making sense of heritage

RNAS Yeovilton, Somerset
A/AVUEST Facility

Archaeological Watching Brief Report

Accession Code: TTNCM: 63/2015
HER number: 32913
Ref: 109960.04
August 2015

wessex archaeology

RNAS Yeovilton
Somerset

A/AVUEST Facility

Archaeological Watching Brief Report

Prepared for:
Bridgeway Consulting Ltd
Bridgeway House
Unit 2
Riverside Way
Nottingham
NG2 1DP

On behalf of:
Mott MacDonald
Demeter House
Station Road
Cambridge
CB1 2RS

Prepared by:
Wessex Archaeology
Portway House
Old Sarum Park
Salisbury
Wiltshire
SP4 6EB

www.wessexarch.co.uk

August 2015

Accession Code: TTNCM: 63/2015
HER number: 32913
Report Ref: 109960.04

Quality Assurance

Project Code	109960	**Accession Code**	TTNCM: 63/2015	**Client Ref.**	
Planning Application Ref.		**Ordnance Survey (OS) national grid reference (NGR)**	553720 244240		

Version	Status*	Prepared by	Checked and Approved By	Approver's Signature	Date
v01	I	*BTC*	*GSC*		14/08/15
File:	\\projectserver\wessex\Projects\109960_Reports\109960_RNASYeovilton_AAVUEST_GSC.docx				
v02	F	*BTC/ NB*	*GSC*		19/08/15
File:	\\projectserver\wessex\PROJECTS\109960_Reports\109960_RNASYeovilton_AAVUEST_v02_GSC.docx				
File:					
File:					
File:					

* I = Internal Draft; E = External Draft; F = Final

DISCLAIMER

RNAS Yeovilton
Somerset

A/AVUEST Facility

Archaeological Watching Brief Report

Contents

Figures

Plates

RNAS Yeovilton
Somerset

A/AVUEST Facility

Archaeological Watching Brief Report

Summary

Wessex Archaeology were commissioned by Bridgeway Consulting Ltd, acting on behalf of Mott MacDonald, to undertake an archaeological watching brief at RNAS Yeovilton on the proposed site of a new Aircraft/Amphibious Vehicle Underwater Escape and Survival Training (A/AVUEST) facility. This watching brief was to take place on geotechnical ground investigation works, consisting of the excavation of five test pits.

The watching brief took place on the 22nd and 23rd July 2015. A total of seven geotechnical pits were excavated due to the presence of archaeological remains. A previous geophysical survey conducted to detect unexploded ordnance had revealed a number of possible archaeological features which may suggest the presence of an Iron Age/Romano-British settlement nearby and indications of medieval ploughing. Apart from the archaeological remains noted during the watching brief, there was no evidence of ground disturbance encountered by the geotechnical investigations.

The archaeological remains found consisted of two undated walls. The nature of the investigations meant that the precise function and purpose of these walls cannot currently be determined. It is proposed that these are most likely field boundaries, but may belong to a building or building complex. Further investigations would be necessary to determine the extent and date of these remains and any associated features.

RNAS Yeovilton
Somerset

A/AVUEST Facility

Archaeological Watching Brief Report

Acknowledgements

Wessex Archaeology would like to thank Bridgeway Consulting Ltd for commissioning the geophysical survey and watching brief. The assistance of Zoe Smithurst and Huw Thomas is gratefully acknowledged in this regard. Thanks are also due to Josephine Janik and Maurice Hopper of Mott MacDonald for their assistance throughout the project.

The fieldwork was undertaken by Benjamin Cullen who compiled and wrote this report. Illustrations were prepared by Karen Nichols. The project was managed on behalf of Wessex Archaeology by Gareth Chaffey

RNAS Yeovilton
Somerset

A/AVUEST Facility

Archaeological Watching Brief Report

1 INTRODUCTION

1.1 Project background

1.1.1 Wessex Archaeology (WA) was commissioned by Bridgeway Consulting Ltd (hereafter 'the Client') to undertake an archaeological watching brief on land at RNAS Yeovilton, Somerset, centred on National Grid Reference (NGR) 553720 244240, hereafter referred to as 'the Site' (**Figure 1**).

1.1.2 The development proposals relate to the construction of new facilities for Aircraft / Amphibious Vehicle Underwater Escape & Survival Training (A/AVUEST; Dunker) on land adjacent to the RNAS base. These works consist of the construction of new access roads into the development area, further areas of hardstanding and the construction of new buildings with associated service trenching.

1.1.3 A Method Statement (MS) (WA 2015a) which set out the methodologies and standards that were employed by WA in order to undertake the archaeological watching brief was submitted to, and approved by, the client prior to any fieldwork being undertaken.

1.1.4 In format and content the MS conformed with current best practice and to the guidance outlined in *Management of Research Projects in the Historic Environment* (MoRPHE, Historic England 2015) and the Chartered Institute for Archaeologists' (CIfA) *Standard and guidance for geophysical survey* (CIfA 2014a) and *Standard and guidance for an archaeological watching brief* (CIfA 2014b).

1.1.5 The proposed works fell within the remit of Permitted Development though the Senior Historic Environment Officer at South West Heritage Trust (SWHT) was consulted for advice. Due to the nature of the identified heritage resource within the Site, he recommended that an archaeological evaluation be undertaken on the Site. Consequently it was decided that an archaeological watching brief should be carried out during the geotechnical works, both as a best practice approach and also to help inform future investigations.

1.1.6 The watching brief took place on the 22nd and 23rd July 2015. The fieldwork was assigned the event number 32913 by the Somerset Historic Environment Record (HER).

1.2 The Site

1.2.1 RNAS Yeovilton is located in South Somerset, approximately 1.5 km to the north-east of Ilchester and 6 km north of Yeovil (**Figure 1**). It is a military airfield which has been operational since the Second World War. The base covers approximately 270 hectares and includes runways, hangars, logistic support and military transport areas, offices,

parking areas, medical facilities, sports and leisure facilities and accommodation for military personnel.

1.2.2 The Site consists of a green field outside the RNAS Yeovilton camp boundary and is to the north of the Fleet Air Arm Museum. It is bounded to the south by the B3151, to the west and north by RNAS Yeovilton and to the east by a fuel storage facility.

1.2.3 The solid geology comprises Langport Member, Blue Lias Formation and Charmouth Mudstone Formation (undifferentiated) with overlying superficial geological deposits of River Terrace Deposits (undifferentiated) (BGS 2015).

2 ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

2.1.1 A detailed archaeological background for the adjacent Waste Management Centre site (Mott MacDonald 2015a) has previously been presented in the form of a Desk-Based Assessment (DBA), and as such will not be repeated here.

2.1.2 In summary, RNAS Yeovilton lies within the Yeo Valley on the edge of the upland area fringing the Somerset Levels to the north, and to the immediate east of Illchester. Although there is limited evidence for Neolithic or Bronze Age activity within the river valley, extensive cropmarks were observed in 1949 and 1970 at Podimore, approximately 1 km to the north of the Site. Further cropmarks indicative of field systems, enclosures and droveways were identified in 1990 and 1997 to the north-east of the Site.

2.1.3 In the early Roman period a military presence was established at Ilchester (*Lindinis*), which stimulated civil settlement and urbanisation. The Roman settlement at Ilchester expanded to cover an area of approximately 20 hectares at the junction of the Fosse Way, the Roman road to Dorchester and the crossing of the River Yeo. There are six identified 1st to 2nd century villas within a 5 km radius of Ilchester (Leech 1982), and the nearest known site is at Ilchester-Mead, located to the south of the town and west of the Site.

2.1.4 The remains of a beam slot which was interpreted as being of Roman or Saxon origin is was located to the north of the Site. Due to the scarcity of remains from this date in the immediate area it is suggested that the focus of the Saxon occupation of the area is likely to have been centred on Yeovilton town. Ridge and furrow identified during previous investigation suggests that the area was under agricultural cultivation in the medieval period.

2.1.5 There is a known Iron Age settlement to approximately 500 m to the west of the proposed development (Lovell 2005). Additionally, a geophysical survey to detect unexploded ordnance (UXO) undertaken in 2011 of the field in which the Site is situated, suggests the presence of considerable archaeological remains possibly relating to this date.

2.1.6 Previous excavations at RNAS Yeovilton immediately adjacent to the western edge of the Site conducted by Wessex Archaeology (WA) have identified the presence of Romano-British, and late Bronze Age/early Iron Age field systems, and a small number of discrete features, including two burials (WA 2015b).

2.1.7 The map regression exercise undertaken as part of the DBA indicated that the Site area has been in use as arable fields from at least the mid-19th century to present, however field boundaries have changed significantly over time, partly as a result of the expansion of RNAS Yeovilton to the immediate west of the Site.

3 AIMS

3.1.1 The aims of the watching brief, as provided in the specification (Mott MacDonald 2015a), were to:

- *Establish the presence and extent of modern truncation or disturbance across the development area; and*
- *Determine the stratigraphy across the development area and establish the presence and nature of archaeological remains, specifically in relation to potential Iron Age or Roman period remains.*

4 METHODOLOGY

4.1 Introduction

4.1.1 All fieldwork was conducted with due regard to the *RNAS Yeovilton A/AVUEST Facility: Archaeological Specification for Watching Brief on Ground Investigation Works* (Mott MacDonald 2015b) and in accordance with *RNAS Yeovilton, Somerset: Method Statement for Geophysical Survey and Archaeological Watching Brief* (WA 2015a).

4.2 Watching brief methodology

4.2.1 All test pit locations were scanned by the principal contractor for the presence of UXOs and buried services and intrusive works were monitored by a UXO specialist. No evidence for any UXO material or services was observed in any of the test pits in this Site.

4.2.2 The geotechnical works consisted of the excavation of five test pits, each measuring 0.6 m by 3.0 m, to a proposed depth of 3.0 m. This excavation was undertaken in discrete spits by a JCB backhoe mechanical excavator using a toothless bucket. Excavation was paused at various depths for the collection of geotechnical samples and at the top of the natural geology to allow for archaeological inspection and recording of remains. The entirety of the excavation was monitored by an experienced archaeologist until it was clear that the potential for archaeological remains to be encountered was exhausted.

4.2.3 While the specification and MS stated that five test pits were to be excavated on this Site, a total of seven were excavated. This was due to the presence of archaeological remains in two test pit locations. Where found, excavation of the test pit was halted at the depth exposed archaeology to enable the archaeologist present to adequately investigate and record these remains and to prevent further disturbance. Two additional test pits were therefore excavated nearby to fulfil the needs of the geotechnical investigations.

4.2.4 All exposed archaeological deposits were recorded using WA's *pro forma* recording system.

4.2.5 A complete drawn record of archaeological features and deposits was compiled. This includes both plans and sections, drawn to appropriate scales (generally 1:20 for plans, 1:10 for sections), and with reference to a Site grid tied to the Ordnance Survey National Grid. The Ordnance Datum (OD) height of all principal features and levels was calculated and plans/sections were annotated with OD heights.

4.2.6 A photographic record was maintained during the archaeological investigations using a digital camera equipped with an image sensor of not less than 10 megapixels. Digital images were subject to managed quality control and curation processes which embedded

appropriate metadata within the image and ensure long term accessibility of the image set.

4.2.7 An accession code (TTNCM: 63/2015) was obtained from Somerset County Council and was marked on all paperwork relating to this watching brief.

5 ARCHAEOLOGICAL RESULTS

5.1 Introduction

5.1.1 A total of seven test pits were excavated within the Site (**Figure 1**). All test pits showed the same stratigraphic sequence of deposits, although the depth of these deposits varied. Initially encountered was a sandy clay loam topsoil, varying in thickness from 0.16–0.36 m, which overlay between 0.15–0.40 m of subsoil. Beneath this lay the gravels of the river terrace deposits first observed at around 0.35 m to 0.7 m below ground level. In the test pits excavated to the full 3.0 m depth, a clay layer which sometimes contained layers of large mudstone blocks, was observed beneath these gravels; this is likely to derive from the solid geology (**Plate 1**). For a full description of the stratigraphic sequence refer to **Appendix 1**.

