in advance by an appropriately qualified person.

²⁴ Hedgerow translocations or clearance of habitats such as trees, scrub, bramble or reedbed etc can lead to direct conflicts, which may require phased clearance or other mitigation measures to overcome.

Where there are no suitable habitats in the surrounding area for reptiles to relocate to (for example if the site is surrounded by roads or hard standings, or is hemmed in by other developments) then this step should be ignored.

2. Reptile-proof fencing should be erected around the perimeter of the affected areas of the site. These should be erected in accordance with published specifications such as that contained in the Highways Agency's *Design Manual for Road & Bridges* (Vol 10(4) (7) HA116/05 *Nature Conservation Advice in Relation to Reptiles and Roads* or the forthcoming *Reptile Mitigation Guidelines* (English Nature). The fencing will normally be required to extend below ground level for a depth of about 250mm, and both the installation and fabrication process may require careful supervision by a suitably qualified reptile handler to ensure that no reptiles are accidentally injured in the process. On large sites it may be useful, and will probably speed up the process, if the site is subdivided into smaller parcels.

Reptile-proof fences may be either vertical 'no-pass' fences or sloping 'one-way' fences. The former will prevent the movement of reptiles in either direction, whilst the latter can be erected in areas where the site lies immediately adjacent to a suitable receptor sites, and will allow reptiles to leave the development area voluntarily.

3. Within the enclosed parcels, any rubble piles, drystone walls, tree roots, buried rubble and timber piles etc should be dismantled by hand to prevent reptiles from using them to shelter in. All arisings should be removed from the site. As far as possible, these operations should be carried out by hand, with the minimum tracking by any vehicles or machinery across the site. Complex or large structures may need to be carefully dismantled under the supervision of a reptile handler who can halt the works and rescue any reptiles which may be found sheltering in them.

4. Following the clearance of sheltering places, the vegetation of the enclosed parcel should be cut, if it has not already been so. Cutting should initially be to a height of about 200mm, starting at the centre of the parcel and working outwards towards the edges. All cutting must be done by hand (eg by strimmer or brush-cutter), rather than by tractor-drawn mower, so as to minimise the risk of causing reptile casualties. All arisings should be removed immediately from the site following cutting.

Note that for a linear site, such as a cycle-path or verge, strimming should be undertaken from the path working ahead and outwards at the same time, effectively cutting a 'V'-shape.

5. After cutting, the site should be strewn with 'refugia'. These should comprise a combination of suitable materials such as sheet metal, timber (eg chipboard), roofing felt and carpet tiles. These will be used by reptiles for sheltering beneath, or for basking on, where they can be found and caught more easily. If the vegetation is already shorter than 200mm, refugia may be laid out straight away without cutting the vegetation. Refugia should be spread evenly around the site at a high density (ie about 100 per hectare).

6. Depending on the site, visits should be made to the site by a reptile handler over at least the next two days to check beneath the refugia, collect any reptiles which may be beneath them and remove them to the receptor habitats. In practice, it will usually take at least a week for the refugia to 'bed in', and daily reptile collection visits may need to take place over a period of several weeks. Reptile collecting visits must be undertaken in suitable weather conditions, ie in dry, still conditions with air temperatures in excess of 10°C.

7. Daily or near-daily reptile collection and removal visits should continue until reptile numbers under the refugia begin to decline noticeably, at which point the vegetation of the site can be cut again, using the same

methodology as at Step 4, but this time to a height of 100mm. Daily reptile collection and removal visits should continue for a further minimum of three days, in suitable weather conditions.

8. When reptile numbers are again detected to be declining, a final cut can be made to achieve very short, close-cropped vegetation of about 40-50mm height, again using the same methodology as at Step 4. This staged removal of the vegetation is likely to drive reptiles to make greater and greater use of the refugia, by removing alternative sheltering places and rendering the rest of the site unattractive to reptiles.

Depending on the individual circumstances of the site, it may be advisable to review the spread and location of refugia, and to begin to cluster these towards the edges of the site or in selected locations, although if this is done then the areas where refugia are no longer present must be kept in a highly unattractive state for reptiles. The manipulation of refugia numbers and locations may be used to reduce the amount of time needed for a reptile handler to check for reptiles. On a small site, however, there is probably no point in moving the refugia, and moving refugia may reduce capture efficiency²⁵. This is a matter which will require expert assessment.

It is essential that the integrity of the reptile-proof fences is maintained throughout the trapping period. These should be checked on every visit, and any breaks repaired within 24 hours, otherwise reptiles could re-enter the trapping area from outside. An advantage of subdividing the trapping areas into compartments is that any breaks in the perimeter fence which do occur, and which go undetected for any length of time, will only affect the compartment it lies alongside, and not the whole trapping area.

On sites where vandalism is a significant problem, it may be necessary to institute security measures to ensure that the reptile-proof fences remain intact throughout the trapping period. The measures necessary will vary from site to site, but could include the use of 'Heras' fencing and/or the presence of site security personnel in extreme cases.

9. Daily or near-daily reptile collection visits should carry on until 10 successive nil-returns have been achieved, in suitable weather conditions, following the last vegetation cut. Following a final inspection by a suitably qualified person (the final inspection can be done at the same time as the last check of the refugia). At this point, the trapping records should be summarised and sent to the relevant Species Officer at the CCW. Although there is no obligation to do this, it will assist in maintaining a clear position with the statutory body and will encourage a cooperative dialogue. This may be useful in establishing that there has been full and reasonable compliance with the legal requirements in the event of a challenge arising.

Note that there is no need to have 10 successive nil-returns between the vegetation cuts, but that these cuts should be at least 2 days apart and the numbers should be showing a decline (the exact time taken should be determined by the reptile handler in charge, and will vary from site to site).

10. CCW will then write to the developer to "release" the site to the developer or site engineers. Again, there is no obligation to obtain written consent from the CCW, but it will further demonstrate that there has been best-practice compliance to the satisfaction of the statutory body.

²⁵ Reptiles usually take a while to find refugia (hence the 'bedding in'), and once they do they tend to use them habitually. Moving refugia may simply confuse the animals and be counterproductive.

11. The area cleared of reptiles should then ideally be immediately stripped of all vegetation and the topsoil removed, leaving bare subsoil. This final stripping may be done with machinery (ideally using a bucket with tines)²⁶. In some cases it may be desirable that the site is 'destructively searched' prior to development, especially if the trapping out has not gone absolutely to plan (eg vandalism problems etc). This means that the topsoil layer to a depth of about 250mm is removed from the site in strips or sections, working sequentially across the site, using a digger with a tined bucket, under the supervision of a reptile handler who is able to check for the presence of any reptiles remaining in the soil. Where such reptiles are found, the reptile handler will stop the works, rescue the animal and release it to the receptor area.

12. The edges of the cleared area should be marked with high-visibility temporary fencing to prevent accidental trafficking of vehicles on the uncleared parts of the site (if any).

13. If there is any delay between the end of the reptile clearance operation and the commencement of development, measures must be taken to prevent the recolonisation of the site by reptiles from adjacent habitats, unless there is no such habitat adjacent to the site. To prevent reptiles re-entering the cleared area, the developer must therefore either:

a) Keep the area in the cleared condition obtained at Step 9 - bare earth with no vegetation. To keep the area bare, the developer could consider using an approved herbicide. Or:

b) Retain the reptile-proof fencing until development works are underway in the area concerned. If this option is chosen, the integrity of the reptile-proof fences will need to be checked regularly throughout the intervening period (ie daily or near-daily), and any breaks repaired within 24 hours. If undetected breaks occur for any length of time, the affected area (or compartment) will need to be trapped out again by repeating Steps 5-9 above.

Maintenance of the site in a cleared and reptile-proof condition is really only critical during the reptiles' active period, since recolonisation is not likely to occur during the winter months. Therefore if a site has been cleared of reptiles in summer prior to development in winter, the reptile-proof fences can be removed (or allowed to deteriorate) once the hibernation period has begun (ie after about the end of October). If the start of development is subsequently delayed beyond the end of the hibernation period, however, (ie after about the end of March) it may be necessary to reinstall the fences, or even re-trap the site.

The site can be re-opened to reptiles by removing the fencing after all construction works are complete.

Catching Methods

The use of refugia at high densities (100/ha) can be very effective for collecting slow-worms. However, other species are less readily found under refugia, and can be much more difficult to catch. 'Noosing' of common lizards whilst sunning on refugia can be effective, but requires skill and is very time-consuming. Snake catching is also a specialised skill, and carries health and safety implications. However, both snakes and common lizards tend to be more mobile than slow-worms, and are therefore more likely to respond to the vegetation clearance and remove themselves from the trapping area where one-way fences make this possible.

²⁶ It is worth noting that there can be a conflict on sites where there is also an archaeological watching brief: archaeologists usually specify a bladed bucket to produce smearing in which archaeological layers can be seen. A tined bucket makes this much more difficult.

Keeping Records

For trapping records, we recommend logging the date, time, weather conditions, temperature, minimum night temp (night before), species caught and location caught (a rough map would suffice, eg area A, B or C) and, if possible, the sex and age of the animals, and if gravid. Ideally a report of the trapping operation, in which all of the capture records are summarised and evaluated, should be prepared at the end of the operation and submitted to the CCW and/or the local authority ecologist. There is no obligation to do so, but the keeping of clear and unambiguous records may be essential in establishing that there was full and reasonable compliance with the law in the event of there being any challenge to the methods used.

When to Trap

Ideally clearance should begin as early as 1 April, with the aim of the site being cleared by the end of July. Clearance operations are less desirable later in the summer, since after about June there is the chance that juvenile animals will also be present, which as well as being extremely difficult to see and catch, may also significantly increase the number of animals on the site.

