



APPENDIX 1 – LANDSCAPE PLAN



1 LOCATION PLAN
1 : 8000

Client

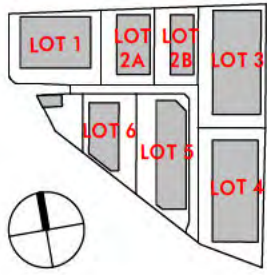


Issue	Description	Date
P1	PRE-DA	11.12.2020

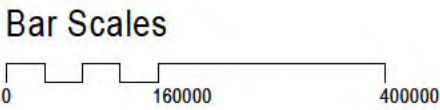
Builder and/or subcontractors shall verify all project dimensions before commencing on-site work or off-site fabrication. Figured dimensions shall take precedence over scaled dimensions. This drawing is copyright and cannot be reproduced in whole or in part or by any medium without the written permission of Nettleton Tribe Partnership Pty Ltd.

DRAFT

Key Plan



Project Name
ESR Kemps Creek Logistics Park
Project Address
Mamre Road, Kemps Creek



Drawing Title
Location Plan

Author:
BC/HS
Drawing Number:
11920_DA001

Checker:
MA

Sheet Size:
A1

Scale:
1 : 8000

Issue:
P1

nettletontribe

nettleton tribe partnership Pty Ltd ABN 58 161 683 122
117 Willoughby Road, Crows Nest, NSW 2065
t +61 2 9431 6431
e: sydney@nettletontribe.com.au w: nettletontribe.com.au



t +61 2 9431 6431
e: sydney@nettletontribe.com.au w: nettletontribe.com.au



Client

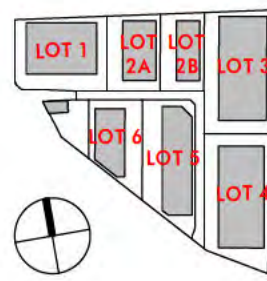


Issue	Description	Date
P1	PRE-DA	11.12.2020

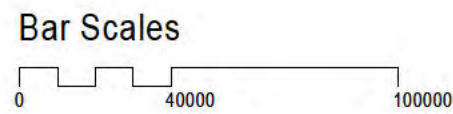
Builder and/or subcontractors shall verify all project dimensions before commencing on-site work or off-site fabrication. Figured dimensions shall take precedence over scaled dimensions. This drawing is copyright and cannot be reproduced in whole or in part or by any medium without the written permission of Nettleton Tribe Partnership Pty Ltd.

DRAFT

Key Plan



Project Name
ESR Kemps Creek Logistics Park
Project Address
Mamre Road, Kemps Creek



Drawing Title:
Staging Plan

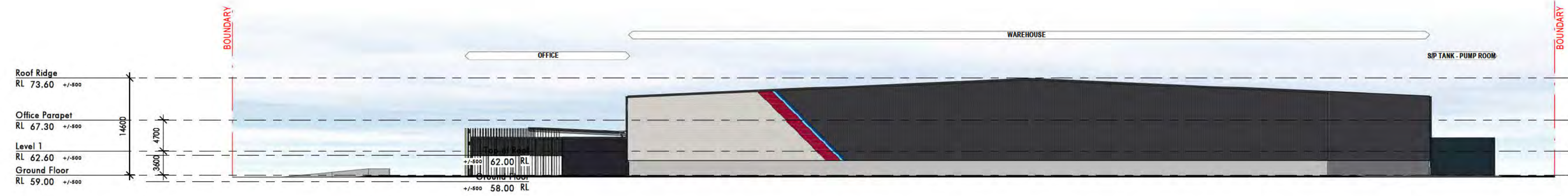
Author: BC/HS
Checker: MA
Sheet Size: A1
Drawing Number: **11920_DA005**

Scale:
1 : 1500

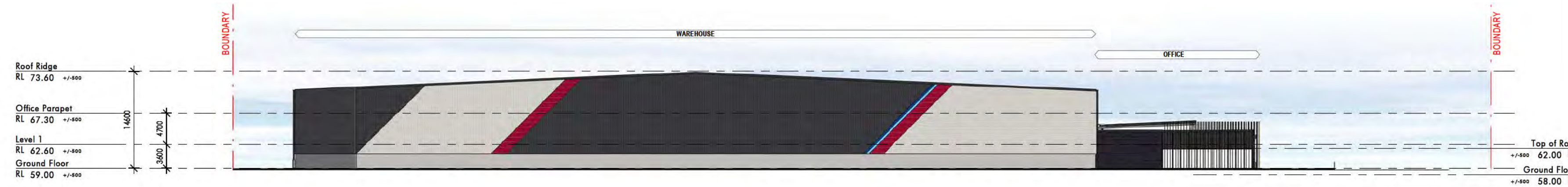
Issue:
P1

nettletontribe

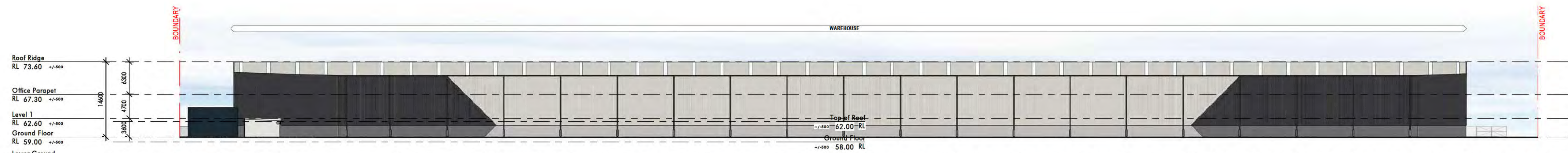
nettleton tribe partnership Pty Ltd ABN 58 161 683 122
117 Willoughby Road, Crows Nest, NSW 2065
t +61 2 9431 6431
e: sydney@nettletontribe.com.au w: nettletontribe.com.au



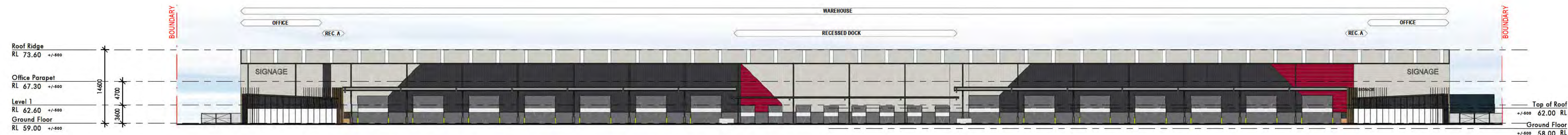
1 LOT 1 WAREHOUSE EAST ELEVATION
1:500



4 LOT 1 WAREHOUSE WEST ELEVATION
1:500



3 LOT 1 WAREHOUSE NORTH ELEVATION
1:500



2 LOT 1 WAREHOUSE SOUTH ELEVATION
1:500



11/12/2020 8:44:17 PM C:\NET\LOCAL\2020\11920_ESR_Kemps_Creek_Site_Plan_2020.dwg

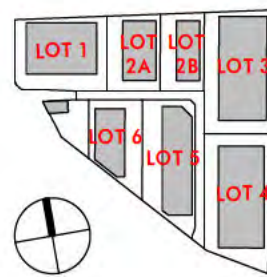


Issue	Description	Date
P1	PRE-DA	11/12/2020

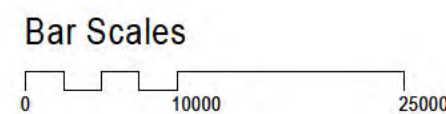
Builder and/or subcontractors shall verify all project dimensions before commencing on-site work or off-site fabrication. Figured dimensions shall take precedence over scaled dimensions. This drawing is copyright and cannot be reproduced in whole or in part or by any medium without the written permission of Nettleton Tribe Partnership Pty Ltd.

DRAFT

Key Plan



Project Name
ESR Kemps Creek Logistics Park
Project Address
Mamre Road, Kemps Creek



Drawing Title:
Elevations - LOT1

Author:
BC/HS
Drawing Number:
11920_DA022

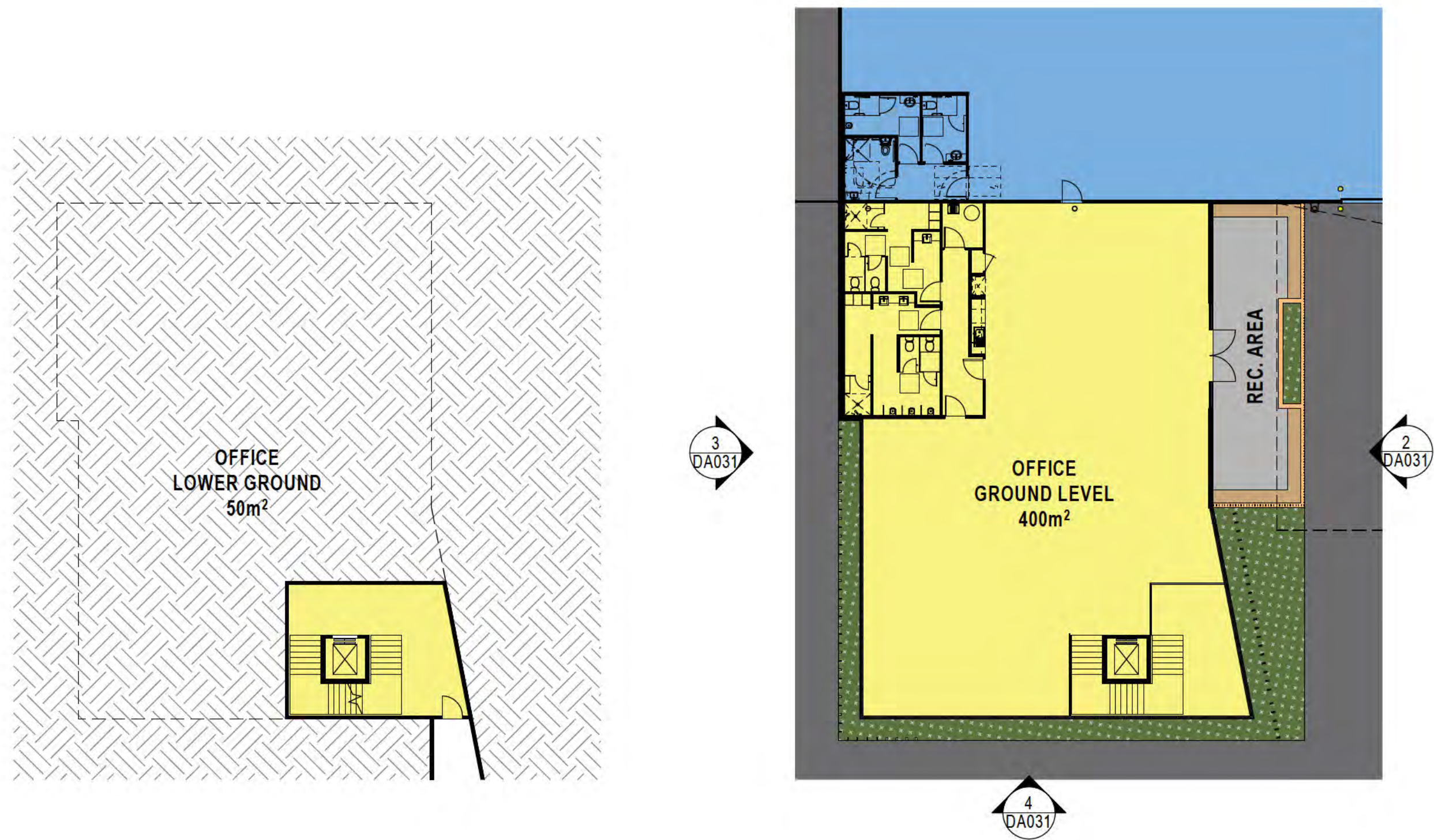
Checker:
MA
Sheet Size:
A1

Scale:
1:500

Issue:
P1

nettletontribe

nettleton tribe partnership pty ltd ABN 58 161 683 122
117 Willoughby Road, Crows Nest, NSW 2065
t +61 2 9431 6431
e: sydney@nettletontribe.com.au w: nettletontribe.com.au

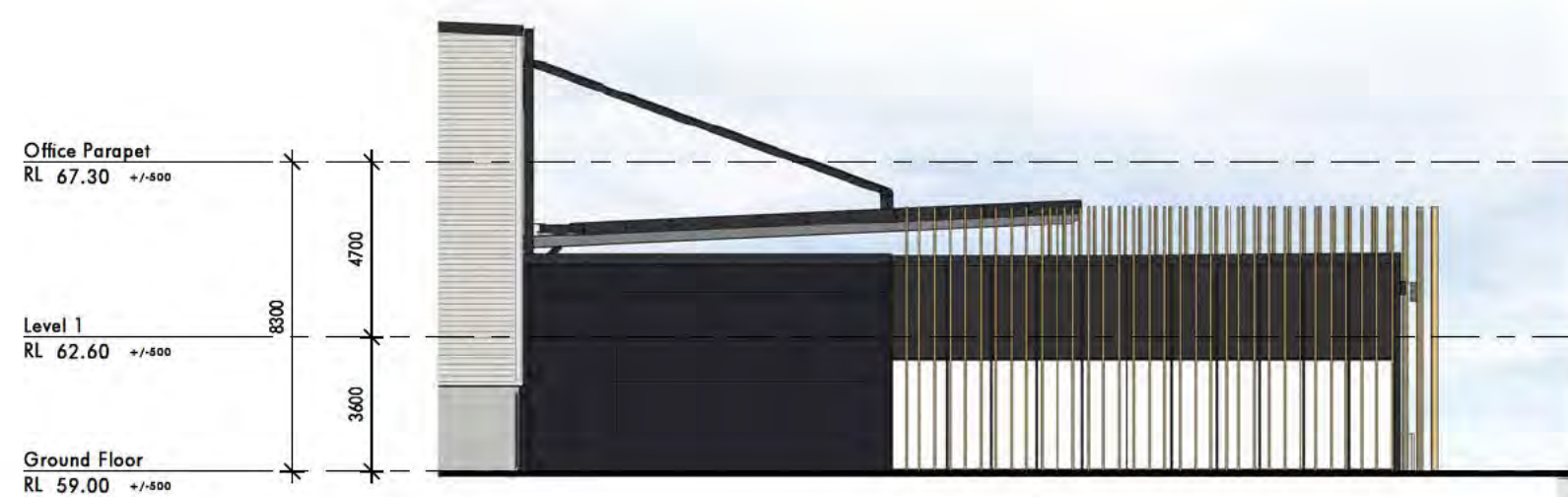


5 OFFICE 1a - LOWER GROUND
1:200

1 OFFICE 1a - GROUND LEVEL
1:200



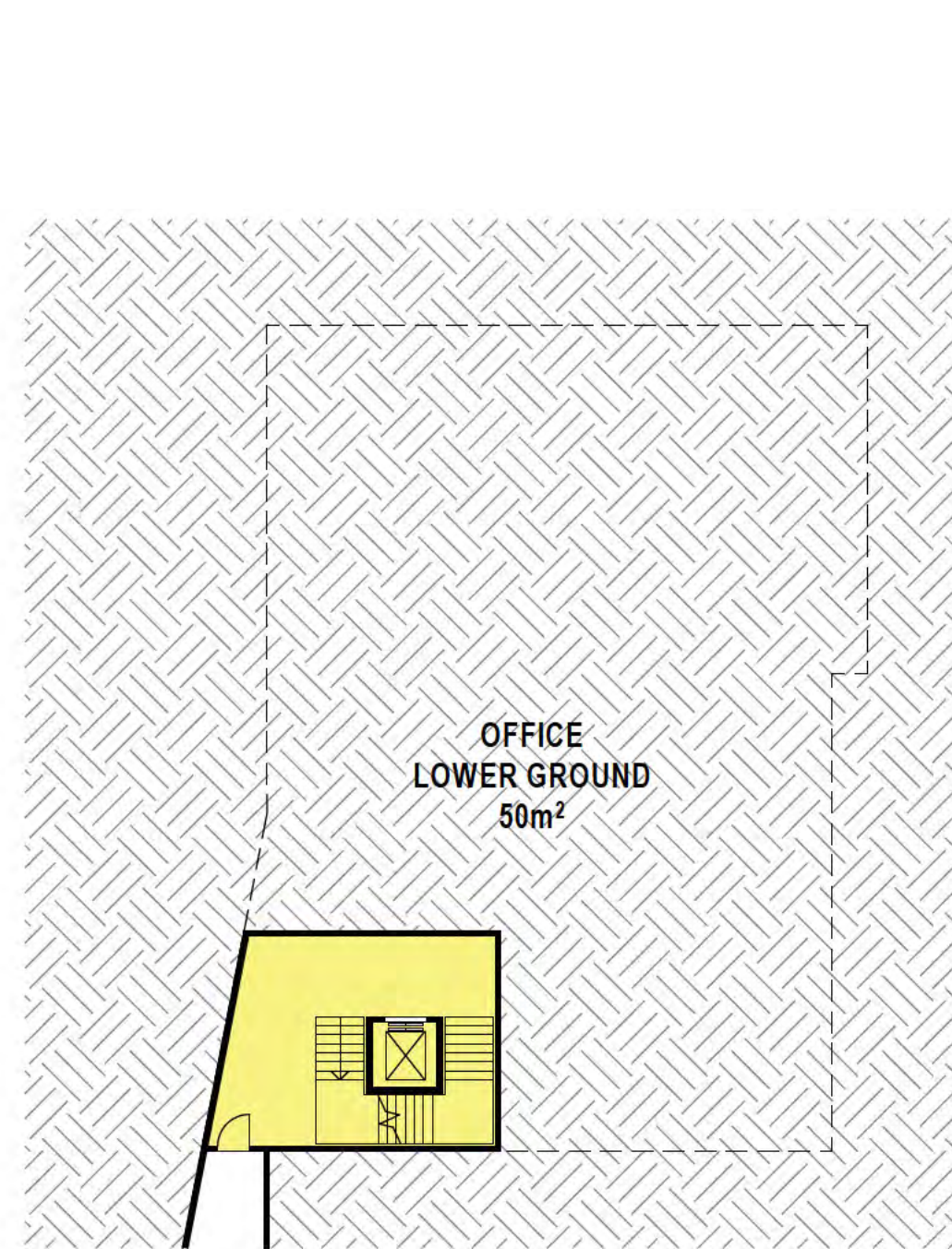
2 OFFICE 1a - EAST ELEVATION
DA031/ 1:200



3 OFFICE 1a - WEST ELEVATION
DA031/ 1:200



4 OFFICE 1a - SOUTH ELEVATION
DA031/ 1:200



7 OFFICE 1b - LOWER GROUND
1:200

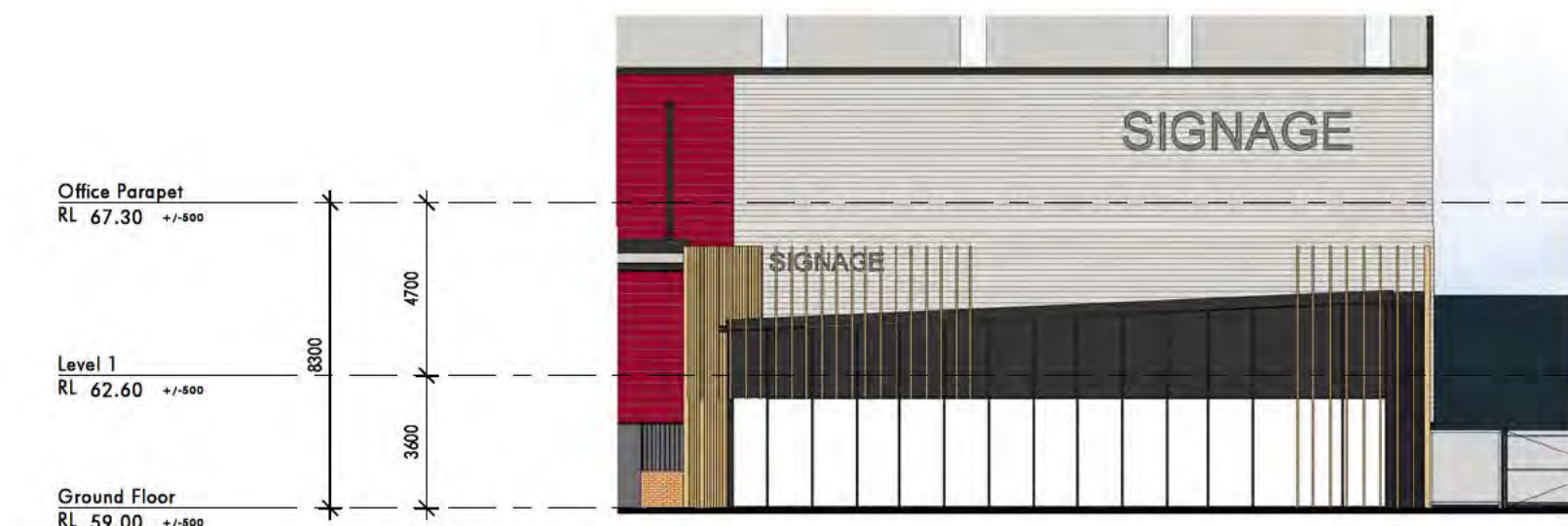
6 OFFICE 1b - GROUND LEVEL
1:200



8 OFFICE 1b - EAST ELEVATION
DA031/ 1:200



9 OFFICE 1b - WEST ELEVATION
DA031/ 1:200



10 OFFICE 1b - SOUTH ELEVATION
DA031/ 1:200

Client

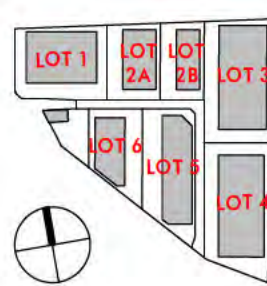


Issue	Description	Date
P1	PRE-DA	11.12.2020

Builder and/or subcontractors shall verify all project dimensions before commencing on-site work or off-site fabrication. Figured dimensions shall take precedence over scaled dimensions. This drawing is copyright and cannot be reproduced in whole or in part or by any medium without the written permission of Nettleton Tribe Partnership Pty Ltd.

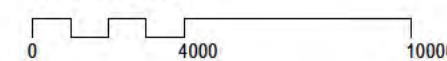
DRAFT

Key Plan



Project Name
ESR Kemps Creek Logistics Park
Project Address
Mamre Road, Kemps Creek

Bar Scales



Drawing Title:

Office Plans & Elevations - LOT1

Author:
BC/HS

Checker:
MA

Sheet Size:
A1

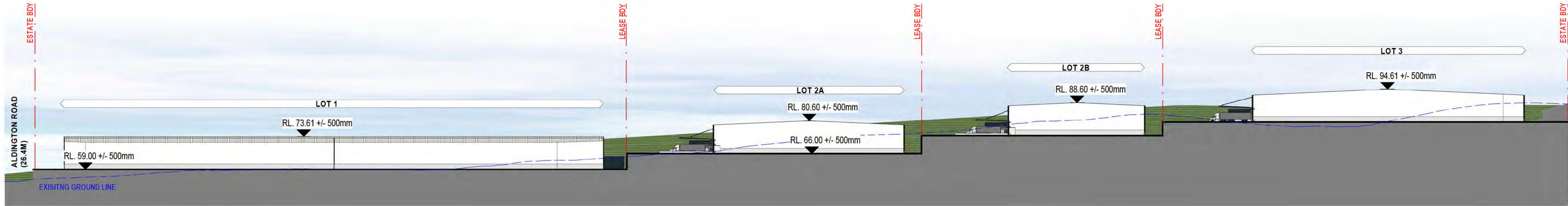
Scale:
1:200

Drawing Number:
11920_DA031

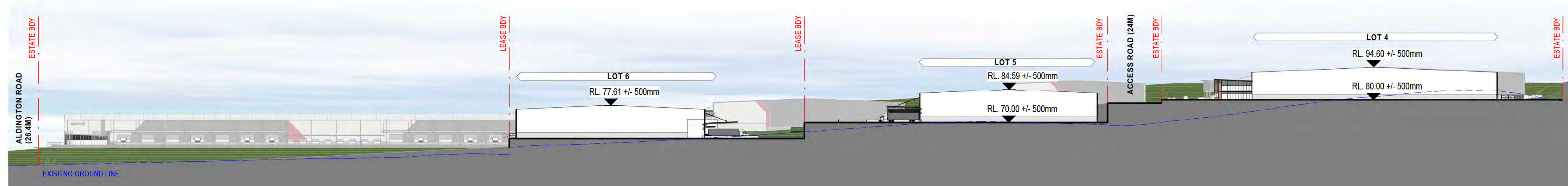
Issue:
P1

nettletontribe

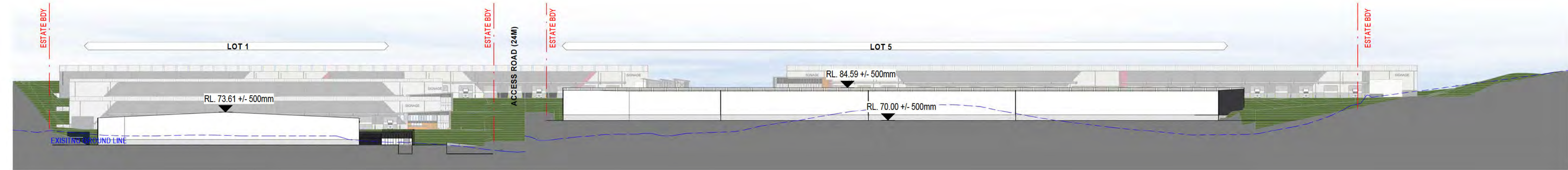
nettleton tribe partnership Pty Ltd ABN 58 161 683 122
117 Willoughby Road, Crows Nest, NSW 2065
t +61 2 9431 6431
e: sydney@nettletontribe.com.au w: nettletontribe.com.au



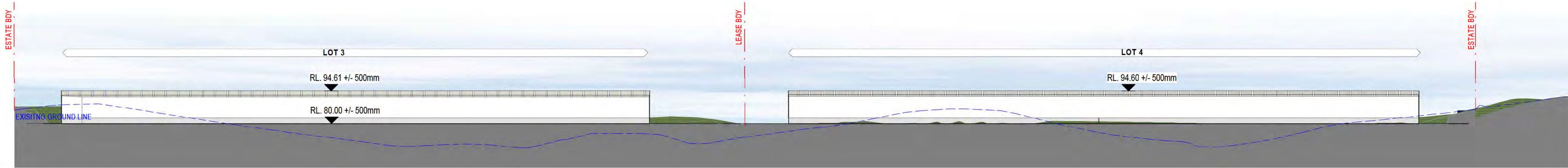
1 SITE SECTION 1
1 : 1000



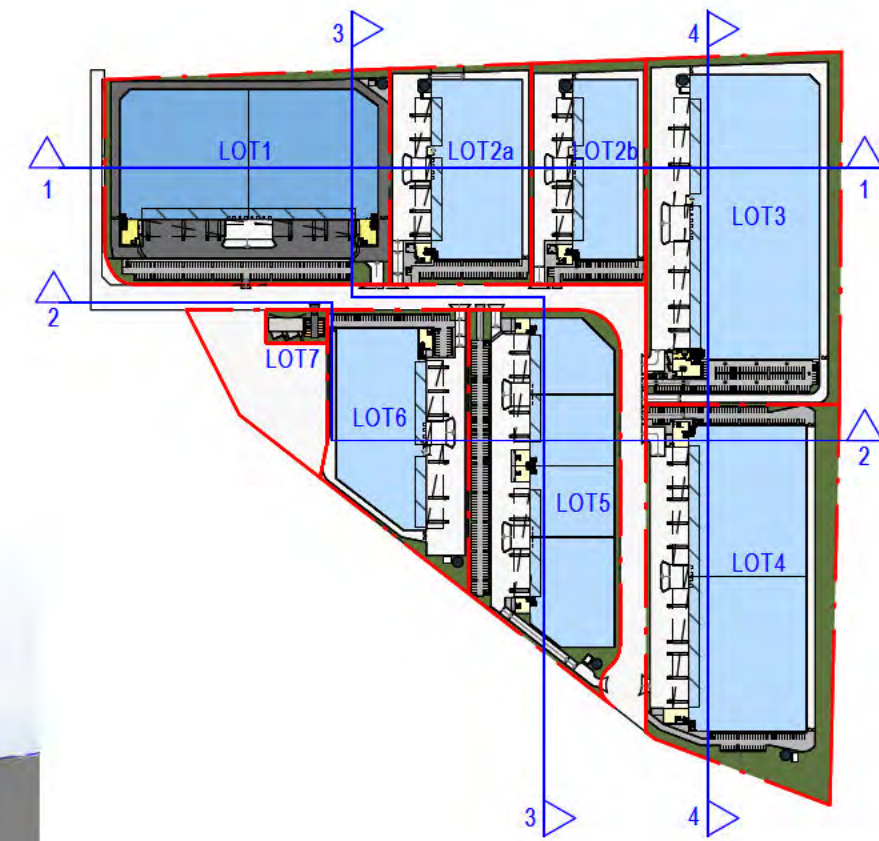
2 SITE SECTION 2
1 : 1000



3 SITE SECTION 3
1 : 1000



4 SITE SECTION 4
1 : 1000



Client

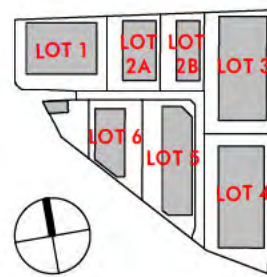


Issue	Description	Date
P2	PRE-DA	11.12.2020
P1	PRE-DA	25.11.2020

Builder and/or subcontractors shall verify all project dimensions before commencing on-site work or off-site fabrication. Figured dimensions shall take precedence over scaled dimensions. This drawing is copyright and cannot be reproduced in whole or in part or by any medium without the written permission of Nettleton Tribe Partnership Pty Ltd.