5.1.2 **Test Pits 2** and **5** were halted due to the presence of archaeological features. These pits were then renumbered **2A** and **5A** respectively as geotechnical test pits were relocated and dug to 3.0 m deep nearby (**Figure 1**).

5.1.3 Three boreholes were also excavated within the Site by Bridgeway Consulting Ltd (**Appendix 4**), these recorded a similar stratigraphic sequence to that recorded in the test pits.

5.2 Features of uncertain date

5.2.1 In **Test Pit 2A** was found a wall (**211**) running along the length of the test pit and roughly covering half its area. This wall was approximately aligned west-north-west – east-south-east (**Plate 2**). It was at least 3.0 m long, 0.32 m wide and 0.36 m deep but continued beyond the edges of the test pit. It was formed of roughly hewn and coursed limestone blocks with regular jointing. Only parts of three courses remain and no bonding agent was visible (**Plate 3**). No associated artefacts were found.

5.2.2 **Test Pit 5A** contained **wall 509**. This wall was on a north-east – south-west alignment and was caught obliquely at the southern end of the test pit (**Plate 4**). Its excavated measurements are 0.52 m long by 0.28 m wide by 0.23 m deep. It was formed of rough-hewn limestone blocks with thick widely spaced joints. No coursing or bonding was visible. No associated artefacts were found.

6 ARTEFACTUAL EVIDENCE

6.1.1 No artefacts of an archaeological nature were observed or recovered during this watching brief.

7 ENVIRONMENTAL EVIDENCE

7.1.1 No deposits deemed suitable for environmental sampling were encountered.

8 CONCLUSIONS

8.1.1 The presence of walls in **Test Pits 2A** and **5A** indicate that there is potential for archaeological remains within the Site, however the structures themselves are currently undated.

8.1.2 Wall **211** appears to be the foundations for a wall. However, given the limitations of the test pit, its precise function and date is impossible to determine. It is most likely a field boundary wall, but without further investigation, the potential for it to be part of a building or other structure cannot be completely eliminated.

8.1.3 The function and purpose of wall **509** is even harder to determine, due to small area exposed and the oblique angle at which it was seen. Again, it is considered most likely part of a former field boundary, but may belong to a building or other structure.

8.1.4 Given the presence of walls surviving in the test pits, the presence of further archaeology can be presumed to be likely. If these walls are field boundaries then it suggests agricultural activity within the Site which may have few if any associated features. However, if they turn out to be part of buildings then there could well be further structures or features associated. Currently the full character and nature of the archaeology within the Site cannot be confirmed though substantial activity is indicated by the 2011 UXO survey immediately to the south.

8.1.5 Geotechnical pits offer a very small window into the archaeological potential of a site and cannot be used to guarantee either the presence or absence of archaeology on the site. As a result it is considered that further archaeological works may be necessary.

9 STORAGE AND CURATION

9.1 Museum

9.1.1 It is recommended that the project archive resulting from the excavation be deposited with Somerset County Museum, Taunton Museum. The Museum has agreed in principle to accept the project archive on completion of the project, under the accession code TTNCM: 63/2015. Deposition of any finds with the Museum will only be carried out with the full agreement of the landowner.

9.2 Preparation of Archive

9.2.1 The complete site archive, which will include paper records, photographic records, graphics, artefacts, ecofacts and digital data, will be prepared following the standard conditions for the acceptance of excavated archaeological material by Somerset County Museum, Taunton, and in general following nationally recommended guidelines (SMA 1995; CIfAc 2014; Brown 2011; ADS 2013).

9.2.2 All archive elements will be marked with the accession code, and a full index will be prepared. The physical archive comprises the following:

9.3 Discard Policy

9.3.1 WA follows the guidelines set out in *Selection, Retention and Dispersal* (Society of Museum Archaeologists 1993), which allows for the discard of selected artefact and ecofact categories which are not considered to warrant any future analysis. Any discard of artefacts will be fully documented in the project archive.

9.3.2 The discard of environmental remains and samples follows nationally recommended guidelines (SMA 1993; 1995; English Heritage 2002).

9.4 Security Copy

9.4.1 In line with current best practice (e.g. Brown 2011), on completion of the project a security copy of the written records will be prepared, in the form of a digital PDF/A file. PDF/A is an ISO-standardised version of the Portable Document Format (PDF) designed for the digital preservation of electronic documents through omission of features ill-suited to long-term archiving.

9.5 OASIS

9.5.1 An OASIS (Online AccesS to the Index of archaeological investigationS) online record http://ads.ahds.ac.uk/projects/oasis/ will be initiated and key fields completed on Details, Location and Creators Forms (**Appendix 2**). All appropriate parts of the OASIS online form will be completed for submission to the HER. This will include an uploaded .pdf version of the entire report.

9.6 Copyright

9.6.1 The full copyright of the written/illustrative archive relating to the Site will be retained by Wessex Archaeology Ltd under the *Copyright, Designs and Patents Act 1988* with all rights reserved. The recipient museum, however, will be granted an exclusive licence for the use of the archive for educational purposes, including academic research, providing that such use shall be non-profitmaking, and conforms with the *Copyright and Related Rights regulations 2003*.

9.6.2 This report may contain material that is non-WA copyright (e.g. Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which we are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferrable by Wessex Archaeology. You are reminded that you remain bound by the conditions of the *Copyright, Designs and Patents Act 1988* with regard to multiple copying and electronic dissemination of the report.

10 REFERENCES

10.1 Bibliography

ADS 2013, *Caring for Digital Data in Archaeology: a guide to good practice*, Archaeology Data Service & Digital Antiquity Guides to Good Practice

Brown, D.H., 2011, *Archaeological archives; a guide to best practice in creation, compilation, transfer and curation*, Archaeological Archives Forum (revised edition)

CIfA, 2014a, *Standard and Guidance for archaeological geophysical survey*, Chartered Institute for Archaeologists

CIfA, 2014b, *Standards and Guidance for an archaeological watching brief*, Chartered Institute for Archaeologists

CIfA, 2014c, *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives*, Chartered Institute for Archaeologists

English Heritage, 2002, *Environmental Archaeology; a guide to theory and practice of methods, from sampling and recovery to post-excavation*, Swindon, Centre for Archaeology Guidelines

Historic England, 2015, *Management of Research Projects in the Historic Environment: The MoRPHE Project Manager's Guide*

Leech, R, 1982, *Excavations at Catsgore 1970–73 A Romano-British Village* Western Archaeological Trust Monographs

Lovell, J. 2005 *Excavation of a Romano-British Farmstead at RNAS Yeovilton*, *Somerset Archaeology and Natural History*, Volume 149 (2005), pp7-70

Mott MacDonald, 2015a, *RNAS Yeovilton Waste Management Centre: Heritage Statement*

Mott MacDonald, 2015b, *RNAS Yeovilton A/AVUEST Facility: Archaeological Specification for Watching Brief on Ground Investigation Works*

SMA, 1993, *Selection, Retention and Dispersal of Archaeological Collections*, Society of Museum Archaeologists

SMA, 1995, *Towards an Accessible Archaeological Archive*, Society of Museum Archaeologists

Wessex Archaeology, 2015a, *RNAS Yeovilton, Somerset, Method Statement for Geophysical Survey and Archaeological Watching Brief*, unpublished client report

Wessex Archaeology, 2015b, *RNAS Yeovilton, Somerset, Project WINFRA –Contract 2 Interim statement*, unpublished client report

10.2 Cartographic Sources

British Geological Survey (BGS)
http://www.bgs.ac.uk/discoveringgeology/geologyofbritain/viewer.html

APPENDIX 1: TRENCH TABLES

KEY: bgl = below ground level

Test pit 1		site sub-division	A/AVUEST	
		test pit dimensions (m)	2.80 by 0.60 by 3.00	
context number	**context type**	**Description**		**depth bgl (m)**
101	Layer	Topsoil: Dark yellow brown silty sand loam, sparse sub-angular limestone and quartzite< 0.06m, bioturbated, friable, distinct horizon.		0-0.36
102	Layer	Subsoil: Dark orange brown sandy clay, common sub-angular limestone and quartzite <0.06m (mostly fine gravel), friable, distinct horizon.		0.36-0.60
103	Natural	Mid yellow brown clayey sand, very abundant sub-angular and sub-rounded mudstone, limestone, quartzite and flint <0.10m, compact, distinct horizon.		0.60-1.20
104	Natural	Mid blue grey clayey sand, very abundant sub-angular and sub-rounded mudstone, limestone, quartzite and flint <0.10m, compact, distinct horizon.		1.20-1.50
105	Natural	Dark blue grey clay, sparse mudstone cobbles and boulders, compact, clear horizon.		1.50-2.00
106	Natural	Very dark blue grey clay, sparse mudstone boulders, compact, clear horizon. Probably degraded upper mudstone.		2.00-
comments	Water table 1.4m bgl			

Test pit 2		site sub-division	A/AVUEST	
		test pit dimensions (m)	3.20 by 0.60 by 3.05	
context number	**context type**	**Description**		**depth bgl (m)**
201	Layer	Topsoil: Very dark yellow/grey brown sandy clay loam, sparse sub-rounded mudstone <0.06m, bioturbated, friable, distinct horizon.		0-0.20
202	Layer	Subsoil: Dark orange brown sandy clay, moderate sub-rounded mudstone and limestone <0.08m, friable, distinct horizon.		0.20-0.35
203	Natural	Light yellow brown/mid brown sandy clay, near complete sub-rounded mudstone, limestone, quartzite, and flint, friable/compact, distinct horizon.		0.35-1.35
204	Natural	Dark blue grey clay, compact, clear horizon.		1.35-1.75
205	Natural	Mudstone: Large sub-angular cobbles/boulders.		1.75-2.00
206	Natural	Very dark blue grey clay, near complete degraded mudstone, compact, clear horizon.		2.00-
comments				

Test pit 2A		site sub-division	A/AVUEST	
		test pit dimensions (m)	2.90 by 0.60 by 0.90	
context number	**context type**	**Description**		**depth bgl (m)**
207	Layer	Topsoil: Dark yellow brown sandy clay loam, rare sub-angular mudstone and quartzite <0.06m, bioturbated, friable, distinct horizon.		0-0.16
208	Layer	Subsoil: Mid orange brown sandy clay, common sub-		0.16-0.38

		rounded mudstone and quartzite <0.08m, friable, distinct horizon.	
209	Natural	Mid-dark yellow brown clayey sand, near complete sub-rounded mudstone, limestone and quartzite <0.10m, compact, distinct horizon.	0.38-
210	Cut	Construction cut for wall **211**. WNW-ESE aligned linear cut filled with wall **211**.	0.30
211	Structure	Wall Foundation: 3.00m by 0.32m by 0.36m, formed of roughly coursed, regularly jointed limestone blocks. ~No dating evidence found.	0.30
comments	Test pit stopped as wall **211** found.		