Post-development Monitoring

In addition to the above, we would encourage the developer to put in place a scheme to monitor the effects of the development on the reptiles and to see if the mitigation has been successful. The design of any monitoring exercises should be discussed in advance with the CCW.

Appendix D National Museum of Wales Archive Guidelines

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Draft after final consultation (20-02-2008)

NATIONAL STANDARDS FOR WALES FOR COLLECTING AND DEPOSITING ARCHAEOLOGICAL ARCHIVES

BACKGROUND

The aim behind all archaeological work of any scale is to gather information to the highest possible standard, to preserve this and to make this information accessible for future archaeologists, other interested enquirers and members of the public. By its very nature much archaeological work is destructive and provides a unique opportunity to investigate a particular place or landscape.

There is a need for a standard for the collection and preservation of archaeological archives within Wales and one, it is intended, that will be applied by all those generating and working with archaeological archives in Wales. Differing structures exist in Wales for the management of the archaeological process:

- The Welsh Archaeological Trusts (WAT) and the National Park Authorities that provide archaeological planning advice within Wales rather than local authority planning departments.
- The Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) and Cadw are still separate organisations with defined roles.
- Cadw is now a division of Welsh Assembly Government.
- There is just one National Museum in Wales
- There is also a strong network of local museums working together as the Federation of Museums and Art Galleries in Wales.

This document seeks to complement the document *Archaeological Archives – a guide to best practice in creation, compilation, transfer and curation* published by the Archaeological Archives Forum (AAF) which is directly relevant only to England, Scotland and Northern Ireland. Users may find the detail contained within the AAF document to be helpful but should also remember that not all within it will be relevant to Wales. This Welsh document makes the process specific to the situation that exists in Wales. In the future the techniques used to study and interpret this record will advance making it essential that today's evidence is generated and

cared for to the highest possible standard; effectively this is preservation of the archaeology by record.

This document has been prepared by the Working Group for the Delivery of the Recommendations of the *What's in Store?* Report and is a web-based document maintained by members of a future National Panel for Archaeological Archives in Wales.

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1. Definition of archaeological archive
2. Use of archives
3. The standard for Wales
4. Guidance notes
5. Appendices
 - 5.1 Organisations involved
 - 5.2 The roles of individuals
 - 5.3 Collecting areas
6. Useful References

1. DEFINITION OF ARCHAEOLOGICAL ARCHIVE

Archaeological archive is the outcome of any piece of archaeological work, whether destructive or not, that generates a record that needs to be preserved for posterity. This archaeological record can be small, perhaps a folder of notes and a computer file generated by a survey or a desk-top assessment of the existing archaeological records. It can also be large, the outcome of invasive work where evaluation or excavation work produces finds and associated paper, photographic or digital records.

2. USES OF THE ARCHAEOLOGICAL ARCHIVE

Archaeological work is undertaken for the benefit the public. The archaeological archive is therefore the product of such work. It is therefore important that archives generated by such work enter the public domain, within reason, as soon as possible following completion of the work. This may entail the deposition of the archaeological archive with a museum, RCAHMW or other relevant repository.

Education and outreach are important in raising public awareness of projects. Where health and safety regulations permit, archaeologists should aim to engage the local community with their work at appropriate times. Press and PR opportunities can be obtained through such means. It can also be helpful to engage the museum or RCAHMW who will be receiving the archives in

this aspect of work as they may be able to help by mounting displays, or provide space on their website to give information about the project. Project archaeologists might present their work at public forums such as National Archaeology Week. Opportunities for school and community involvement may arise. Guidance may be obtained through the Council for British Archaeology's Education Officer or from museum education officers or community groups.

3. A STANDARD FOR COLLECTING AND DEPOSITING ARCHAEOLOGICAL ARCHIVES IN WALES

The archaeological brief and specification or project design

Where archaeological work is required to be undertaken as a response to proposed development a brief setting out the scope of the required archaeological work will normally be prepared by the relevant archaeological curator. In response to this brief an archaeological contractor will agree a specification with the Curatorial Archaeologist. Where archaeological investigation is not part of the development process, the research/project design or specification should be agreed by the appropriate Curatorial Archaeologist prior to any works commencing, in line with best practice and IFA standards and guidance. The specification or project design should identify the proposed repository for the archaeological archive as well as setting out the standards with which the project will comply.

PROJECT SET-UP

All archaeological work should be undertaken in line with an explicitly stated project proposal. Depending on the situation of the work this may be referred to by a variety of names; project design, research design, specification, written scheme of investigation, etc. This document will set out the specific objectives and methodology of the project.

Project archives will normally fall into one of two categories:

A) Records-only projects

Projects where there is an expectation that the archive will only comprise records (paper, photographic, digital etc.).

B) Projects where there is an expectation of data beyond records

Projects where there is an expectation of archaeological data beyond records may include one or more of the following: finds, including finds that may require specialist lifting or immediate conservation and samples or data that make the project more complex.

The following should be used as guidance – it should be remembered that archaeology is not always easily predicted and a project may change scale quite unexpectedly. In these situations

a project archaeologist may need to recap some stages to ensure that all aspects of the standard are covered.

A. RECORDS-ONLY PROJECTS

A1. PROJECT PLANNING

- A1.1 Decide upon a place of deposit for archive generated by an archaeological project and ensure that the future repository is willing to accept the archive.
- A1.2 Ensure that the Curatorial Archaeologist is aware of the place of deposition.

A2. ARCHAEOLOGICAL WORK

- A2.1 The archaeological work must be undertaken to a recognised standard.
- A2.2 Digital data standards must be agreed and adhered to.

A3. SITE RECORDS

- A3.1 Information, including digital information, must be collected and organised to recognised standards.
- A3.2 Liaison must take place between the Project Archaeologist and repository about how site records should be presented to them. Conditions of deposit and copyright should be agreed with the repository.
- A3.3 All site records must be prepared to the agreed standards.

A4. PREPARING FOR THE TRANSFER OF ARCHIVE

- A4.1 Once all specialist reports are received and any disposal strategy implemented, the site archive must be brought together and prepared for transfer to a repository.
- A4.2 Intellectual Property Rights must be defined and recorded for each piece of written and photographic work.
- A4.3 If a repository for the archive has not already been agreed, or has changed, seek to ensure that the planned place of deposit is willing to accept the archive. Ensure that legal ownership is transferred to the repository.
- A4.4 All records must be packaged, prepared and listed to the standards agreed with the repository.
- A4.5 Supplementary information e.g. publication report should be provided to the repository.

A5. SIGNING OFF

- A5.1 Once the repository agrees to accept the archive an Entry Form will be issued to the Project Archaeologist.
- A5.2 The Project Archaeologist must send a copy of the Entry Form to the Curatorial Archaeologist as confirmation that the work is completed.
- A5.3 The Local Planning Authority may need to be advised of the completion of the work.
- A5.4 Other curators or funding bodies (Cadw, HLF, etc.) may need to be advised of the completion of the work.

B) PROJECTS WITH AN EXPECTATION OF DATA BEYOND RECORDS

B1. PROJECT PLANNING

- B1.1 Agree a place of deposit for archive generated by an archaeological project with the landowner.
- B1.2 Seek to ensure that the future repository is willing to accept the archive. **Note** – it may not always be possible to achieve this at this stage, in which case see B5 *Preparing for the transfer of archive*.
- B1.3 Ensure that legal ownership is transferred by the landowner to the repository if it is possible to do so.
- B1.4 Ensure that the Curatorial Archaeologist is aware of the place of deposition.
- B1.5 Refine the project design to meet any criteria suggested by the repository.
- B1.6 If the project may recover one or more of the following types of data: finds of a higher significance, finds that require specialist lifting, finds that require immediate conservation, medium to large scale volume of finds, then inform a conservator of the project and provide them with an opportunity to contribute to the project design.
- B1.7 If the project may require input from specialists, inform them of the project and provide them with an opportunity to contribute to the project design.
- B1.8 Refine the project design and inform the Curatorial Archaeologist.

B2. ARCHAEOLOGICAL WORK

- B2.1 The archaeological work must be undertaken to a recognised standard.
- B2.2 Digital data standards must be agreed and adhered to.

B3. DEALING WITH FINDS/ENVIRONMENTAL SAMPLES

- B3.1 Should complex problems with objects be encountered consultation must take place with a conservator.
- B3.2 Consultation must take place with specialists as appropriate as the project progresses. If large wooden objects are encountered a wood specialist must be consulted.
- B3.3 In the event of the discovery of human remains obtain a licence from the Department for Constitutional Affairs and follow best practice guidelines.
- B3.4 Should items that may constitute Treasure be discovered inform the Coroner.
- B3.5 Consult finds specialists to ensure that any specific requirements they may have are known and considered.
- B3.6 If finds are discovered ensure that they are washed and cleaned appropriately.

- B3.7 A selection, retention and disposal strategy must be agreed upon with the Curatorial Archaeologist and receiving Museum Curator.
- B3.8 A conservation assessment should be obtained on all significant finds generated by the project.
- B3.9 Should there be any finds that specialists or the receiving museum require to be labelled these should be marked to mda standards.
- B3.10 Packaging of finds must be undertaken using archival quality materials and in such a way that micro-environments appropriate for the materials are maintained.
- B3.11 All finds must be stored to their optimum requirements throughout the process of post-excavation and specialist reporting.

B4. SITE RECORDS

- B4.1 Information, including digital information, must be collected and organised to recognised standards.
- B4.2 Liaison must take place between the Project Archaeologist and repository about how site records should be presented to them. Conditions of deposit and copyright should be agreed with the repository.
- B4.3 All site records must be prepared to the agreed standards.