DRAFT

Key Plan



Project Name
ESR Kemps Creek Logistics Park
Project Address
Mamre Road, Kemps Creek

Bar Scales



Drawing Title:
Site Sections - Sheet 1

Author:
BC/HS
Drawing Number:
11920_DA041

Checker:
MA

Sheet Size:
A1

Scale:
As indicated
Issue:
P2

nettletontribe

nettleton tribe partnership Pty Ltd ABN 58 161 683 122
117 Willoughby Road, Crows Nest, NSW 2065
t +61 2 9431 6431
e: sydney@nettletontribe.com.au w: nettletontribe.com.au



APPENDIX 2 – AHIMS SEARCH RESULTS

Urbis Pty Ltd - Angel Place L8 123 Pitt Street

Date: 02 November 2020

Level 8 123 Angel Street
Sydney New South Wales 2000

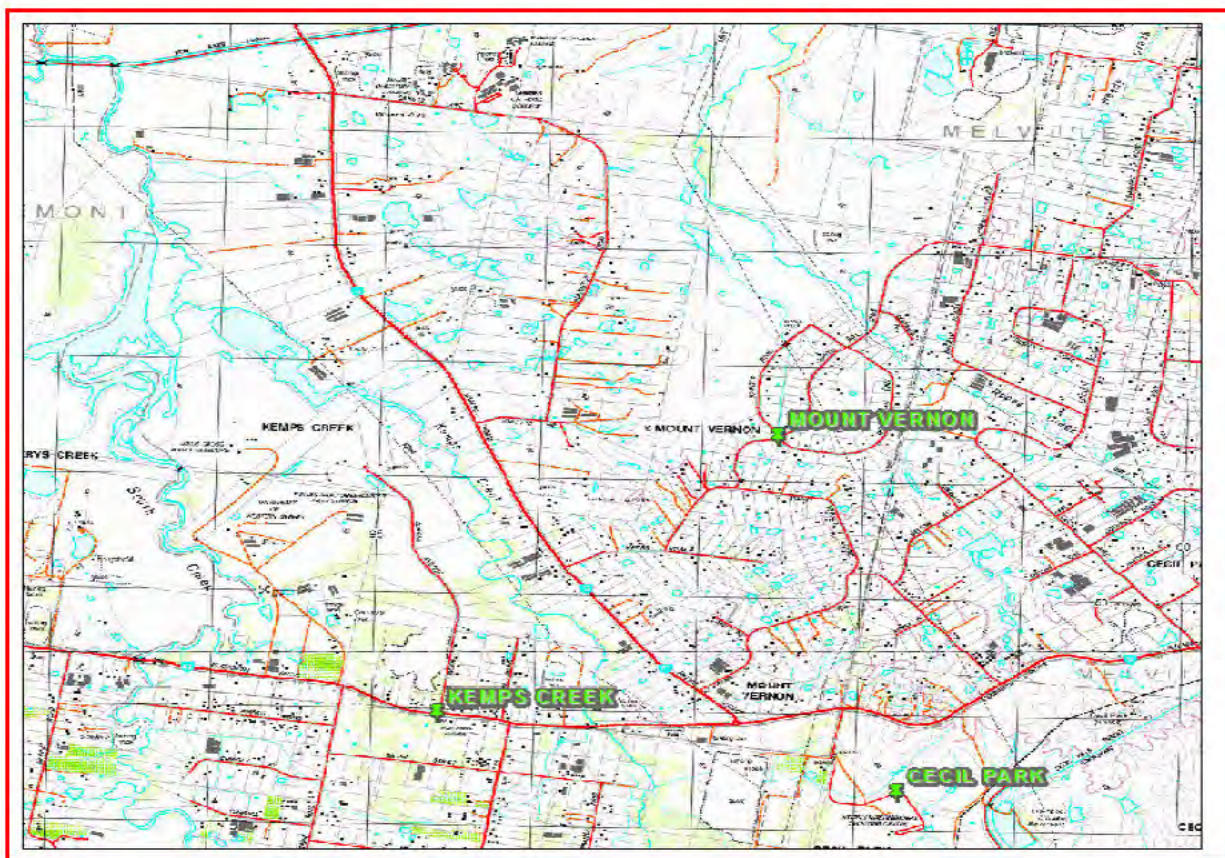
Attention: Aaron Olsen

Email: aolsen@urbis.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters, conducted by Aaron Olsen on 02 November 2020.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

117	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : ESR Kemps Ck 7km

Client Service ID : 546950

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-2057	PGH1;Monier PGH; <u>Contact</u>	GDA	56	298268	6254015	Open site	Destroyed	Artefact : - <u>Permits</u>	Isolated Find	98435,103366
45-5-2046	PGH2;Monier PHG; <u>Contact</u>	GDA	56	298493	6254045	Open site	Destroyed	Artefact : - <u>Permits</u>	Isolated Find	98435,103366
45-5-2008	SC4;Cecil Park Shooting Complex; <u>Contact</u>	AGD	56	298360	6247790	Open site	Valid	Artefact : - <u>Permits</u>	Isolated Find	3857
45-5-2009	SC5 Cecil Park Shooting Complex <u>Contact</u>	AGD	56	298340	6247790	Open site	Valid	Artefact : - <u>Permits</u>	Isolated Find	3857
45-5-2011	SC3;Cecil Park Shooting Complex; <u>Contact</u>	AGD	56	298050	6247790	Open site	Valid	Artefact : - <u>Permits</u>	Isolated Find	3857
45-5-2012	SC2;Cecil Park Shooting Complex; <u>Contact</u>	AGD	56	297760	6247810	Open site	Valid	Artefact : - <u>Permits</u>	Isolated Find	3857
45-5-2013	SC1;Cecil Park Shooting Complex; <u>Contact</u>	AGD	56	297800	6247960	Open site	Valid	Artefact : - <u>Permits</u>	Isolated Find	3857
45-5-2426	IFSC 11;Cecil Park; <u>Contact</u>	AGD	56	297990	6248110	Open site	Valid	Artefact : - <u>Permits</u>	Isolated Find	
45-5-2427	IFSC 10;Cecil Park; <u>Contact</u>	AGD	56	297680	6247790	Open site	Valid	Artefact : - <u>Permits</u>	Isolated Find	
45-5-2429	CPSC 3;Cecil Park; <u>Contact</u>	AGD	56	297710	6248020	Open site	Valid	Artefact : - <u>Permits</u>	Open Camp Site	
45-5-2430	IFSC 7;Cecil Park; <u>Contact</u>	AGD	56	298590	6247980	Open site	Valid	Artefact : - <u>Permits</u>	Isolated Find	
45-5-2711	CDG1 <u>Contact</u>	AGD	56	293300	6252800	Open site	Valid	Artefact : - <u>Permits</u>	4577	1345,1539,473 7
45-5-3999	PAD 2001-6 <u>Contact</u>	GDA	56	295825	6248852	Open site	Valid	Potential Archaeological Deposit (PAD) : - <u>Permits</u>		
45-5-4006	Artefact Scatter PAD 2007-4 <u>Contact</u>	GDA	56	295792	6248524	Open site	Valid	Artefact : - <u>Permits</u>		
45-5-4007	Artefact Scatter 2008-4 <u>Contact</u>	GDA	56	297641	6248524	Open site	Valid	Artefact : - <u>Permits</u>		
45-5-4008	Isolated Object 2009-5 <u>Contact</u>	GDA	56	297443	6248524	Open site	Valid	Artefact : - <u>Permits</u>		

Report generated by AHIMS Web Service on 02/11/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : ESR Kemps Ck 7km

Client Service ID : 546950

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-4009	Isolated Object 2010-5	GDA	56	297432	6248202	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>				Extent Heritage Pty Ltd - Pyrmont - Individual users,Doctor.Alan Williams		<u>Permits</u>		
45-5-4010	Isolated Object 2011-5	GDA	56	297479	6248304	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>				Extent Heritage Pty Ltd - Pyrmont - Individual users,Doctor.Alan Williams		<u>Permits</u>		
45-5-4022	Artefact Scatter PAD 2023-846	GDA	56	299598	6249047	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>				Extent Heritage Pty Ltd - Pyrmont - Individual users,Doctor.Alan Williams,Mr.Mattl		<u>Permits</u>	4577	
45-5-4049	PAD 2054-6	GDA	56	296512	6249100	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>				Extent Heritage Pty Ltd - Pyrmont - Individual users,Doctor.Alan Williams		<u>Permits</u>		
45-5-4675	Oakdale West Isolated Find (OW IF 2)	GDA	56	296627	6254876	Open site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>				Artefact - Cultural Heritage Management - Pyrmont,Mr.Josh Symons,Mr.ryan tadde		<u>Permits</u>		
45-5-4676	Oakdale West Isolated Find 3	GDA	56	295882	6254754	Open site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>				Artefact - Cultural Heritage Management - Pyrmont,Mr.Josh Symons,Mr.ryan tadde		<u>Permits</u>		
45-5-5259	Elizabeth Drive AFT 1	GDA	56	293377	6249426	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>				Kelleher Nightingale Consulting Pty Ltd,Miss.Kristen Taylor		<u>Permits</u>		
45-5-5260	Wylde MTB PAD1	GDA	56	298467	6248411	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>				Eco Logical Australia Pty Ltd - Sydney - Individual users,Mr.Daniel Claggett		<u>Permits</u>		
45-5-5261	Wylde MTB PAD2	GDA	56	298498	6248258	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>				Eco Logical Australia Pty Ltd - Sydney - Individual users,Mr.Daniel Claggett		<u>Permits</u>		
45-5-5262	Wylde MTB PAD 3	GDA	56	299151	6248697	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>				Eco Logical Australia Pty Ltd - Sydney - Individual users,Mr.Daniel Claggett		<u>Permits</u>		
45-5-5274	Bakers Lane SLR AFT 1	GDA	56	295915	6254097	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>				Mr.Matthew Kelleher,Kelleher Nightingale Consulting Pty Ltd (Generic users)		<u>Permits</u>		
45-5-5268	Kemps Creek IF-02	GDA	56	295030	6253859	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>				Urbis Pty Ltd - Angel Place L8 123 Pitt Street,Miss.Meggan Walker		<u>Permits</u>		
45-5-5269	Kemps Creek IF-01	GDA	56	294976	6253943	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>				Urbis Pty Ltd - Angel Place L8 123 Pitt Street,Miss.Meggan Walker		<u>Permits</u>		
45-5-5281	Cross Street Kemps Creek AFT 1	GDA	56	296973	6248376	Open site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 02/11/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : ESR Kemps Ck 7km

Client Service ID : 546950

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Mr.Matthew Kelleher,Kelleher Nightingale Consulting Pty Ltd (Generic users)							
45-5-5230	Elizabeth Precinct Isolated Find 03 (EPIF 03)	GDA	56	293375	6249980	Open site	Valid	Artefact : -	4577	
	Contact	Recorders	Artefact - Cultural Heritage Management - Pyrmont,Ms.Jennifer Norfolk							
45-5-5231	Elizabeth Precinct Isolated Find 02 (EPIF 02)	GDA	56	293466	6250004	Open site	Valid	Artefact : -		
	Contact	Recorders	Artefact - Cultural Heritage Management - Pyrmont,Ms.Jennifer Norfolk							
45-5-5232	Elizabeth Precinct Isolated Find 01 (EPIF 01)	GDA	56	293416	6249892	Open site	Valid	Artefact : -		
	Contact	Recorders	Artefact - Cultural Heritage Management - Pyrmont,Ms.Jennifer Norfolk							
45-5-5233	Elizabeth Precinct Artefact Scatter 01 (EPAS 01)	GDA	56	293412	6249873	Open site	Valid	Artefact : -		
	Contact	Recorders	Artefact - Cultural Heritage Management - Pyrmont,Ms.Jennifer Norfolk							
45-5-5301	Kemps Creek East (KCE) PAD	GDA	56	296543	6249177	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Mr.Andrew Costello,Jacobs Group (Australia) Pty Ltd - North Sydney							
45-5-5302	Kemps Creek West (KCW) PAD	GDA	56	296110	6249360	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Mr.Andrew Costello,Jacobs Group (Australia) Pty Ltd - North Sydney							
45-5-5303	Kemps North West (KNW) PAD	GDA	56	295455	6250265	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Mr.Andrew Costello,Jacobs Group (Australia) Pty Ltd - North Sydney							
45-5-5306	South Creek East (SCE)	GDA	56	293940	6251020	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Mr.Andrew Costello,Jacobs Group (Australia) Pty Ltd - North Sydney							
45-5-5307	South Creek West T1 (SCW T1)	GDA	56	293360	6251085	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Jacobs Group (Australia) Pty Ltd - North Sydney,Mr.Andrew Costello							
45-5-5308	South Creek West T2 (SCW T2)	GDA	56	293360	6251085	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Mr.Andrew Costello,Jacobs Group (Australia) Pty Ltd - North Sydney							
45-5-5315	MRP-OS2	GDA	56	296737	6253925	Open site	Valid	Artefact : -		
	Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Taylar Reid							
45-5-5316	MRP-OS1	GDA	56	294413	6252254	Open site	Valid	Artefact : -		
	Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Taylar Reid							

Report generated by AHIMS Web Service on 02/11/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : ESR Kemps Ck 7km

Client Service ID : 546950

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-5234	Elizabeth Precinct PAD 03	GDA	56	293924	6249724	Open site	Valid	Potential Archaeological Deposit (PAD) :-		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont,Ms.Jennifer Norfolk							<u>Permits</u>
45-5-5235	Elizabeth Precinct PAD 02	GDA	56	293927	6249529	Open site	Not a Site	Potential Archaeological Deposit (PAD) :-		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont,Artefact - Cultural Heritage Ma							<u>Permits</u>
45-5-5236	Elizabeth Precinct PAD 01	GDA	56	293200	6249565	Open site	Valid	Potential Archaeological Deposit (PAD) :-, Artefact :-		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont,Artefact - Cultural Heritage Ma							<u>Permits</u>
45-5-5277	Cecil Park Water Reservoir AFT 1	GDA	56	299289	6248948	Open site	Valid	Artefact :-		
	<u>Contact</u>	<u>Recorders</u>	Mr.Matthew Kelleher,Kelleher Nightingale Consulting Pty Ltd (Generic users)							<u>Permits</u> 4577
45-5-2568	CGD5	AGD	56	293300	6253500	Open site	Valid	Artefact :-	Open Camp Site	98435
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting							<u>Permits</u>
45-5-2561	GLC1	GDA	56	299580	6249001	Open site	Valid	Artefact :-	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	Annie Nicholson,Mr.Matthew Kelleher,Kelleher Nightingale Consulting Pty Ltd (Ge							<u>Permits</u> 4577
45-5-2550	CGD1	AGD	56	293350	6252800	Open site	Valid	Artefact :-	Open Camp Site	98435
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting							<u>Permits</u>
45-5-2552	CGD3	AGD	56	293000	6252800	Open site	Valid	Modified Tree (Carved or Scarred) :-	Scarred Tree	98435
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting							<u>Permits</u>
45-5-2553	CGD4	AGD	56	293300	6252500	Open site	Valid	Artefact :- , Modified Tree (Carved or Scarred) :-	Open Camp Site,Scarred Tree	98435
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting							<u>Permits</u>
45-5-2554	CGD2	AGD	56	293000	6252900	Open site	Valid	Artefact :-	Open Camp Site	98435
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting							<u>Permits</u>
45-5-2307	P-CP9	AGD	56	298110	6248750	Open site	Valid	Artefact :-	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	Helen Brayshaw							<u>Permits</u>
45-5-2308	P-CP8	AGD	56	298580	6248760	Open site	Valid	Artefact :-	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	Helen Brayshaw							<u>Permits</u>
45-5-2310	KC/ED2;	AGD	56	297520	6248760	Open site	Valid	Artefact :-	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	Helen Brayshaw							<u>Permits</u>

Report generated by AHIMS Web Service on 02/11/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : ESR Kemps Ck 7km

Client Service ID : 546950

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-0604	Cecil Park 1	AGD	56	297350	6251470	Open site	Valid	Artefact : -	Open Camp Site	1283,98435
	<u>Contact</u>	<u>Recorders</u>	Smith,M Hanckel					<u>Permits</u>	694	
45-5-0605	Cecil Park 2	AGD	56	297600	6251780	Open site	Valid	Artefact : -	Open Camp Site	1283,98435
	<u>Contact</u>	<u>Recorders</u>	Smith,M Hanckel					<u>Permits</u>		
45-6-1775	Lec 9;	AGD	56	293200	6252700	Open site	Valid	Artefact : -	Open Camp Site	1345,98435
	<u>Contact</u>	<u>Recorders</u>	Mary Dallas Consulting Archaeologists (MDCA)					<u>Permits</u>		
45-6-1777	Lec10;	AGD	56	293180	6253070	Open site	Valid	Artefact : -	Open Camp Site	1345,97496,98 435,99352
	<u>Contact</u>	<u>Recorders</u>	Mary Dallas Consulting Archaeologists (MDCA)					<u>Permits</u>	1586,2056	
45-6-1778	Lec 11;	AGD	56	293300	6252820	Open site	Valid	Artefact : -	Open Camp Site	1345,98435
	<u>Contact</u>	<u>Recorders</u>	Mary Dallas Consulting Archaeologists (MDCA)					<u>Permits</u>		
45-6-1779	Lec 12;	AGD	56	293300	6252850	Open site	Valid	Artefact : -	Open Camp Site	1345,98435,99 352
	<u>Contact</u>	<u>Recorders</u>	Mary Dallas Consulting Archaeologists (MDCA)					<u>Permits</u>	2056	
45-5-0214	Kemps Creek;	AGD	56	296100	6248300	Open site	Valid	Artefact : -	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	Ms.Laila Haglund					<u>Permits</u>		
45-5-0215	South Creek	AGD	56	293800	6249900	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	362
	<u>Contact</u>	<u>Recorders</u>	Ms.Laila Haglund					<u>Permits</u>		
45-5-0496	Fleurs1 Fleurs Radio Telescope	AGD	56	293750	6250730	Open site	Valid	Artefact : -	Open Camp Site	961,1018,9843 5
	<u>Contact</u>	<u>Recorders</u>	University of Sydney					<u>Permits</u>		
45-5-3058	EV1	AGD	56	295751	6254547	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Jim Wheeler					<u>Permits</u>		
45-5-3028	EPTA3	AGD	56	294160	6254370	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>	2188	
45-5-3029	EPTA4	AGD	56	294850	6253540	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>	2188	
45-5-3030	EPTA5	AGD	56	295170	6253570	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>	2188	
45-5-3031	EPTA6	AGD	56	295210	6253410	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>	2188	
45-5-3032	EPTA10	AGD	56	293580	6253610	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>	2188	
45-5-3033	EPTA11	AGD	56	293340	6253690	Open site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 02/11/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : ESR Kemps Ck 7km

Client Service ID : 546950

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-3034	EP-1 1	AGD	56	295260	6253400	Open site	Valid	Artefact : -	2188	
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>	2188	
45-5-3035	EP-1 2	AGD	56	295190	6253500	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>	2188	
45-5-3036	EP-1 3	AGD	56	295240	6253710	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>	2188	
45-5-3095	PGH3	GDA	56	299004	6254512	Open site	Valid	Artefact : 2		103366
	<u>Contact</u> T Russell	<u>Recorders</u>						<u>Permits</u>		
45-5-2991	TCE 1	AGD	56	293300	6252700	Open site	Valid	Artefact : -		99352
	<u>Contact</u> T Russell	<u>Recorders</u>						<u>Permits</u>	2056	
45-5-4102	Kemps Creek IF1	GDA	56	295565	6253701	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4103	Kemps Creeks IF2	GDA	56	294737	6254040	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4104	Kemps Creek (logosoc1)	GDA	56	295307	6254094	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4105	Kemps Creek (logosoc2)	GDA	56	295265	6254066	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4525	Oakdale South IF2	GDA	56	297566	6254552	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4526	Oakdale South AS2	GDA	56	297513	6254618	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4527	Oakdale South IF1	GDA	56	297516	6254817	Open site	Valid	Artefact : -		104331
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4528	Oakdale South AS3	GDA	56	297508	6254390	Open site	Valid	Artefact : -		104331
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4529	Oakdale South AS4	GDA	56	297190	6253944	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4947	Oakdale South AS5	GDA	56	297775	6254796	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4948	Oakdale South IF3	GDA	56	297752	6254842	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		

Report generated by AHIMS Web Service on 02/11/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : ESR Kemps Ck 7km

Client Service ID : 546950

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-5104	PAD 2	GDA	56	294516	6249243	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd, Miss. Jasmine Fenyvesi							<u>Permits</u>
45-5-5133	Oakdale West 18 Isolated Find 01	GDA	56	296303	6254317	Open site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont, Artefact - Cultural Heritage Ma							<u>Permits</u>
45-5-5134	Oakdale West 18 Artefact Scatter 02	GDA	56	296886	6254515	Open site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont, Artefact - Cultural Heritage Ma							<u>Permits</u>
45-5-5135	Oakdale West 18 Artefact Scatter 03	GDA	56	296777	6254242	Open site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont, Artefact - Cultural Heritage Ma							<u>Permits</u>
45-5-5136	Oakdale West 18 Isolated Find 02	GDA	56	296659	6254589	Closed site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont, Artefact - Cultural Heritage Ma							<u>Permits</u>
45-5-5137	Oakdale West 18 Artefact Scatter 01	GDA	56	297167	6254820	Closed site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont, Artefact - Cultural Heritage Ma							<u>Permits</u>
45-5-5187	MSP-01	GDA	56	294210	6254558	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Biosis Pty Ltd - Wollongong, Mrs. Samantha Keats							<u>Permits</u>
45-5-5188	MSP-02	GDA	56	293594	6253823	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Biosis Pty Ltd - Wollongong, Mrs. Samantha Keats							<u>Permits</u>
45-5-5189	MSP-03	GDA	56	293501	6253805	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Biosis Pty Ltd - Wollongong, Mrs. Samantha Keats							<u>Permits</u>
45-5-5190	MSP-04	GDA	56	293580	6253610	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Biosis Pty Ltd - Wollongong, Mrs. Samantha Keats							<u>Permits</u>
45-5-5037	UC AS 23	GDA	56	298800	6248150	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Extent Heritage Pty Ltd - Pyrmont - Individual users, Ms. Fenella Atkinson							<u>Permits</u> 4303
41-5-0014	M12-AS-04	GDA	56	294361	6250957	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Jacobs Group (Australia) Pty Ltd - Newcastle, Miss. Chelsea Jones							<u>Permits</u>
45-5-5186	Mamre Road Artefact Scatter 1901 (MAM AS1901)	GDA	56	295114	6253373	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont, Ms. Jennifer Norfolk							<u>Permits</u>
45-5-2615	Area D	AGD	56	292900	6253450	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting							<u>Permits</u> 1586

Report generated by AHIMS Web Service on 02/11/2020 for Aaron Olsen for the following area at Datum : GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : ESR Kemps Ck 7km

Client Service ID : 546950

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-3106	Kemps Creek (KC PAD 1)	AGD	56	296000	6248875	Open site	Valid	Potential Archaeological Deposit (PAD) : 1, Artefact : 1		97456,98064
	<u>Contact</u>	T Russell							<u>Permits</u>	
45-5-4374	CP AS1	GDA	56	298104	6249004	Open site	Valid	Artefact : 1		
	<u>Contact</u>				Mr.josh madden				<u>Permits</u>	
45-5-4937	M12-AS-01	GDA	56	297650	6248694	Open site	Valid	Artefact : -		
	<u>Contact</u>				Mr.Neville Baker,Sydney Water-Parramatta				<u>Permits</u>	
45-5-4749	M12 A4	GDA	56	293785	6251051	Open site	Valid	Artefact : -		
	<u>Contact</u>				Navin Officer Heritage Consultants Pty Ltd,Mrs.Nicola Hayes				<u>Permits</u>	
45-5-4767	M12 A5	GDA	56	296537	6249457	Open site	Valid	Artefact : -		
	<u>Contact</u>				Navin Officer Heritage Consultants Pty Ltd,Mrs.Nicola Hayes				<u>Permits</u>	
45-5-5330	Elizabeth Precinct Isolated Find 05 (EP IF 05)	GDA	56	293287	6249478	Open site	Valid	Artefact : -		
	<u>Contact</u>				Artefact - Cultural Heritage Management - Pyrmont,Ms.Alyce Haast				<u>Permits</u>	
45-5-5331	Elizabeth Precinct Isolated Find 04 (EP IF 04)	GDA	56	293336	6249535	Open site	Valid	Artefact : -		
	<u>Contact</u>				Artefact - Cultural Heritage Management - Pyrmont,Ms.Alyce Haast				<u>Permits</u>	
45-5-5358	OW 19 IF 2	GDA	56	296486	6254788	Open site	Destroyed	Artefact : -		
	<u>Contact</u>				Artefact - Cultural Heritage Management - Pyrmont,Artefact - Cultural Heritage Ma				<u>Permits</u>	
45-5-5359	OW 19 IF 1	GDA	56	296535	6254830	Open site	Destroyed	Artefact : -		
	<u>Contact</u>				Artefact - Cultural Heritage Management - Pyrmont,Artefact - Cultural Heritage Ma				<u>Permits</u>	
45-5-5340	MSP-05	GDA	56	294016	6254604	Open site	Valid	Artefact : -		
	<u>Contact</u>				Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats				<u>Permits</u>	
45-5-5341	MSP-06	GDA	56	294123	6254552	Open site	Valid	Artefact : -		
	<u>Contact</u>				Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats				<u>Permits</u>	
45-5-5342	MSP-07	GDA	56	294146	6254469	Open site	Valid	Artefact : -		
	<u>Contact</u>				Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats				<u>Permits</u>	
45-5-5343	MSP-08	GDA	56	294155	6254417	Open site	Valid	Artefact : -		
	<u>Contact</u>				Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats				<u>Permits</u>	
45-5-5344	MSP-09	GDA	56	294469	6253984	Open site	Valid	Artefact : -		
	<u>Contact</u>				Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats				<u>Permits</u>	
45-5-5345	MSP-10	GDA	56	294548	6253896	Open site	Valid	Artefact : -		
	<u>Contact</u>				Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats				<u>Permits</u>	
45-5-5346	MSP-11	GDA	56	293382	6254091	Open site	Valid	Artefact : -		
	<u>Contact</u>				Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats				<u>Permits</u>	

Report generated by AHIMS Web Service on 02/11/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

APPENDIX 3 – QUESTIONNAIRE

1. Cultural connection: Please describe the nature of your cultural connection to the country on which the subject area is situated. Please include any relevant cultural knowledge or knowledge of Aboriginal objects or places within the subject area. Have you ever lived in or near the subject area? If you are a Traditional Owner, please state this clearly.