Test pit 3		**site sub-division**	A/AVUEST
		test pit dimensions (m)	2.80 by 0.60 by 3.00
context number	**context type**	**Description**	**depth bgl (m)**
301	Layer	Topsoil: Very dark yellow brown sandy clay loam, rare sub-angular mudstone <0.08m, bioturbated, friable, distinct horizon.	0-0.20
302	Layer	Subsoil: Dark orange brown clayey sand, common sub-rounded mudstone <0.08m, friable, distinct horizon.	0.20-0.50
303	Natural	Mid orange brown clayey sand, near complete sub-rounded mudstone and limestone <0.10m, compact, distinct horizon.	0.50-1.05
304	Natural	Mid blue grey clay, rare rounded mudstone <0.40m, compact, distinct horizon.	1.05-1.60
305	Natural	Dark blue grey clay, near complete degraded mudstone, compact, distinct horizon.	1.60-
comments			

Test pit 4		**site sub-division**	A/AVUEST
		test pit dimensions (m)	3.10 by 0.60 by 3.00
context number	**context type**	**Description**	**depth bgl (m)**
401	Layer	Topsoil: Dark yellow grey brown sandy clay loam, rare sub-angular and sub-rounded limestone < 0.20m, bioturbated, friable, distinct horizon.	0-0.22
402	Layer	Subsoil: Mid orange brown sandy clay, common sub-angular and sub-rounded limestone and quartzite <0.10m, friable, distinct horizon.	0.22-0.44
403	Natural	Mid-dark yellow brown sandy clay, near complete sub-rounded mudstone, limestone and quartzite <0.10m, friable, distinct horizon.	0.44-1.10
404	Natural	Mid blue grey clay, lens of sub-rounded mudstone boulders <0.50m at base, compact, distinct horizon.	1.10-1.90
405	Natural	Dark blue grey clay, very rare sub-rounded mudstone <0.10m, compact, distinct horizon, probably degraded upper mudstone.	1.90-
comments			

Test pit 5		**site sub-division**	A/AVUEST
		test pit dimensions (m)	3.00 by 0.60 by 2.04
context number	**context type**	**description**	**depth bgl (m)**

501	Layer	Topsoil: Dark yellow brown silty sand loam, sparse sub-angular mudstone and quartzite <0.06m, bioturbated, friable, distinct horizon.	0-0.30
502	Layer	Subsoil: Dark orange brown sandy clay, common sub-angular mudstone <0.06m, friable, distinct horizon.	0.30-0.70
503	Natural	Mid yellow brown clayey sand, abundant sub-rounded and sub-angular mudstone, limestone, quartzite, and flint <0.10m, compact, distinct horizon.	0.70-1.80
504	Natural	Dark blue grey clay, sparse mudstone boulders, compact, distinct horizon, probably degraded upper mudstone.	1.80-
comments			

Test pit 5A		**site sub-division**	A/AVUEST
		test pit dimensions (m)	3.30 by 0.60 by 0.80
context number	**context type**	**Description**	**depth bgl (m)**
505	Layer	Topsoil: Very dark yellow brown sandy clay loam, rare sub-rounded mudstone <0.06m, bioturbated, friable, distinct horizon.	0-0.18
506	Layer	Subsoil: Mid orange brown sandy clay, common sub-rounded mudstone <0.08m, friable, distinct horizon.	0.18-0.52
507	Natural	Mid yellow brown clayey sand, near complete sub-rounded and rounded mudstone, quartzite, and flint <0.10m, compact, distinct horizon.	0.52-
508	Cut	Construction cut for wall **509**. NE-SW aligned linear.	0.23
509	Structure	Wall foundation: 0.52m by 0.28m by 0.23m. rough hewn limestone blocks with thick widely spaced jointing. Caught obliquely at end of test pit so impossible to determine if truly wall.	0.23
comments	Test pit stopped so possible archaeology could be investigated.		

APPENDIX 2: TEST PIT AND BOREHOLE LOGS

Bridgeway Consulting Ltd
Bridgeway House, 2 Riverside Way
NG2 1DP
Telephone: 0115 9191111

WINDOWLESS SAMPLER LOG

Project	Site	Consultant	EXPLORATORY HOLE No
RNAS Yeovilton	AAUVEST	Mott MacDonald	**BH01**
Job No: J14504	Date: 21-07-15, 24-07-15	Ground Level (m): 68.70	Co-Ordinates (): LAT: 51.017142, LONG: -2.637218
Contractor: Bridgeway Consulting Ltd			Sheet: 1 of 3

SAMPLES & TESTS				STRATA					
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	Field Test kPa HSV	Field Test kPa PP	Instrument/ Backfill
0.10	ES			68.50		0.20	TOPSOIL: Brown slightly clayey gravelly fine to coarse SAND with occasional roots and rootlets. Gravel is very angular to subrounded fine to coarse of quartzite and limestone.			
0.20-0.80	B					(0.70)				
0.20	ES									
0.30-0.40	D									
0.50	ES			67.80		0.90	Brown slightly clayey gravelly fine to coarse SAND. Gravel is very angular to subrounded fine to coarse of quartzite and limestone.			
0.90-1.20	B									
0.90-1.00	D			67.50		1.20	Yellowish brown clayey very gravelly fine to coarse SAND. Gravel is very angular to rounded fine to coarse of quartzite, limestone and mudstone.			
1.00	ES									
1.20-1.65	S	N5							80	
1.50-1.60	D									
1.65-1.95	B					(1.20)	Firm medium and high strength fissured brownish blue slightly sandy slighlty gravelly CLAY with occasional subangular cobbles of mudstone and limestone. Sand is fine to medium. Gravel is angular to subrounded fine to coarse of mudstone and limestone.			
2.00	ES							74		
2.20-2.65	UT100			66.30		2.40		66		
								71		
2.65-2.73	D						Stiff medium and high strength thinly laminated bluish grey slighlty gravelly silty CLAY. Gravel is angular to subangular fine to medium of mudstone.			
2.73-2.81	D									
2.80-3.25	S	N23				(1.40)				
3.00	ES							65		
3.30-3.40	D							92		
								85		
3.60-3.80	UT100			64.90		3.80				
3.70-3.80	D						----- *Borehole continued as a Cored Drillhole* -----			

Progress and Water Observations

Date	Depth	Casing	Casing Dia (mm)	Water Depth (m)	Hole Dia. (mm)	Recovery (%)
21-07-15	1.20	0.00	NA	DRY		NA
21-07-15	1.50	1.50	160	DRY	128	100
21-07-15	2.00	2.00	140	DRY	116	100
21-07-15	3.60	3.60	140	DRY	116	100
22-07-15	4.60	3.60	140	1.00	116	100
22-07-15	5.60	3.60	140	0.80	116	100

GENERAL REMARKS

1. Position scanned with CAT and Genny prior to excavation.
2. Pit hand dug to 1.20mbgl prior to drilling.
3. Dynamic sampling from 1.20mbgl to 3.80mbgl
4. Rotary core complete from 3.80mbgl to 15.09mbgl.

All dimensions in metres Scale 1:50	Client: Mott MacDonald	Method/ Plant Used: Commachio 305	Logged By: HW

Bridgeway Consulting Ltd
Bridgeway House, 2 Riverside Way
NG2 1DP
Telephone: 0115 9191111

BOREHOLE LOG

Project	Site	Consultant	BOREHOLE No
RNAS Yeovilton	AAUVEST		**BH01**
Job No J14504	**Date** 21-07-15 24-07-15	**Ground Level (m)** 68.70	**Co-Ordinates ()** LAT: 51.017142 LONG: -2.637218
Contractor Bridgeway Consulting Ltd			**Sheet** 2 of 3

RUN DETAILS			SAMPLES & TESTING			STRATA				
Depth	TCR (SCR) RQD	Fracture Spacing min(ave)max	Depth	Type	Result	Red'cd Level	Legend	Depth (Thick-ness)	DESCRIPTION Discontinuities	DESCRIPTION Main
	71 (28) 28		3.80-4.00	S	N50/ 95 mm	64.90		3.80 (0.47)		Stiff thinly laminated bluish grey slighlty gravelly silty CLAY. Gravel is angular to subangular fine to medium of mudstone.
4.60						64.43		4.27		
	100 (97) 84		4.60 4.90 5.05-5.33	C ES CR	N50/ 255 mm				4.27 - 13.40 very widely spaced other than 4.3-4.6. Set 2 45° Smooth stepped smooth planar white precipitate of calcite in places. 1 very tight to closed clean to surface coating. 4.60 - 15.00 bedding fractures. Set 1 0° Smooth stepped smooth planar 0 very tight to closed clean 7.30 - 9.50 Sets 1 and 2 present.	Weak thinly laminated bluish grey very fine grained MUDSTONE. Occasional shell fragments up to 15mm.
5.60										
	100 (95) 74		5.60 6.00 6.06-6.28	C ES CR	N50/ 95 mm					
6.50										6.38 Medium strong.
	93 (86) 65		6.50 7.00 7.12-7.30	C ES CR	N50/ 40 mm					6.97 Weak to medium strong.
7.50										
	76 (50) 43		7.50 8.00 8.20-8.26	C ES CR	N100/ 190 mm					7.50 - 8.00 Zone of drilling induced fractures. 7.50 - 8.50 Weak.
8.50										
	100 (97) 88		8.50-8.70 8.50	CR C	N50/ 10 mm					
9.50		10 119 495								
	100 (67) 61		9.50 9.57-9.67 10.13-10.43	C CR CR	N50/ 40 mm			(10.82)	9.50 - 10.50 Set 1,2 and 3 present. 9.70 - 10.40 1No discontinuity, spacing unknown. Set 3 80° Smooth planar smooth planar white precipitate of calcite 1 very tight to closed calcite	
10.50										10.50 Shell fragments 20mm. 10.50 - 10.80 Zone of drilling induced fractures.
	89 (53) 47		10.50 10.90-11.10	C CR	N50/ 0 mm					

Drilling Progress and Water Observations

Date	Depth	Time	Casing	Core Dia mm	Water Strike	Water Standing
22-07-15	4.60	16.00	3.60	116	4.60	1.00
22-07-15	5.60	17.00	3.60	116		
22-07-15	8.50	18.00	3.60	116		
23-07-15	8.50	08.00	3.60	116		
23-07-15	10.50	10.00	3.60	116		

Rotary Flush

From	To	Type	Returns
4.60	15.00	Water	Lost flush at 8.50m.

GENERAL REMARKS

1. Position scanned with CAT and Genny prior to excavation.
2. Pit hand dug to 1.20mbgl prior to drilling.
3. Dynamic sampling from 1.20mbgl to 3.80mbgl
4. Rotary core complete from 3.80mbgl to 15.09mbgl.

All dimensions in metres Scale 1:50	Client Mott MacDonald	Method/ Plant Used Commachio 305	Logged By HW

Bridgeway Consulting Ltd
Bridgeway House, 2 Riverside Way
NG2 1DP
Telephone: 0115 9191111

BOREHOLE LOG

Project	Site	Consultant	BOREHOLE No
RNAS Yeovilton	AAUVEST		**BH01**
Job No J14504	**Date** 21-07-15 24-07-15	**Ground Level (m)** 68.70	**Co-Ordinates ()** LAT: 51.017142 LONG: -2.637218
Contractor Bridgeway Consulting Ltd			**Sheet** 3 of 3

RUN DETAILS			SAMPLES & TESTING			STRATA				
Depth	TCR (SCR) RQD	Fracture Spacing min(ave)max	Depth	Type	Result	Red'cd Level	Legend	Depth (Thick-ness)	DESCRIPTION Discontinuities	DESCRIPTION Main
12.00										
	77 (49) 37		12.00	C	N50/ 60 mm					Weak thinly laminated bluish grey very fine grained MUDSTONE. Occasional shell fragments up to 15mm. *(continued)* 12.00 - 12.20 Zone of drilling induced fractures.
			12.28-12.42	CR						
			12.82-12.97	CR						12.97 - 13.22 Zone of no recovery.
13.50										
	100 (92) 82		13.81-14.05	CR						
			14.55-14.71	CR						
15.00						53.61		15.09		
			15.00	C	N50/ 40 mm					

Drilling Progress and Water Observations

Date	Depth	Time	Casing	Core Dia mm	Water Strike	Water Standing
23-07-15	13.50	18.00	3.60	116		
24-07-15	13.50	08.00	3.60	116		
24-07-15	15.09	14.00	3.60	116		

Rotary Flush

From	To	Type	Returns

GENERAL REMARKS

1. Position scanned with CAT and Genny prior to excavation.
2. Pit hand dug to 1.20mbgl prior to drilling.
3. Dynamic sampling from 1.20mbgl to 3.80mbgl
4. Rotary core complete from 3.80mbgl to 15.09mbgl.