B5. PREPARING FOR THE TRANSFER OF ARCHIVE

- B5.1 If a repository for the archive has not already been agreed, or has changed, ensure that it is willing to accept the archive. Ensure that legal ownership is transferred by the landowner to the repository.
- B5.2 Once any specialist reports commissioned are received and any disposal strategy implemented, the site archive must be brought together to prepare for transfer to a repository.
- B5.3 All finds, samples and records must be packaged, prepared and listed to the standards agreed with the repository.
- B5.4 In the event that a museum is not receiving the full site records, copies of paper site records essential for the interpretation of finds/samples must be supplied.
- B5.5 Supplementary information e.g. publication report should be provided to the repository.

B5.6 Intellectual Property Rights must be defined for each piece of written and photographic work.

B6. SIGNING OFF

B6.1 Once the repository receives the archive an Entry Form will be issued to the Project Archaeologist.

B6.2 The Project Archaeologist must send a copy of the Entry Form to the Curatorial Archaeologist as confirmation that the work is completed.

B6.3 The Local Planning Authority may need to be advised of completion of work.

B6.4 Other curators or funding bodies (Cadw, HLF, etc.) may need to be advised of completion of work.

4. GUIDANCE NOTES

A. RECORDS-ONLY PROJECTS

A1. PROJECT PLANNING

Standard	Responsible body / person	Consultation Required	Guidance
<p>A1.1 Decide upon a place of deposit for archive generated by an archaeological project. Ensure that the future repository is willing to accept the archive.</p>	<p>Project Archaeologist or Project Instigator</p>	<p>Curatorial Archaeologist and Archivist</p>	<p>The archive or museum identified as potentially the most appropriate repository for a particular excavation archive should be approached at this stage to ensure that they are willing to accept it. Any terms and conditions that may be made must be defined.</p> <p>It is recommended that all contractors send all relevant repositories a standard letter informing them of the intended work that will generate an archive. Then contact should be made with the relevant archivist to ensure that an agreement in principle exists for the transfer of ownership of any records generated by the piece of work.</p>
<p>A1.2 Ensure that the Curatorial Archaeologist is aware of the place of deposition.</p>	<p>Project Archaeologist</p>	<p>Curatorial Archaeologist</p>	<p>The Curatorial Archaeologist needs to be informed of the decision that has been taken about where the archive will be deposited.</p>

A2. ARCHAEOLOGICAL WORK

Standard	Responsible body / person	Consultation Required	Guidance
A2.1 The archaeological work must be undertaken to a recognised standard.	Project Archaeologist	Archivist	The recognised standards are the IFA Standards and Guidance. However, the English Heritage Centre for Archaeology Recording Manual 2005 and the Museum of London Archaeological Recording Manual provide examples of best practice.
A2.2 Digital data standards must be agreed and adhered to.	Project Archaeologist	Archivist Curatorial Archaeologist	and IFA guidelines and RCAHMW can supply specifications for intended digital deposits. Other organisations that can provide initial guidance are the Archaeology Data Service (ADS), the Association for Geographical Information (AGI), Intra-Governmental Group on Geographic Information (IGGI) and the National Archives.

A3. SITE RECORDS

Standard	Responsible body / person	Consultation Required	Guidance
A3.1 Information, including digital information, must be collected and organised to recognised standards.	Project Archaeologist	Archivist	A list of the contents and quantity of the project archive should be included in any project report along with details of the proposed agreed repository. Depositors should ensure that the intended repository is able to take the proposed volume of records and that they will ensure its future, integrity and use. If, for example following a Project Review in line with MoRPHE (EH 2005) and MAP 2 (EH 1991), further analysis and reporting are required the temporary proposed location of the archive will be identified in the report.
A3.2 Liaison must take place between the Project Archaeologist and repository about how site records should be presented to them. Conditions of deposit and copyright should be agreed with the repository.	Project Archaeologist	Archivist	The repository will provide current guidance on how records should be presented or ordered, including up-to-date specifications for digital data. However, where possible, it is advisable that such guidance be sought before production of the records begins.
A3.3 All site records must be prepared to the agreed standards.	Project Archaeologist	Archivist	All site records should be completed and fully cross-referenced. A detailed catalogue should be included with the archive. Written and signed details of copyright and conditions of deposit, as agreed with the repository, should be included.

A4. PREPARING FOR THE TRANSFER OF ARCHIVE

Standard	Responsible body / person	Consultation Required	Guidance
A4.1 Once all specialist reports are received and any disposal strategy implemented, the site archive must be brought together and prepared for transfer to a repository.	Project Archaeologist	Curatorial Archaeologist	The timescale for this should be less than five years from completion of the archaeological work. Ideally the archive should be delivered in full.
A4.2 Intellectual Property Rights must be defined and recorded for each piece of written and photographic work.	Project Archaeologist	Archivist	The future repository may have its own guidelines about this. The mda website has useful links to relevant sources of advice on Intellectual Property Rights.
A4.3 If a repository for the archive has not already been agreed, or has changed, seek to ensure that the planned place of deposit is willing to accept the archive. Ensure that legal ownership is transferred to the repository.	Project Archaeologist	Archivist	The archive or museum identified as potentially the most appropriate repository for a particular excavation archive should be approached to ensure that they are willing to accept it. Any terms and conditions that may be made must be defined. Legal transfer of title documents should be signed by the archaeological contractor.
A4.4 All records must be packaged,	Project Archaeologist	Archivist	Full lists containing the detail of the contexts of each box

prepared and listed to the standards agreed with the repository.

should be prepared and transferred in hard copy and in digital format if appropriate.

A4.5 Supplementary information e.g. publication report should be provided to the repository.

Project Archaeologist

Supplementary information for instance a copy of an archive or publication report should be submitted.

A5. SIGNING OFF

Standard

Responsible body / Consultation person Required

Guidance

A5.1 Once the repository agrees to accept the archive an Entry Form will be issued to the Project Archaeologist.

Archivist

Project Archaeologist

The Entry Form will act as acceptance of the archive and confirmation that the standards required have been met. **If this is not the case the archive must be declined and the Project Archaeologist asked to rectify matters to meet the standard deemed acceptable.**

A5.2 The Project Archaeologist must send a copy of the Entry Form to the Curatorial Archaeologist as confirmation that the work is completed.

Project Archaeologist

Curatorial Archaeologist

A5.3 The Local Planning Authority may need to be advised of the completion of the work.

Curatorial Archaeologist

Local Planning Authority

If a condition has been placed on planning consent the Local Planning Authority must be advised to discharge any condition upon confirmation of transfer.

A5.4 Other curators or funding bodies (Cadw, HLF, etc.) may need to be advised of the completion of the work.

Project Archaeologist Cadw / relevant funding bodies etc.

In the event that other curators or funding bodies (e.g. Cadw, HLF, etc.) should also require submission of archives to an appropriate repository as part of their agreement of project designs or specifications or as a condition of grant aid, then all those who have been involved during the process, including RCAHMW, whether in receipt of an archive or not, should be informed that work has been completed.

B) PROJECTS WITH AN EXPECTATION OF DATA BEYOND RECORDS

B1. PROJECT PLANNING

Standard	Responsible body / person	Consultation Required	Guidance
B1.1 Agree a place of deposit for archive generated by an archaeological project with the landowner.	Project Archaeologist or Project Instigator	Landowner; Curatorial Archaeologist	<p>To consult with the landowner over future ownership issues to identify and agree the place of deposit for the archive generated by the archaeological project.</p> <p>Legal ownership of any finds, with the exception of Treasure, generated by a particular piece of work lies with the landowner. Ultimately it is the landowner's decision where these are deposited. Most landowners will require guidance about the most appropriate place for them to deposit any finds recovered from their land. In some instances it may be difficult to achieve this, in which case advice should be sought from the repository deemed by the Curatorial Archaeologist to be the most appropriate for receipt of the archive.</p>
B1.2 Seek to ensure that the future repository is willing to accept the archive.	Project Archaeologist	Museum Curator or Archivist	The museum or archive identified as potentially the most appropriate repository for a particular excavation archive should be approached at this stage to ensure that they are willing to accept it. Any terms and conditions that may be made must be defined.
Note – it may not always be possible to achieve this at this			

stage, in which case see B5 *Preparing for the transfer of archive.*

It is recommended that all contractors send all relevant repositories a standard letter informing them of the intended work that may or will generate an archive. Then contact should be made with the relevant collections/archives manager to ensure that an agreement in principle exists for the transfer of ownership of any finds and records generated by the piece of work.

Standard

Responsible body / Consultation person Required

Guidance

B1.3 Ensure that legal ownership is transferred by the landowner to the repository if it is possible to do so.

Project Archaeologist
Museum Curator or
Archivist and
Landowner

Legal transfer of title documents should be signed by the landowner and/or the archaeological contractor.

B1.4 Ensure that the Curatorial Archaeologist is aware of the place of deposition.

Project Archaeologist
Curatorial
Archaeologist

The Curatorial Archaeologist needs to be informed of the decision that has been taken about where the archive will be deposited.

B1.5 Refine the project design to meet any criteria suggested by the repository.

Project Archaeologist
Museum Curator or
Archivist

The Museum Curator should have an opportunity to offer advice on the project design.

B1.6 If the project may recover one or more of the following types of data: finds of a higher significance, finds that

Project Archaeologist
Conservator

A Conservator should be notified about the project and invited to contribute to the project design.

require specialist lifting, finds that require immediate conservation, medium to large scale volume of finds then inform a conservator of the project and provide them with an opportunity to contribute to the project design.



Standard	Responsible body / person	Consultation Required	Guidance
B1.7 If the project may require input from Specialists, inform them of the project and provide them with an opportunity to contribute to the project design.	Project Archaeologist	Specialists	Specialists should be notified about the project and invited to contribute to the project design.
B1.8 Refine the project design and inform the Curatorial Archaeologist.	Project Archaeologist	Curatorial Archaeologist	The Curatorial Archaeologists needs to be made aware of any changes to the project design and know the full scope of the project.