2. **Representing your community members:** Please state who you or your organisation represents. Do you or your organisation represent other members of the Aboriginal community? If so, please describe how information is provided to the other members, and how their information and knowledge may be provided back to the Proponent and Urbis.



3. **Previous experience:** Please list your relevant (for example, in the area of the proposed project) previous experience in providing cultural heritage advice and survey participation.



4. **Schedule of Rates:** Please provide your Certificate of Currency including Product and Public Liability Insurance and Worker's Compensation. Please also schedule of rates (hourly/half day/day) for fieldwork participation, and include any expenses you may expect to incur, and these will be sought to be reimbursed. Please note that it is for the discretion for the Proponent to decide if they invite RAPs for site works and the consultation process does not guarantee paid employment.

Meggan Walker

From: Carolyn .H [REDACTED]
Sent: Thursday, 11 February 2021 8:19 PM
To: Andrew Crisp; Meggan Walker
Subject: Fw: ACHA Stage 2 & 3 Document - 290-308 Aldington Road, Kemps Creek (Our Ref P0028928).
Attachments: A1.PL2022.pdf; A1.WC2021.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

From: Carolyn .H [REDACTED]
Sent: Thursday, 11 February 2021 8:11 PM
To: Meggan Walker <mwalker@urbis.com.au>
Subject: Fw: ACHA Stage 2 & 3 Document - 290-308 Aldington Road, Kemps Creek (Our Ref P0028928).



INDIGENOUS SERVICES PTY LTD

Contact: Carolyn Hickey

[REDACTED]

Hi Andrew,
Please find attached the completed Questionnaire and Insurances.
A1 would like to be included in the field work.
Kind Regards
Carolyn Hickey

From: Meggan Walker <mwalker@urbis.com.au>
Sent: Friday, 15 January 2021 11:46 AM
To: Andrew Crisp <acrisp@urbis.com.au>
Cc: Balazs Hansel <bhansel@urbis.com.au>
Subject: ACHA Stage 2 & 3 Document - 290-308 Aldington Road, Kemps Creek (Our Ref P0028928).

Hello All,

Thank you for your registration for our project at 290-308 Aldington Road, Kemps Creek.
Please see the attached Stage 2 and Stage 3 letter for this project.
provide responses in writing, preferably by response email, by **5pm 12th February 2021**, to either myself or Andrew Crisp (details below):
Andrew Crisp
Urbis Pty Ltd
Senior Consultant (Archaeology)
02 8233 7642
Acrisp@urbis.com.au
Level 8/123 Pitt Street, Sydney, 2000.

Meggan Walker

From: Biamanga [REDACTED]
Sent: Tuesday, 9 February 2021 2:40 PM
To: Meggan Walker
Subject: Re: ACHA Stage 2 & 3 Document - 290-308 Aldington Road, Kemps Creek (Our Ref P0028928).

Aboriginal Cultural Heritage Assessment (ACHA) for the proposed redevelopment of 290-308 Aldington Road, Lots 11, 12 and 13 in DP 253503 at 290-308 Aldington Road, Kemps Creek, NSW

Please keep me informed on any further developments

On Fri, Jan 15, 2021 at 11:50 AM Meggan Walker <mwalker@urbis.com.au> wrote:

Hello All,

Thank you for your registration for our project at 290-308 Aldington Road, Kemps Creek.

Please see the attached Stage 2 and Stage 3 letter for this project.

provide responses in writing, preferably by response email, by **5pm 12th February 2021**, to either myself or Andrew Crisp (details below):

Andrew Crisp

Urbis Pty Ltd

Senior Consultant (Archaeology)

02 8233 7642

Acrisp@urbis.com.au

Level 8/123 Pitt Street, Sydney, 2000.

Please let us know if you have any questions or queries.

Kind regards,

MEGGAN WALKER
CONSULTANT

D +61 2 8233 7626
T +61 2 8233 9900
E mwalker@urbis.com.au

Meggan Walker

From: Goobah <goobahchts@gmail.com>
Sent: Tuesday, 19 January 2021 9:42 AM
To: Meggan Walker
Subject: Re: ACHA Stage 2 & 3 Document - 290-308 Aldington Road, Kemps Creek (Our Ref P0028928).
Attachments: Goobah Current 1 Workers Insurance Certificate of Currency (9).pdf; Goobah Current 1 GIO Business Protect Certificate of Currency GPM005192282.pdf
Follow Up Flag: Follow up
Flag Status: Flagged

Aboriginal Cultural Heritage Assessment (ACHA) for the proposed redevelopment of 290-308 Aldington Road, Kemps Creek.

This is to confirm that we support the above proposed redevelopment and also confirm that we are traditional owners, we have participated in many surveys in western and greater Sydney including {WSA} Western Sydney Airport, Mt Gilead and many more, we have attached my insurances with our rate of pay o [REDACTED] and wish to be considered for field work with the redevelopment of 290-308 Aldington Road, Kemps Creek, please confirm.

On Fri, Jan 15, 2021 at 11:50 AM Meggan Walker <mwalker@urbis.com.au> wrote:

Hello All,

Thank you for your registration for our project at 290-308 Aldington Road, Kemps Creek.

Please see the attached Stage 2 and Stage 3 letter for this project.

provide responses in writing, preferably by response email, by **5pm 12th February 2021**, to either myself or Andrew Crisp (details below):

Andrew Crisp

Urbis Pty Ltd

Senior Consultant (Archaeology)

02 8233 7642

Acrisp@urbis.com.au

Level 8/123 Pitt Street, Sydney, 2000.

Please let us know if you have any questions or queries.

Kind regards,

Meggan Walker

From: Darleen Johnson <murrabidgeemullangari@yahoo.com.au>
Sent: Tuesday, 9 February 2021 9:15 AM
To: Meggan Walker
Subject: Re: ACHA Stage 2 & 3 Document - 290-308 Aldington Road, Kemps Creek (Our Ref P0028928).


Follow Up Flag: Follow up
Flag Status: Flagged

Hi Meggan
I have read the project information and methodology for the above project, I endorse the recommendations made.
Kind regards
Ryan Johnson
[REDACTED]

On Friday, 15 January 2021, 11:56:05 am AEDT, Meggan Walker <mwalker@urbis.com.au> wrote:

Hello all,

Please see the below.

The email attachment was too large for your inbox, so please find the stage 2 and 3 document available for download here:  [P0028928_KempsCreek_Stage2.3_20210115_Reduced.pdf](#)

Please let us know if you have any issues with access, and please provide comments on the Stage 2 and 3 document by **COB 12th February 2021**.

Kind regards,

MEGGAN WALKER
CONSULTANT

D +61 2 8233 7626
T +61 2 8233 9900
E mwalker@urbis.com.au

**SHAPING
CITIES AND
COMMUNITIES**



ANGEL PLACE, LEVEL 8, 123 PITT STREET
SYDNEY, NSW 2000, AUSTRALIA

Meggan Walker

From: Murramarang <murramarangchts@gmail.com>
Sent: Tuesday, 19 January 2021 1:10 PM
To: Meggan Walker
Subject: Re: ACHA Stage 2 & 3 Document - 290-308 Aldington Road, Kemps Creek (Our Ref P0028928).

Follow Up Flag: Follow up
Flag Status: Flagged

290-308 Aldington Road, Kemps Creek

This is to confirm that we support stages 2 and 3 for this project and want to be kept informed on any further developments

On Fri, Jan 15, 2021 at 11:50 AM Meggan Walker <mwalker@urbis.com.au> wrote:

Hello All,

Thank you for your registration for our project at 290-308 Aldington Road, Kemps Creek.

Please see the attached Stage 2 and Stage 3 letter for this project.

provide responses in writing, preferably by response email, by **5pm 12th February 2021**, to either myself or Andrew Crisp (details below):

Andrew Crisp

Urbis Pty Ltd

Senior Consultant (Archaeology)

02 8233 7642

Acrisp@urbis.com.au

Level 8/123 Pitt Street, Sydney, 2000.

Please let us know if you have any questions or queries.

Kind regards,

From: [Aaron Olsen](#)
Cc: [Andrew Crisp](#); [Balazs Hansel](#); [Owen Barrett](#); [Meggan Walker](#)
Bcc: ["Reception@deerubbin.org.au"](#); ["cazadirect@live.com"](#); ["James.eastwood@y7mail.com"](#); ["barkingowlcorp@gmail.com"](#); ["biamangachts@gmail.com"](#); ["clive.freeman@y7mail.com"](#); ["corroboreecorp@bigpond.com"](#); ["cullendullachts@gmail.com"](#); ["didgengunawalclan@yahoo.com.au"](#); ["goobahchts@gmail.com"](#); ["gulagachts@gmail.com"](#); ["gunjeewong@yahoo.com.au"](#); ["philipkhan.acn@live.com.au"](#); ["merrigarn@hotmail.com"](#); ["muragadi@yahoo.com.au"](#); ["murrabidgeemullangari@yahoo.com.au"](#); ["murramaragchts@gmail.com"](#); ["danny@tocomwall.com.au"](#); ["Waawaar.awaa@gmail.com"](#); ["waarlan12@outlook.com"](#); ["wurrumay@hotmail.com"](#); ["butuheritage@gmail.com"](#); ["ngambaaculturalconnections@hotmail.com"](#); ["kayla_87@hotmail.com"](#); ["yulayculturalservices@gmail.com"](#)
Subject: 290-308 Aldington Road, Kemps Creek – Aboriginal Cultural Heritage Assessment – Stage 4 – Review of Draft ACHAR and Draft ATR
Date: Thursday, 20 May 2021 10:37:00 AM
Attachments: [P0028928_ATR_D08_Compressed.pdf](#)
[P0028928_ESR_Kemps_Creek_ACHA_D06_Compressed.pdf](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)

Good morning

Thank you again for registering your interest in the above project. As part of Stage 4 of the Aboriginal Cultural Heritage Assessment (ACHA), we now provide a draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and a draft Archaeological Technical Report (ATR) for your consideration and comment. Appendices have been omitted at this stage to reduce file sizes.

You will note that parts of the draft ACHAR and draft ATR include yellow highlighted text. These sections will be amended after completion of Stage 4 of the ACHA process.

Please provide any comments in relation to the draft ACHAR and draft ATR by **17 June 2021** to:

Andrew Crisp
Senior Consultant
Urbis Pty Ltd
Level 8, 123 Pitt Street
Sydney NSW 2000
E: acrisp@urbis.com.au
P: 02 8233 7642

If you have any questions in the meantime, please let us know.

Kind regards

AARON OLSEN
CONSULTANT

D +61 2 8233 9957
T +61 2 8233 9900
E aolsen@urbis.com.au

**SHAPING
CITIES AND
COMMUNITIES**



ANGEL PLACE, LEVEL 8, 123 PITT STREET
SYDNEY, NSW 2000, AUSTRALIA

Our highest priority is the health and wellbeing of our people, clients and community. [Click here to read Urbis' response to COVID-19.](#)

This email and any files transmitted are for the intended recipient's use only. It contains information which may be confidential and/or protected by copyright. Any personal information in this email must be handled in accordance with the *Privacy Act 1988 (Cth)*. If you have received this email by mistake, please notify the sender and permanently delete the email. Any confidentiality or copyright is not waived or lost because this email has been sent to you by mistake.

Meggan Walker

From: Aaron Olsen
Sent: Tuesday, 15 June 2021 4:42 PM
To: Andrew Crisp
Cc: Owen Barrett
Subject: FW: 290-308 Aldington Road, Kemps Creek – Aboriginal Cultural Heritage Assessment – Stage 4 – Review of Draft ACHAR and Draft ATR

AARON OLSEN
CONSULTANT

D +61 2 8233 9957
T +61 2 8233 9900
E aolsen@urbis.com.au

**SHAPING
CITIES AND
COMMUNITIES**



ANGEL PLACE, LEVEL 8, 123 PITT STREET
SYDNEY, NSW 2000, AUSTRALIA

Our highest priority is the health and wellbeing of our people, clients and community. [Click here to read Urbis' response to COVID-19.](#)

This email and any files transmitted are for the intended recipient's use only. It contains information which may be confidential and/or protected by copyright. Any personal information in this email must be handled in accordance with the Privacy Act 1988 (Cth). If you have received this email by mistake, please notify the sender and permanently delete the email. Any confidentiality or copyright is not waived or lost because this email has been sent to you by mistake.

From: philip khan <philipkhan.acn@live.com.au>
Sent: Tuesday, 15 June 2021 12:26 PM
To: Aaron Olsen <aolsen@urbis.com.au>
Subject: Re: 290-308 Aldington Road, Kemps Creek – Aboriginal Cultural Heritage Assessment – Stage 4 – Review of Draft ACHAR and Draft ATR

Dear Aaron,

Thank you for your ACHA for 290- 308 Aldington Road, Kemps Creek, us Aboriginal people have walked this land for tens of thousands of years and we continue to do so today. We hold a deep connection to the land, skies and water

ways. We would like to agree to your recommendations, will there be an interpretation plan for this project?, we look forward to working alongside you on this project.

Kind Regards

Kadibulla Khan



From: Aaron Olsen <aolsen@urbis.com.au>

Sent: Thursday, 20 May 2021 10:37 AM

Cc: Andrew Crisp <acrisp@urbis.com.au>; Balazs Hansel <bhansel@urbis.com.au>; Owen Barrett <obarrett@urbis.com.au>; Meggan Walker <mwalker@urbis.com.au>

Subject: 290-308 Aldington Road, Kemps Creek – Aboriginal Cultural Heritage Assessment – Stage 4 – Review of Draft ACHAR and Draft ATR

Good morning

Thank you again for registering your interest in the above project. As part of Stage 4 of the Aboriginal Cultural Heritage Assessment (ACHA), we now provide a draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and a draft Archaeological Technical Report (ATR) for your consideration and comment. Appendices have been omitted at this stage to reduce file sizes.

You will note that parts of the draft ACHAR and draft ATR include yellow highlighted text. These sections will be amended after completion of Stage 4 of the ACHA process.

Please provide any comments in relation to the draft ACHAR and draft ATR by **17 June 2021** to:

Andrew Crisp
Senior Consultant
Urbis Pty Ltd
Level 8, 123 Pitt Street
Sydney NSW 2000
E: acrisp@urbis.com.au
P: 02 8233 7642

If you have any questions in the meantime, please let us know.

Kind regards

AARON OLSEN
CONSULTANT

D +61 2 8233 9957
T +61 2 8233 9900

E aolsen@urbis.com.au

**SHAPING
CITIES AND
COMMUNITIES**



ANGEL PLACE, LEVEL 8, 123 PITT STREET
SYDNEY, NSW 2000, AUSTRALIA

Our highest priority is the health and wellbeing of our people, clients and community. [Click here to read Urbis' response to COVID-19.](#)

This email and any files transmitted are for the intended recipient's use only. It contains information which may be confidential and/or protected by copyright. Any personal information in this email must be handled in accordance with the Privacy Act 1988 (Cth). If you have received this email by mistake, please notify the sender and permanently delete the email. Any confidentiality or copyright is not waived or lost because this email has been sent to you by mistake.

APPENDIX D

ARCHAEOLOGICAL TECHNICAL REPORT

The logo for URBIS, featuring the word "URBIS" in a bold, white, sans-serif font. The text is positioned to the left of a white square frame that is partially open on the right side. A white line extends from the top of the frame, running horizontally across the top of the page.

URBIS

ARCHAEOLOGICAL TECHNICAL REPORT

290-308 Aldington Road, 59-62 and
63 Abbots Road, Kemps Creek

Prepared for
ESR AUSTRALIA
12 April 2022

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Associate Director	Balazs Hansel, MA Archaeology, MA History
Senior Consultant	Andrew Crisp, BA Archaeology (Hons), M. ICOMOS
Consultant	Owen Barrett, BA Archaeology and Paleoanthropology
Project Code	P0028928
Report Number	Final Issued 12 April 2022

Urbis acknowledges the important contribution that Aboriginal and Torres Strait Islander people make in creating a strong and vibrant Australian society.

We acknowledge, in each of our offices, the Traditional Owners on whose land we stand.

All information supplied to Urbis in order to conduct this research has been treated in the strictest confidence. It shall only be used in this context and shall not be made available to third parties without client authorisation. Confidential information has been stored securely and data provided by respondents, as well as their identity, has been treated in the strictest confidence and all assurance given to respondents have been and shall be fulfilled.

© Urbis Pty Ltd
50 105 256 228

All Rights Reserved. No material may be reproduced without prior permission.

You must read the important disclaimer appearing within the body of this report.

urbis.com.au

CONTENTS

Executive Summary.....	1
Introduction and Background	4
1.1. Project Background.....	4
1.2. Proposed Development	4
1.3. Objectives and Requirements of this Report	8
1.4. Aboriginal Community Consultation.....	11
1.5. Personnel and Authorship	12
2. Environmental Context	14
2.1. Overview of Environment.....	14
3. Archaeological Context	16
4. Predictive Model	17
5. Fieldwork Aims and Procedures	22
5.1. Research Methodology	22
5.2. Test Excavation Methodology.....	23
5.2.1. Proposed Test Excavation Stage 1	24
5.2.2. Test Excavation Stage 2.....	24
5.2.3. General Procedures	24
6. Results	28
6.1. Overview	28
6.1.1. Archaeological Survey Results.....	28
6.1.2. Survey Unit 1	29
6.1.3. Survey Unit 2	31
6.1.4. Survey Unit 3	32
6.1.5. Survey Unit 4	34
6.1.6. Test Excavation Results	38
6.1.6.1. Area 1	44
6.1.6.2. Area 2	45
6.1.6.3. Area 3	47
6.1.6.4. Area 4	49
6.1.6.5. Area 5	50
6.1.6.6. Area 6	51
6.1.7. Soils and Disturbance.....	53
7. Analysis and Discussion.....	54
7.1. Artefact Analysis	54
7.2. Significance Assessment.....	64
7.2.1. Scientific Significance.....	64
7.2.1.1. Isolated Find 01	64
7.2.1.2. Isolated Find 02	64
7.2.1.3. Isolated Find 03	64
7.2.1.4. Aldington Road Subsurface Assemblage.....	64
7.3. Impact Assessment.....	65
7.4. Management and Mitigation	65
7.4.1. Surface Collection	65
7.4.2. Repatriation or Deposition in Keeping Place.....	65
8. Conclusions and Recommendations	66
9. References	69
Disclaimer.....	70

Appendix A	Basic and Extensive AHIMS Search Results
Appendix B	Pit and Spit Register
Appendix C	Artefact Catalogue

FIGURES

Figure 1 – Regional location.....	5
Figure 2 – Subject area	6
Figure 3 – Concept masterplan for subject area	7
Figure 4 – Landforms.....	15
Figure 5 - Subject area (red polygon) with identified surface artefact locations (stars), areas of identified high disturbance (red), drainage line/open depression (blue), ridge (purple) and simple slope (green). A systematic grid of test pits will be established at 20m intervals along each indicative transect (white).	23
Figure 6 – View east from rear of dwelling.	30
Figure 7 – Dwelling on crest.	30
Figure 8 – View west down crest toward poultry farm.	30
Figure 9 – View from eastern end of crest down onto poultry farm.....	30
Figure 10 – Indicative shot of poultry farm.	30
Figure 11 – View west along hill slope to west and north of poultry farm.	30
Figure 12 – View south across SU2.	31
Figure 13 – View east across SU2.	31
Figure 14 – Crest, slope and open depression landforms within SU2.	31
Figure 15 – View south-west over large dam.	31
Figure 16 – Indicative shot of open depression/drainage line.....	32
Figure 17 – View of limited exposure adjacent to dam.....	32
Figure 18 – Indicative shot of current height and density of sugar cane crop in SU3.....	32
Figure 19 – Indicative level and type of exposure within SU3.....	32
Figure 20 – View north from SU3 across SU2 and SU1.	33
Figure 21 – View south from northern crest to southern crest in SU3.	33
Figure 22 – Location of IF-1 in vehicle track on crest.....	33
Figure 23 – IF-1 proximal flake fragment (grey silcrete).....	33
Figure 24 – Indicative shot of exposure along vehicle access track	33
Figure 25 – General location of IF-2 and IF-3 on access track to south of SU4	33
Figure 26 – IF-2 angular fragment (grey silcrete).....	34
Figure 27 – IF-3 medial flake fragment (grey silcrete).....	34
Figure 28 – Indicative shot of dwelling from rear. Aspect north-west.....	34
Figure 29 – View of dam on north side of driveway	34
Figure 30 – Hardstand area.....	35
Figure 31 – View south-east along driveway.....	35
Figure 32 – View of dam on north side of driveway	35
Figure 33 – Indicative view of southern portion of SU4.....	35
Figure 34 – Survey Tracks.....	36
Figure 35 – Survey Units	37
Figure 36 – Test Excavation Transects Overview	39
Figure 37 – Transect a and Transect B	40
Figure 38 – Transects C, D, E, F, G, H, I J K and M.....	41
Figure 39 – Transect L and Transect Q.....	42
Figure 40 – Transect N, O, P R, S and T	43

Figure 41 - Area 1 view north	44
Figure 42 - Area 1 view south.....	44
Figure 43 - Test pit A6: intact soil profile.	45
Figure 44 - Test pit A9: redeposited soil and clay.	45
Figure 45 Test square B1: clayey fill to 30cm.	45
Figure 46 Test square B5: clay fill to approx. 15cm.	45
Figure 47 - Area 2 view east; spur and crest in background, test pit C1 in foreground	46
Figure 48 - Area 2 view west; test pit E6 in foreground.....	46
Figure 49 - Test pit C6.	46
Figure 50 - Test pit C5.....	46
Figure 51 - Test pit E7.	47
Figure 52 - Test pit E4	47
Figure 53 - Area 3 view west; test pit I5 in foreground	47
Figure 54 - Area 3 view south. Test pit I3 in foreground	47
Figure 55 - Test pit I7. Truncated and disturbed.	48
Figure 56 – Test pit I1. Truncated and mixed.....	48
Figure 57 - Test pit J6: Disturbed subsoil only.	48
Figure 58 - Test pit J3.....	48
Figure 59 - Area 4, northern portion, view east; test square F5 in foreground.....	49
Figure 60 - Area 4 northern portion, view south; test square D9 in foreground.	49
Figure 61 - Area 4 southern portion, view east; test square M5 in foreground.	49
Figure 62 - Area 4 southern portion, view north; test square M5 in foreground, area 4 northern portion in background.	49
Figure 63 - Area 5 view east; test square L6 in foreground.	51
Figure 64 - Area 5 view south; test square L10 in foreground.	51
Figure 65 - Area 6, view south; test square R4 in foreground.....	51
Figure 66 - Area 6, view north east; end of transect T.	51
Figure 67 -Artefact Types	55
Figure 68 – Raw Materials.....	55
Figure 69 – Artefact Distribution by Landform	55
Figure 70 – Artefact distribution by transect.....	55
Figure 71 – Artefact Distribution by Spit	55
Figure 72 – Artefact Distribution by Pit	55
Figure 73 -B1, spit 1	57
Figure 74 – B1, spit 1.....	57
Figure 75 – B5, spit 3.....	57
Figure 76 – B5, spit 3.....	57
Figure 77 – F5, spit 2.....	57
Figure 78 – F5, spit 2.....	57
Figure 79 – F7, spit 1.....	58
Figure 80 – F7, spit 1.....	58
Figure 81 – J6, spit 1	58
Figure 82 – J6, spit 1	58
Figure 83 – L5, spit 1	58
Figure 84 – L5, spit 1	58
Figure 85 – L7, spit 1	59
Figure 86 – L7, spit 1	59
Figure 87 – L9, spit 1	59
Figure 88 – L9, spit 1	59

Figure 89 – M1, spit 2	59
Figure 90 – M1, spit 2	59
Figure 91 – M1, spit 3	60
Figure 92 – M1, spit 3	60
Figure 93 – M4, spit 2	60
Figure 94 – M4, spit 2	60
Figure 95 – P6, spit 1	60
Figure 96 – P6, spit 1	60
Figure 97 – R3, spit 1	61
Figure 98 – R3, spit 1	61

TABLES

Table 1 – Code of Practice Requirements.....	9
Table 2 - Consultation summary table	11
Table 3 – Registered Aboriginal Parties (RAPs)	11
Table 4 – Test Excavation Team	13
Table 5 – Predictive Model	18
Table 6 – RAP survey attendees	28
Table 7 – Field Survey Data – Survey Coverage	29
Table 8 - Field Survey Data – Landform Summary	29
Table 9 - Test excavation artefact assemblage.....	54
Table 10 – Soil conditions for artefact locations	56
Table 11 – Impacts to identified Aboriginal Sites within the subject area	65

EXECUTIVE SUMMARY

This Archaeological Technical Report (ATR) has been prepared to accompany a detailed Aboriginal Cultural Heritage Assessment (ACHA) which forms part of the Environmental Impact Assessment (EIS) for a State Significant Development (SSD) application 9080531. This assessment has been prepared by Urbis on behalf of ESR Australia (the proponent).