All dimensions in metres Scale 1:50	Client Mott MacDonald	Method/ Plant Used Commachio 305	Logged By HW

Bridgeway Consulting Ltd
Bridgeway House, 2 Riverside Way
NG2 1DP
Telephone: 0115 9191111

WINDOWLESS SAMPLER LOG

Project	Site	Consultant	EXPLORATORY HOLE No
RNAS Yeovilton	AAUVEST	Mott MacDonald	**BH02**
Job No: J14504	Date: 24-07-15, 29-07-15	Ground Level (m): 68.64	Co-Ordinates (): LAT: 51.01757, LONG: -2.636991
Contractor: Bridgeway Consulting Ltd			Sheet: 1 of 3

SAMPLES & TESTS				STRATA					
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	Field Test kPa HSV	Field Test kPa PP	Instrument/ Backfill
0.00-0.50	B			68.44		0.20	TOPSOIL: Brown slightly clayey gravelly fine to coarse SAND with occasional roots and rootlets. Gravel is very angular to subrounded fine to coarse of quartzite and limestone.			
0.10	ES									
0.20-0.40	D			68.14		0.50				
0.20	ES									
0.50-0.80	B			67.84		0.80	Brown slightly clayey gravelly fine to coarse SAND with occasional roots and rootlets. Gravel is very angular to subrounded fine to coarse of quartzite and limestone.			
0.50	ES									
0.60-0.70	D									
0.90-1.00	D									
1.00	ES					(1.00)	Light yellowish brown slightly clayey very sandy angular to subrounded fine to coarse GRAVEL of quartzite, limestone and mudstone. Sand is fine to coarse.	83		
1.20-1.65	S	N7						75		
								84		
1.65	UT100	Refusal		66.84		1.80	Firm high strength thinly laminated brownish greyish blue slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is angular to subangular fine to medium of mudstone. 1.65 - 1.80 Band of strong grey fine grained limestone.			
1.65-2.10	S	N11								
2.00	ES									
2.10-2.50	UT100									
2.50-2.95	S	N27				(1.80)	Stiff to very stiff high strength thinly laminated bluish grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is angular to subangular fine to medium of mudstone.			
								110		
3.00-3.30	B							105		
3.00	ES							107		
3.30-3.60	UT100									
				65.04		3.60	----- *Borehole continued as a Cored Drillhole* -----			

Progress and Water Observations

Date	Depth	Casing	Casing Dia (mm)	Water Depth (m)	Hole Dia. (mm)	Recovery (%)
24-07-15	1.20	0.00		DRY		
24-07-15	1.50	1.50	160	DRY	128	100
24-07-15	1.70	1.50	160	1.70	116	100
27-07-15	3.30	3.60	140	1.00	116	100
27-07-15	4.80	3.60	140	0.80	116	100
27-07-15	6.30	3.60	140	0.80	116	100
28-07-15	6.30	3.60	140	1.00	116	100

GENERAL REMARKS

1. Position scanned with CAT and Genny prior to excavation.
2. Inspection pit hand excavated to 1.20mbgl prior to drilling.
3. Dynamic sampling from 1.20mbgl to 3.60mbgl.
4. Rotary core complete from 3.60mbgl to 15.00mbgl.

All dimensions in metres Scale 1:50	Client: Mott MacDonald	Method/ Plant Used: Commachio 305	Logged By: HW

Bridgeway Consulting Ltd
Bridgeway House, 2 Riverside Way
NG2 1DP
Telephone: 0115 9191111

BOREHOLE LOG

Project	Site	Consultant	BOREHOLE No
RNAS Yeovilton	AAUVEST		**BH02**
Job No: J14504	Date: 24-07-15 / 29-07-15	Ground Level (m): 68.64	Co-Ordinates (): LAT: 51.01757 LONG: -2.636991
Contractor: Bridgeway Consulting Ltd			Sheet: 2 of 3

RUN DETAILS			SAMPLES & TESTING			STRATA				
Depth	TCR (SCR) RQD	Fracture Spacing min(ave)max	Depth	Type	Result	Red'cd Level	Legend	Depth (Thick-ness)	DESCRIPTION: Discontinuities	DESCRIPTION: Main
3.60			3.60	C	N50/ 40 mm	65.04		3.60		Stiff to very stiff high strength thinly laminated bluish grey slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is angular to subangular fine to medium of mudstone.
	81 (50) 50		4.00	ES				(0.63)		
			4.44-4.65	CR		64.41		4.23	4.23 - 10.80 very widely spaced becoming medium to widely spaced from 10.30mbgl. Set 1 80° Smooth planar smooth planar white precipitate of calcite 1 very tight to closed calcite	
4.80										Medium strong thinly laminated bluish grey very fine grained MUDSTONE. 4.80 - 6.50 Very weak to weak. 4.80 - 15.00 Occasional shell fragments up to 30mm.
			4.80	C	N50/ 235 mm					
	100 (94) 0		5.00	ES						
6.30			6.00-6.05	CR						
			6.00	ES					4.23 - 15.00 bedding fractures Set 2 0° Smooth stepped smooth planar 0 very tight to closed clean	
			6.30	C	N50/ 10 mm					6.50 - 6.68 Medium strong.
	100 (75) 55		6.58-6.68	CR						6.68 - 15.00 Weak to medium strong.
			7.09-7.20	CR						
7.80			7.39-7.59	CR					6.80 - 10.70 very widely spaced. Set 3 45° Smooth stepped smooth planar white precipitate of calcite in places. 1 very tight to closed clean to surface coating.	
			7.80	C	N100/ 220 mm					
	68 (47) 40		8.00	ES						
			8.78-8.97	CR						
9.30										
		7 91 341	9.30	C	N60/ 95 mm			(10.77)		
			9.55-9.67	CR					9.70 - 11.60 medium to very widely spaced Set 4 65° Smooth planar smooth planar white precipitate of calcite in places. 1 very tight to closed clean to surface coating.	
	100 (47) 42		10.15-10.35	CR						
10.80										
			10.80	C	N100/ 60 mm					
	98		11.42-11.54	CR						

Drilling Progress and Water Observations

Date	Depth	Time	Casing	Core Dia mm	Water Strike	Water Standing
27-07-15	4.80	15.00	3.60	116		
27-07-15	6.30	17.00	3.60	116		
28-07-15	6.30	08.00	3.60	116		
28-07-15	9.30	10.00	3.60	116		

Rotary Flush

From	To	Type	Returns
3.60	15.00	Water	Lost flush at 7.80m.

GENERAL REMARKS

1. Position scanned with CAT and Genny prior to excavation.
2. Inspection pit hand excavated to 1.20mbgl prior to drilling.
3. Dynamic sampling from 1.20mbgl to 3.60mbgl.
4. Rotary core complete from 3.60mbgl to 15.00mbgl.

All dimensions in metres Scale 1:50	Client: Mott MacDonald	Method/ Plant Used: Commachio 305	Logged By: HW

Bridgeway Consulting Ltd
Bridgeway House, 2 Riverside Way
NG2 1DP
Telephone: 0115 9191111

BOREHOLE LOG

Project	Site	Consultant	BOREHOLE No
RNAS Yeovilton	AAUVEST		**BH02**

Job No	Date	Ground Level (m)	Co-Ordinates ()	Sheet
J14504	24-07-15 29-07-15	68.64	LAT: 51.01757 LONG: -2.636991	3 of 3

Contractor: Bridgeway Consulting Ltd

RUN DETAILS			SAMPLES & TESTING			STRATA				
Depth	TCR (SCR) RQD	Fracture Spacing min(ave)max	Depth	Type	Result	Red'cd Level	Legend	Depth (Thick-ness)	DESCRIPTION	
									Discontinuities	Main
	(60) 27									Medium strong thinly laminated bluish grey very fine grained MUDSTONE. *(continued)* 11.90 - 12.65 Some shell fragments up to 50mm.
12.30										
	100 (97) 88		12.98-13.13	CR						
			13.50-13.80	CR						
13.80										
	75 (58) 26		14.19-14.26	CR						
15.00						53.64		15.00		

Drilling Progress and Water Observations

Date	Depth	Time	Casing	Core Dia mm	Water Strike	Water Standing
28-07-15	12.30	16.00	3.60	116		
29-07-15	12.30	08.00	3.60	116		
29-07-15	15.00	15.00	3.60	116		

Rotary Flush

From	To	Type	Returns

GENERAL REMARKS

1. Position scanned with CAT and Genny prior to excavation.
2. Inspection pit hand excavated to 1.20mbgl prior to drilling.
3. Dynamic sampling from 1.20mbgl to 3.60mbgl.
4. Rotary core complete from 3.60mbgl to 15.00mbgl.

All dimensions in metres Scale 1:50	Client Mott MacDonald	Method/ Plant Used Commachio 305	Logged By HW

Bridgeway Consulting Ltd
Bridgeway House, 2 Riverside Way
NG2 1DP
Telephone: 0115 9191111

WINDOWLESS SAMPLER LOG

Project	Site	Consultant	EXPLORATORY HOLE No
RNAS Yeovilton	AAUVEST	Mott MacDonald	**BH03**
Job No: J14504	Date: 29-07-15 30-07-15	Ground Level (m): 68.69	Co-Ordinates (): LAT: 51.01737, LONG: -2.637269
Contractor: Bridgeway Consulting Ltd			Sheet: 1 of 3

SAMPLES & TESTS				STRATA					
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	Field Test kPa HSV	Field Test kPa PP	Instrument/ Backfill
0.10-0.40	B			68.49		0.20	TOPSOIL: Brown slightly clayey gravelly fine to coarse SAND with some roots and rootlets. Gravel is angular to subrounded fine to coarse of quartzite, limestone and mudstone.			
0.10	ES			68.24		0.45				
0.20-0.30	D						Brown slightly clayey gravelly fine to coarse SAND with some roots and rootlets. Gravel is angular to subrounded fine to coarse of quartzite, limestone and mudstone.			
0.20	ES									
0.50	ES									
0.60-1.00	B		▼			(0.85)				
0.60-0.70	D									
1.00	ES			67.39		1.30	Yellowish brown slightly clayey sandy angular to rounded fine to coarse GRAVEL of quartzite and mudstone. Sand is fine to coarse.			
1.05	W									
1.20-1.65	S	N14				(0.50)				
1.40-1.50	D			66.89		1.80	Firm blueish grey mottled brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is subangular to subrounded fine to medium of mudstone.			
1.80-2.25	UT100						Firm to stiff high to very high strength blueish grey thinly laminated slightly sandy slightly gravelly CLAY with some shell fragments up to 20mm in size. Sand is fine to medium. Gravel is angular to subangular fine to medium of mudstone.			
2.10-2.20	D									
2.20	ES									
2.25-2.70	S	N16				(1.70)				
2.80-3.00	D								152	
3.00-3.45	UT100									
				65.19		3.50				
3.45-3.50	D						----- *Borehole continued as a Cored Drillhole* -----			

Progress and Water Observations

Date	Depth	Casing	Casing Dia (mm)	Water Depth (m)	Hole Dia. (mm)	Recovery (%)
29-07-15	1.20		N/A	1.05		N/A
29-07-15	1.50	1.50	160	1.05	128	100
29-07-15	2.30	2.30	140	0.00	116	100
29-07-15	3.50	2.30		1.25	116	100
29-07-15	6.50	2.30		1.21	116	100
30-07-15	6.50	2.30		0.90	116	100

GENERAL REMARKS

1. Position scanned with CAT and Genny prior to excavation.
2. Pit hand dug to 1.20mbgl prior to drilling.
3. Dynamic sampling from 1.20mbgl to 3.50mbgl.
4. Rotary core complete from 3.50mbgl to 15.03mbgl.