B2. ARCHAEOLOGICAL WORK

Standard	Responsible body / person	Consultation Required	Guidance
B2.1 The archaeological work must be undertaken to a recognised standard.	Project Archaeologist	Museum Curator or Archivist	The recognised standards are the IFA Standards and Guidance. However, the English Heritage Centre for Archaeology Recording Manual 2005 and the Museum of London Archaeological Recording Manual provide examples of best practice.
B2.2 Digital data standards must be agreed and adhered to.	Project Archaeologist	Archivist Curatorial Archaeologist	and IFA guidelines and RCAHMW can supply specifications for intended digital deposits. Other organisations that can provide initial guidance are the Archaeology Data Service (ADS), the Association for Geographical Information (AGI), Intra-Governmental Group on Geographic Information (IGGI) and the National Archives.

B3. DEALING WITH FINDS/ENVIRONMENTAL SAMPLES

Standard	Responsible body / person	Consultation Required	Guidance
B3.1 Should complex problems with objects be encountered consultation must take place with a conservator.	Project Archaeologist	Conservator	A conservator should provide on-site advice on lifting complex items. The treatment of vulnerable or delicate items, especially of wet organic material should be undertaken immediately.
B3.2 Consultation must take place with specialists as appropriate as the project progresses. If large wooden objects are encountered a wood specialist must be consulted.	Project Archaeologist	Specialists	Specialists; e.g. palaeo-environmental, soils, finds etc. need to advise on specific sampling or research strategies during the progression of the project work. Where wood is discovered, English Heritage Guidelines on the Recording, Sampling, Conservation and Curation of Waterlogged Wood should be followed.
B3.3 In the event of the discovery of human remains obtain a licence from the Department for Constitutional Affairs and follow best practice guidelines.	Project Archaeologist	Department for Constitutional Affairs / Specialists	It is important to ensure all human remains are treated respectfully in ways that are considered ethical. Guidelines from the Church of England and Department of Culture, Media and Sport should be followed.
B3.4 Should items that may constitute Treasure be discovered inform the Coroner.	Project Archaeologist	Coroner and National Museum Wales Department of Archaeology & Numismatics	If something is discovered that may be Treasure it is essential that the Coroner is informed within 14 days from the day you realise it is, or may be, Treasure.

B3.5	Consult finds specialists to ensure that any specific requirements they may have are known and considered.	Project Archaeologist	Specialists Conservator	/	Specialists, for example, may prefer Prehistoric pottery or lithics to be unwashed so scanning for residues / use-wear can be undertaken.
	Standard	Responsible body / person	Consultation Required		Guidance
B3.6	If finds are discovered ensure that they are washed and cleaned appropriately.	Project Archaeologist	Conservator Specialists as required.	/	Finds should be washed in accordance guidance set out in First Aid for Finds. The minimum amount of cleaning should be done in order for specialist study to be undertaken.
B3.7	A selection, retention and disposal strategy must be agreed upon with the Curatorial Archaeologist and receiving Museum Curator.	Project Archaeologist	Curatorial Archaeologist Museum Curator specialists	/	SMA Guidelines for the Selection, Retention and Dispersal of Archaeological Collections (1993). The presumption is that all small finds should be kept wherever possible. In some circumstances, e.g. bulk collections of tile, it may be appropriate for a representative sample to be made by the specialist prior to deposition in the museum, with the rest fully recorded and then discarded.
B3.8	A conservation assessment should be obtained on all significant finds generated by the project.	Project Archaeologist	Conservator		All bulk iron should be x-radiographed. All wet materials should be stabilised following advice from a conservator. Wet items identified for retention must be treated by a Conservator prior to deposition. Other

			conservation actions need to be agreed with the Conservator.
B3.9	Should there be any finds that specialists or the receiving museum require to be labelled these should be marked to mda standards.	Project Archaeologist	Museum Curator or Conservator for sensitive or vulnerable items Finds should be marked with the minimum amount of information possible. Each find should have the site code, year, small find number. Alternatively if this information is provided on secure sealed packaging it need not be marked directly onto the artefacts. Some specialists may require finds to be marked before they can study them. Mark with the museum's accession number if required by place of deposit.
B3.10	Packaging of finds must be undertaken using archival quality materials and in such a way that micro-environments appropriate for the materials are maintained.	Project Archaeologist	Conservator First Aid for Finds should be used as a guide.
	Standard	Responsible body / person	Consultation Required
B3.11	All finds must be stored to their optimum requirements throughout the process of post-excavation and specialist	Project Archaeologist	Conservators and Specialists <i>First Aid for Finds</i> should be used as a guide.

reporting.



B4. SITE RECORDS

Standard	Responsible body / person	Consultation Required	Guidance
B4.1 Information, including digital information, must be collected and organised to recognised standards.	Project Archaeologist	Archivist or Museum Curator	A list of the contents and quantity of the project archive should be included in any project report along with details of the proposed agreed repository. Depositors should ensure that the intended repository is able to take the proposed volume of records and that they will ensure its future, integrity and use. If, for example following a Project Review in line with MoRPHE (EH 2005) and MAP2 (EH 1991), further analysis and reporting are required, the temporary proposed location of the archive will be identified in the Highlight Assessment report.
B4.2 Liaison must take place between the Project Archaeologist and repository about how site records should be presented to them. Conditions of deposit and copyright should be agreed with the repository.	Project Archaeologist	Archivist or Museum Curator and Specialists	The repository will provide any current guidance on how records should be presented or ordered, including up-to-date specifications for digital data. However, where possible, it is advisable that such guidance be sought before production of the records begins.
B4.3 All site records must be prepared to the agreed standards.	Project Archaeologist	RCAHMW Archivist, Museum Curator and Specialists	All site records should be completed and fully cross-referenced. A detailed catalogue should be included with the archive. Written and signed details of copyright and conditions of deposit, as agreed with the repository, should be

included.

B5. PREPARING FOR THE TRANSFER OF ARCHIVE

Standard	Responsible body / person	Consultation Required	Guidance
<p>B5.1 If a repository for the archive has not already been agreed, or has changed, ensure that it is willing to accept the archive. Ensure that legal ownership is transferred by the landowner to the repository.</p>	Project Archaeologist	Museum Curator or Archivist and Landowner	<p>The museum or archive identified as potentially the most appropriate repository for a particular excavation archive should be approached to ensure that they are willing to accept it. Any terms and conditions that may be made must be defined.</p> <p>Legal transfer of title documents should be signed by the landowner and/or the archaeological contractor.</p>
<p>B5.2 Once any specialist reports commissioned are received and any disposal strategy implemented, the site archive must be brought together to prepare for transfer to a repository.</p>	Project Archaeologist	Curatorial Archaeologist	<p>The timescale for this should be less than five years from completion of the archaeological fieldwork. Ideally the archive should be delivered in full.</p>
<p>B5.3 All finds, samples and records must be packaged, prepared and listed to the standards agreed with the repository.</p>	Project Archaeologist	Archivist or Museum Curator	<p>Full lists containing the detail of the contexts of each box and itemising those with any supplementary contextual and publication information. These should be prepared and transferred in hard copy and in an agreed digital format if</p>

<p>B5.4 In the event that a museum is not receiving the full site records, copies of paper site records essential for the interpretation of finds/samples must be supplied.</p>	<p>Project Archaeologist Museum Curator</p>	<p>appropriate. This only needs to be done if artefacts and paper records are not being deposited at the same repository. If a museum has only agreed to accept finds it is essential that sufficient copies of records of finds lists, context interpretations, etc. will be provided for meaningful interpretation of these items at the museum. A full list of the location of every part of the site archive should be provided to each of the receiving repositories.</p>
<p>Standard</p>	<p>Responsible body / Consultation person / Required</p>	<p>Guidance</p>
<p>B5.5 Supplementary information e.g. publication report should be provided to the repository.</p>	<p>Project Archaeologist</p>	<p>Supplementary information should be provided dependent upon the nature of the material being accepted. At the minimum a copy of an archive or publication report should also be submitted.</p>
<p>B5.6 Intellectual Property Rights must be defined for each piece of written and photographic work.</p>	<p>Project Archaeologist Archivist</p>	<p>The future repository may have its own guidelines about this. The mda website has useful links to relevant sources of advice on Intellectual Property Rights.</p>

B6. SIGNING OFF

Standard	Responsible body / Consultation person	Required	Guidance
B6.1 Once the repository receives the archive an Entry Form will be issued to the Project Archaeologist.	Museum Curator / RCAHMW Archivist	Project Archaeologist	The Entry Form will act as acceptance of the archive and confirmation that standards required have been met. In the event that this is not the case the archive must be declined and the Project Archaeologist asked to rectify matters to meet the standard deemed acceptable.
B6.2 The Project Archaeologist must send a copy of the Entry Form to the Curatorial Archaeologist as confirmation that the work is completed.	Project Archaeologist	Curatorial Archaeologist	
B6.3 The Local Planning Authority may need to be advised of completion of work.	Curatorial Archaeologist	Local Planning Authority	If a condition has been placed on planning consent the Local Planning Authority must be advised to discharge any condition upon confirmation of transfer.
B6.4 Other curators or funding bodies (Cadw, HLF, etc.) may need to be advised of completion of work.	Project Archaeologist	Cadw / relevant funding bodies etc.	In the event that other curators or funding bodies (e.g. Cadw, HLF, etc.) should also require submission of archives to an appropriate repository as part of their agreement of project designs or schemes of work or as a condition of grant aid. Then all those who have been involved during the process, whether in receipt of an archive or not, should be informed that work has been completed.