The SSD application is for the construction of a logistics park for Lots 11, 12 and 13 in DP 253503 at 290-308 Aldington Road, as well as 59-62 and 63 Abbots Road, Kemps Creek, NSW (hereafter referred as the 'subject area'). The ACHA informed the preparation of the present Aboriginal Cultural Heritage Assessment Report (ACHAR), which will accompany the SSD application. This Archaeological Technical Report (ATR) has been prepared to accompany the ACHAR.

Following the preparation of the ACHAR and the field survey undertaken on 16th February 2021, test excavation was deemed prudent for the subject area. This decision was based on the presence of Aboriginal artefacts observed within an exposed vehicle track and undisturbed landforms in proximity to freshwater.

This ATR is intended to detail the methodology and results of test excavation. Refer to Section 1.2 of the ACHAR for detailed information regarding the proposed development at the subject area.

This ATR has been prepared in accordance with the following statutory guidelines:

- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (Office of Environment and Heritage 2011) (the Assessment Guidelines).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010) (CoP).

Test excavation was conducted from Monday 19th April 2021 to Monday 3rd May 2021 covering a variety of landforms with the aim of testing these landscape features for any potential sub-surface archaeological deposits.

Test excavation was undertaken in line with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010) to understand the nature, extent, integrity and research significance of the Aboriginal archaeological resource. The test excavation also aimed to sample the various landscape features for any potential sub-surface archaeological deposits.

The test excavation included:

- The Stage 1 of testing including the excavation of up to 171 (one hundred and seventy-one) 50 cm by 50 cm test pits in a systematic transect system at a spacing of 10m or 20m. The location of the test pits was informed by the results of the archaeological survey and the predictive model of the ACHAR.
- All excavated material was wet sieved through a 5mm metal sieve station.

In total, 171 test pits were excavated from 20 transects (Transect A – Transect T) across all landform types within the subject area to provide a comprehensive sample.

The test excavation identified low density subsurface Aboriginal archaeological deposits (13 artefacts from 12 test pits).

The predictive model formulated for the ACHAR (see Section 2.7 of ACHA) anticipated that artefact scatters, PADs and isolated finds had moderate-high potential to occur in areas of low historical ground disturbance, on the basis of the distribution of artefact sites in the region as well as the landscape features present – including elevated ground/terraces associated with waterways and crests/spurs.

The results of the test excavation confirmed:

- Altogether, thirteen (13) artefacts were recovered during the test excavation programme.
- The presence of a low density, background scatter suggests a transitional, low frequency use of the subject area by Aboriginal people, including lower slopes, terraces adjacent to waterways, spurs and ridge crests.
- The very small artefact assemblage provides limited information on the artefact production process that might have taken place in the area.

- While the subject area was clearly utilised by Aboriginal people in the past, the results of the test excavation suggest it was likely to have been in a transitional manner, with no focus of intensive or repeated occupation.
- Test excavations also revealed that if archaeological deposits had been present in areas of high disturbance and/or erosion, post depositional processes may have removed or dispersed the archaeological evidence.
- The scientific significance of the subject area is determined to be low, based on the presence of a low-density subsurface assemblage of common artefact types for the Cumberland Plain (flakes, debitage, broken core and blades) produced from local silcrete resources and associated with landforms consisted with predictive model (terraces adjacent to water sources, lower hill slopes, spurs and crests).
- The subject area has been assessed as containing high cultural value to local Aboriginal communities on the basis of the deep connection Aboriginal people hold with the land and broader environment.
- The subject area has been assessed as possessing low historical value due to lack of historical connections.
- The subject area is considered to have moderate aesthetic value due to impacts caused by farming and pastoral activities within the study area.

Following the results of the test excavation program it is anticipated that the proposed works will result in direct harm to subsurface Aboriginal archaeological deposits which constitutes a low scientific and moderate cultural significant site(s).

The project can proceed in accordance with the following recommendations:

Recommendation 1 – Surface Collection

Following SSDA approval and prior to construction, surface collection of identified artefacts IF1, IF2 and IF3 must be undertaken in accordance with the Code of Practice and with the involvement of the Registered Aboriginal Parties.

- Isolated Find 01 (IF-1) – proximal flake fragment (grey silcrete) (33°51'33.5"S, 150°47'57.7"E)
- Isolated Find 02 (IF-2) – angular fragment (grey silcrete) (33°51'28.6"S, 150°47'47.2"E)
- Isolated Find 03 (IF-3) – medial flake fragment (grey silcrete) (33°51'30"S, 150°47'47.9"E)

No further subsurface archaeological excavation is warranted.

Recommendation 2 – Aboriginal Cultural Heritage Induction

It is recommended that induction materials be prepared in consultation with the Registered Aboriginal Parties (RAPs) for inclusion in the construction management plan and site inductions for any contractors working at the subject area. The induction material should include an overview of the types of sites and artefacts to be aware of (i.e. stone tools), under the NPW Act, and the requirements of an 'archaeological chance find procedure' (refer below). This should be prepared for the project and included in any site management plans.

The induction material may be paper based, included in any hard copy site management documents; or electronic, such as "PowerPoint" for any face-to-face site inductions.

Recommendation 3 – Archaeological Chance Find Procedure

Although considered highly unlikely, should any Aboriginal objects, archaeological deposits be uncovered during any site works, a Chance Find Procedure must be implemented. The following steps must be carried out:

1. All works stop in the vicinity of the find. The find must not be moved 'out of the way' without assessment.
2. The archaeologist and Aboriginal representative on site examine the find, provides a preliminary assessment of significance, records the item for the AHIMS register and decides on appropriate management. Such management may require further consultation with the Aboriginal Cultural Heritage Regulation Branch of the Department of Premier and Cabinet (DPC), preparation of a research design and archaeological investigation/salvage methodology and decision on temporary care and control.
3. Depending on the significance of the find, reassessment of the archaeological potential of the subject area may be required, and further archaeological investigation undertaken.

4. Reporting may need to be prepared regarding the find and approved management strategies. Any such documentation should be appended to this assessment and revised accordingly.
5. Works in the vicinity of the find can only recommence when all management measures are implemented, and the find is removed from the activity area. Should the find be an unmovable item such as an engraving or grinding groove located on a sandstone surface, further management measures will need to be introduced to avoid harm to the find.

Recommendation 4 – Human Remains Procedure

In the unlikely event that human remains are uncovered during any site works, the following must be undertaken:

1. All works within the vicinity of the find immediately stop.
2. Site supervisor or other nominated manager must notify the NSW Police and DPC.
3. The find must be assessed by the NSW Police, and may include the assistance of a qualified forensic anthropologist.
4. Management recommendations are to be formulated by the Police, DPC and site representatives.
5. Works are not to recommence until the find has been appropriately managed.

INTRODUCTION AND BACKGROUND

1.1. PROJECT BACKGROUND

Urbis was engaged by ESR Australia (the Proponent) to undertake an Aboriginal Cultural Heritage Assessment (ACHA) for Lots 11, 12 and 13 in DP 253503 at 290-308 Aldington Road, as well as 59-62 and 63 Abbots Road, Kemps Creek, NSW (hereafter referred as the 'subject area'). The ACHA informed the preparation of the present Aboriginal Cultural Heritage Assessment Report (ACHAR), which will accompany State Significant Development (SSD) application 9080531 for a warehousing and distribution centre within the subject area to be known as Westlink Logistics Park. This Archaeological Technical Report (ATR) has been prepared to accompany the ACHAR.

The subject area is located within the City of Penrith Local Government Area (LGA), approximately 37km west of the Sydney CBD (Figure 1 and Figure 2). It is approximately 32ha and is situated approximately 900m east of Kemps Creek on the west-facing slopes of the valley associated with that waterway. The subject area is currently utilised for agricultural purposes and includes dwellings, agricultural sheds, dams, fencing and other farm improvements.

It is bound on all sides by semi-rural properties. The north-west corner of the subject area has frontages to Aldington Road and Abbots Road

1.2. PROPOSED DEVELOPMENT

The Proponent is proposing to redevelop the subject area to provide a logistics park with 5 lots of warehouse and ancillary office floorspace (Figure 3).

Site preparatory works include:

- Demolition and clearing of all existing built form structures and vegetation;
- Bulk earthworks including 'cut and fill' to create flat development platforms for the proposed buildings, and topsoiling, grassing and site stabilisation works;
- Subdivision of the site into 5 individual allotments.
- Construction of a new industrial estate comprising 6 warehouses and a total GFA of 150,577m², including 144,482m² of warehousing floorspace and 5,895m² of ancillary office floorspace
- 1 new on-site retail cafe building comprising 200m² of floorspace;
- Construction of a new internal road layout and parking for 658 vehicles;
- Associated site servicing works and ancillary facilities, including OSD detention basin;
- Associated site landscaping; and
- Works-in-kind (WIK) arrangements through a Voluntary Planning Agreement (VPA) for external road upgrades including to Aldington Road and Abbots Road, and a new signalised intersection at Mamre Road and Abbots Road.

This ATR is intended to detail the methodology and results of excavations at the subject area. Refer to Section 1.2 of the ACHA for detailed information regarding the proposed development at the subject area.

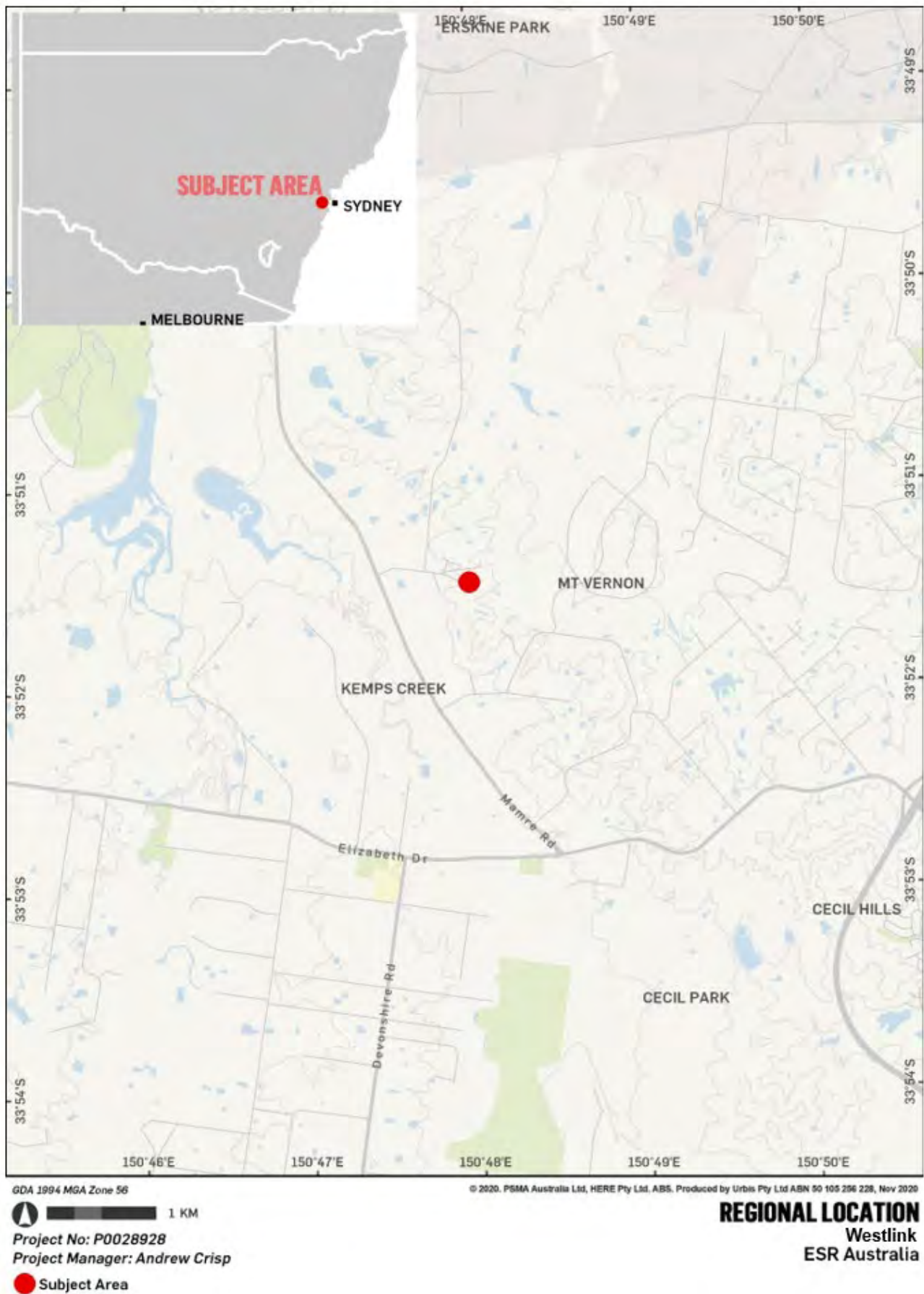


Figure 1 – Regional location



GDA 1994 MGA Zone 56

© 2020, PSMA Australia Ltd, HERE Pty Ltd, ABS. Produced by Urbis Pty Ltd ABN 50 105 256 228, Nov 2020



Project No: P0028928

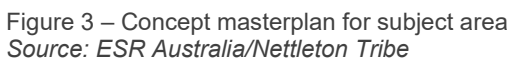
Project Manager: Andrew Crisp

 Subject Area — Contours Hydrology

LOCATION OF THE SUBJECT AREA

Westlink
ESR Australia

Figure 2 – Subject area



1.3. OBJECTIVES AND REQUIREMENTS OF THIS REPORT

This ATR has been prepared in accordance with the following statutory guidelines:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (Department of Environment, Climate Change and Water (DECCW), 2010) (the Consultation Guidelines).
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (Office of Environment and Heritage 2011) (the Assessment Guidelines).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010) (the Code of Practice).
- *The Australia ICOMOS Charter for Places of Cultural Significance, The Burra Charter, 2013* (Burra Charter).

This ATR has been prepared to address the following objectives:

- Investigate the nature, spatial and stratigraphical extent, condition and integrity of any archaeological deposits that may be present.
- If archaeological deposits are identified, apply relevant research questions to interpret the finds and results in context of local and regional archaeological modelling.

This report complies with the requirements of the Code of Practice. Please refer to Table 1 for details on where each requirement is met. Please note, the below table refers to sections of the accompanying ACHAR for some requirements. Where this is the case, the ACHAR provides a more detailed overview of the requirement, which will be summarised within this ATR. The relevant sections of both the ACHAR and the present ATR are indicated.

Table 1 – Code of Practice Requirements

Requirement	ATR
1 – Review previous archaeological work	ACHAR Section 2.1 ATR Section 3
2 – Review the Landscape Context	ACHAR Section 2.2 ATR Section 2
3 – Summarise and discuss the local and regional character of Aboriginal land use and its material traces.	ACHAR Section 2.1.1 – 2.1.2 ATR Section 3
4 – Predict the nature and distribution of evidence	ACHAR Section 2.4 ATR Section 4
5 – Archaeological Survey	ACHAR Section 2.7 ATR Section 6.1.1 – 6.1.5
6 – Site definition	ATR Section 7.1 & Appendix C
7 – Site recording	ATR Section 7.1 & Appendix C
8 – Location information and geographic reporting	ATR Section 7.1 & Appendix C
9 – Record survey coverage data	ACHAR Section 2.7 ATR Section 6.1.1
10 – Analyse survey coverage	ACHAR Section 2.7 ATR Section 6.1.1
11 – Archaeological Report content and format	The ACHAR and ATR have been formatted in accordance with the requirements of the Code of Practice.
12 – Records	Records have been stored and will be made available upon request.
13 – Notifying DECCW and reporting	This assessment has complied with the Code of Practice. Urbis will provide all information on request.
14 – Test Excavation which is not excluded from the definition of harm	No excavation was undertaken in any of the identified areas or exclusion zones.

Requirement	ATR
15 – Pre-Conditions to carrying out Test excavation.	Urbis has complied with all requirements for notification, strategy and consultation prior to commencing excavation.
16 – Test excavation that can be carried out in accordance with this code.	Test excavation was undertaken in accordance with the requirements of the Code of Practice. Management protocols for objects uncovered are in accordance with the protocols.
17 – When to stop test excavation.	Test excavation was ceased following the testing of an adequate sample of the subject area.
18 – Artefact recording.	Artefact recording complies with the requirements of the Code of Practice.
19 – Attribute recording	Attribute recording complies with the requirements of the Code of Practice.
20 – Photography and drawing	All photos and section drawings available on request.

1.4. ABORIGINAL COMMUNITY CONSULTATION

Consultation with Aboriginal community was undertaken in accordance with the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Department of Environment, Climate Change and Water (DECCW), 2010) (the Consultation Guidelines) as part of the ACHA process. A brief summary of the consultation to date is included in Table 2 below. Full details of the consultation process followed is included in Section 3 of the accompanying ACHA.

Table 2 - Consultation summary table

Stage	Date commenced	Date completed	Comment
1.1	2 November 2020	2 November 2020	The search identified the subject area as freehold tenure, which extinguishes Native Title.
1.2	6 November 2020	3 December 2020	A total of 61 Aboriginal groups and individuals with a potential interest in the subject area were identified.
1.3	4 December 2020	31 December 2020	A total of 24 groups registered interested in the project (see Table 3 below).
1.6	18 January 2021	18 January 2021	A list of all Registered Aboriginal Parties (RAPs) was provided to the DPC and Deerubbin Local Aboriginal Land Council.
2	15 January 2021	15 January 2021	An information pack, which included a brief introduction to the project, the project location, and AHIMS search result to provide understanding of the registered cultural sites in the local area, was sent to all RAPs via email.
3	15 January 2021	12 February 2021	Five responses were received to the Stage 2 information pack. The response are included in the ACHAR.
4	20 May 2021	17 June 2021	One response was received to the Stage 4 draft ACHAR. The response are included in the final ACHAR.

The Registered Aboriginal Parties (RAPs) for the project are listed in Table 3 below.

Table 3 – Registered Aboriginal Parties (RAPs)

Name	Contact
Deerubbin Local Aboriginal Land Council	Kevin Cavanagh
A1 Indigenous Services	Carolyn Hickey
Aragung Aboriginal Cultural Heritage Site Assessments	Jamie Eastwood
Barking Owl Aboriginal Corporation	Jody Kulakowski
Biamanga	Janaya Smith

Name	Contact
Clive Freeman	Clive Freeman
Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson
Cullendulla	Corey Smith
Didge Ngunawal Clan	Lillie Carroll & Paul Boyd
Goobah Developments	Basil Smith
Gulaga	Wendy Smith
Gunjeewong Cultural Heritage Aboriginal Corporation	Cherie Carroll Turrisse
Kamilaroi Yankuntjatjara Working Group	Phil Khan
Merrigarn	Shaun Carroll
Muragadi Heritage Indigenous Corporation	Jesse Johnson
Murra Bidgee Mullangari Aboriginal Corporation	Darleen Johnson & Ryan Johnson
Murramarang	Roxanne Smith
Tocomwall	Danny Franks
Waawaar Awaa Aboriginal Corporation	Rodney Gunther
Wailwan Aboriginal Group	Philip Boney
Wurrumay Pty Ltd	Vicky Slater
Butucarbin Aboriginal Corporation	Lowanna Gibson
Ngambaa Cultural Connections	Kaarina Slater
Woronora Platwau Gundangara Elders Council	Kayla Williamson

1.5. PERSONNEL AND AUTHORSHIP

This ATR has been prepared by Owen Barrett, Urbis Consultant Archaeologist, and Andrew Crisp, Urbis Senior Archaeologist. Review and quality control were undertaken by Balazs Hansel, Urbis Associate Director Archaeology.

Owen Barrett holds a Bachelor of Arts (Archaeology and Paleoanthropology) from the University of New England. Andrew Crisp holds a Bachelor of Arts (Honours - First Class in Archaeology) from the University of Sydney. Balazs Hansel holds a Masters (History) from the University of Szeged in addition to Masters (Archaeology and Museum Studies) from the University of Szeged and is currently completing a PhD (Archaeology) at the University of Sydney.

The personnel involved in the test excavation team are listed in Table 4.

Table 4 – Test Excavation Team

Name	Organisation	Role
Andrew Crisp	Urbis	Excavation Director
Meggan Walker	Urbis	Archaeologist & Recording
Owen Barrett	Urbis	Archaeologist & Recording
Aaron Olsen	Urbis	Archaeologist & Recording
Sam Richards	Urbis	Archaeologist
Jamie Currell	Kamilaroi Yankuntjatjara Working Group	Cultural Heritage Officer
Grant Fenton	Kamilaroi Yankuntjatjara Working Group	Cultural Heritage Officer
Tyrone Pol	Kamilaroi Yankuntjatjara Working Group	Cultural Heritage Officer
Kadibulla Kahn	Kamilaroi Yankuntjatjara Working Group	Cultural Heritage Officer
Stefanie Naiker	Kamilaroi Yankuntjatjara Working Group	Cultural Heritage Officer
Adam Gunther	Kamilaroi Yankuntjatjara Working Group	Cultural Heritage Officer
David Whitton	Kamilaroi Yankuntjatjara Working Group	Cultural Heritage Officer
Phil Boney	Wailwan Aboriginal Group	Cultural Heritage Officer
Braydon MacDougall	Wailwan Aboriginal Group	Cultural Heritage Officer
Joshua MacDougall	Wailwan Aboriginal Group	Cultural Heritage Officer
Steven Knight	Deerubbin Local Aboriginal Land Council	Cultural Heritage Officer

2. ENVIRONMENTAL CONTEXT

2.1. OVERVIEW OF ENVIRONMENT

The environmental context for the study area is elaborated in section 2.2 of the accompanying ACHAR. Presented here is a summary as identifies through desktop assessment and field survey.

- The subject area is located within the Sydney Basin, upon the Cumberland Plain. The Cumberland Plain lies on Triassic shales and overlain by Hawkesbury sandstone. There are two soil landscapes identified within the subject area (Figure 13), the Luddenham soil landscape and the Blacktown soil landscape.
- The subject area includes two First Order waterways running westward from elevated ground on its eastern boundary. The confluence into a Second Order waterway is in the centre of the subject area and forms a tributary of Kemps Creek, which is located approximately 1km west of the subject area. These waterways have been dammed for agricultural purposes. The majority of the subject area is within 200m of one or more of these waterways.
- The subject area has been subjected to varying levels of disturbance associated with agricultural activities such as land clearing, ploughing and subsequent erosion, the construction of sheds and fences and extensive modification for roads, structures and dams. Section 2.3 in the ACHAR provides a detailed description of historical land use.