All dimensions in metres Scale 1:50	Client: Mott MacDonald	Method/ Plant Used: Commachio 305	Logged By: HW

Bridgeway Consulting Ltd
Bridgeway House, 2 Riverside Way
NG2 1DP
Telephone: 0115 9191111

BOREHOLE LOG

Project	Site	Consultant	BOREHOLE No
RNAS Yeovilton	AAUVEST		**BH03**
Job No: J14504	Date: 29-07-15 30-07-15	Ground Level (m): 68.69	Co-Ordinates (): LAT: 51.01737 LONG: -2.637269
Contractor: Bridgeway Consulting Ltd			Sheet: 2 of 3

RUN DETAILS			SAMPLES & TESTING			STRATA				
Depth	TCR (SCR) RQD	Fracture Spacing min(ave)max	Depth	Type	Result	Red'cd Level	Legend	Depth (Thick-ness)	DESCRIPTION: Discontinuities	DESCRIPTION: Main
3.50	100 (98) 98		3.50-3.95 3.60 ES 3.90-4.00 D	S	N37	65.19		3.50 (0.70)		Very stiff high to very high strength blueish grey thinly laminated slightly sandy slightly gravelly CLAY with some shell fragments up to 20mm in size. Sand is fine to medium. Gravel is angular to subangular fine to medium of mudstone.
4.50			4.30-4.50 CR			64.49		4.20		3.50 Becoming very stiff.
5.50	90 (77) 77		4.50 C 5.00 ES 5.20-5.50 CR		N50/ 25 mm				4.50 - 15.00 Set 1 0° Smooth smooth planar very tight	Very weak to weak blueish grey thinly laminated very fine grained MUDSTONE.
6.50	100 (90) 86		5.50 C 5.74-5.95 CR 6.00 ES		N100				4.75 - 9.95 Set 2 45° Smooth smooth planar calcite staining very tight	4.30 - 4.80 Weak to medium strong. 4.80 - 5.50 Very weak.
7.50	100 (95) 70		6.50-6.64 CR 6.50 C 7.00 ES		N100/ 190 mm				6.40 - 15.00 Set 3 80° Smooth smooth planar calcite staining very tight	6.40 - 6.70 Weak to medium strong. 6.70 - 7.20 Weak.
8.50	100 (85) 61		7.50 C 7.61-7.70 CR 8.00 ES		N50/ 10 mm					7.50 - 8.40 Weak.
10.00	100 (33) 16	7 152 485	8.50 C 8.67-8.95 CR 9.48-9.63 CR		N50/ 25 mm			(10.83)	9.60 - 9.67 Set 4 90° Smooth smooth planar calcite staining very tight	8.40 - 10.00 Weak to medium strong.
11.50	95 (83) 49		10.00 C 10.60-10.78 CR		N50/ 25 mm					10.00 - 10.70 Medium strong. 10.70 - 13.00 Weak to medium strong

Drilling Progress and Water Observations

Date	Depth	Time	Casing	Core Dia mm	Water Strike	Water Standing
29-07-15	3.50	13.00	2.30	116		
29-07-15	6.50	18.00	2.30	116		
30-07-15	6.50	08.00	2.30	116		
30-07-15	8.50	10.00	2.30	116		
30-07-15	10.00	12.00	2.30	116		
30-07-15	11.50	13.00	2.30	116		

Rotary Flush

From	To	Type	Returns
3.50	15.00	Water	

GENERAL REMARKS

1. Position scanned with CAT and Genny prior to excavation.
2. Pit hand dug to 1.20mbgl prior to drilling.
3. Dynamic sampling from 1.20mbgl to 3.50mbgl.
4. Rotary core complete from 3.50mbgl to 15.03mbgl.

All dimensions in metres Scale 1:50	Client: Mott MacDonald	Method/ Plant Used: Commachio 305	Logged By: HW

Bridgeway Consulting Ltd
Bridgeway House, 2 Riverside Way
NG2 1DP
Telephone: 0115 9191111

BOREHOLE LOG

Project	Site	Consultant	BOREHOLE No
RNAS Yeovilton	AAUVEST		**BH03**

Job No	Date	Ground Level (m)	Co-Ordinates ()	Sheet
J14504	29-07-15 30-07-15	68.69	LAT: 51.01737 LONG: -2.637269	3 of 3

Contractor: Bridgeway Consulting Ltd

RUN DETAILS			SAMPLES & TESTING			STRATA				
Depth	TCR (SCR) RQD	Fracture Spacing min(ave)max	Depth	Type	Result	Red'cd Level	Legend	Depth (Thick-ness)	DESCRIPTION	
									Discontinuities	Main
			11.50	C	N50/ 15 mm					Very weak to weak blueish grey thinly laminated very fine grained MUDSTONE. *(continued)*
	93 (73) 50		12.06-12.20	CR						12.20 - 13.00 Shell fragments up to 50mm in size.
			12.59-12.79	CR						
13.00										
			13.00	C	N50/ 15 mm					13.00 - 13.20 Weak to medium strong.
	98 (69) 67		13.65-13.88	CR						13.20 - 13.65 Weak.
14.50										13.65 - 15.03 Weak to medium strong.
	100 (0) 0		14.50	C	N50/ 15 mm					
15.00						53.66		15.03		
			15.00	C	N50/ 15 mm					

Drilling Progress and Water Observations

Date	Depth	Time	Casing	Core Dia mm	Water Strike	Water Standing
30-07-15	13.00	14.30	2.30	116		
30-07-15	14.50	16.00	2.30	116		
30-07-15	15.03	17.00	2.30	116		

Rotary Flush

From	To	Type	Returns

GENERAL REMARKS

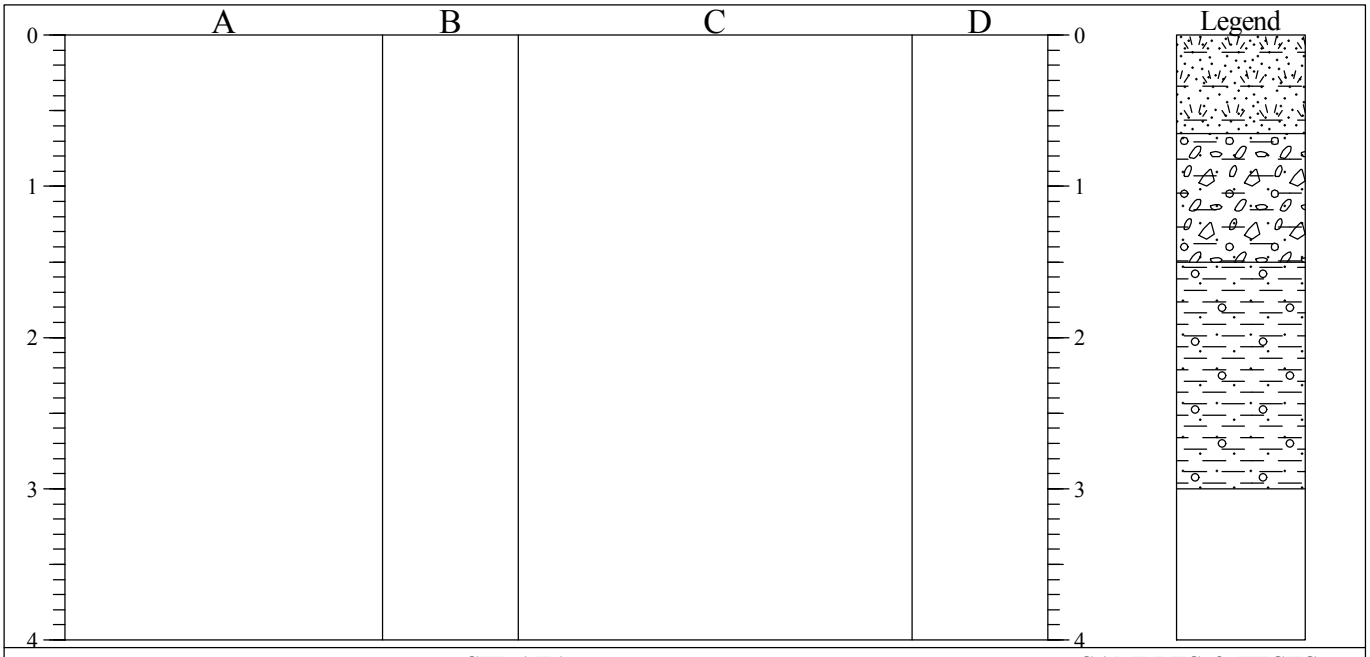
1. Position scanned with CAT and Genny prior to excavation.
2. Pit hand dug to 1.20mbgl prior to drilling.
3. Dynamic sampling from 1.20mbgl to 3.50mbgl.
4. Rotary core complete from 3.50mbgl to 15.03mbgl.

All dimensions in metres Scale 1:50	Client: Mott MacDonald	Method/ Plant Used: Commachio 305	Logged By: HW

Bridgeway Consulting Ltd
Bridgeway House, 2 Riverside Way
NG2 1DP
Telephone: 0115 9191111

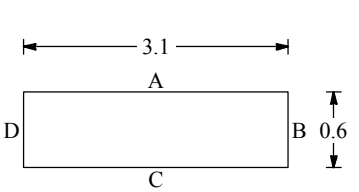
TRIAL PIT LOG

Project	Site	Consultant	TRIAL PIT No
RNAS Yeovilton	AAUVEST	Mott MacDonald	**TP01**
Job No: J14504	Date: 22-07-15 22-07-15	Ground Level (m)	Co-Ordinates ()
Contractor: Bridgeway Consulting Ltd			Sheet: 1 of 1



Depth	DESCRIPTION	Depth	Type	Field Tests (kPa) HSV	Field Tests (kPa) PP
	STRATA		**SAMPLES & TESTS**		
0.00-0.65	TOPSOIL: Brown slightly clayey gravelly fine to coarse SAND. Gravel is angular to subrounded fine to coarse of quartzite and limestone. 0.00 - 0.20 Some roots and rootlets.	0.10	ES		
		0.20-0.50	B		
		0.20-0.30	D		
		0.20	ES		
0.65-1.50	Yellowish brown clayey sandy subangular to rounded fine to coarse GRAVEL of quartzite, chert and mudstone. Sand is fine to coarse.	0.50	ES		
		0.80-1.20	B		
		1.00-1.10	D		
		1.00	ES		
	1.40 Groundwater strike.				
1.50-3.00	Firm low to medium strength thinly laminated blueish brown slightly sandy slightly gravelly CLAY with occasional cobbles of angular mudstone. Sand is fine to medium. Gravel is very angular to subangular fine to coarse of mudstone. 1.80 Becoming greyish blue. 2.10 Becoming stiff	1.50-1.60	D	38	
		1.50	W	48 35	
		2.00	ES		
		2.70-2.80	D		
		3.00	ES		

Shoring/Support:
Stability:



GENERAL REMARKS

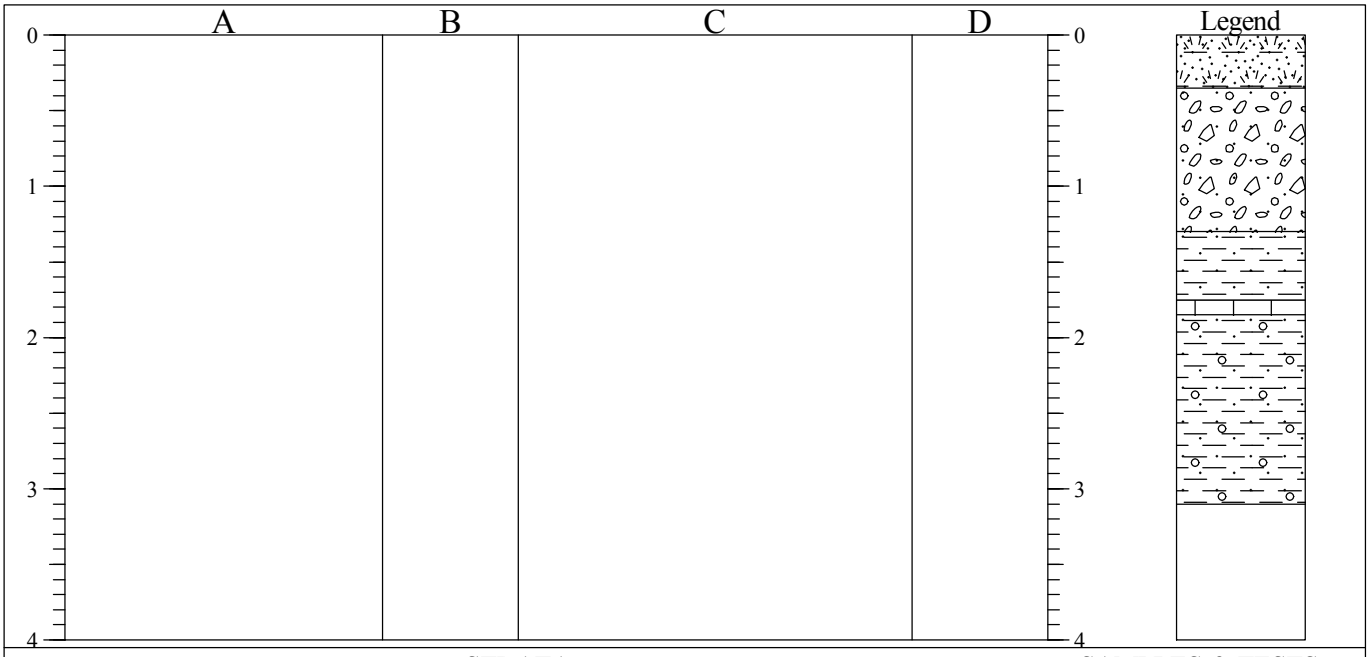
1. Position scanned with CAT and Genny prior to excavation.
2. Groundwater ingress at 1.40mbgl.
3. Hand shear vane attempted below 2.10mbgl but clay unsuitable due to splitting on mutiple attempts.
3 Trial pit complete at 3.00mbgl.
4. On completion pit backfilled with arisings and compacted.