5. APPENDICES

5.1 ORGANISATIONS INVOLVED

Cadw is the historic environment division within the Welsh Assembly Government with responsibility for protecting, conserving and promoting an appreciation of the historic environment of Wales. This includes historic buildings, ancient monuments, historic parks and gardens, landscapes and underwater archaeology.

The four Welsh Archaeological Trusts are independent limited companies with charitable status providing a uniform local archaeological service across the whole of Wales. Their work falls into two categories: heritage management/curatorial work and field services/contract-based work. The former includes the maintenance of regional Sites and Monuments Records (SMRs) / Historic Environment Records (HERs) and the provision of archaeological advice to a range of people, for a range of purposes, and includes advice provided to the local planning authorities. The latter includes threat-related work on specific classes of monument or environment and undertaking commercially-funded projects as an archaeological contracting unit.

All archaeological contracting organisations offer commercial archaeological services. Some organisations provide a specialised service such as geophysical surveying, whilst others offer a range of services from desk-based assessments to large-scale excavations. They can vary in size from a sole trader to a company employing a large number of staff. Some organisations work within a local area whilst others offer a national service. Commercial archaeological organisations can be contracted to undertake archaeological work by a developer (or agents working on behalf of a developer) as part of the planning process.

University departments and individual researchers based in Universities may undertake archaeological work. They may be working on projects beyond the scope of the planning process or on non-scheduled land. Their work is therefore undertaken independently of most regulatory controls.

Research groups e.g. local societies and private individuals may undertake archaeological work. They may be working on projects beyond the scope of the planning process or on non-scheduled land. Their work is also therefore undertaken independently of most regulatory controls.

The Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) collects and curates archaeological records and archives (paper, photographic and digital) within the terms of the *National Monuments Record of Wales (NMRW) Collecting Policy*. NMRW is the national repository for records of the archaeological, architectural and historic environment in Wales. In effect this means that all archaeological archives, without associated finds, created by any organisations or individuals, are accepted by RCAHMW for the NMRW. RCAHMW also surveys, researches and interprets archaeological sites and landscapes in Wales.

Amgueddfa Cymru – National Museum Wales collects and curates archaeological artefacts with associated environmental samples, including human remains and records from sites of national significance from across the whole of Wales.

Non-national museums are located across Wales and many of these will collect and curate archaeological artefacts and some will also collect associated environmental samples, human remains or records from sites from within their locally defined area. Some of these museums may collect across an entire county – e.g. Carmarthenshire Museum, whilst others may only collect locally e.g. Tenby Museum & Art Gallery.

5.2. ROLES OF INDIVIDUALS

Curatorial Archaeologist – The role of a curatorial archaeologist is to secure the appropriate management of the archaeological resource. Where archaeological investigation is proposed their role is to ensure that it is undertaken to appropriate standards. The principal bodies that perform this role in Wales are Cadw and the Curatorial Sections of the Welsh Archaeological Trusts. Where archaeological work is undertaken as part of the planning process, curatorial advice is provided to the Local Planning Authorities (LPA) by the Welsh Archaeological Trusts. Advice is also provided to the developer and their archaeological contractor / project archaeologist in order that they can meet the requirements of the LPA. Briefs for necessary archaeological work are provided by the curatorial archaeologist, detailed specifications are agreed and the work monitored on behalf of the LPA.

Project Instigator – The project instigator is the individual, organisation or body who has commissioned, funded or in some other way initiated the archaeological work. Archaeological investigation can be undertaken for a variety of reasons, for example academic research. In this instance it may be an individual researcher, university department or museum that is the project instigator. Other curatorial organisations such

as Cadw or The National Trust may require archaeological work to inform conservation. With a development-led investigation it may be the current landowner or the prospective developer of a site that commissions a piece of archaeological work. While not actually undertaking the work, the project instigator will be ultimately responsible for the archaeological work fulfilling any standards, conditions or other legal requirements.

Archaeological Contractor/Project Archaeologist – the project archaeologist is the individual or organization undertaking the archaeological work. Where work is undertaken as part of the planning process the developer will appoint an archaeological contractor. The scope of the required works will be set out by the curatorial archaeologist and a specification or detailed project design will be produced by the archaeological contractor in response, to be agreed by the curatorial archaeologist. Such a scheme can include all aspects of archaeological work including desk-based assessments, evaluation, geophysical survey, topographic survey, building recording, full excavation, etc. All such work will require full reporting, publication and deposition of archives.

Landowner – the landowner is the legal owner of the land on which the archaeological investigation is being undertaken. It is the responsibility of the project archaeologist to obtain the landowner's permission and agreement for the deposition of the archive in an appropriate repository.

Museum Curator / Archivist – the person who will hold responsibility for archaeological archive at the end of the archaeological work should be a point of contact from the start of the project. This individual can decide whether or not the archive will be accepted into their museum / archive and will be responsible to ensure that clear instructions are issued at the outset of the project about organisation, documentation and any specific packaging or conservation requirements.

Conservator – the person who will provide specialist advice about the long-term preservation of finds generated by the archaeological work. They will liaise with finds specialists and with the museum curator to ensure that all requirements for the objects are met. The conservation work should be undertaken by an accredited conservator or a practice led by an accredited conservator.

Specialists – the specialist is a person with specific knowledge of a particular process or category of finds or material, e.g. palaeo-environmentalist, pollen analyst, pottery, radiocarbon dating, etc. Specialists will be commissioned to advise during project

development and implementation and will produce a report for the Project Archaeologists. These specialists should be involved with the project design from an early stage should materials or items of a particular type be anticipated.

5.3. COLLECTING AREAS AND POLICIES

Collecting areas

Before undertaking any piece of work that might generate an archaeological archive it is essential to consider where it might be deposited. The table (below) summarises the current collecting areas of the non-national museums.

Collection policies

The following summarises the collection policies of the accredited organisations accepting archaeological archives. The collecting policies of all accredited museums will be informed by MLA's accreditation guidelines.

Collecting Policies of Welsh Non National Museums

The map shows collecting areas within Wales. The details of individual museums' collecting policies will be available from those museums on request (or by links from this website).

Amgueddfa Cymru – National Museum Wales

National Museum Wales seeks to collect and acquire archaeological material to enhance the displays and to increase the range of its reference collections, in order to enable a better understanding of the past. It collects archaeological finds and single or groups of coins from all periods from the lower Palaeolithic to the post-medieval period from across all of Wales. For detail on this strategy see <http://www.museumwales.ac.uk/en/collections/use/>.

The Royal Commission on the Ancient and Historical Monuments of Wales Archaeological Archives Policy (January 2003)

The Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) collects and curates archaeological records and archives (paper, photographic and digital) within the terms of the *National Monuments Record of Wales*

Collecting Policy. NMRW is the national repository for records of the archaeological, architectural and historic environment in Wales. In effect this means that all archaeological archives, without associated finds, created by any organisations or individuals, are accepted by RCAHMW for the NMRW. Archaeological archives with associated finds would normally be expected to remain together and be held in an appropriate museum but RCAHMW would encourage a copy of the core paper/digital archive to be deposited in the NMRW along with details of the museum holding the original. In the event that a museum accepting or holding archaeological finds is unable to accept the paper and/or digital associated records these may be deposited in the NMRW. Potential depositors are encouraged to contact the NMRW Archivist at an early stage to discuss arrangements.

TABLE SHOWING COLLECTING AREAS OF INDIVIDUAL MUSEUMS IN WALES

<i>Name & Address of Museum</i>	<i>Contact Name/Job Title</i>	<i>Phone number/email address</i>	<i>What is the geographical area from which they collect</i>	<i>Is there a restriction on what is collected?</i>	<i>Is there anything that the museum does not collect?</i>
Amgueddfa Cymru – National Museum Wales Cathays Park, Cardiff, CF10 3NP	Elizabeth A. Walker, Collections Manager	02920573274 Elizabeth.Walker@mus-eumwales.ac.uk	Across the whole of Wales.	We collect anything pre-industrial revolution.	Do not accept excavation records unless there are associated finds.
National Roman Legion Museum High Street, Caerleon, Newport NP18 1AE	Mark Lewis or Julie Reynolds, Curatorial Officers or Elizabeth A. Walker Collections Manager	01633 436183 or 02920573274	Caerleon and District	We collect anything archaeological pre-industrial revolution.	Do not accept excavation records unless there are associated finds.
Abergavenny Museum The Castle, Castle Street, Abergavenny, Monmouthshire. NP7 5EE	Curator		Abergavenny and Surrounding Area	Size would be an issue due to the amount of storage available	
Scolton Manor Museum Bethlehem, Haverfordwest, Pembrokeshire. SA62 5QL	Charlotte New	01437 731328	Cambria area, Pembrokeshire, Not the National Park	None	Would rather not take any further soil samples.
Radnorshire Museum Temple Street, Llandrindod Wells, Powys. LD1 5DL	Heather Pegg or Will Adams	01597 824513	Old County of Radnorshire	Maybe Quantity but all would be assessed on an individual basis	Paper, Digital Records, Human Remains and Soil Samples
Neath Museum Gwyn Hall, Orchard Street, Neath, West Glamorgan. SA11 1DT	Annette Jones	01639 645741/ 01639 645726	Neath and Port Talbot	Nothing too large, awaiting new premises	Human Remains or paper
Newport Museum and Art Gallery John Frost Square, Newport, South Wales. NP20 1PA	Curator	01633 414701	Newport County	Any proposed donation in line with their collection policy	Soil Samples
Amgueddfa Pontypool Park Buildings, Pontypool, Torfaen. NP4 6JH	Deborah Wildgust	01495 752036	Torfaen Valley from Blaenavon to Cwmbran	Size would be an issue	Human Remains