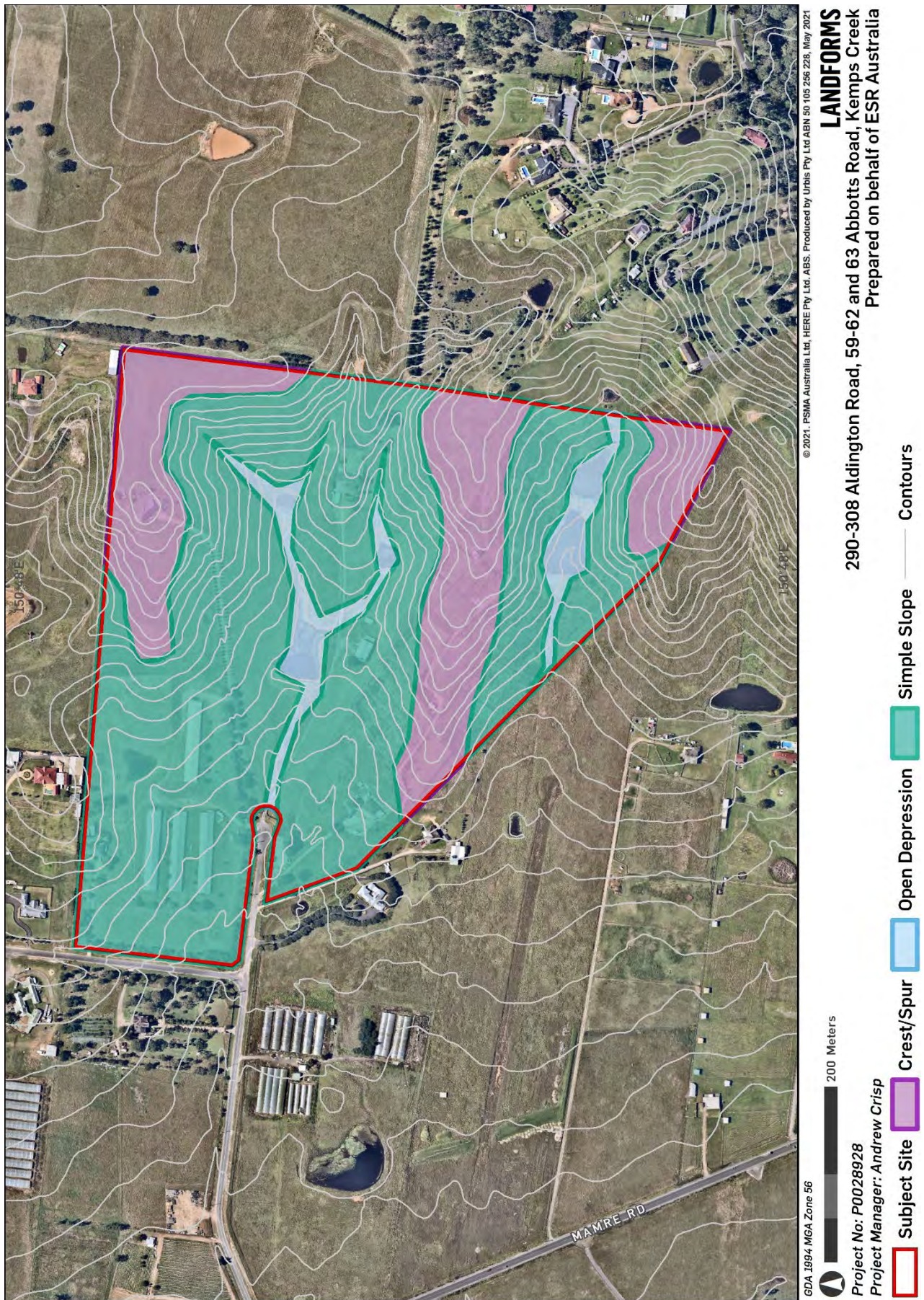


Figure 4 – Landforms

3. ARCHAEOLOGICAL CONTEXT

A detailed discussion of the archaeological context of the subject area is provided in Section 2 of the accompanying ACHAR. This includes the search of the Aboriginal Heritage Information Management System (AHIMS) previous archaeological investigations pertinent to the subject area and broader region. Presented here is a summary of the archaeological context of the subject area.

There are no identified Aboriginal sites or objects within the study area and two sites within a 1km radius. These consist of artefact scatters along a minor tributary of Ropes Creek.

A wider Extensive AHIMS search area that covers approximately 7km² identified 117 Aboriginal registered Aboriginal sites. These included grinding grooves, a modified tree, artefact scatters, isolated finds and potential archaeological deposits (PADs).

It should be noted that the AHIMS register does not represent a comprehensive list of all Aboriginal objects or sites in a specified area. It lists recorded sites identified during previous archaeological survey effort. The wider surroundings of the subject area have experienced various levels and intensity of archaeological investigations during the last few decades. Most of the registered sites have been identified through targeted, pre-development surveys for infrastructure and maintenance works, with the restrictions on extent and scope of those developments. Archaeological sites can be found across a variety of landforms in the Cumberland Plain, with greater frequency in the vicinity of waterways, lower slopes and river terraces.

4. PREDICTIVE MODEL

The following predictive model reproduced in Table 4 was developed to inform the accompanying ACHAR. For a detailed description on the development of the predictive model, refer to Section 2.4 of the accompanying ACHAR.

The predictive model took accounts for the results of the desktop study and field survey including:

- Detailed analysis of previous archaeological investigations within the same Region.
- Presence or absence of landscape features that present potential for archaeological resources (human occupation, use) such as raised terraces adjacent to a water source.
- Analysis of the geology and soil landscape within the subject area which allows for a determination to be made of the type of raw material that would have been available for artefact production (silcrete, tuff, quartz etc) and the potential for the accumulation of archaeological resource within the subject area.
- Investigation of and determination of the level of disturbance/historical land use within the subject area which may impact on or remove entirely any potential archaeological material.

In summary, due to the hydrology and archaeologically sensitive landscape features, and the identification of surface artefacts the subject area retains moderate to high potential for the presence of Aboriginal archaeological resources, isolated finds, artefact scatters and/or PADs. This informed the decision to undertake archaeological test excavation at the subject area in accordance with The Code.

Table 5 – Predictive Model

Site type	Description	Potential	Justification
Artefact Scatters/ Camp Sites	<p>Artefact scatters/camp sites represent past Aboriginal occupation and possible stone knapping activities and include archaeological remains such as stone artefacts and hearths.</p> <p>This site type usually appears as surface accumulation of stone artefacts in areas where vegetation is limited, and ground surface visibility increases. Such scatters of artefacts are also often exposed by erosion, agricultural events such as ploughing, and the creation of informal, unsealed vehicle access tracks and walking paths.</p> <p>These types of sites are often located on dry, relatively flat and elevated land along or adjacent to rivers and creeks.</p>	Moderate to high	<ul style="list-style-type: none"> ▪ The distribution of artefact sites in the region suggests that there would be archaeological potential for these site types within the subject area. ▪ The subject area contains archaeologically sensitive landforms: elevated ground and hill slopes associated with waterways. ▪ Areas of low historical ground disturbance in the subject area increase the potential that these site types would remain intact.
Isolated Finds	<p>Isolated finds represent artefactual material in singular, one off occurrences. Isolated finds are generally indicative of stone tool production, although can also include contact sites.</p> <p>Isolated finds may represent a single item discard event or be the result of limited stone knapping activity. The presence of such isolated artefacts may indicate the presence of a more extensive, in situ buried archaeological deposit, or a larger deposit obscured by low ground visibility.</p> <p>Isolated artefacts are likely to be located on landforms associated with past Aboriginal activities, such as ridgelines that would have provided ease of movement through the area, and level areas with access to water, particularly creeks and rivers.</p>	Moderate to high	<ul style="list-style-type: none"> ▪ The distribution of artefact sites in the region suggests that there would be archaeological potential for these site types within the subject area. ▪ The subject area contains archaeologically sensitive landforms: elevated ground and hill slopes associated with waterways. ▪ Areas of low historical ground disturbance in the subject area increase the potential that these site types would remain intact.

Site type	Description	Potential	Justification
PAD	<p>Potential Archaeological Deposits (or PADs) are areas where there is no surface expression of stone artefacts, but due to a landscape feature there is a strong likelihood that the area will contain buried deposits.</p> <p>Landscape features which may feature in PADs include proximity to waterways, particularly terraces and flats near Third Order and above watercourses; ridge lines, ridge tops and sand dune systems.</p>	Moderate to high	<ul style="list-style-type: none"> The distribution of artefact sites in the region suggests that there would be archaeological potential for these site types within the subject area. The subject area contains archaeologically sensitive landforms: elevated ground and hill slopes associated with waterways. Areas of low historical ground disturbance in the subject area increase the potential that these site types would remain intact.
Scarred Trees	<p>Scarred trees are the results of the stripping-off the bark by Aboriginal people for various reasons, including the construction of shelters (huts), canoes, paddles, shields, baskets and bowls, fishing lines, cloaks, torches and bedding, as well as being beaten into fibre for string bags or ornaments (sources cited in Attenbrow 2002: 113).</p> <p>The removal of bark exposes the heart wood of the tree, resulting in a scar that can heal by the regrowth of the bark or remain an exposed scar for a prolonged period. Such scars, when they occur, are typically described as scarred trees.</p> <p>These sites most often occur in areas with mature, remnant native vegetation. The locations of scarred trees often reflect an absence of historical clearance of vegetation rather than the actual pattern of scarred trees. Carved trees are different from scarred trees, and the carved designs may indicate totemic affiliation (Attenbrow 2002: 204); they may also have been carved for ceremonial purposes or as grave markers.</p>	Nil	<ul style="list-style-type: none"> Historical vegetation clearance in the subject area has removed all original trees.
Axe Grinding Grooves	Grinding grooves are the physical evidence of tool making or food processing activities undertaken by Aboriginal people. The manual rubbing of stones	Low	<ul style="list-style-type: none"> The geology within the subject area makes it highly unlikely that

Site type	Description	Potential	Justification
	<p>against other stones creates grooves in the rock; these are usually found on flat areas of abrasive rock such as sandstone.</p> <p>They may be associated with creek beds, or water sources such as rock pools in creek beds and on platforms, as water enables wet grinding to occur.</p>		<p>the exposed sandstone outcrops required for this site type would occur within the subject area.</p>
Bora/Ceremonial	<p>Aboriginal ceremonial sites are locations that have spiritual or ceremonial values to Aboriginal people. Aboriginal ceremonial sites may comprise natural landforms and, in some cases, will also have archaeological material. Bora grounds are a ceremonial site type, usually consisting of a cleared area around one or more raised earth circles, and often comprised of two circles of different sizes, connected by a pathway, and accompanied by ground drawings or mouldings of people, animals or deities, and geometrically carved designs on the surrounding trees.</p>	Low	<ul style="list-style-type: none"> Historical land-use in the subject area is likely to have destroyed any bora grounds or ceremonial sites if they had been present.
Burial	<p>Aboriginal burial of the dead often took place relatively close to camp site locations. This is due to the fact that most people tended to die in or close to camp (unless killed during warfare, hunting etc), and it is difficult to move a body long distance.</p> <p>Soft, sandy soils on, or close to, rivers and creeks allowed for easier movement of earth for burial; and burials may also occur within rock shelters or middens.</p> <p>Aboriginal burial sites may be marked by stone cairns, carved trees or a natural landmark. Burial sites may also be identified through historic records or oral histories.</p>	Low	<ul style="list-style-type: none"> The subject area is not situated on soft, sandy soils. The subject area does not include any visible rock overhangs suitable as shelters.
Contact site	<p>These types of sites are most likely to occur in locations of Aboriginal and settler interaction, such as on the edge of pastoral properties or towns. Artefacts located at such sites may involve the use of introduced materials such as glass or ceramics by Aboriginal people or be sites of Aboriginal occupation in the historical period.</p>	Low	<ul style="list-style-type: none"> Contact sites in the area are possible due to early European settlement. Historical land-use in the subject area reduces the potential for these sites.

Site type	Description	Potential	Justification
Midden	<p>Midden sites are indicative of Aboriginal habitation, subsistence and resource extraction. Midden sites are expressed through the occurrence of shell deposits of edible shell species often associated with dark, ashy soil and charcoal.</p> <p>Middens often occur in shelters, or in eroded or collapsed sand dunes. Middens occur along the coast or in proximity to waterways, where edible resources were extracted. Middens may represent a single meal or an accumulation over a long period of time involving many different activities. They are also often associated with other artefact types.</p>	Nil to low	<ul style="list-style-type: none"> ▪ The subject area is not situated near the coast. ▪ The lower order tributaries within the subject area is not conducive to this type of site.
Art	<p>Art sites can occur in the form of rock engravings or pigment on sandstone outcrops or within shelters (discussed below).</p> <p>An engraving is some form of image which has been pecked or carved into a rock surface. Engravings typically vary in size and nature, with small abstract geometric forms as well as anthropomorphic figures and animals also depicted (DECCW, 2010c).</p> <p>In the Sydney region engravings tend to be located on the tops of Hawkesbury Sandstone ridges where vistas occur. Pigment art is the result of the application of material to a stone to leave a distinct impression. Pigment types include ochre, charcoal and pipeclay. Pigment art within the Sydney region is usually located in areas associated with habitation and sustenance.</p>	Nil to low	<ul style="list-style-type: none"> ▪ The subject area does not include any visible sandstone outcrops or rock overhangs. ▪ It is unlikely that the exposed sandstone outcrops required for this site type would occur within the subject area.
Shelters	<p>Shelter sites are places of Aboriginal habitation. They take the form of rock overhangs which provided shelter and safety to Aboriginal people. Suitable overhangs must be large and wide enough to have accommodated people with low flooding risk.</p> <p>Due to the nature of these sites, with generic rock overhangs common particularly in areas with an abundance of sandstone, their use by Aboriginal people is generally confirmed through the correlation of other site types including middens, art, PAD and/or artefactual deposits.</p>	Nil to low	<ul style="list-style-type: none"> ▪ The subject area does not include any rock overhangs. ▪ It is unlikely that the exposed sandstone outcrops required for this site type would occur within the subject area.

5. FIELDWORK AIMS AND PROCEDURES

5.1. RESEARCH METHODOLOGY

The below Archaeological Research Design (ARD) has been developed to provide a framework to investigate the nature and origin of the potential archaeological resource within the subject area.

The ARD has been designed based on the results of the ACHAR, particularly the results of the archaeological background research and predictive model. The ARD has been prepared to cover the following objectives:

- Investigate the nature, spatial and stratigraphical extent, condition and integrity of any archaeological deposits that may be present.
- If archaeological deposits are identified, apply relevant research questions to interpret the finds and results in context of local and regional archaeological modelling.

To fulfil the objectives of the ARD, the following research questions were formulated:

1. Is there a subsurface archaeological deposit present?
2. If an archaeological deposit present, how can it be interpreted?
 - What is the spatial and vertical extent of the deposit?
 - What is the integrity and condition of the deposit?
 - What are the physical attributes and compositions of the deposit (e.g. stone artefacts, features, remains of original environment, contact period artefacts)?
 - What are the characteristics of the stone artefact assemblage? What types of artefacts are present and what specialisation if any can be detected in the assemblage?
 - Does the archaeological deposit have evidence of intra-site patterning or various occupational periods?
 - Should faunal and/or shell material be located, what species present were utilised by Aboriginal people?
3. Can the archaeological deposit be interpreted in a local context?
 - Are there similarities or differences with nearby archaeological sites?
 - Is there evidence of connection to nearby sites in terms of raw material, composition and nature of the assemblage?
4. Can the archaeological deposit be interpreted in the regional context?
 - Where did the raw materials originate from?
 - Is there any indication of trade in connection of raw material procurement?
 - How does the assemblage compare to other archaeological sites within the region?
5. Do the results if the archaeological excavation changes the scientific and cultural significance of the site?
 - What is the scientific and cultural value of the assemblage?
 - How do the Aboriginal stakeholders view the cultural value of the deposit and assemblage?

5.2. TEST EXCAVATION METHODOLOGY

The test excavations were undertaken in line with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010) to understand the nature, extent, integrity and research significance of the Aboriginal archaeological resource. The test excavation also aimed to sample the various landscape features located within the subject area for any potential sub-surface archaeological deposits.

This section presents the proposed methodology for the test excavation program. According to the Code of Practice “test excavations should be sufficiently comprehensive to allow characterisation of the Aboriginal objects present without having a significant impact on the archaeological value of the subject area”.

The test excavation methodology proposed:

- The initial Stage 1 of testing to include the excavation of up to 100 (one hundred) 50 cm by 50 cm test pits at a spacing of 20m on a number of separate transects.
- The location of the transects (Figure 5) has been informed by the results of the archaeological survey and the predictive model of the ACHAR.
- The area indicated with the yellow dashed polygon in 63 Abbots Road required clarification regarding access and scheduling (active market garden) to conduct the required, up to, 40 (forty) test pits. Clearance of portions of the sugar cane will be required prior to excavation being undertaken.
- The location and number of transects and test pits were to be further adjusted by on-site observation of localised disturbance and in consultation with the Aboriginal officers on site.
- All excavated material was to be wet sieved through a 5mm metal sieve station.



Figure 5 - Subject area (red polygon) with identified surface artefact locations (stars), areas of identified high disturbance (red), drainage line/open depression (blue), ridge (purple) and simple slope (green). A systematic grid of test pits will be established at 20m intervals along each indicative transect (white).

5.2.1. Proposed Test Excavation Stage 1

The test pits were proposed be excavated by hand (inclusive of trowels, shovels and other hand tools) along each transect at intervals of 20m.

The first test pit within each transect and/or landform were proposed to be excavated in 5cm spits to establish the depth and nature of soil and any stratigraphy present. Subsequent test pits conducted within the same transect and/or landform and/or potential archaeological deposit were then be excavated in either 10cm spits or stratigraphic units (whichever is smaller) to the base of Aboriginal object-bearing units being the removal of the A-horizon soil deposit down to the sterile clay layer (B-horizon).

All test pits were to be excavated using the above methods in each transect before any further adjustment was made to the transect or additional pits are excavated.

All excavated soil was to be sieved through 5mm nested sieves using wet sieving method.

Following the completion of Stage 1, the Excavation Director (Andrew Crisp) would make the decision whether it is necessary to excavate additional 50cm by 50 cm test pits in order to identify the spatial extent of identified archaeological resources, or existing pits will be expanded to further excavate those pits that yielded archaeological material or features to better understand the nature, extent and integrity of the identified archaeological resources.

- At the completion of Stage 1 Urbis would inform the proponent (ESR) whether it has been determined that Stage 2 test excavation is required. The Excavation Director (Andrew Crisp) was to determine whether it was necessary to excavate additional 50cm by 50 cm test pits in order to identify the spatial extent of identified archaeological resources, or existing pits will be expanded to further excavate those pits that yielded archaeological material or features to better understand the nature, extent and integrity of the identified archaeological resources.

5.2.2. Test Excavation Stage 2

Test pits could have been expanded into a 1m x 1m square or other arrangements in line with the Code of Practice at the discretion of the Excavation Director. The additional pits were to be excavated in 50cm x 50cm test pit units, to further understand the archaeological resource.

Additional 50cm x 50cm test pits were proposed to be placed at an interval of 3, 5 or 10m (or other justifiable and regular spacing appropriate to the scale of the area being tested) from the test pits that yielded archaeological resource to test further the immediate area for artefact concentrations and/or archaeological features, or to define a site boundary. These additional test pits would be excavated using the same methodology outlined above.

5.2.3. General Procedures

The Code of Practice dictates that the maximum surface area of all test excavation units must be no greater than 0.5% of the Potential Archaeological Deposit or landform unit area being investigated.

All excavated soil shall be sieved in 5 mm sieves using wet sieving method.

Artefacts will be collected, bagged and tagged with a unique identification number according to test pit location, spit or context number.

Each test pit shall be recorded using standard archaeological procedure, including standardised recording forms, coordinates collected using a GPS, photographic recording with scale and stratigraphic / soil profile for each test pit shall be recorded in scale drawings as required by Code of Practice recording requirements.

Test excavation units shall be backfilled as soon as practicable, to be organised by the proponent. Alternatively, if manual collapse of the test pits is deemed appropriate this will be agreed to prior to the test excavation program.

An AHIMS site card shall be prepared and submitted to the AHIMS Registrar for any new sites identified during test excavations.

An AHIMS Site Impact Recording form shall be completed and submitted to the AHIMS Registrar for any sites impacted during test excavations.

In the unlikely event that suspected human remains are identified works will immediately cease and the NSW Police and DPC will be notified.

Test excavations shall cease when enough information has been recovered to adequately characterise the objects/assembly(s) present with regard to their nature and significance. Enough information is defined by DPC as meaning *“that the sample of excavated material clearly and self-evidently demonstrates the deposit’s nature and significance. This may include things like locally or regionally high object density: presence of rare or representative objects: presence of archaeological features: or locally or regionally significant deposits stratified or not”* (DECCW 2010a).

Test excavation was undertaken during business days from Monday 19th April 2021 to Monday 3rd May 2021. The program was intended to run from Monday 19th April 2021 to Friday 30th April 2021, but completion was delayed due to additional time required to clear lemon grass.

Test excavation was undertaken in line with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010) in order to understand the nature, extent, integrity and research significance of the Aboriginal archaeological resource. The test excavation also aimed to sample the various landscape features located within the subject area for any potential sub-surface archaeological deposits.

The test excavation included:

- The initial Stage 1 of testing including the excavation of up to 171 50 cm x 50 cm test pits in a series of linear transects at a spacing of 10m or 20m. The location of the test pits was informed by the results of the archaeological survey and the predictive model of the ACHAR.
- All excavated material was wet sieved through a 5mm metal sieve station.

In total, 171 test pits were excavated from 20 transects providing a comprehensive sample of the site. All artefacts that have been identified have been stored in a locked tambour in the Urbis office until a care and control agreement with DLALC could be reached.

Details of the excavation in relation to Requirement 16a of the Code of Practice (DECCW, 2011) are discussed below. As Aboriginal archaeological deposits were located, the Code of Practice requirement 16b is relevant to this assessment and discussed below.

Requirement 16a – Test Excavations

1. Test excavation units must be placed on a systematic grid appropriate to the scale of the area – either PAD or site – being investigated e.g. 10 m intervals, 20 m intervals, or other justifiable and regular spacing.

Transects were laid to sample the site and landforms present including upper, lower and mid slopes, spurs, and areas near the drainage line. Where pits had to be offset due to localised disturbance (such as roadway) this was marked on the spit sheet.

2. Any test excavation point must be separated by at least 5 m.

No test pits were located within 5m of each other. All test pits were separated by a minimum of 10m.

3. Test excavations units must be excavated using hand tools only.

The test excavation was conducted using hand tools for all pits.

4. Test excavations must be excavated in 50 cm x 50 cm units.

Each pit was 50cm x 50cm as a maximum and excavated until cultural sterile depths were reached (being basal clay) – this was between 10-50cm across the subject area. Each pit location was recorded through Garmin GPS and a mud map of the site was drawn in the field.

5. Test excavations units may be combined and excavated as necessary to understand the site characteristics, however:

i) the maximum continuous surface area of a combination of test excavation units at any single excavation point conducted in accordance with point 1 (above) must be no greater than 3 m²

No test pit was extended beyond 50cm by 50cm in size.

ii) the maximum surface area of all test excavation units must be no greater than 0.5% of the area – either PAD or site – being investigated .

Artefacts density within any pit never exceeded 2 artefacts across the subject area, and as such, no combination or expansion of pits was required.

6. Where the 50 cm x 50 cm excavation unit is greater than 0.5% of the area then point 5 (ii) (above) does not apply.

No test pits exceeded 50cm x 50cm.

7. The first excavation unit must be excavated and documented in 5 cm spits at each area – either PAD or site – being investigated. Based on the evidence of the first excavation unit, 10 cm spits or sediment profile/stratigraphic excavation (whichever is smaller) may then be implemented.

The first test pit within each landform was excavated in 5cm spits.

8. All material excavated from the test excavation units must be sieved using a 5 mm aperture wire-mesh sieve.

All excavated material was separated into spits using buckets and sieved using a 5mm aperture wire-mesh metal sieve station.

9. Test excavation units must be excavated to at least the base of the identified Aboriginal object-bearing units, and must continue to confirm the soils below are culturally sterile.

Each pit was 50cm x 50cm as a maximum and excavated until cultural sterile depths were reached (being basal clay) – this was between 10-50cm across the subject area. Basal clays included reddish orange, orangey brown and yellowy brown clay.

11. Photographic and scale-drawn records of the stratigraphy/soil profile, features and informative Aboriginal objects must be made for each single excavation point.

Each pit was recorded with basal and section photographs and spit recording sheets describing the soils, depth, inclusions and presence/absence of artefacts. Soil samples were taken from one pit in each transect. Recording sheets and soil samples are stored physically at the Urbis office in a locked tambour, and digitally on One Drive.

12. Test excavations units must be backfilled as soon as practicable.

Each pit was backfilled through collapsing at the completion of the excavation program.

13. Following test excavation, an Aboriginal Site Impact Recording form must be completed and submitted to the AHIMS Registrar as soon as practicable, for each AHIMS site that has been the subject of test excavation in accordance with the requirements of this Code. The DECCW Aboriginal Site Impact Recording Form is available on the DECCW website.

ASIR form pending.

Requirement 16b – Objects Recovered During Test Excavations

Any Aboriginal objects that are moved during test excavation must be reburied as soon as practicable in a secure temporary storage location in accordance with Requirement 26 pending any agreement reached as to the long-term management of the salvaged Aboriginal objects.

The person carrying out the test excavation is responsible for ensuring that procedures are put in place so that Aboriginal objects that are reburied are not harmed.

The location of the secure temporary storage location must be submitted to AHIMS with a site update record card for the site(s) in question.

The Aboriginal objects were removed to the Urbis Offices at Angel Place, Level 8, 123 Pitt Street, Sydney NSW 2000, as a temporary storage location. The Aboriginal objects were stored in a locked cabinet in office space with around-the-clock security surveillance. The final keeping place of the artefacts will be made in consultation with the Registered Aboriginal Parties (RAPs) (see Section 7.4.2 below).

6. RESULTS

6.1. OVERVIEW

A field survey of the subject area was undertaken on 16th February 2021 by Urbis Senior Archaeologist Andrew Crisp, with three RAP site officers in attendance. Full details of survey results can be seen in section 2.7 of the ACHAR.

The study area was walked on foot with opportunistic inspection of areas of surface exposure. Landforms identified as having a potential for containing a subsurface archaeological deposit were identified. The archaeological survey was undertaken in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010a).

Following the preparation of the ACHAR and the field survey, test excavation was deemed prudent for the subject area. This decision was based on the presence of Aboriginal artefacts observed within an exposed vehicle track and undisturbed landforms within proximity to freshwater. Detailed test excavation results can be found below in Section 6.1.2.

6.1.1. Archaeological Survey Results

A field survey of the subject area was undertaken on 16th February 2021 by Urbis Senior Archaeologist Andrew Crisp, with three RAP site officers in attendance. Representatives are listed in Table 6 below.

Table 6 – RAP survey attendees

RAP Group	Representative
Deerubbin Local Aboriginal Land Council (DLALC)	Steven Randall
Deerubbin Local Aboriginal Land Council (DLALC)	Kevin Meredith
Deerubbin Local Aboriginal Land Council (DLALC)	Jack Donovan

The study area was walked on foot with opportunistic inspection of areas of surface exposure. Landforms identified as having a potential for containing a subsurface archaeological deposit were identified. The archaeological survey was undertaken in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010a).

In accordance with the Code of Practice the study area was surveyed according to survey units, landforms, and landscapes. All survey units are described in Table 6 and sampled landform areas are described in Table 7.

The field survey was undertaken in generally overcast, rainy conditions with conditions clearing toward the second half of the survey. The field survey was undertaken via pedestrian transects with individuals distanced at approximately 5-10m where possible, and archaeologist with handheld GPS at end of the group.

The coverage of the field survey as shown by GPS data is represented in Figure 34 below. Small portions of the subject area were inaccessible due to livestock and canine activity (see red hashed portions in Figure 35).