All dimensions in metres Scale 1:50	Client: Mott MacDonald	Method/ Plant Used: JCB 3CX	Logged By: HW

Bridgeway Consulting Ltd
Bridgeway House, 2 Riverside Way
NG2 1DP
Telephone: 0115 9191111

TRIAL PIT LOG

Project	Site	Consultant	TRIAL PIT No
RNAS Yeovilton	AAUVEST	Mott MacDonald	**TP02**
Job No: J14504	Date: 23-07-15 23-07-15	Ground Level (m)	Co-Ordinates ()
Contractor: Bridgeway Consulting Ltd			Sheet: 1 of 1

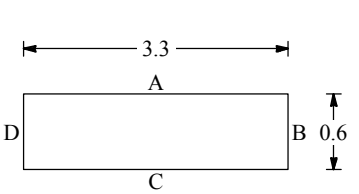


STRATA

SAMPLES & TESTS

Depth	DESCRIPTION	Depth	Type	Field Tests (kPa) HSV	Field Tests (kPa) PP
0.00-0.35	TOPSOIL: Brown gravelly slightly clayey fine to coarse SAND with occasional to some roots and rootlets. Gravel is angular to rounded fine to coarse of quartzite and limestone.	0.10	ES		
0.35-1.30	Light yellowish brown very sandy subangular to rounded fine to coarse GRAVEL of quartzite, limestone and mudstone. Sand is fine to coarse.	0.20-0.35	B		
		0.20-0.30	D		
		0.20	ES		
		0.40-1.00	B		
		0.50-0.60	D		
		0.50	ES		
	1.20 Water ingress.	1.00	ES		
1.30-1.75	Soft to firm medium strength brownish blue slightly sandy CLAY. Sand is fine to medium.	1.40-1.50	B		
		1.40-1.50	D	55	
1.75-1.85	Strong fine grained grey LIMESTONE with shell fragments.	1.50	ES	62	
1.85-3.10	Firm to stiff thinly laminated greyish blue slightly sandy slightly gravelly CLAY with occasional subangular cobbles of limestone and mudstone. Sand is fine. Gravel is very angular to subroundedf fine to coarse of limestone and mudstone.	1.65	W	57	
		2.80-2.90	D		
		3.00	ES		

Shoring/Support:
Stability:



GENERAL REMARKS

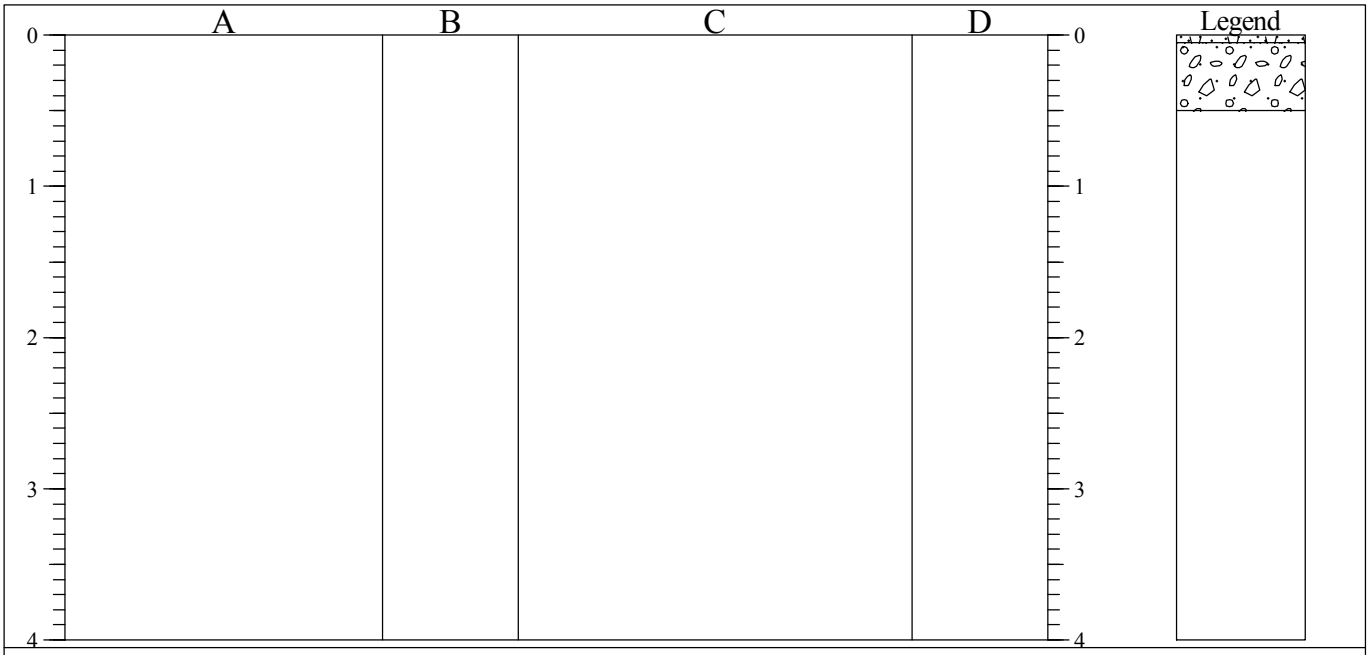
1. Position scanned with CAT and Genny prior to excavation.
2. Groundwater ingress at 1.20mbgl. Sheen noted on surface of water. No reading detected with oil/water interface probe.
3. Trial pit complete at 3.10mbgl.
4. On completion pit backfilled with arisings and compacted.

All dimensions in metres Scale 1:50	Client: Mott MacDonald	Method/ Plant Used: JCB 3CX	Logged By: HW

Bridgeway Consulting Ltd
Bridgeway House, 2 Riverside Way
NG2 1DP
Telephone: 0115 9191111

TRIAL PIT LOG

Project	Site	Consultant	TRIAL PIT No
RNAS Yeovilton	AAUVEST	Mott MacDonald	**TP02A**
Job No: J14504 / Date: 23-07-15 23-07-15	Ground Level (m)	Co-Ordinates ()	
Contractor: Bridgeway Consulting Ltd			Sheet: 1 of 1

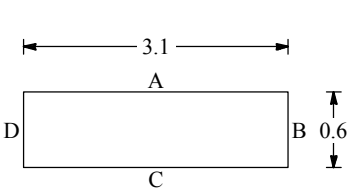


STRATA

SAMPLES & TESTS

Depth	DESCRIPTION	Depth	Type	Field Tests (kPa) HSV	Field Tests (kPa) PP
0.00-0.05	TOPSOIL: Brown gravelly slightly clayey fine to coarse SAND with occasional to some roots and rootlets. Gravel is angular to rounded fine to coarse of quartzite and limestone.	0.10	ES		
0.05-0.50	Light yellowish brown very sandy fine to coarse GRAVEL of quartzite, limestone and mudstone. Sand is fine to coarse.	0.20-0.40	B		
		0.20-0.30	D		
		0.20	ES		
		0.50	D		
		0.50	ES		

Shoring/Support:
Stability:



GENERAL REMARKS

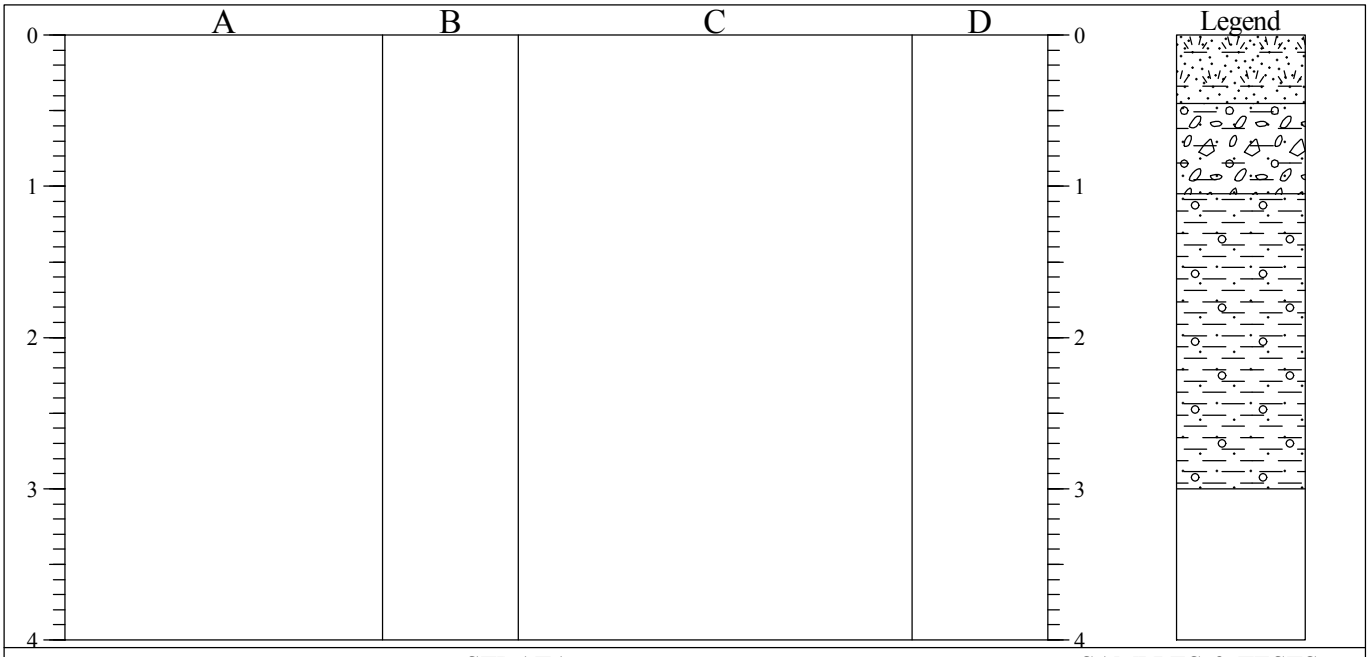
1. Position scanned with CAT and Genny prior to excavation.
2. Trial pit terminated at 0.50mbgl due excavation of archaeologically important material.
3. On completion pit backfilled with arisings and compacted.