Museums and Heritage Service Caerphilly County Borough Council, Nelson Road, Tredomen, Ystrad Mynach, Hengoed CF82 7WF	Principal and Officer	Museum and Heritage	01495 235879	Caerphilly Area	County	Dependent on size and expertise available	Human Remains
Caldicot Castle Museum Caldicot Castle, Caldicot, Monmouthshire NP26 4HU	Curator		01291 420241	County Monmouth	of	Size would be an issue and no blind archives these would hopefully go to the Royal Commission	With regards to a planning case where there are no finds, they would not take the paper records.
Chepstow Museum Gwy House, Bridge Street, Chepstow, Monmouthshire NP16 5EZ	Curator		01291 625981	County Monmouth	of	Size would be an issue and no blind archives these would hopefully go to the Royal Commission	With regards to a planning case where there are no finds, they would not take the paper records.
Monmouthshire Museum Service The Nelson Museum and Local History Centre, Priory Street, Monmouth, Monmouthshire NP25 3XA	Andrew Helme		01600 710630	County Monmouth	of	Size would be an issue and no blind archives these would hopefully go to the Royal Commission	With regards to a planning case where there are no finds, they would not take paper records.
Brecknock Museum and Art Gallery Captains Walk, Brecon, Powys. LD3 7DS	Curator Collections Management Officer	or	01874 624121	Old County Breconshire	of	No large archives due to lack of space.	Human Remains
Carmarthenshire County Museum Abergwili, Carmarthen SA31 2JG	Gavin Evans Museum Curator		01267 228696/ 01267 242301 gahevans@carmarthenshire.gov.uk	County Carmarthenshire	of	None	Soil Samples, unless someone can make a really good case
Gwynedd Museum and Art Gallery Bangor, Ffordd Gwynedd, Bangor, Gwynedd LL57 1DT	Esther Roberts Curator	Roberts	01248 353368	Gwynedd Boundary	County	None	Paper, digital, unwashed soil or metallurgical samples or unstabilised metal or wood and probably only a sample of washed environmental samples.
Wrexham County Borough	Stephen Greter Heritage Services	Greter Services	01978 297430	Wrexham Borough	County Council	None apart from those	Not too many Soil Samples or

Council	Manager		Area only	on Council website	waterlogged material.
Ty Henblas, Queen's Square, Wrexham LL13 8AZ					
Porthcawl Museum and Historical Society	Mr J David	01656 782211	South of M4, between Ogmore and Kenfig Rivers	Size would be an issue due to limited storage	None
The Museum, Old Police Station, John Street, Porthcawl, Glamorgan CF36 3BD					
Anglesey Museums and Culture Service	Curator	01248 752009 agxlh@anglesey.gov.uk	Relating to the Isle of Anglesey, would consider further afield if nearby areas could not accept them	Dependent on storage available at the time.	Contaminated objects in need of extensive treatment before they can be stored, be a risk to other objects (e.g woodworm)
Rhosmeirch, Llangefni, Anglesey LL77 7TQ					
Swansea Museum	Garethe El Tawab	01792 653763	Within Boundaries of the City and County of Swansea. In rare cases they will consider material from new excavations from sites from which they already have material from early excavations.	None, unless storage becomes a problem	Soil Samples, heavy industrial waste, i.e slag and only take representative samples of 'modern', post 1850, domestic material.
Victoria Road, Maritime Quarter, Swansea SA1 1SN	Curator	Swansea.museum@swansea.gov.uk			
Powysland Museum	Eva Bredsdorff	01938 554656	The old county of Montgomeryshire	None – they do request that items, which need conservation, are treated; that all ownership issues have been dealt with and that the collection is stored in Museum boxes.	None
The Canal Wharf, Welshpool, Powys SY21 7AQ	Senior Museum Curator				
Haverfordwest Museum	Mr Simon Hancock	01437 763087	Haverfordwest, the old town and county boundry. Exceptionally they would consider items not found in the town but having a	Time span is from 1100AD onwards, from when the town was first established by Norman and Flemish settlers.	Human Remains, Soil Samples
Castle House, Haverfordwest, Haverfordwest, Pembrokeshire SA61 2EF	Manager/Curator	simon615@btinternet.com			

				direct relevance to Haverfordwest.		
Merthyr Tydfil County Borough Museum Service	Scott Reid Museum Officer or Kelly Powell Curatorial Officer	01685 723112	Merthyr Tydfil County Borough Council	Material must be within boundary i.e local in origin. Must be in accordance with 1996 Treasure Act, all acquisitions subject to limits based on staffing, storage and collection care.	Biological Material	
Old Bell Museum Arthur Street, Montgomery SY15 6RA	Dr Ann Welton Hon. Curator	01686 668313	Montgomery Parish Boundary	Size would be an issue, could not accept very large or heavy items or ones requiring highly specialised storage conditions.	None	
Flintshire Museum Service. Library HQ, County Hall, Mold, Flintshire CH7 6NW	Debbie Snow Principal Museum Officer	01352 704409	Flintshire	Large archive would be a problem as storage is limited.	None – but would have to consider accepting large soil samples.	
Denbighshire Heritage Service Ruthin Gaol, 46 Clwyd Street, Ruthin LL15 1HP	Rose McMahon Curator and Research Officer	01824 708223	Denbighshire County Council Boundaries	None – although capacity of the stores would be a concern if they were offered a very large archive.	Unlikely to accept, soil samples, environmental samples, slag or animal bone, waterlogged wood, human bone.	
Cynon Valley Museum and Gallery Depot Road, Gadlys, Aberdare CF44 8DL	Heather Perry County Collections Manager	01685 886729	Boundaries of Rhondda Cynon Taff	Volume could be an issue due to space restrictions	Unlikely to accept a lot of Soil samples if that's all the archive was. Each deposit on it's own merits.	
Abertillery and District Museum The Metropole, Market Street, Abertillery, NP13 1AH	Mrs. Peggy Bearcroft	01495 211140	Abertillery & District			
Blaina Heritage Action	Mrs. Shirley	01495 290201	Blaina			

Group Museum Meyrick

Blaina District Office,
High Street,
Blaina,
NP13 3XD

Brynmawr & District Mrs. Vivienne 01495 313900
Museum Williams

Carnegie Library,
Market Square,
Brynmawr,
NP23 4AJ

Ebbw Vale Works Archive Mr. Barry Caswell 01495 350941
and Museum

Unit 15,
Cwm Draw Ind. Est.,
Ebbw Vale,
NP23 5AE

Tredegar and District Mr. Ron Jenkins 01495 722687
MuseumTredegar Library,

The Circle,
Tredegar,
NP22 3PS

Brynmawr and
District

Ebbw Vale

Tredegar and District

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Appendix E Cost Format

1 Page

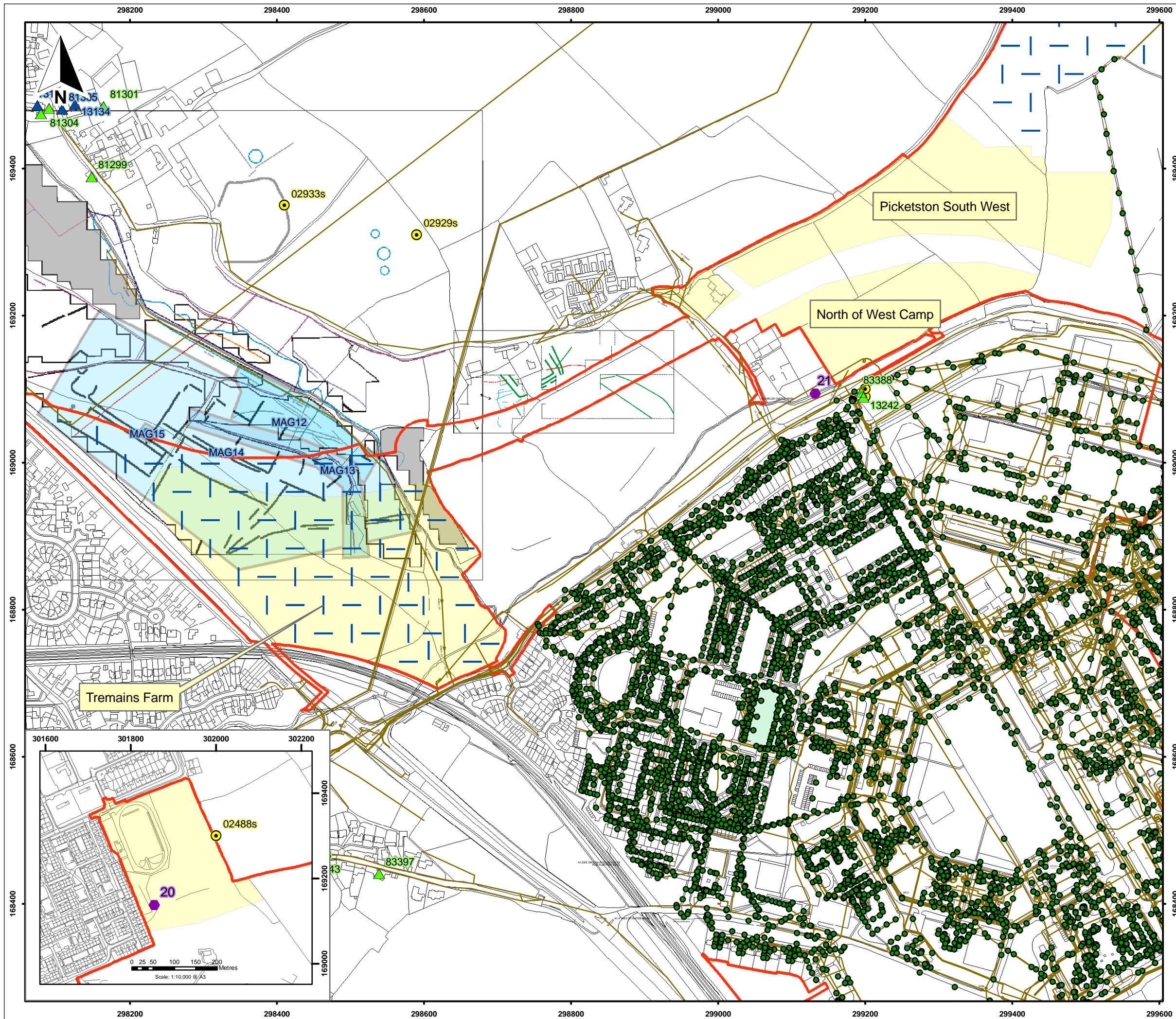
Item	Task	Resource ¹	Time (days)	Rate/day	Price
Fieldwork ²					
1					
2					
3					
4					
5					
Post-excavation					
6					
7					
8					
9					
	Sub Total				
Expenses ³					
Contingency ⁴					
	Total				