Generally, visibility was low across the subject area due to grass and vegetation coverage, with visibility limited to areas of exposure resulting from disturbance including paths and vehicle tracks, dams, small erosion scours and livestock rutting/erosion around the base of trees.

The survey data is represented in Figure 34 and Figure 35 below with each survey unit discussed below.

Table 7 – Field Survey Data – Survey Coverage

Survey Unit	Landform	Unit Area (m ²)	Visibility %	Exposure %	Effective Coverage (m ²)	Effective Coverage %
1	Crest and Simple Slope	50800	20%	20%	2032	4%
2	Crest, Open Depression and Simple Slope	20325	20%	10%	406.5	2%
3	Crest and Simple Slope	46675	10%	30%	1400.25	3%
4	Simple Slope	4675	10%	10%	46.75	1%

During the course of the survey disturbance was noted and areas of potential were recorded. The test excavation will target undisturbed landforms within close proximity to freshwater, locations of newly identified Aboriginal sites and areas considered to be moderately to highly disturbed (control area). Three previously unidentified sites were recorded as a result of the survey (refer to Section 2.7.3).

Table 8 - Field Survey Data – Landform Summary

Landform	Landform Area (m ²)	Area Effectively Surveyed (m ²)	Percentage of Landform Effectively Covered	Number of Aboriginal Sites	Number of Artefact Features
Crest	42350	1694	4%	1	1
Simple Slope	79850	3194	4%	2	2
Open Depression	1400	56	4%	0	0

6.1.2. Survey Unit 1

Survey Unit 1 (SU1) incorporates 90-308 Aldington Road, Kemps Creek NSW (Lot 13 DP253503).

The eastern portion of SU1 is dominated by a crest landform with the topography of the SU sloping down toward the west into the Kemps Creek catchment. On the eastern crest is situated a small domestic dwelling.

The western half of SU1 contains simple slopes with the western portion of SU1 dominated by a decommissioned poultry farm (truncated landform, four large sheds, silos, vehicle tracks).

SU 1 was heavily grassed with some bordering light vegetation and trees. Visibility in SU 1 was low, at approximately 20%. Exposures were associated with the areas of disturbance including the dam embankments, unsealed tracks, livestock impacts at the base of trees and in association with the poultry farm structures.

No Aboriginal sites were identified in Survey Unit 1.



Figure 6 – View east from rear of dwelling.



Figure 7 – Dwelling on crest.



Figure 8 – View west down crest toward poultry farm.



Figure 9 – View from eastern end of crest down onto poultry farm.



Figure 10 – Indicative shot of poultry farm.



Figure 11 – View west along hill slope to west and north of poultry farm.

6.1.3. Survey Unit 2

Survey Unit 2 (SU2) incorporates 59-62 Abbots Road, Kemps Creek NSW (Lot 12 DP253503).

The eastern portion of SU1, similar to SU1, is dominated by a number of crest landforms with the topography of the SU sloping down toward the west into the Kemps Creek catchment. The centre of SU2 is dominated by a forked open depression draining to the west. On the eastern crest is situated a small domestic dwelling and the southern hillslope is situated a small, shed complex.

The majority of SU2 contains simple slopes associated with the three-crest landform in the eastern portion of the SU.

SU2 was heavily grassed. Visibility in SU2 was low, at approximately 20%. Exposures were associated with the areas of disturbance including the dam embankments, livestock impacts at the base of trees and in association with the dwelling/sheds.

No Aboriginal sites were identified in Survey Unit 2.



Figure 12 – View south across SU2.



Figure 13 – View east across SU2.



Figure 14 – Crest, slope and open depression landforms within SU2.



Figure 15 – View south-west over large dam.



Figure 16 – Indicative shot of open depression/drainage line.



Figure 17 – View of limited exposure adjacent to dam.

6.1.4. Survey Unit 3

Survey Unit 3 (SU3) incorporates the eastern portion of 63 Abbots Road, Kemps Creek NSW (Lot 11 DP253503).

The SU3 is dominated by two east-west crest landforms with the topography of the SU sloping down toward the west into the Kemps Creek catchment. The south-eastern portion of SU3 is dominated by an open depression draining to the west. The entire SU is utilised as an active market garden, currently growing sugar cane and other crops.

SU3 is densely cropped with visibility limited entirely to unsealed vehicle tracks. Visibility in SU3 was low, at approximately 10%.

Three Aboriginal sites were identified in Survey Unit 3. All sites were identified within the unsealed vehicle access track running the crest at the centre of the SU. These sites include:

Isolated Find 01 (IF-1) – proximal flake fragment (grey silcrete) (33°51'33.5"S, 150°47'57.7"E)

Isolated Find 02 (IF-2) – angular fragment (grey silcrete) (33°51'28.6"S, 150°47'47.2"E)

Isolated Find 03 (IF-3) – medial flake fragment (grey silcrete) (33°51'30"S, 150°47'47.9"E)



Figure 18 – Indicative shot of current height and density of sugar cane crop in SU3



Figure 19 – Indicative level and type of exposure within SU3



Figure 20 – View north from SU3 across SU2 and SU1.



Figure 21 – View south from northern crest to southern crest in SU3.



Figure 22 – Location of IF-1 in vehicle track on crest



Figure 23 – IF-1 proximal flake fragment (grey silcrete)



Figure 24 – Indicative shot of exposure along vehicle access track



Figure 25 – General location of IF-2 and IF-3 on access track to south of SU4



Figure 26 – IF-2 angular fragment (grey silcrete)



Figure 27 – IF-3 medial flake fragment (grey silcrete)

6.1.5. Survey Unit 4

Survey Unit 4 (SU4) incorporates the north-western portion 63 Abbots Road, Kemps Creek NSW (Lot 11 DP253503) fronting onto the road easement.

The eastern portion of SU4 contains small dams and a residential dwelling. The western portion of the SU abutting the road easement is currently utilised as a hard stand laydown yard for timber and construction elements.

SU4 contains simple slopes sloping down to the north-west. SU4 was heavily grassed and contains a large hardstand area. Visibility in SU4 was low, at approximately 10%. Exposures were associated with the areas of disturbance including the dam embankments.

No Aboriginal sites were identified in Survey Unit 4.



Figure 28 – Indicative shot of dwelling from rear. Aspect north-west.



Figure 29 – View of dam on north side of driveway



Figure 30 – Hardstand area



Figure 31 – View south-east along driveway



Figure 32 – View of dam on north side of driveway



Figure 33 – Indicative view of southern portion of SU4

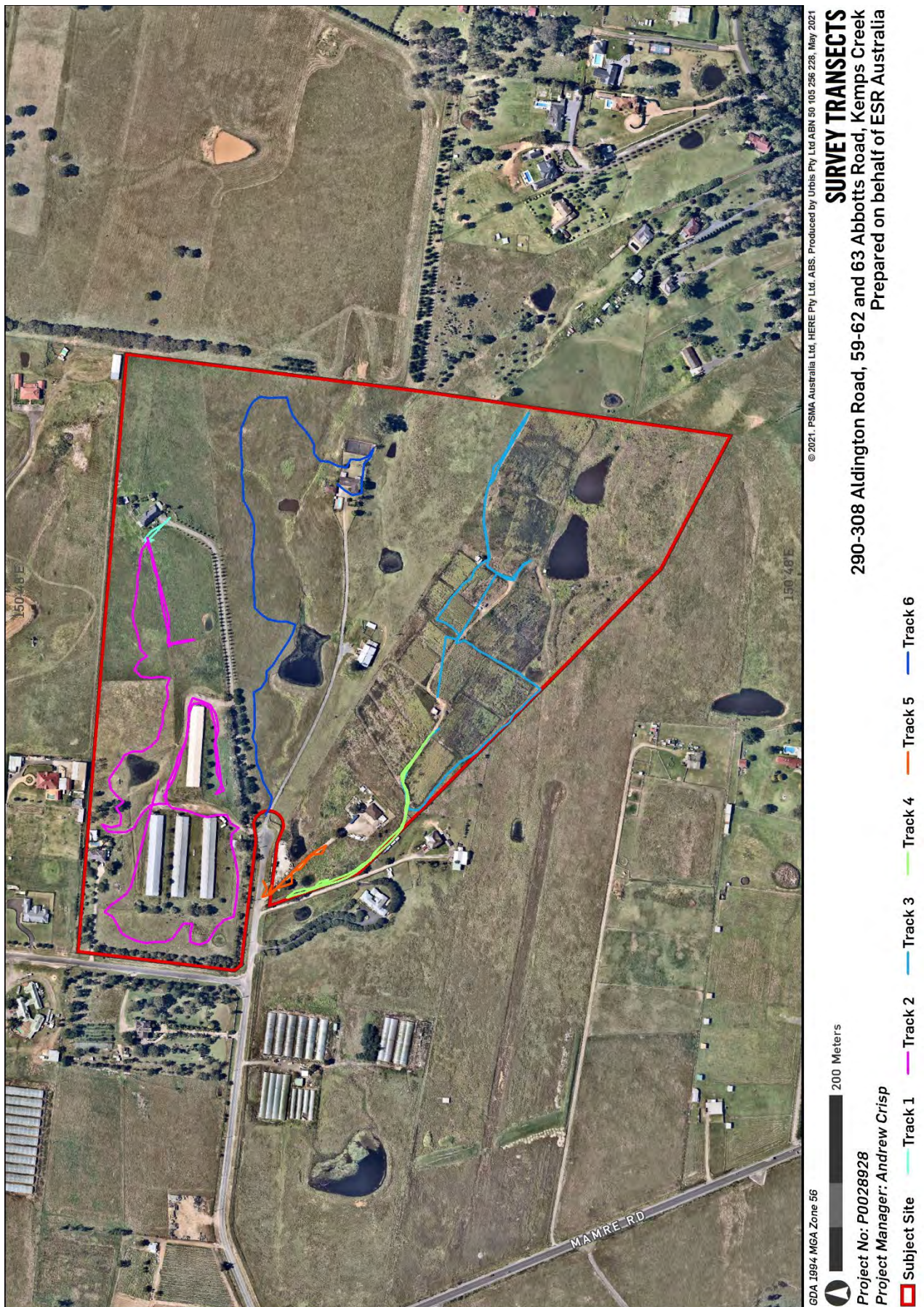


Figure 34 – Survey Tracks

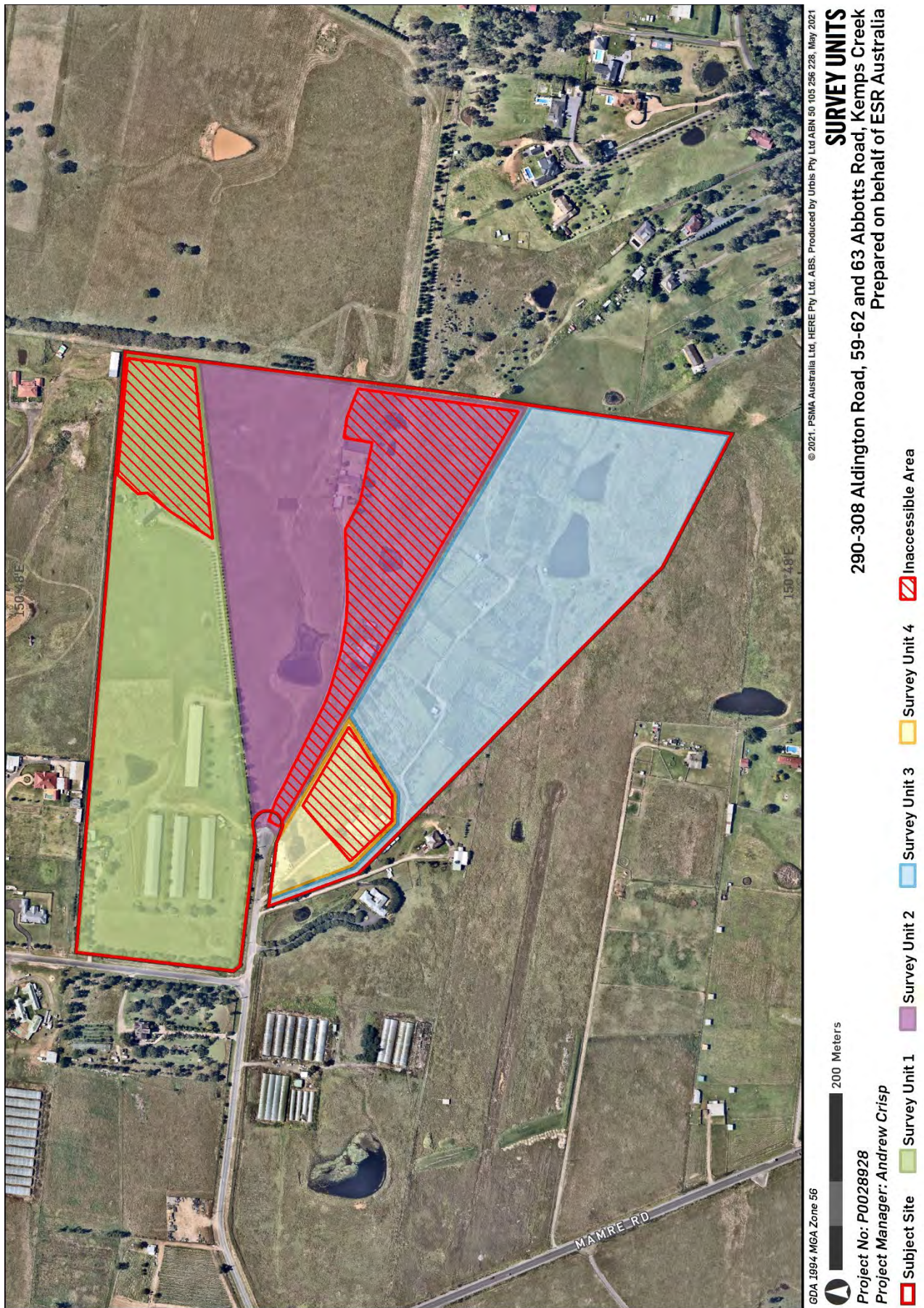


Figure 35 – Survey Units

6.1.6. Test Excavation Results

Test excavation was conducted from Monday 19th April 2021 to Monday 3rd May 2021. A total of 171 50cm x 50cm test pits were excavated according to the proposed methodology covering a variety of landforms. For clarity these will be demarcated as Areas 1 to 6 and described below.

Area 1: Lower slopes in the western portion of the study area adjacent to Aldington Rd. This area consisted of simple slopes above and adjacent to a small dam. Vegetation consisted of exotic grass and weed species, with regrowth eucalypts and acacias on the perimeter. Area 1 consisted of test pits A1-A15 and B1-B5. Two artefacts were recovered from tests pits in Area 1: a silcrete complete flake (B1) and a quartzite angular fragment (B5).

Area 2: lower and mid-slopes following a spur leading up to a crest in the north-east corner of the subject area. This was approximately parallel to the study areas northern boundary. Vegetation consisted of exotic pasture grasses. Area 2 consisted of test pits C1-C6 and E1-E7. No artefacts were recovered from Area 2.

Area 3: Upper crest/ridge in the north-eastern portion of the study area. Area 3 consisted of test pits I1-I7, J1-J7 and K1- K3. Vegetation consisted of exotic grasses and weeds. One artefact was recovered from tests pits in Area 3: a silcrete complete tool (J6).

Area 4: Lower/mid-slopes adjacent to the main waterway in the centre of the site. The northern portion of Area 4 of test squares D1-D10, F1-F10, G1-G5 and H1 -H5. The southern portion of area 4 consisted of test squares M1-M10. Five artefacts were recovered from tests pits in Area 4: two silcrete complete tools (F5 and M4), two silcrete complete flakes (F7 and M1) and a silcrete distal flake (M1).

Area 5: Upper crest east and centre of study area. This landform is located above the upper catchment of the waterways in area 4. Area 5 consisted of test squares L1-L28. Three artefacts were recovered from tests pits in Area 5: a silcrete distal flake (L5), a silcrete complete flake (L7) and a silcrete broken core (L9).

Area 6: Long broad spur in between two waterways. Heavily modified market gardens. Area 6 consisted of test squares N1-N9, O1-O4, P1-7, Q1-Q3, R1-R10, S1-S7 and T1-T10. Two artefacts were recovered from tests pits in Area 6: two silcrete complete flakes (P6 and R3).



Figure 36 – Test Excavation Transects Overview



Figure 37 – Transect a and Transect B

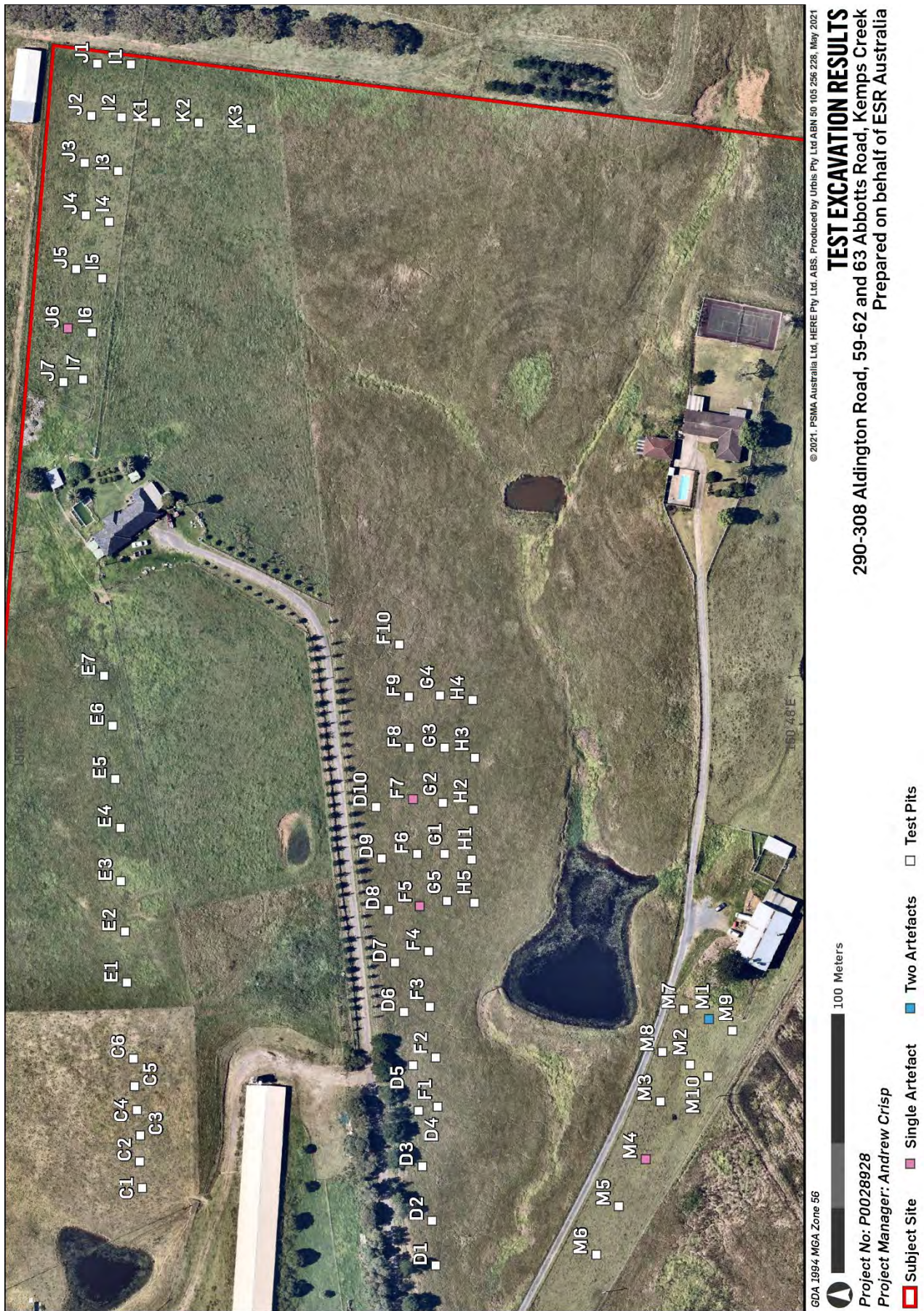


Figure 38 – Transects C, D, E, F, G, H, I J K and M

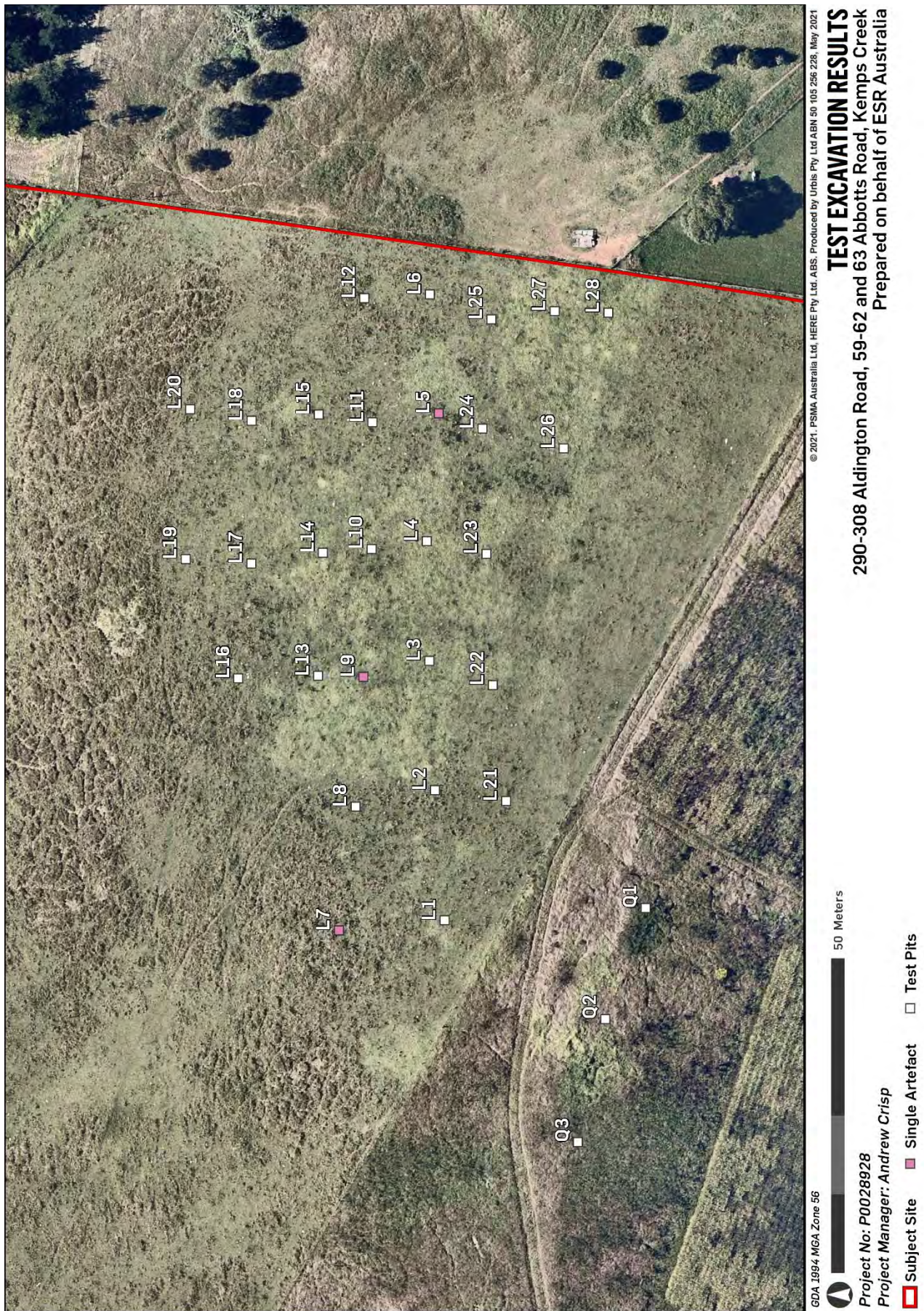


Figure 39 – Transect L and Transect Q

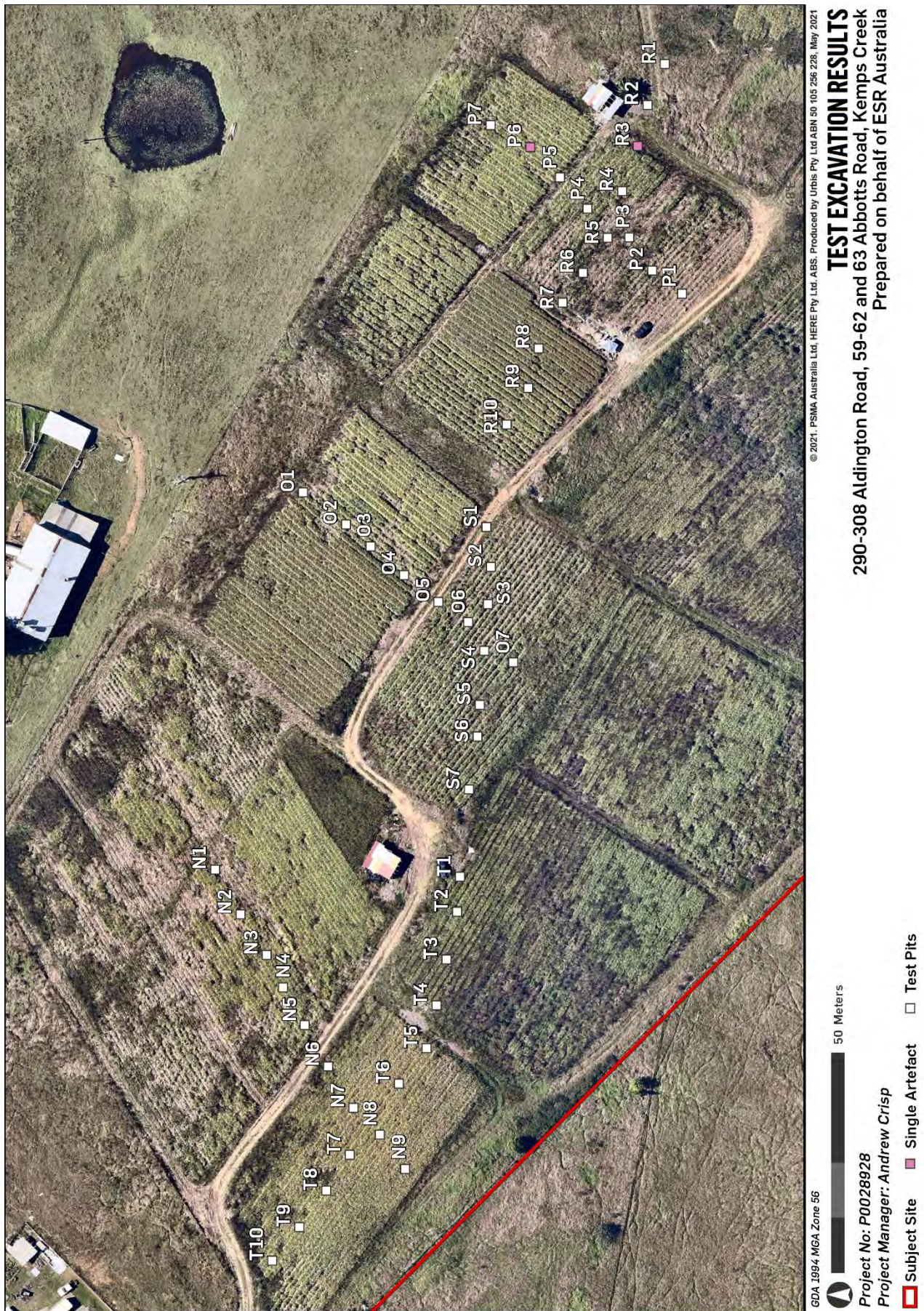


Figure 40 – Transect N, O, P R, S and T

6.1.6.1. Area 1

Lower slopes in the western portion of the study area adjacent to Aldington Rd. This area consisted of simple slopes above and adjacent to a small dam. Vegetation consisted of exotic grass and weed species, with regrowth eucalypts and acacias on the perimeter. Area 1 consisted of test squares A1-A15 and B1-B5.