All dimensions in metres Scale 1:50	Client: Mott MacDonald	Method/ Plant Used: JCB 3CX	Logged By: HW

Bridgeway Consulting Ltd
Bridgeway House, 2 Riverside Way
NG2 1DP
Telephone: 0115 9191111

TRIAL PIT LOG

Project	Site	Consultant	TRIAL PIT No
RNAS Yeovilton	AAUVEST	Mott MacDonald	**TP03**
Job No: J14504 / Date: 23-07-15 23-07-15	Ground Level (m)	Co-Ordinates ()	
Contractor: Bridgeway Consulting Ltd			Sheet: 1 of 1

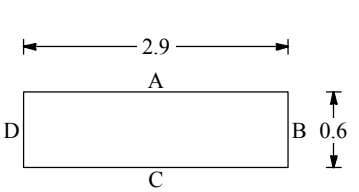


STRATA

SAMPLES & TESTS

Depth	DESCRIPTION	Depth	Type	Field Tests (kPa) HSV	Field Tests (kPa) PP
0.00-0.45	TOPSOIL: Brown gravelly slightly clayey fine to coarse SAND with occasional to some roots and rootlets. Gravel is angular to rounded fine to coarse of quartzite and limestone.	0.10	ES		
		0.20-0.40	B		
0.45-1.05	Yellowish brown slightly clayey very sandy angular to rounded fine to coarse GRAVEL of quartzite, limestone and mudstone. Sand is fine to coarse.	0.20-0.30	D		
		0.20	ES		
		0.50	ES		
		0.60-1.00	B		
1.05-3.00	1.00 Groundwater seepage.	0.60-0.70	D		
	Firm high strength thinly laminated blueish grey slightly sandy slightly gravelly CLAY with occasional cobbles of subangular mudstone and limestone. Sand is fine to medium. Gravel is subangular to subrounded fine to coarse mudstone and limestone.	1.00	ES		
				82	
		1.50-1.60	B	71	
				80	
		1.80-1.90	D		
	2.10 Becoming stiff.	2.00	ES		
		3.00	ES		

Shoring/Support:
Stability:



GENERAL REMARKS

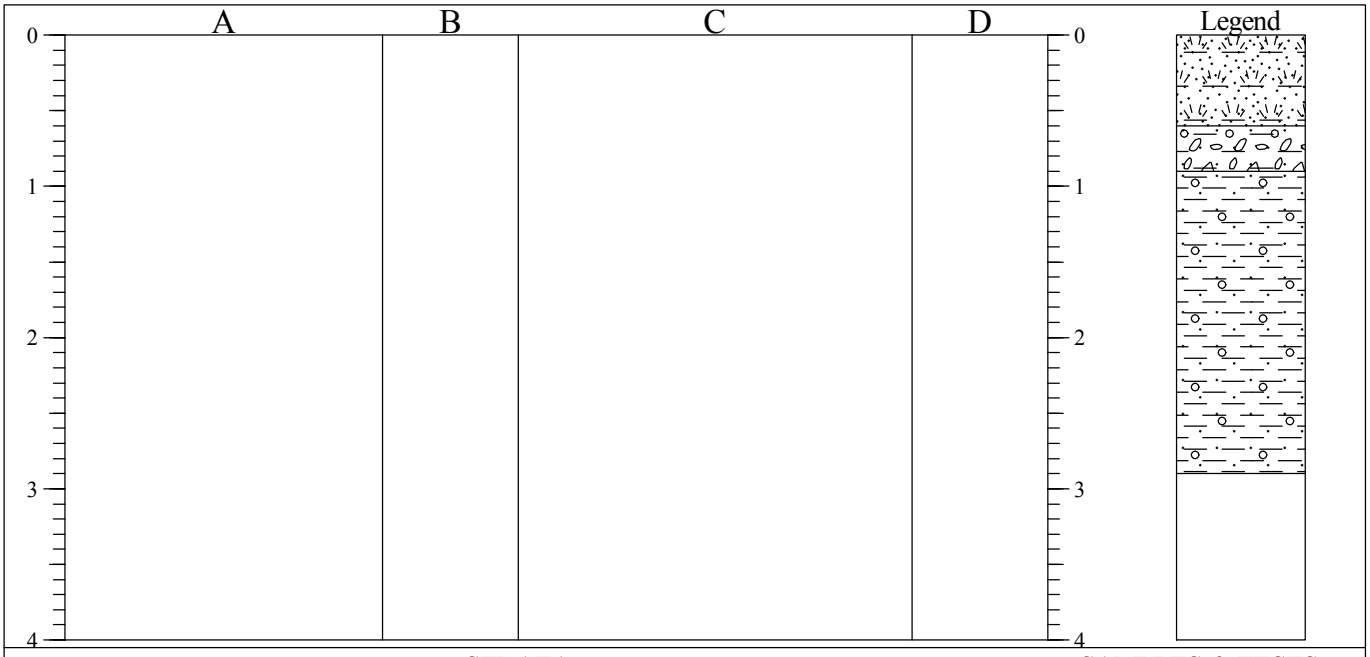
1. Position scanned with CAT and Genny prior to excavation.
2. Groundwater seepage at 1.00mbgl.
3. Trial pit complete at 3.00mbgl.
4. On completion pit backfilled with arisings and compacted.

All dimensions in metres Scale 1:50	Client: Mott MacDonald	Method/ Plant Used: JCB 3CX	Logged By: HW

Bridgeway Consulting Ltd
Bridgeway House, 2 Riverside Way
NG2 1DP
Telephone: 0115 9191111

TRIAL PIT LOG

Project	Site	Consultant	TRIAL PIT No
RNAS Yeovilton	AAUVEST	Mott MacDonald	**TP04**
Job No: J14504 / Date: 23-07-15 23-07-15	Ground Level (m)	Co-Ordinates ()	
Contractor: Bridgeway Consulting Ltd			Sheet: 1 of 1



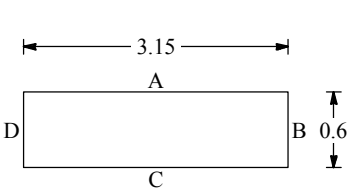
STRATA

Depth	DESCRIPTION
0.00-0.60	TOPSOIL: Brown gravelly slightly clayey fine to coarse SAND with occasional to some roots and rootlets. Gravel is angular to rounded fine to coarse of quartzite and limestone. 0.35 Becoming yellowish brown.
0.60-0.90	Light yellowish brown slightly clayey very sandy angular to rounded fine to coarse GRAVEL of quartzite, limestone and mudstone. Sand is fine to coarse.
0.90-2.90	Firm medium to high strength thinly laminated blueish grey slightly sandy slightly gravelly CLAY with occasional to some cobbles and boulders of mudstone and limestone. Sand is fine to medium. Gravel is angular fine to coarse of mudstone and limestone. 0.90 Water seepage. 1.40 Becoming stiff. 1.90 Some oxidised plant remains.

SAMPLES & TESTS

Depth	Type	Field Tests (kPa) HSV	Field Tests (kPa) PP
0.10	ES		
0.20-0.60	B		
0.20-0.30	D		
0.20	ES		
0.50	ES		
0.60-0.90	B		
0.60-0.70	D		
1.00	ES	50 82	
2.00	ES		
2.50-2.60	D		
2.90	ES		

Shoring/Support:
Stability:



GENERAL REMARKS

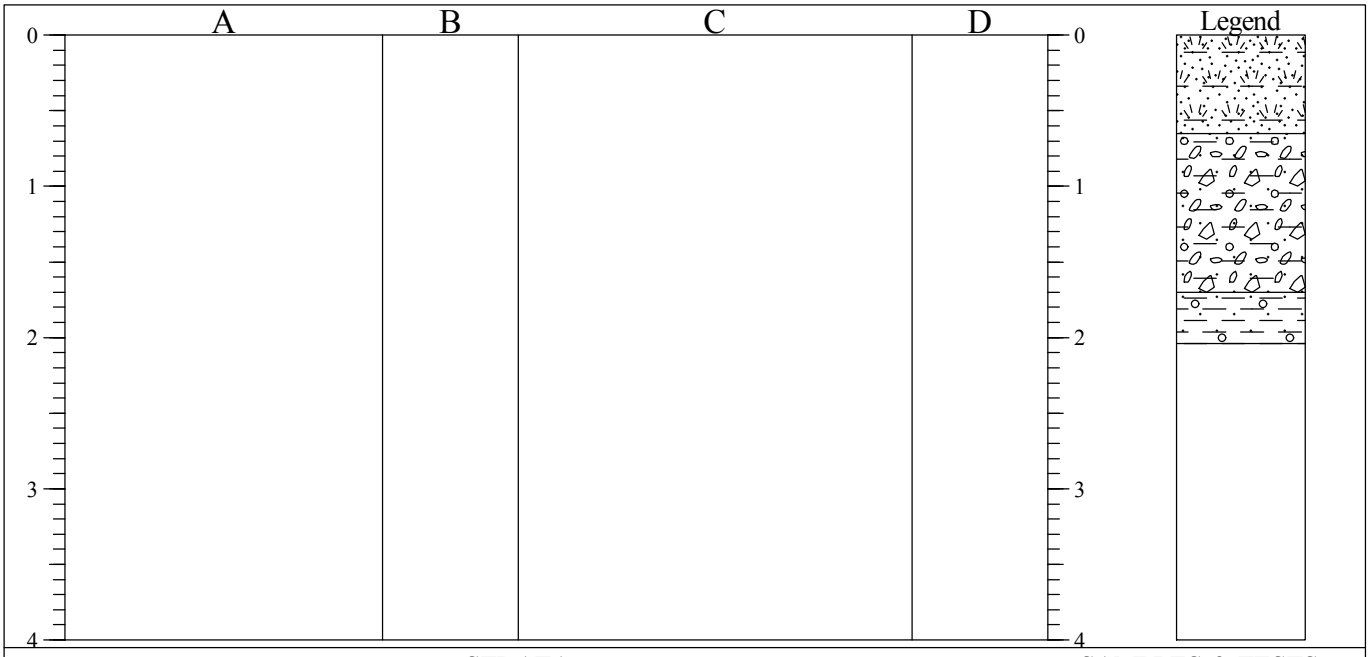
1. Position scanned with CAT and Genny prior to excavation.
2. Groundwater seepage at 0.90mbgl.
3. Trial pit terminated at 2.90mbgl due hard digging caused by presence of limestone/mudstone.
4. On completion pit backfilled with arisings and compacted.

All dimensions in metres Scale 1:50	Client: Mott MacDonald	Method/ Plant Used: JCB 3CX	Logged By: HW

Bridgeway Consulting Ltd
Bridgeway House, 2 Riverside Way
NG2 1DP
Telephone: 0115 9191111

TRIAL PIT LOG

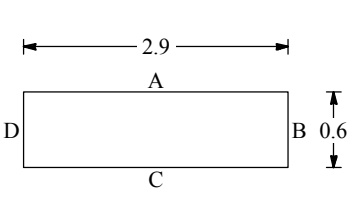
Project	Site	Consultant	TRIAL PIT No
RNAS Yeovilton	AAUVEST	Mott MacDonald	**TP05**
Job No: J14504	Date: 23-07-15 23-07-15	Ground Level (m):	Co-Ordinates ():
Contractor: Bridgeway Consulting Ltd			Sheet: 1 of 1



Depth	DESCRIPTION	Depth	Type	Field Tests (kPa) HSV	PP
0.00-0.65	TOPSOIL: Brown gravelly slightly clayey fine to coarse SAND with occasional to some roots and rootlets. Gravel is angular to rounded fine to coarse of quartzite and limestone.	0.10	ES		
	0.40 Becoming yellowish brown.	0.20-0.60	B		
		0.20-0.30	D		
0.65-1.70	Light yellowish brown slightly clayey sandy angular to well rounded fine to coarse GRAVEL of quartizte, limestone and mudstone. Sand is fine to coarse.	0.20	ES		
		0.50	ES		
		0.80-1.20	B		
		0.80-0.90	D		
		1.00	ES		
	1.50 Significant water ingress, slowing after 20 minutes.				
		1.60	W		
1.70-2.04	Soft to firm high strength greyish brownish blue slightly sandy slightly gravelly CLAY. Sand is fine. Gravel is very angular to subrounded fine to coarse of mudstone and limestone.	1.80-1.90	D	86	
		2.00	ES	78	
				82	

STRATA — SAMPLES & TESTS

Shoring/Support:
Stability:



GENERAL REMARKS

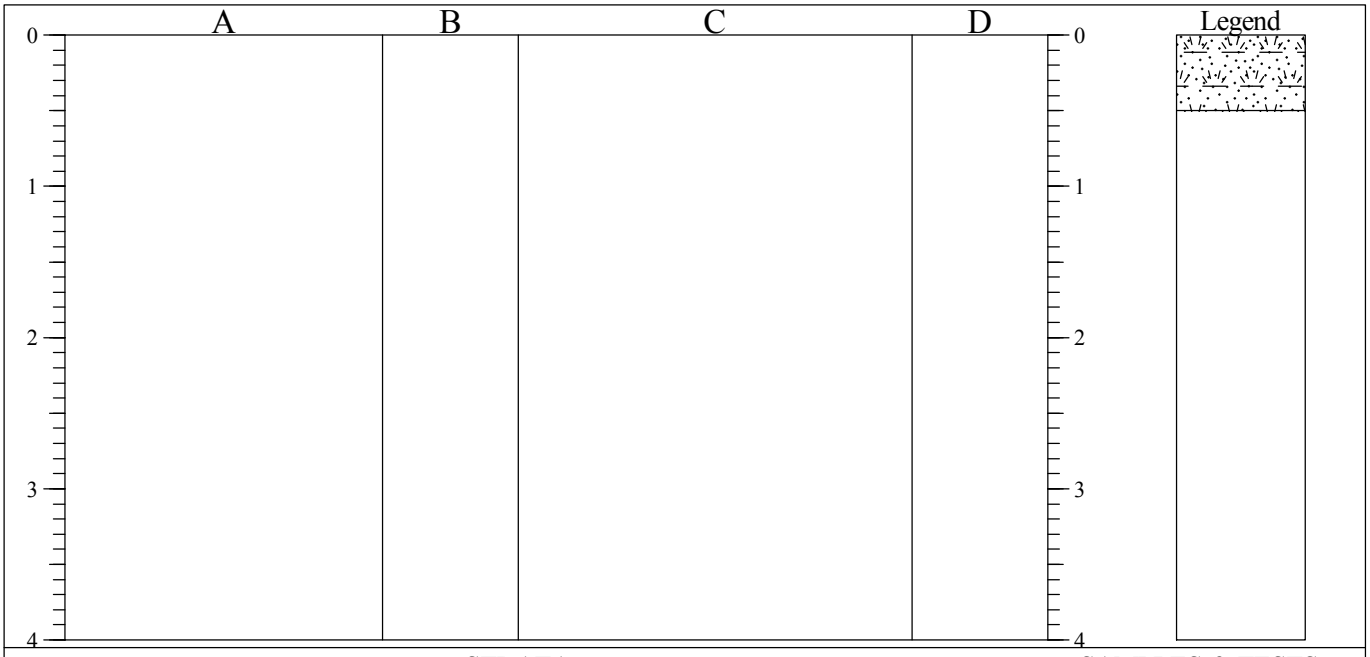
1. Position scanned with CAT and Genny prior to excavation.
2. Significant groundwater ingress at 1.50mbgl.
3. Trial pit terminated at 2.04mbgl due to hard digging caused by presence of limestone/mudstone.
4. On completion pit backfilled with arisings and compacted.

All dimensions in metres Scale 1:50	Client: Mott MacDonald	Method/ Plant Used: JCB 3CX	Logged By: HW

Bridgeway Consulting Ltd
Bridgeway House, 2 Riverside Way
NG2 1DP
Telephone: 0115 9191111

TRIAL PIT LOG

Project	Site	Consultant	TRIAL PIT No
RNAS Yeovilton	AAUVEST	Mott MacDonald	**TP05A**
Job No: J14504 / Date: 23-07-15 23-07-15	Ground Level (m)	Co-Ordinates ()	
Contractor: Bridgeway Consulting Ltd			Sheet: 1 of 1

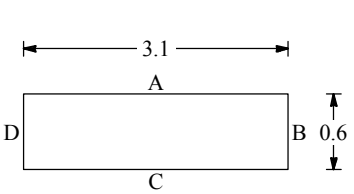


STRATA

SAMPLES & TESTS

Depth	DESCRIPTION	Depth	Type	Field Tests (kPa) HSV	Field Tests (kPa) PP
0.00-0.50	TOPSOIL: Brown gravelly slightly clayey fine to coarse SAND with occasional to some roots and rootlets. Gravel is angular to rounded fine to coarse of quartzite and limestone.				

Shoring/Support:
Stability:



GENERAL REMARKS

1. Position scanned with CAT and Genny prior to excavation.
2. Groundwater seepage at 1.60mbgl.
3. Trial pit terminated at 0.50mbgl due to archaeologically important material and possible presence of UXO in the vicinity.
4. Probable gravel visible at 0.50mgl on termination of pit.
5. On completion pit backfilled with arisings and compacted.

All dimensions in metres Scale 1:50	Client: Mott MacDonald	Method/ Plant Used: JCB 3CX	Logged By: HW

APPENDIX 3: OASIS FORM

OASIS ID: wessexar1-221044

Project details

Project name	RNAS Yeovilton, A/AVUEST Facility
Short description of the project	Wessex Archaeology were commissioned by Bridgeway Consulting Ltd, acting on behalf of Mott MacDonald, to undertake an archaeological watching brief at RNAS Yeovilton on the proposed site of a new Aircraft/Amphibious Vehicle Underwater Escape and Survival Training (A/AVUEST) facility. This watching brief was to take place on geotechnical ground investigation works, consisting of the excavation of five test pits. The watching brief took place on the 22nd and 23rd July 2015. A total of seven geotechnical pits were excavated due to the presence of archaeological remains. A previous geophysical survey conducted to detect unexploded ordnance had revealed a number of possible archaeological features which may suggest the presence of an Iron Age/Romano-British settlement nearby and indications of medieval ploughing. Apart from the archaeological remains, there was no evidence of ground disturbance encountered by the geotechnical investigations. The archaeological remains found consisted of two undated walls. The nature of the investigations meant that the precise function and purpose of these walls cannot currently be determined. It is proposed that these are most likely field boundaries, but may belong to a building or building complex. Further investigations would be necessary to determine the extent and date of these remains and any associated features.
Project dates	Start: 22-07-2015 End: 23-07-2015
Previous/future work	No / Not known
Any associated project reference codes	109960 - Contracting Unit No.
Any associated project reference codes	TTNCM: 63/2015 - Museum accession ID
Any associated project reference codes	32913 - HER event no.
Type of project	Field evaluation
Site status	None
Current Land use	Cultivated Land 1 - Minimal cultivation
Monument type	WALL Uncertain
Significant Finds	NONE None
Methods & techniques	"Test Pits"

Project location

Country	England

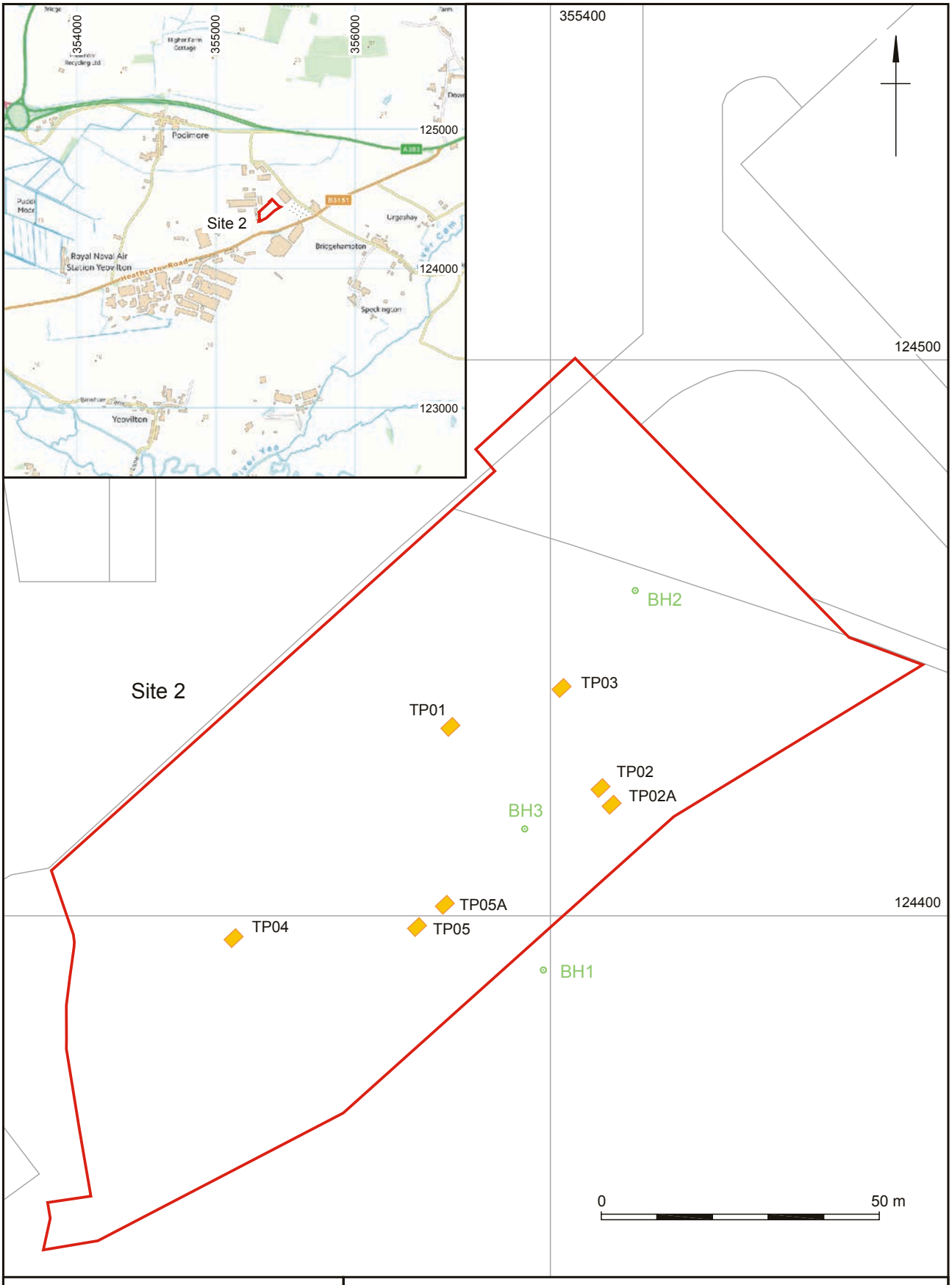
Site location	SOMERSET SOUTH SOMERSET YEOVILTON RNAS Yeovilton, A/AVUEST Facility
Postcode	BA22 8HW
Study area	0 Square metres
Site coordinates	ST 53720 44240 51.194984050118 -2.662391480421 51 11 41 N 002 39 44 W Point
Height OD / Depth	Min: 67.5m Max: 68.24m

Project creators

Name of Organisation	Wessex Archaeology
Project brief originator	Mott MacDonald
Project design originator	Mott MacDonald
Project director/manager	Gareth Chaffey
Project supervisor	Ben Cullen
Type of sponsor/funding body	Developer

Project archives

Physical Archive Exists?	No
Digital Archive recipient	Somerset County museum
Digital Archive ID	TTNCM: 63/2015
Digital Media available	"Images raster / digital photography","Text"
Paper Archive recipient	Somerset County Museum
Paper Archive ID	TTNCM: 63/2015
Paper Media available	"Context sheet","Diary","Plan","Section"



Site outline

Test pit

Borehole

Date:	19/08/2015	Revision Number:	1
Scale:	1:1000 @ A4	Illustrator:	SEJ/KMN
Path:	X:\PROJECTS\109960\Graphics_Office\Rep figs\WB\2015_08_05\109960_WB.dwg		

Location plan of the Site showing test pit locations

Figure 1

Plate 1: SW Facing representative section of Test Pit 4

Plate 2: View of Test Pit 2A from the north-west

Date:	05/08/2015	Revision Number:	0
Scale:	N/A	Illustrator:	SEJ
Path:	X:\PROJECTS\109960\Graphics_Office\Rep figs\WB\2015_08_05\ 109960_plates.cdr		

Plate 3: Detailed view of wall 211

Plate 4: West facing representative section of Test Pit 5A showing wall 209

Date:	05/08/2015	Revision Number:	0
Scale:	N/A	Illustrator:	SEJ
Path:	X:\PROJECTS\109960\Graphics_Office\Rep figs\WB\2015_08_05\ 109960_plates.cdr		

Wessex Archaeology Ltd registered office Portway House, Old Sarum Park, Salisbury, Wiltshire SP4 6EB
Tel: 01722 326867 Fax: 01722 337562 info@wessexarch.co.uk www.wessexarch.co.uk