¹Project Director, Project Officer, Supervisor, Archaeologist, Plant, Fencing, etc

²Itemise separately - Batslays, Tremains Farm, Picketston, MoD St Athan and Waycock Cross

³ Consumables, Travel, Accomodation, Expenses, Printing, etc

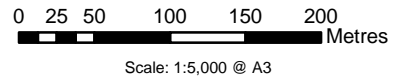
⁴ Additional fieldwork (10%), finds/environmental/dating, community engagement



Key:

- Application site boundary (DTC & ABP)
- Service Families Accomodation (SFA)
- ▲ Listed Building - Grade II*
- ▲ Listed Building - Grade II
- Non-statutory site/find
- Defence Estates (DE) Recorded defence structure
- ~ Interpreted geophysics results
- Key sub-surface feature grouping
- Trench
- Services
- Services

Note:
Inset Shows Castleton SFA Area to East



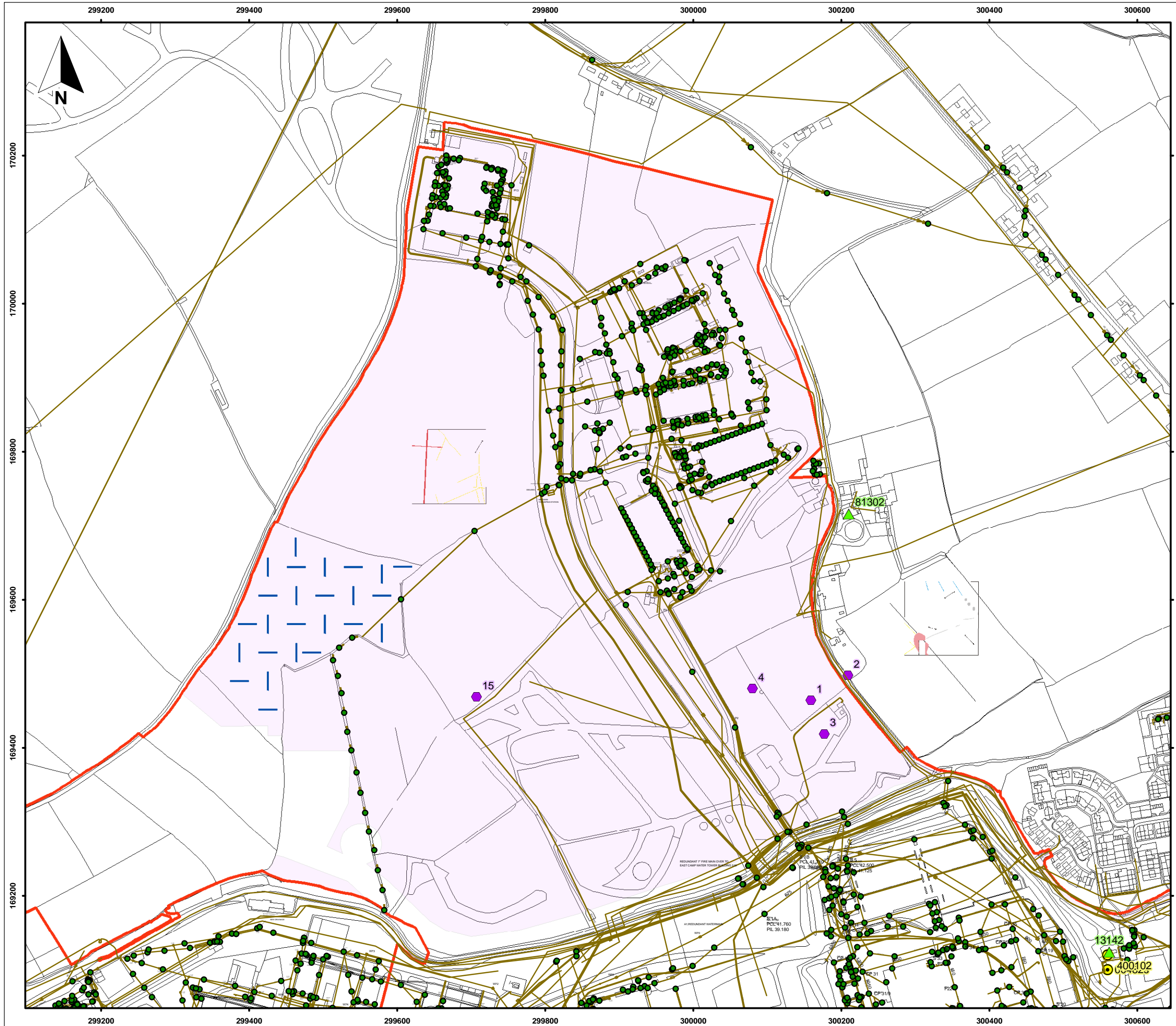
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Ministry of Defence (MoD), Metrix UK Ltd and Sodexo Ltd/Welsh Assembly Government
Defence Technical College Aerospace Business Park - St Athan

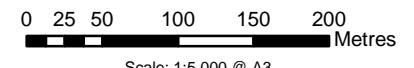
Figure 3
Provisional Archaeological Trench Proposals: Tremains Farm

June 2009
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- Key:**
- Application site boundary (DTC & ABP)
 - Defence Technical College (DTC)
 - ▲ Listed Building - Grade II
 - Non-statutory site/find
 - ◆ Defence Estates (DE) recorded defence structure
 - ~ Interpreted geophysics results
 - Trench
 - Services
 - Services