Figure 41 - Area 1 view north



Figure 42 - Area 1 view south

Transect A consisted of 15 test pits at 10m intervals and ran from the south, adjacent to the dam, upslope to the north. No artefacts were recovered from transect A.

Soil profiles in Transect A showed considerable variation with an average depth of 20cm, and a depth range from 10cm to 36cm.

Test pits A5, A9-A11 and A13 consisted of a redeposited mix of local clay and soil directly overlying disturbed basal clay. This disturbance appeared to be related to earthworks associated with the construction of nearby poultry sheds.

Test pit A2 appeared truncated and mixed possibly affected by dam construction.

Remaining test pits displayed a more or less intact soil profile, though inclusions of sparse clay patches suggest a degree of prior disturbance.

A typical intact soil profile such as at A6 consisted of:

- I. 0-12cm: Dark brown humic silty clay loam with abundant grass roots. Munsell 7.5YR 3/4; bioturbated transition to:
- II. 12cm-base: Decreasing humic content; reddish brown moderately compact silty clay loam. Munsell 7.5YR 4/4; increasing clay towards base; bioturbated transition to:
- III. Base: Red brown silty clay to light clay. Munsell 5YR 4/6.



Figure 43 - Test pit A6: intact soil profile.



Figure 44 - Test pit A9: redeposited soil and clay.

Transect B was parallel to transect A 20m to the west. Five test pits were spaced at 10m intervals. Test pits in Transect B had 13 to 30cm of redeposited clay and soil overlying natural soil profiles with a depth range of 19 to 25cm.

One artefact was recovered from B1 however this was from spit 1 (top 10cm), within fill, and was therefore out of context.

One artefact was recovered from test square B5 from the transition to intact natural topsoil. The provenance of the artefact is therefore uncertain considering level of disturbance at test square B5.



Figure 45 Test square B1: clayey fill to 30cm.



Figure 46 Test square B5: clay fill to approx. 15cm.

6.1.6.2. Area 2

Lower and mid-slopes following a spur leading up to a crest in north west of subject area. This was approximately parallel to the study areas northern boundary. Vegetation consisted of exotic pasture grasses. Area 2 consisted of test pits C1-C6 and E1-E7.



Figure 47 - Area 2 view east; spur and crest in background, test pit C1 in foreground



Figure 48 - Area 2 view west; test pit E6 in foreground.

Transect C consisted of 6 test pits at 10m intervals running east west on gentle lower slopes above a dam. No artefacts were recovered from transect C.

Soil profiles were consistent within Transect C. Test pits were shallow, ranging from 15-20cm depth and appeared to be truncated and mixed. This would be consistent with ploughing and subsequent erosion.

A typical soil profile such as at C6 consisted of:

- I. 0-base: Reddish brown, silty clay loam, clumpy and faint clay mottling; appears to be truncated and disturbed. Munsell 7.5YR 4/4; gradual transition to:
- II. Base: reddish brown silty clay Munsell 5YR 4/6.



Figure 49 - Test pit C6.



Figure 50 - Test pit C5

Transect E formed a continuation of transect C incorporating the steeper mid-slopes on a wide spur towards the crest of the landform. Transect E consisted of 6 test pits at 20m intervals. No artefacts were recovered from Transect C.

Soil profiles were consistent within Transect E. Test pits were shallow, ranging from 16-22cm depth and appeared to be affected by ploughing and erosion. Test pits E6 and E7 were slightly more reddish brown and appeared less disturbed, though still these test squares also displayed some clay mottling suggesting past disturbance.

A typical soil profile such as at E4 consisted of:

- I. 0-base: Yellowish brown, silty clay loam, clumpy and mixed with clay; appears to be truncated and disturbed. Munsell 7.5YR 5/4; disturbed boundary to:
- II. Base: reddish brown silty clay. Clumpy and disturbed.



Figure 51 - Test pit E7.



Figure 52 - Test pit E4

6.1.6.3. Area 3

Upper crest/ridge in the north-eastern portion of the study area. Area 3 consisted of test pits I1-I7, J1-J7 and K1- K3. Vegetation consisted of exotic grasses and weeds.



Figure 53 - Area 3 view west; test pit I5 in foreground



Figure 54 - Area 3 view south. Test pit I3 in foreground

Transect I began on the eastern edge of the subject area and covered the crest of the landform. Transect I consisted of 7 test squares at 20m intervals. No artefacts were recovered from transect I.

Soil profiles were consistently truncated and disturbed with around 10cm of mixed red brown clay silty loam.

A typical soil profile such as at I1 consisted of:

- I. 0-base: Red brown mix of silt and clay. Munsell 5YR 4/6; Cracked and clumpy with an indistinct boundary to:
- II. Base: red brown heavy clay, Munsell 5YR 4/6. Also disturbed.



Figure 55 - Test pit I7. Truncated and disturbed.



Figure 56 – Test pit I1. Truncated and mixed.

Transect J was parallel to transect I 10m to the north. Transect J consisted of 7 test squares at 20m intervals. One silcrete tool was recovered from test pit J6 in a highly disturbed soil profile.

Soil profiles were consistently truncated and disturbed with around 10cm of mixed red brown clay and silty loam.

A typical soil profile such as at J6 consisted of:

- I. 0-base: Red brown mix of soil and clay. Munsell 5YR 4/6; Cracked and clumpy with an indistinct boundary to:
- II. Base: red brown heavy clay, Munsell 5YR 4/6. Also disturbed.



Figure 57 - Test pit J6: Disturbed subsoil only.



Figure 58 - Test pit J3.

6.1.6.4. Area 4

Lower/mid-slopes adjacent to the main waterway in the centre of the site. The northern portion of Area 4 of test squares D1-D10, F1-F10, G1-G5 and H1-H5. The southern portion of area 4 consisted of test squares M1-M10.



Figure 59 - Area 4, northern portion, view east; test square F5 in foreground.



Figure 60 - Area 4 northern portion, view south; test square D9 in foreground.



Figure 61 - Area 4 southern portion, view east; test square M5 in foreground.



Figure 62 - Area 4 southern portion, view north; test square M5 in foreground, area 4 northern portion in background.

Transect D consisted of 10 test pits at 20m intervals running east west on a terrace above a dam. No artefacts were recovered from transect D.

Soil profiles were generally consistent within Transect D, although tending to lighter soil colours at lower elevation. Test pits ranged from 17-27cm depth and appeared to be intact.

A typical soil profile such as at D3 consisted of:

- I. 0-base: Dark brown humic silty clay loam, with scattered charcoal flecks; appears intact. Munsell 7.5YR 3/4; clear transition to:
- II. Base: reddish brown silty clay Munsell 5YR 4/6.

Transect F consisted of 10 test pits at 20m intervals running east west on a terrace above a dam. Two artefacts were recovered from transect F: a silcrete complete tool and a silcrete complete flake (see Table 9 below).

Soil profiles were generally consistent within Transect F. Test pits ranged from 18-47cm depth and mostly appeared to be intact.

A typical soil profile such as at F5 consisted of:

- I. 0-base: Dark brown silty clay loam, with sparse ironstone gravels. Munsell 7.5YR 3/4; transition to:
- II. Base: reddish brown silty clay. Munsell 5YR 4/6.

Transect G consisted of 5 test pits at 20m intervals running east west on a terrace above a dam. No artefacts were recovered from transect G.

Soil profiles were generally consistent within Transect G. Test pits ranged from 18-30cm depth and mostly appeared to be intact.

A typical soil profile such as at G2 consisted of:

- I. 0-base: Medium brown silty clay loam. Munsell 7.5YR 5/3; transition to:
- II. Base: yellowish brown clay. Munsell 7.5YR 5/4.

Transect H consisted of 5 test pits at 20m intervals running east west on a terrace above a dam. No artefacts were recovered from transect H.

Soil profiles were generally consistent within Transect H, although there was some colour variation from grey brown to dark brown. Ironstone gravels were common among test pits in transect H. Test pits ranged from 20-34cm depth and appeared to be intact.

A typical soil profile such as at H2 consisted of:

- I. 0-base: Grey to medium brown silty clay loam with scattered ironstone gravels. Munsell 7.5YR 5/3; transition to:
- II. Base: yellowish brown silty clay. Munsell 7.5YR 5/4.

Transect M consisted of 10 test pits on south-east/north-west axis alongside a driveway on a terrace below a dam. M1 to M6 are aligned on a single axis at 20 metre intervals. M7 and M8 are on a parallel axis 10m north-east and M9 and M10 are on a parallel axis 10m south-west. Three artefacts were recovered from transect M: a silcrete distal flake, a silcrete complete tool and a silcrete complete flake (see Table 9 below).

Soil profiles were generally consistent within Transect M. Test pits ranged from 11-28cm depth and mostly appeared to be intact, although the lower test pits (M5 and M6) appeared truncated.

A typical soil profile such as at M4 consisted of:

- I. 0-base: reddish grey brown silty clay loam. Munsell 5YR 5/3; transition to:
- II. Base: reddish brown silty clay. Munsell 5YR 4/6.

6.1.6.5. Area 5

Upper crest east and centre of study area. This landform is located above the upper catchment of the waterways in area 4. Area 5 consisted of test squares L1-L28.



Figure 63 - Area 5 view east; test square L6 in foreground.



Figure 64 - Area 5 view south; test square L10 in foreground.

Transect L consisted of 28 test pits in a grid pattern on a crest. Test pits were separated by 20m intervals along the east-west axis and 10m intervals along the north-west axis. Three artefacts were recovered from transect H: a silcrete distal flake, a silcrete complete flake and a silcrete broken core (see Table 9 below).

Soil profiles were generally consistent within Transect L. Ironstone gravels were common among test pits in transect L. Test pits ranged from 12-37cm depth and appeared to be intact.

A typical soil profile such as at L8 consisted of:

- I. 0-base: reddish grey brown silty clay loam. Munsell 5YR 5/3; transition to:
- II. Base: reddish grey brown silty clay. Munsell 5YR 5/3.

6.1.6.6. Area 6

Long broad spur in between two waterways. Heavily modified market gardens. Area 6 consisted of test squares N1-N9, O1-O4, P1-7, Q1-Q3, R1-R10, S1-S7 and T1-T10.



Figure 65 - Area 6, view south; test square R4 in foreground.



Figure 66 - Area 6, view north east; end of transect T.

Transect N

Transect N consisted of 9 test pits at 20m intervals running east west within the market garden towards the base of the slope. No artefacts were recovered from transect N.

Soil profiles were generally consistent within Transect N. Test pits ranged from 20-29cm depth and appeared to be disturbed through heavy ploughing.

A typical soil profile such as at N6 consisted of:

- I. 0-base: mixed dark reddish brown soil and clay, ploughed, in market garden bed. Munsell 5YR 3/2. clear transition to:
- II. Base: reddish brown plasticky clay.

Transect O

Transect O consisted of 7 test pits at 20m intervals running east west within the market garden towards the midslope. No artefacts were recovered from transect O.

Soil profiles were generally consistent within Transect O. Test pits ranged from 20-35cm depth and appeared to be disturbed through heavy ploughing.

A typical soil profile such as at O2 consisted of:

- I. 0-base: mixed dark reddish brown clay and loam, ploughed, in market garden bed. Munsell 5YR 3/2. Plastic sheet fragments throughout. Transition to:
- II. Base: dark reddish brown silty clay.

Transect P

Transect P consisted of 7 test pits at 20m intervals running east west within the market garden along the spur. 1 artefact was identified within Transect P, a complete silcrete flake in Pit P6.

Soil profiles were generally consistent within Transect P. Test pits ranged from 11-30cm depth and appeared to be disturbed through heavy ploughing.

A typical soil profile such as at P1 consisted of:

- I. 0-base: mixed dark reddish brown clay, ploughed, in market garden bed. Munsell 5YR 3/2. Transition to:
- II. Base: reddish brown clay.

Transect Q

Transect Q consisted of 3 test pits at 20m intervals running north south within the market garden. No artefacts were recovered from transect Q.

Soil profiles were generally consistent within Transect Q. Test pits ranged from 17-27cm depth and appeared to be disturbed from heavy ploughing.

A typical soil profile such as at Q1 consisted of:

- I. 0-base: Dark reddish brown compacted clayey-loamy soil, heavily ploughed, with lemon grass roots and clay nodules from ploughing. Munsell 5YR 3/2. Clear transition to:
- II. Base: red plasticky clay.

Transect R

Transect R consisted of 9 test pits at 20m intervals running north south within the market garden down the slope. One artefact was recovered from Transect R, being a complete silcrete flake in pit R3.

Soil profiles were generally consistent within Transect R. Test pits ranged from 10-37cm depth and appeared to be disturbed from heavy ploughing.

A typical soil profile such as at R4 consisted of:

- I. 0-base: Yellowy brown clayey loam soil, market garden with lemongrass roots, heavily ploughed, Munsell 7.5YR 7/8, some ironstone gravels. transition to:
- II. Base: mottled orangey yellow brown plasticky clay base.

Transect S

Transect S consisted of 7 test pits at 20m intervals running north south within the market garden down the slope. No artefacts were recovered from transect S.

Soil profiles were generally consistent within Transect S. Test pits ranged from 10-32cm depth and appeared to be disturbed from heavy ploughing.

A typical soil profile such as at S5 consisted of:

- I. 0-base: orangey brown loamy clayey soil, heavily ploughed, orangey clay flecks. Munsell 7.5YR 6/8. Clear transition to:
- II. Base: orangey basal clay.

Transect T

Transect T consisted of 9 test pits at 20m intervals running east west along the spur within the market garden. No artefacts were recovered from transect T.

Soil profiles were generally consistent within Transect T. Test pits ranged from 10-29cm depth and appeared to be disturbed from heavy ploughing.

A typical soil profile such as at T3 consisted of:

- I. 0-base: Yellowy brown loam soil, ploughed market garden with some bioturbation, plastics, rootlets and stone inclusions. orangey brown loamy clayey soil, heavily ploughed, orangey clay flecks. Munsell 7.5YR 7/6. Transition to:
- II. Base: shale and yellowy basal clay, undulations due to ploughing.

6.1.7. Soils and Disturbance

Soils across the subject area generally consisted of silty clay loams, with varying degrees of humic material and colours ranging from dark brown to grey brown, on a clay base. Soil depths above the underlying clay base ranged from 10-50cm across the subject area. The underlying clay ranged from dark orange and reddish brown to light yellowy brown. Areas 2, 3 and 6 exhibited significant disturbance, while soils in the remaining areas were generally intact.

7. ANALYSIS AND DISCUSSION

7.1. ARTEFACT ANALYSIS

1. Is there a subsurface archaeological deposit present?

Yes. The below table shows the artefact assemblage across the subject area.

Table 9 - Test excavation artefact assemblage

Test Pit	Spit	Artefact Type	Raw Material	Landform
B1	1	Complete Flake	Silcrete	Lower hill slope
B5	3	Angular Fragment	Quartzite	Lower hill slope
F5	2	Complete Tool	Silcrete	Terrace
F7	1	Complete Flake	Silcrete	Terrace
J6	1	Complete Tool	Silcrete	Crest
L5	1	Distal Flake	Silcrete	Crest
L7	1	Complete Flake	Silcrete	Crest
L9	1	Broken Core	Silcrete	Crest
M1	2	Distal Flake	Silcrete	Terrace
M1	3	Complete Flake	Silcrete	Terrace
M4	2	Complete Tool	Silcrete	Terrace
P6	1	Complete Flake	Silcrete	Spur
R3	1	Complete Flake	Silcrete	Spur

In general, thirteen (13) artefacts were identified across the subject area during the test excavation, with artefacts present across a variety of landforms. This represents a low density assemblage, reflective of small and temporary occupation across the subject area.

The dominant raw material across the assemblage was silcrete, comprising 92% (n=12) of lithic materials, while quartzite comprised 8% (n=1). The closest known silcrete extraction point is at Plumpton, approximately 14km north of the subject area, and this may be where the silcrete present within the subject area was sourced.

Spatially, the majority of artefacts were located in Transects L and M, which were both located in Lot 12 DP253503. Both transects contained three (3) artefacts. Transect L was located to the east of the lot, north of the market gardens, with transect M located to the west of the shed on the lot approximately 280m to the west of Transect L. No artefacts were located below 30cm depth, with artefact densities decreasing with depth across the subject area. Spit 1 (0-10cm) contained 62% (n=8) of artefacts, Spit 2 23% (n=3) and Spit 3 15% (n=3). The majority of artefacts were located on terrace landform, being 38% (n=5), with 31% (n=4) on crests, and 15% (n=2) on both spur and lower hill slope landforms. The pit with the highest density was M1, which contained two (2) artefacts, both being silcrete, one being a distal flake (spit 2) and one being a complete flake (spit 3).

Five (5) artefact types were identified across the assemblage. This ranged from angular fragments to complete tools. The dominant artefact type across the assemblage was complete flakes, which comprised 46% (n=6) of artefact types. Complete tools were also highly represented, comprising 23% (n=3), with distal flakes

comprising 15% (n=2) and 8% (n=1) for both angular fragments and broken core. The below charts represent the archaeological assemblage for the subject area.

Regarding soil condition, Table 10 identifies the soils in which artefacts were located in each pit. This demonstrates artefacts were generally located in natural soils including natural topsoils across the subject area, with the exception of the Complete Flake located in Pit M1 Spit 3. Pit P6 Spit 1 and Pit R3 Spit 1 also indicated disturbance with ploughing evident due to their location within the market garden, and plastic fragments were also found in Spit 1 of Pit P6.

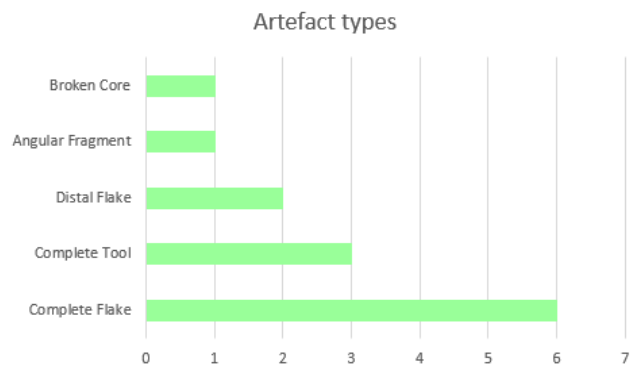


Figure 67 -Artefact Types

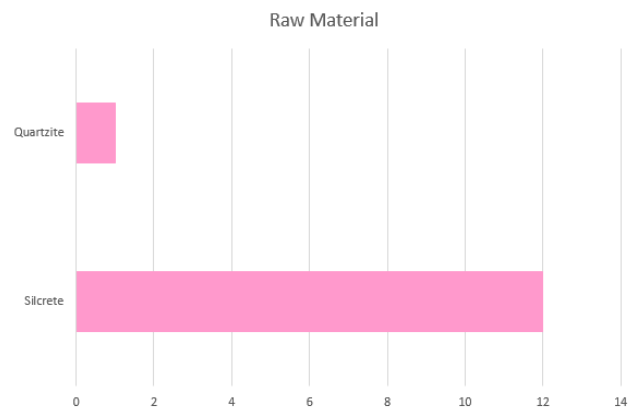


Figure 68 – Raw Materials

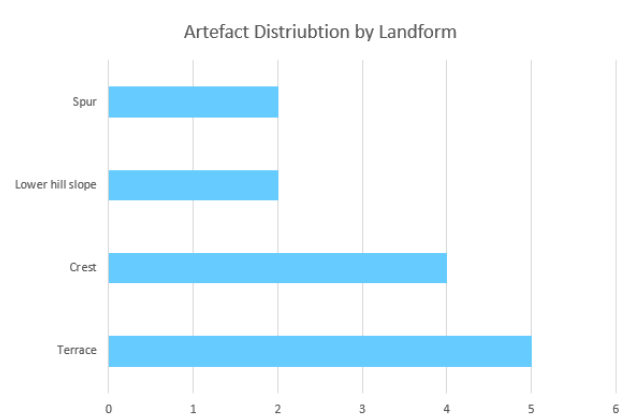


Figure 69 – Artefact Distribution by Landform

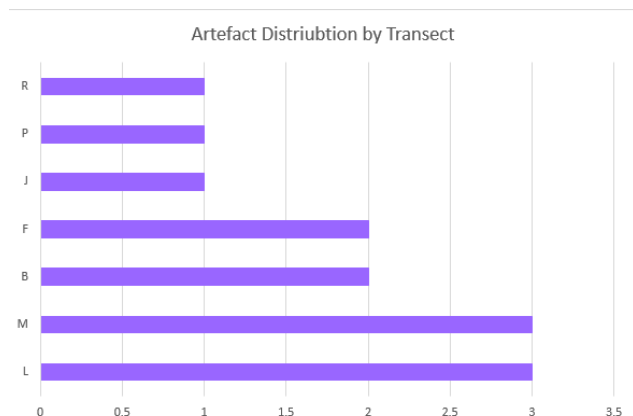


Figure 70 – Artefact distribution by transect

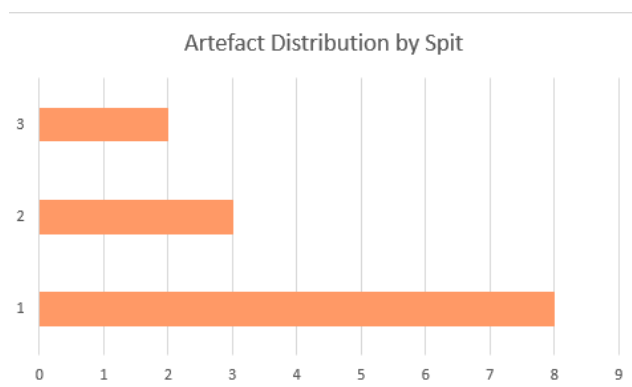


Figure 71 – Artefact Distribution by Spit

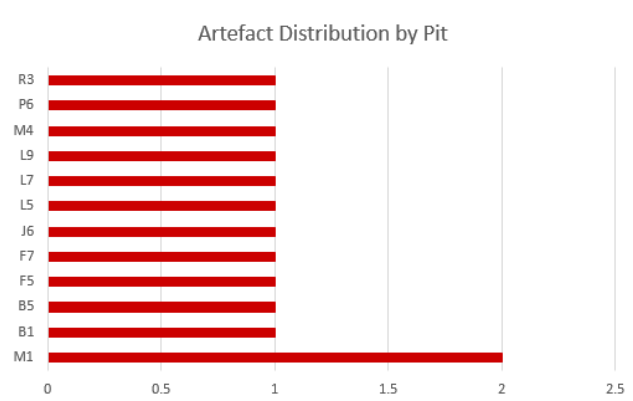


Figure 72 – Artefact Distribution by Pit

Table 10 – Soil conditions for artefact locations

Pit	Spit	Soil
B1	1	Brown clayey loam.
B5	3	Natural topsoil below disturbed mixed clay (Spit 1-2).
F5	2	Dark brown clayey loam.
F7	1	Dark brown clayey loam.
J6	1	Mixed soils and red clay.
L5	1	Dark brown clayey loam.
L7	1	Orange brown clayey loam.
L9	1	Thin layer of dark brown clayey loam over reddish grey brown silty clay loam.
M1	2	Reddish grey brown silty clay loam.
M1*	3	Reddish grey brown silty clay loam, increasingly red and mottled- potentially deposited.
M4	2	Reddish grey brown silty clay loam, increasing red clay content.
P6*	1	Predominantly yellowish brown clay, ploughed with silty loam. Plastic fragments.
R3*	1	Yellowy brown clayey loamy soil compacted and heavily ploughed.

* indicates disturbance in pit/spit.



Figure 73 -B1, spit 1



Figure 74 – B1, spit 1



Figure 75 – B5, spit 3



Figure 76 – B5, spit 3



Figure 77 – F5, spit 2



Figure 78 – F5, spit 2



Figure 79 – F7, spit 1



Figure 80 – F7, spit 1



Figure 81 – J6, spit 1



Figure 82 – J6, spit 1



Figure 83 – L5, spit 1



Figure 84 – L5, spit 1



Figure 85 – L7, spit 1



Figure 86 – L7, spit 1



Figure 87 – L9, spit 1



Figure 88 – L9, spit 1



Figure 89 – M1, spit 2



Figure 90 – M1, spit 2



Figure 91 – M1, spit 3



Figure 92 – M1, spit 3



Figure 93 – M4, spit 2



Figure 94 – M4, spit 2



Figure 95 – P6, spit 1



Figure 96 – P6, spit 1



Figure 97 – R3, spit 1



Figure 98 – R3, spit 1

2. If an archaeological deposit present, how can it be interpreted?

- What is the spatial and vertical extent of the deposit?

A regional model for artefact distribution in relation to stream ordering on the Cumberland Plain has been developed principally by Beth White and Jo McDonald. White and McDonald (2010) analysed artefact distribution on the north of the Cumberland Plain by examining the results from archaeological investigations in the Rouse Hill area. This research found that artefact distribution varies significantly with stream order, with higher densities of artefacts located in proximity to larger streams.