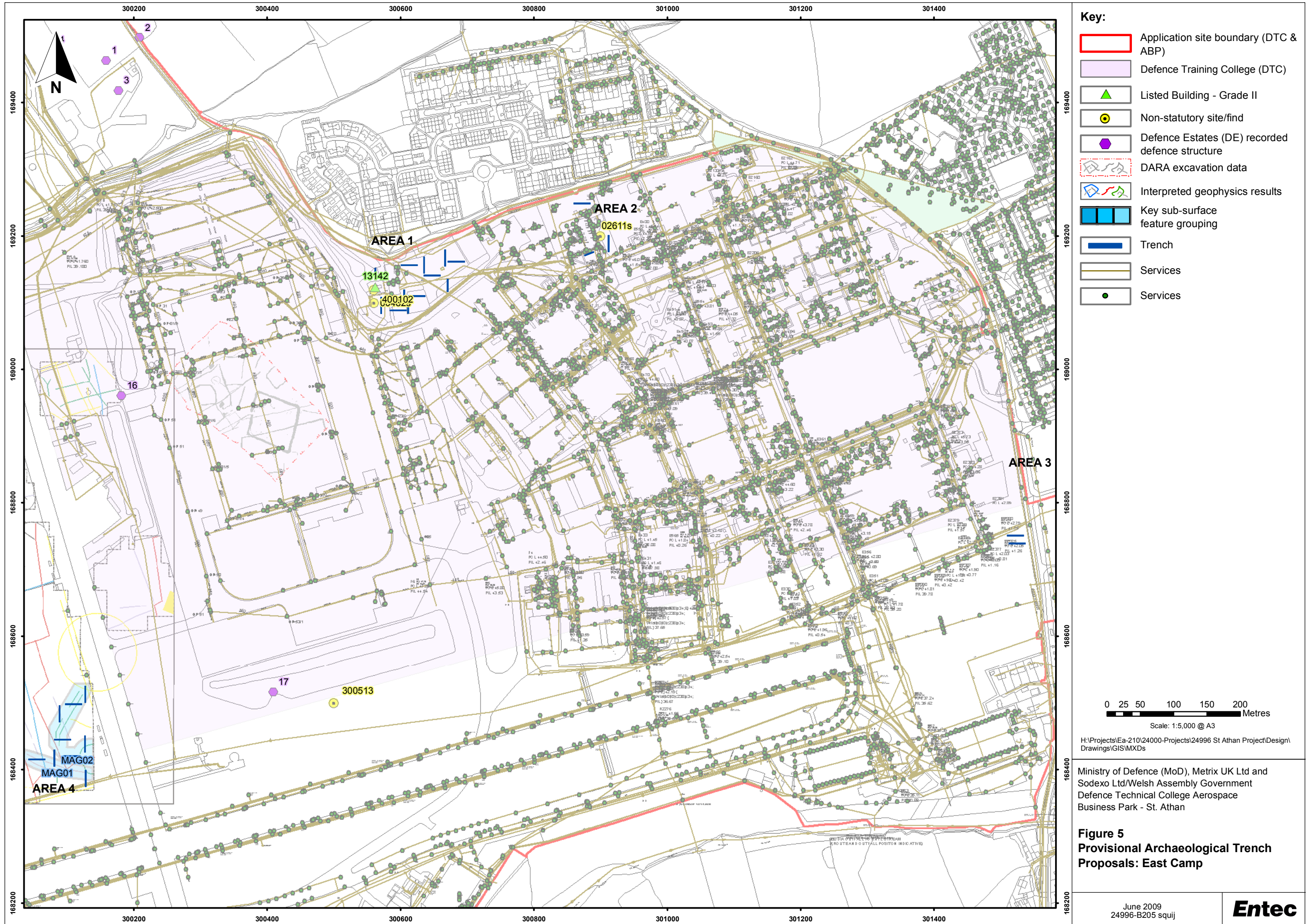
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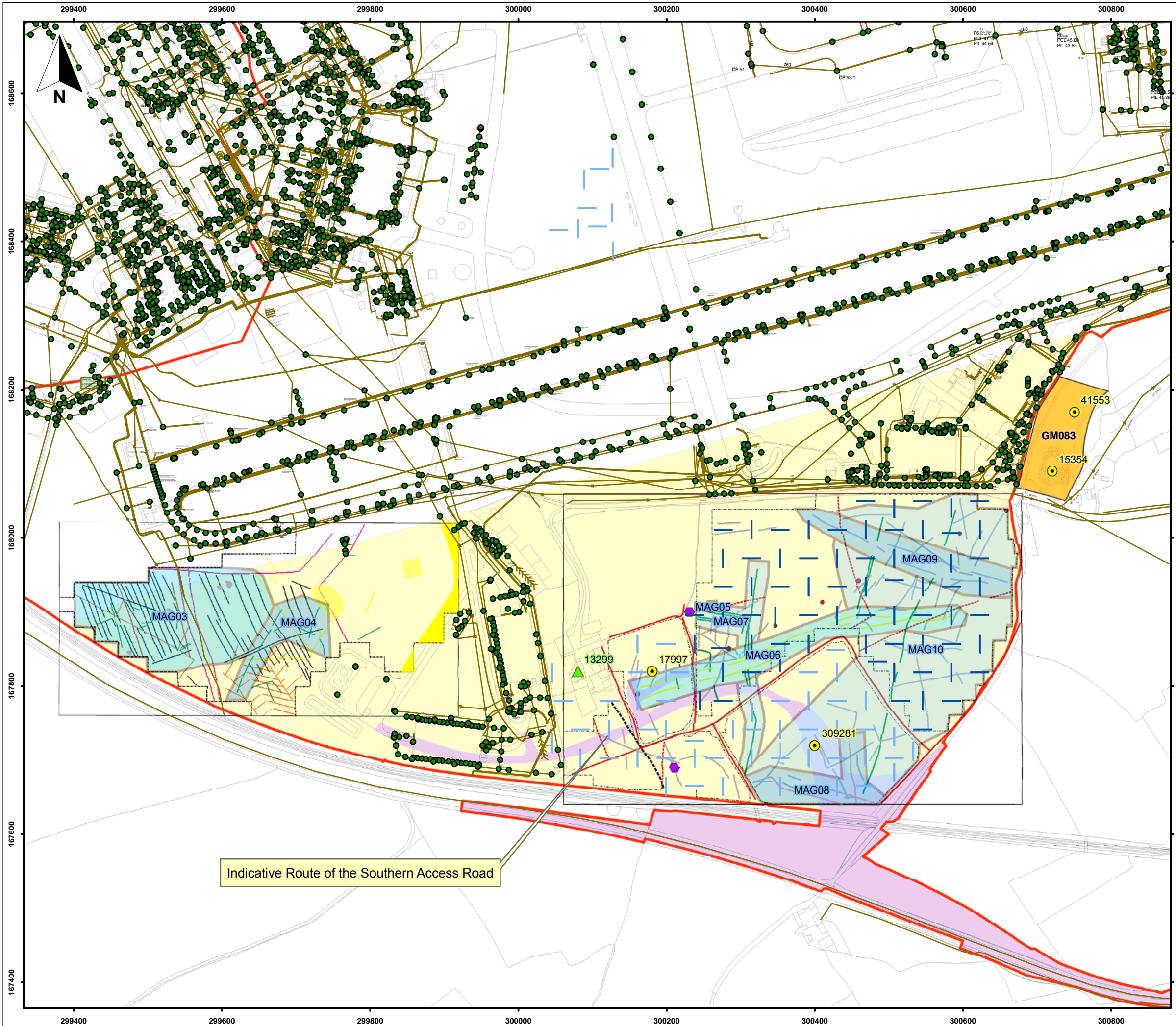
Ministry of Defence (MoD), Metrix UK Ltd and Sodexo Ltd/Welsh Assembly Government
 Defence Technical College Aerospace Business Park - St. Athan

Figure 4
Provisional Archaeological Trench Proposals: Picketston

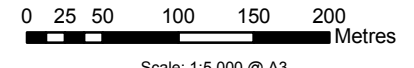
June 2009
 24996-B203 squij







- Key:**
- Application site boundary (DTC & ABP)
 - Aerospace Business Park (ABP)
 - Southern Access Road
 - Scheduled Monument
 - ▲ Listed Building - Grade II
 - Non-statutory site/find
 - Defence Estates (DE) recorded defence structure
 - Interpreted geophysics results
 - Key sub-surface feature grouping
 - Trench (phase 1)
 - Trench (phase 2)
 - Services
 - Services



Scale: 1:5,000 @ A3

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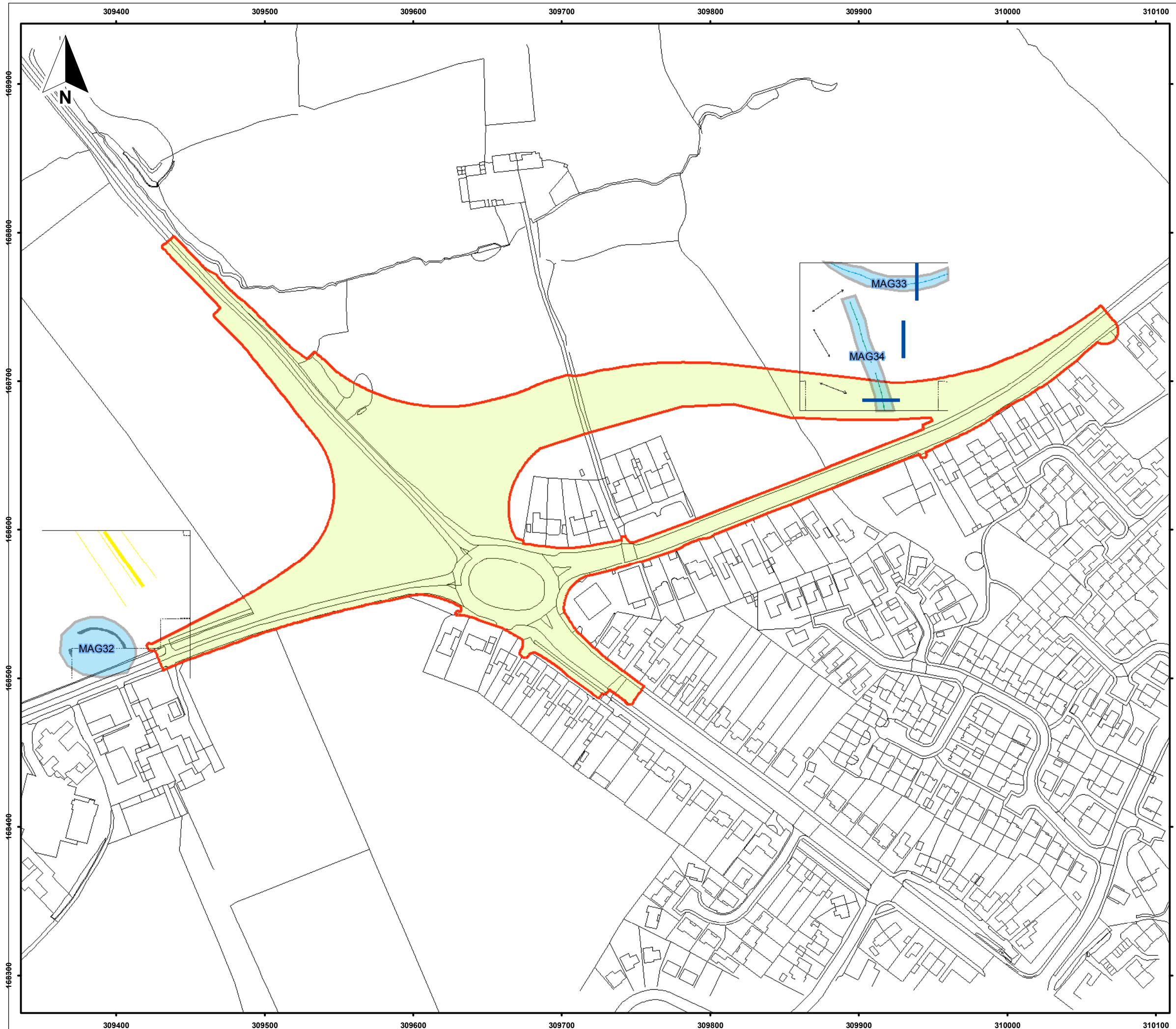
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 Defence Technical College Aerospace Business Park - St. Athan

Figure 2
Provisional Archaeological Trench Proposals: Batslays'

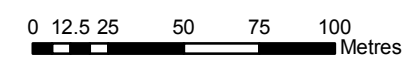
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- Key:**
- Application site boundary (DTC & ABP)
 - Waycock Cross Highway Works
 - Interpreted geophysics results
 - Key sub-surface feature grouping
 - Trench



Scale: 1:2,500 @ A3

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Ministry of Defence (MoD), Metrix UK Ltd and Sodexo Ltd/Welsh Assembly Government
 Defence Technical College Aerospace Business Park - St. Athan

Figure 6
Provisional Archaeological Trench Proposals: Waycock Cross

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