First Order Streams had a mean density of 0.7 artefacts/m², while for Second Order Streams this was 6.5 artefacts/m² and for Fourth Order Streams this increased to 13.9 artefacts/m². There was not enough data on third order streams for the authors to make a comparison (White & McDonald 2010, p.32).

Distance from water was also tested, as this was believed to be a primary determinant of where people camped and hence where artefact density would be present in the archaeological record. For First Order Streams, distance from water was not as statistically important; with artefact archaeological deposits found to be comprised of mainly background scatter. For Second Order Streams, artefact densities were found to be highest within 50 m of water and decline with increasing distance from water. Fourth Order Streams displayed artefact densities highest 51-100m from the stream and lower closer to the stream (<50m) and declining densities greater than 100m from the stream (White & McDonald 2010, p.33).

To compare the current test excavation results with this regional model it is necessary to extrapolate the results of the 50 x 50cm test pits to what the results may have been if a full square meter was excavated. By doing so it becomes clear that transect M in close proximity to the second order tributary had the highest artefact density per test unit at 1.5 artefacts / m².

- What is the spatial and vertical extent of the deposit?

The results of the test excavation are in line with the regional model developed by White and MacDonald and clearly shows that there is a correlation between artefact densities and the proximity to fresh water and along spurs/crest landforms. All artefacts were identified within 0-30cm of the soil deposit within the subject area.

- What is the integrity and condition of the deposit?

The assemblage is generally low density and is generally indicative of low intensity occupation or background scatter. Generally artefacts were identified in non-disturbed contexts within natural brown clayey loamy soils, with only three pits with artefacts containing evidence of disturbance in the relevant spit (M1, P6 and R3). Disturbance was generally in the form of ploughing (P6 and R3) with some plastic fragments identified (P6) and some redeposited soil (M1).

These results suggest the archaeological assemblage of the subject site is generally intact with moderate integrity, with 77% (n=10) of archaeological materials identified in natural soil deposits.

- What are the physical attributes and compositions of the deposit (e.g. stone artefacts, features, remains of original environment, contact period artefacts)?

The archaeological assemblage on the site included exclusively stone artefacts. These were primarily silcrete artefacts, comprising 92% (n=12) with 8% (n=1) quartzite. Artefacts were typically flakes or fragments, comprising 77% (n=10), while complete tools comprised 15% (n=2) and cores comprised 8% (n=1). These artefacts are generally determined to represent background scatter indicative of low intensity habitation/occupation.

No contact or potential contact sites were identified.

- What are the characteristics of the stone artefact assemblage? What types of artefacts are present and what specialisation if any can be detected in the assemblage?

The absence of large, formalised tools (such as ground stone axes and flaked hatchets) indicates the assemblage is representative of small tool tradition of the Bondaian phase of the Eastern Regional Sequence. The Bondaian Phase dates to the mid to late Holocene, typically the last 5,000 years.

- Does the archaeological deposit have evidence of intra-site patterning or various occupational periods?

The low-density assemblage does not provide any evidence of intra-site patterning. The artefact typology combined with shallow soil profile suggests a small number of single events rather than repeat occupation.

- Should faunal and/or shell material be located, what species present were utilised by Aboriginal people?

No bone or shell was recovered during program.

3. Can the archaeological deposit be interpreted in a local context?

- Are there similarities or differences with nearby archaeological sites?

The low-density artefact assemblage recovered from the subject area, comprising primarily flaked silcrete artefacts, is similar to other nearby sites, such as AHIMS ID# 45-5-0604, AHIMS ID# 45-5-0605 which are located within 1km of the subject area. The presence of a quartzite artefact is similar to AHIMS ID# 45-5-5189, located approximately 4.25km north west of the subject area within the vicinity of South Creek.

The results are generally similar to that of OA1 in the Mamre South Precinct excavated by Biosis in 2019. 16 artefacts were identified, of which 93.8% (n=15) were silcrete. While the wider Mamre Road South Precinct excavations resulted in much higher density, the OA1 area is compatible with the current subject area.

- Is there evidence of connection to nearby sites in terms of raw material, composition and nature of the assemblage?

The artefact assemblage of the present subject area appears to be connected to nearby sites by the common dominance of flaked silcrete artefacts and the presence of a single quartzite artefact, consistent with an origin closer to South Creek or Kemps Creek.

The presence of silcrete connects the artefact assemblage at the subject area to Plumpton Ridge, which is the closest known resource extraction site for red silcrete in this region. The dominance of silcrete, as present in other sites across this region, is likely the result of the local natural source and therefore abundance of the material and does not necessarily indicate a connection between individual sites, but rather a regional connection to the Plumpton Ridge extraction site.

4. Can the archaeological deposit be interpreted in the regional context?

- Where did the raw materials originate from?

All recovered artefacts are formed from red silcrete, with the exception of one artefact formed from quartzite (Table 9). Red silcrete is common within the Cumberland Plain and may have originated near to the subject area, such as the silcrete extraction point at Plumpton, approximately 14km north of the subject area (see Section 7.1 above). Quartzite is commonly associated with waterways in the region, such as nearby South Creek (Doelman et al. 2015) and Kemps Creek. The raw materials from which the recovered artefacts are formed may therefore have originated from within the region surrounding the subject area.

- Is there any indication of trade in connection of raw material procurement?

There is no indication among the recovered artefacts of any trade in raw materials. The artefacts are consistent with the use of locally sourced materials.

- How does the assemblage compare to other archaeological sites within the region?

The artefact assemblage is consistent with other sites in the regions, which typically include artefact assemblages dominated by red silcrete flaked artefacts.

5. Do the results of the archaeological excavation change the scientific and cultural significance of the site?

- What is the scientific and cultural value of the assemblage?

Low scientific significance. Low density subsurface assemblage, common artefact types (flakes, debitage, broken core and blades) produced from local silcrete resources. Distribution of artefacts was across the landscape and evident on all landforms predicted to contain subsurface deposits (terraces adjacent to water sources, lower hill slopes, spurs and crests).

- How do the Aboriginal stakeholders view the cultural value of the deposit and assemblage?

As part of the ACHAR, consultation with members of the local Aboriginal community was undertaken to identify the level of spiritual/cultural significance of the subject area and its components. Kamilaroi Yankuntjatjara Working Group have noted the deep connection that Aboriginal people hold with the land. The subject area has been assessed as containing high cultural value to local Aboriginal communities on the basis of the deep connection Aboriginal people hold with the land and broader environment.

7.2. SIGNIFICANCE ASSESSMENT

The Australia International Council on Monuments and Sites (ICOMOS) Burra Charter 2013 provides guidance for the assessment, conservation and management of places of cultural significance (cultural heritage places). The Burra Charter provides a definition of cultural significance as “aesthetic, historic, scientific, social or spiritual value for past, present or future generations”.

- Cultural heritage places or sites can be assessed through the application of these five principal values.
- Social or cultural value (for Aboriginal sites this is assessed by Aboriginal people).
- Historical value.
- Scientific/archaeological value (assessed mostly by archaeologists/heritage consultants).
- Spiritual Value (for Aboriginal sites this is assessed by Aboriginal people).
- Aesthetic value.

While the Burra Charter does not include ‘archaeological value’ specifically it is noted that it can be considered as a sub-set of scientific or other values (Australia ICOMOS Practice Note The-Burra-Charter-and-Archaeological-Practice).

This section is a summary of scientific of archaeological values for the project area. The assessment for social, historical and aesthetic value is presented in Section 4 of the ACHAR.

7.2.1. Scientific Significance

Scientific or archaeological value may refer to the information content of a place and its ability to reveal more about an aspect of the past through examination or investigation of the place, including the use of archaeological techniques. The relative scientific value of a place is likely to depend on the importance of the information or data involved, on its rarity, quality or representativeness, and its potential to contribute further important information about the place itself or a type or class of place or to address important research questions. To establish potential, it may be necessary to carry out some form of testing or sampling. For example in the case of an archaeological site, this could be established by a test excavation.

To appreciate scientific value, ask:

- Would further investigation of the place have the potential to reveal substantial new information and new understandings about people, places, processes or practices which are not available from other sources?

7.2.1.1. Isolated Find 01

Low scientific significance. Common artefact and site type in the Cumberland Plain discovered in a disturbed context.

7.2.1.2. Isolated Find 02

Low scientific significance. Common artefact and site type in the Cumberland Plain discovered in a disturbed context.

7.2.1.3. Isolated Find 03

Low scientific significance. Common artefact and site type in the Cumberland Plain discovered in a disturbed context.

7.2.1.4. Aldington Road Subsurface Assemblage

Low scientific significance. Low density subsurface assemblage, common artefact types (flakes, debitage, broken core and blades) produced from local silcrete resources. Distribution of artefacts was across the landscape and evident on all landforms predicted to contain subsurface deposits (terraces adjacent to water sources, lower hill slopes, spurs and crests).

7.3. IMPACT ASSESSMENT

The identified Aboriginal sites within the study area has been considered in relation to the proposed works. Impacts to the sites will be unavoidable due to the requirement for bulk earthworks and associated activities. The types of impact to the identified Aboriginal sites within the study area is shown in Table 11 below.

Table 11 – Impacts to identified Aboriginal Sites within the subject area

Site number	Site name	Type of harm	Degree of harm	Consequence of harm
Pending	Isolated Find 01 (IF-1)	Direct	Total	Total loss of value
Pending	Isolated Find 02 (IF-2)	Direct	Total	Total loss of value
Pending	Isolated Find 03 (IF-3)	Direct	Total	Total loss of value
Pending	Aldington Road Subsurface Assemblage	Direct	Total	Total loss of value

7.4. MANAGEMENT AND MITIGATION

7.4.1. Surface Collection

Following SSDA approval and prior to construction surface collection of identified artefacts IF1, IF2 and IF3 must be undertaken in accordance with the Code of Practice and with the involvement of the Registered Aboriginal Parties.

Isolated Find 01 (IF-1) – proximal flake fragment (grey silcrete) (33°51'33.5"S, 150°47'57.7"E)

Isolated Find 02 (IF-2) – angular fragment (grey silcrete) (33°51'28.6"S, 150°47'47.2"E)

Isolated Find 03 (IF-3) – medial flake fragment (grey silcrete) (33°51'30"S, 150°47'47.9"E)

7.4.2. Repatriation or Deposition in Keeping Place

Through consultation with the RAPs a decision will be made as to the final destination for the artefacts recovered during both the test excavation and surface collection programs.

Care and Control of artefacts

Through the ACHA process a determination will be made in consultation with the RAPs the final keeping place of the artefacts collected during the project. All project artefacts will be sorted and packaged in accordance with Australian Museum Standards. The general options are:

Option 1: Deerubbin LALC enters into a Care and Control agreement and the artefacts are then stored at their designated keeping place (Old Parramatta Gaol).

Option 2: Repatriation of artefacts to 'Country'. Following construction of proposed development the artefacts would be reburied within the subject area and the location registered on AHIMS.

Option 3: Designation of alternative keeping place such as local museum, Australian Museum or with other RAP group.

8. CONCLUSIONS AND RECOMMENDATIONS

This ATR has been prepared to accompany a detailed ACHA which forms part of the EIS for a SSD application 9080531. This assessment has been prepared by Urbis on behalf of ESR Australia.

The SSD application is for the construction of a logistics park at for Lots 11, 12 and 13 in DP 253503 at 290-308 Aldington Road, as well as 59-62 and 63 Abbots Road, Kemps Creek, NSW (hereafter referred as the 'subject area'). The ACHA informed the preparation of the ACHAR, which will accompany the SSD application. This ATR has been prepared to accompany the ACHAR.

Following the preparation of the ACHAR and the field survey undertaken 16th February 2021, test excavation was deemed prudent for the subject area. This decision was based on the presence of Aboriginal artefacts observed within an exposed vehicle track and undisturbed landforms in proximity to freshwater.

This ATR is intended to detail the methodology and results of test excavation. Refer to Section 1.2 of the ACHA for detailed information regarding the proposed development at the subject area.

This ATR has been prepared in accordance with the following statutory guidelines:

- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (Office of Environment and Heritage 2011) (the Assessment Guidelines).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010) (CoP).

Test excavation was conducted from Monday 19th April 2021 to Monday 3rd May 2021 covering a variety of landforms with the aim of testing these landscape features for any potential sub-surface archaeological deposits.

Test excavation was undertaken in line with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010) to understand the nature, extent, integrity and research significance of the Aboriginal archaeological resource. The test excavation also aimed to sample the various landscape features for any potential sub-surface archaeological deposits.

The test excavation included:

- The Stage 1 of testing including the excavation of up to 171 (one hundred and seventy-one) 50 cm by 50 cm test pits in a systematic transect system at a spacing of 10m or 20m. The location of the test pits was informed by the results of the archaeological survey and the predictive model of the ACHAR.
- All excavated material was wet sieved through a 5mm metal sieve station.

In total, 171 test pits were excavated from 20 transects (Transect A – Transect T) across all landform types within the subject area to provide a comprehensive sample.

The test excavation identified low density subsurface Aboriginal archaeological deposits (13 artefacts from 12 test pits).

The predictive model formulated for the ACHAR (see Section 2.7 of ACHA) anticipated that artefact scatters, PADs and isolated finds had moderate-high potential to occur in areas of low historical ground disturbance, on the basis of the distribution of artefact sites in the region as well as the landscape features present – including elevated ground/terraces associated with waterways and crests/spurs.

The results of the test excavation confirmed:

- Altogether, thirteen (13) artefacts were recovered during the test excavation programme.
- The presence of a low density, background scatter suggests a transitional, low frequency use of the subject area by Aboriginal people, including lower slopes, terraces adjacent to waterways, spurs and ridge crests.
- The very small artefact assemblage provides limited information on the artefact production process that might have taken place in the area.
- While the subject area was clearly utilised by Aboriginal people in the past, the results of the test excavation suggest it was likely to have been in a transitional manner, with no focus of intensive or repeated occupation.

- Test excavations also revealed that if archaeological deposits had been present in areas of high disturbance and/or erosion, post depositional processes may have removed or dispersed the archaeological evidence.
- The scientific significance of the subject area is determined to be low, based on the presence of a low-density subsurface assemblage of common artefact types for the Cumberland Plain (flakes, debitage, broken core and blades) produced from local silcrete resources and associated with landforms consisted with predictive model (terraces adjacent to water sources, lower hill slopes, spurs and crests).
- The subject area has been assessed as containing high cultural value to local Aboriginal communities on the basis of the deep connection Aboriginal people hold with the land and broader environment.
- The subject area has been assessed as possessing low historical value due to lack of historical connections.
- The subject area is considered to have moderate aesthetic value due to impacts caused by farming and pastoral activities within the study area.

Following the results of the test excavation program it is anticipated that the proposed works will result in direct harm to subsurface Aboriginal archaeological deposits which constitutes a low scientific and moderate cultural significant site(s).

The project can proceed in accordance with the following recommendations:

Recommendation 1 – Surface Collection

Following SSDA approval and prior to construction surface collection of identified artefacts IF1, IF2 and IF3 must be undertaken in accordance with the Code of Practice and with the involvement of the Registered Aboriginal Parties.

- Isolated Find 01 (IF-1) – proximal flake fragment (grey silcrete) (33°51'33.5"S, 150°47'57.7"E)
- Isolated Find 02 (IF-2) – angular fragment (grey silcrete) (33°51'28.6"S, 150°47'47.2"E)
- Isolated Find 03 (IF-3) – medial flake fragment (grey silcrete) (33°51'30"S, 150°47'47.9"E)

No further subsurface archaeological excavation is warranted.

Recommendation 2 – Aboriginal Cultural Heritage Induction

It is recommended that induction materials be prepared in consultation with the Registered Aboriginal Parties (RAPs) for inclusion in the construction management plan and site inductions for any contractors working at the subject area. The induction material should include an overview of the types of sites and artefacts to be aware of (i.e. stone tools), under the NPW Act, and the requirements of an 'archaeological chance find procedure' (refer below). This should be prepared for the project and included in any site management plans.

The induction material may be paper based, included in any hard copy site management documents; or electronic, such as "PowerPoint" for any face-to-face site inductions.

Recommendation 3 – Archaeological Chance Find Procedure

Although considered highly unlikely, should any Aboriginal objects, archaeological deposits be uncovered during any site works, a Chance Find Procedure must be implemented. The following steps must be carried out:

1. All works stop in the vicinity of the find. The find must not be moved 'out of the way' without assessment.
2. The archaeologist and Aboriginal representative on site examine the find, provides a preliminary assessment of significance, records the item for the AHIMS register and decides on appropriate management. Such management may require further consultation with the Aboriginal Cultural Heritage Regulation Branch of the Department of Premier and Cabinet (DPC), preparation of a research design and archaeological investigation/salvage methodology and decision on temporary care and control.
3. Depending on the significance of the find, reassessment of the archaeological potential of the subject area may be required, and further archaeological investigation undertaken.
4. Reporting may need to be prepared regarding the find and approved management strategies. Any such documentation should be appended to this assessment and revised accordingly.

5. Works in the vicinity of the find can only recommence when all management measure all implemented, and the find is removed from the activity area. Should the find be an unmovable item such as an engraving or grinding groove located on a sandstone surface, further management measures will need to be introduced to avoid harm to the find.

Recommendation 4 – Human Remains Procedure

In the unlikely event that human remains are uncovered during any site works, the following must be undertaken:

1. All works within the vicinity of the find immediately stop.
2. Site supervisor or other nominated manager must notify the NSW Police and DPC.
3. The find must be assessed by the NSW Police, and may include the assistance of a qualified forensic anthropologist.
4. Management recommendations are to be formulated by the Police, DPC and site representatives.
5. Works are not to recommence until the find has been appropriately managed.

9. REFERENCES

- Attenbrow, V. 2002. *Sydney's Aboriginal Past*. University of New South Wales Press, Sydney: Australia.
- Attenbrow, V. 2010. *Sydney's Aboriginal Past, 2nd Edition*, University of New South Wales Press, Sydney: Australia.
- Bioss, 2018. *Mamre South State Significant Development Application. Statement of Heritage Impact*.
- Department of Environment, Climate Change and Water NSW (DECCW) 2010 *Aboriginal cultural heritage consultation requirements for proponents 2010: Part 6 National Parks and Wildlife Act 1974*, Department of Environment, Climate Change and Water NSW.
- DECCW 2010 *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales: Part 6 National Parks and Wildlife Act 1974*, Department of Environment, Climate Change and Water NSW.
- DECCW 2010 *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in New South Wales: Part 6 National Parks and Wildlife Act 1974*, Department of Environment, Climate Change and Water NSW.
- Doelman, T, Webb, J, Williams, A, May, J and Barry, F 2015. *Paleochannels and Patches: A Geoarchaeological Assessment of Silcrete Sources in the Cumberland Plain, Eastern Australia*, *Geoarchaeology: An International Journal*, vol. 30, pp. 495–510.
- Dominic Steele Consulting Archaeology (DSCA) 2010. *Aboriginal and non-Aboriginal Cultural Heritage Impact Assessment, LOGOS Kemps Creek Logistics Project*.
- Flynn, M 1997. *Holroyd history and the Silent Boundary Project*, Holroyd City Council.
- ICOMOS, 2013. *The Burra Charter*.
- JMCHM, 2005. *Archaeological testing and salvage excavation at Discovery Point, Site #45-5-2737, in the former grounds of Tempe House*.
- MacLaurin, ECB. 1966. 'Fitzgerald, Richard (1772–1840)', *Australian Dictionary of Biography*, National Centre of Biography, Australian National University.
- Nanson, GC, Young, RW and Stockton, ED 1987, Chronology and palaeoenvironment of the Cranebrook Terrace, near Sydney, containing artefacts more than 40,000 years old, *Archaeology in Oceania*, vol. 22, pp. 72-78.
- Ngara Consulting Pty Ltd, 2003. *Archaeological Assessment of Aboriginal Heritage: Reservoir Entry Lands (AHIMS#102059)*, Prospect. Unpublished report to Conybeare and Morrison.
- Tench, W. 1789. *A Narrative of the Expedition to Botany Bay*, p. 53. Cited in Flannery, 2012. *Watkin Tench: 1788*, The Text Publishing Company, Melbourne: Australia.
- Tindale, NB. 1974. *Aboriginal Tribes of Australia. Their Terrain, Environmental Controls, Distribution, Limits and Proper Names*. ANU Press, Canberra: Australia.

DISCLAIMER

This report is dated 12 April 2022 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd (**Urbis**) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of ESR AUSTRALIA (**Instructing Party**) for the purpose of Archaeological Technical Report (**Purpose**) and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

In preparing this report, Urbis was required to make judgements which may be affected by unforeseen future events, the likelihood and effects of which are not capable of precise assessment.

All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

In preparing this report, Urbis may rely on or refer to documents in a language other than English, which Urbis may arrange to be translated. Urbis is not responsible for the accuracy or completeness of such translations and disclaims any liability for any statement or opinion made in this report being inaccurate or incomplete arising from such translations.

Whilst Urbis has made all reasonable inquiries it believes necessary in preparing this report, it is not responsible for determining the completeness or accuracy of information provided to it. Urbis (including its officers and personnel) is not liable for any errors or omissions, including in information provided by the Instructing Party or another person or upon which Urbis relies, provided that such errors or omissions are not made by Urbis recklessly or in bad faith.

This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

APPENDIX A

BASIC AND EXTENSIVE AHIMS SEARCH RESULTS

Urbis Pty Ltd - Angel Place L8 123 Pitt Street

Date: 02 November 2020

Level 8 123 Angel Street
Sydney New South Wales 2000

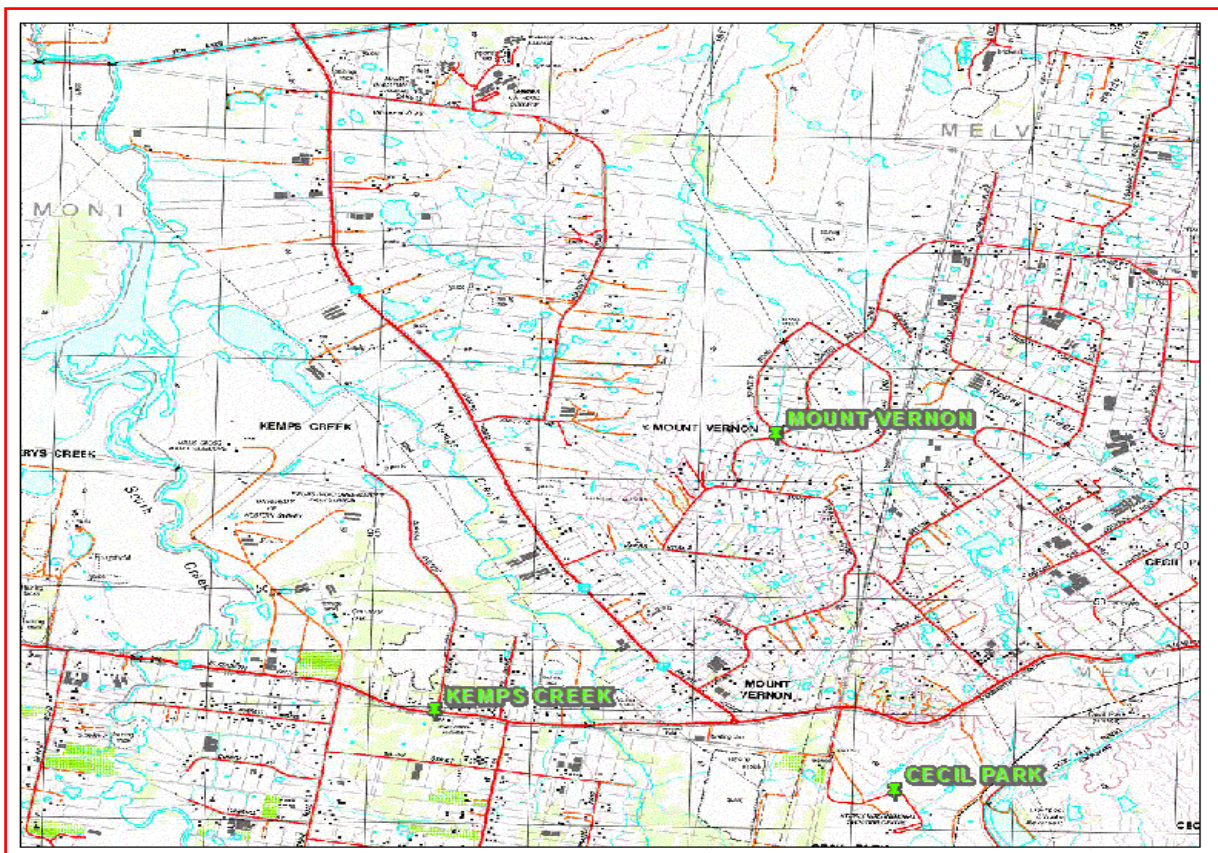
Attention: Aaron Olsen

Email: aolsen@urbis.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters, conducted by Aaron Olsen on 02 November 2020.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

117	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : ESR Kemps Ck 7km

Client Service ID : 546950

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-2057	PGH1;Monier PGH; <u>Contact</u>	GDA	56	298268	6254015	Open site	Destroyed	Artefact : - <u>Permits</u>	Isolated Find	98435,103366
45-5-2046	PGH2;Monier PHG; <u>Contact</u>	GDA	56	298493	6254045	Open site	Destroyed	Artefact : - <u>Permits</u>	Isolated Find	98435,103366
45-5-2008	SC4;Cecil Park Shooting Complex; <u>Contact</u>	AGD	56	298360	6247790	Open site	Valid	Artefact : - <u>Permits</u>	Isolated Find	3857
45-5-2009	SC5 Cecil Park Shooting Complex <u>Contact</u>	AGD	56	298340	6247790	Open site	Valid	Artefact : - <u>Permits</u>	Isolated Find	3857
45-5-2011	SC3;Cecil Park Shooting Complex; <u>Contact</u>	AGD	56	298050	6247790	Open site	Valid	Artefact : - <u>Permits</u>	Isolated Find	3857
45-5-2012	SC2;Cecil Park Shooting Complex; <u>Contact</u>	AGD	56	297760	6247810	Open site	Valid	Artefact : - <u>Permits</u>	Isolated Find	3857
45-5-2013	SC1;Cecil Park Shooting Complex; <u>Contact</u>	AGD	56	297800	6247960	Open site	Valid	Artefact : - <u>Permits</u>	Isolated Find	3857
45-5-2426	IFSC 11;Cecil Park; <u>Contact</u>	AGD	56	297990	6248110	Open site	Valid	Artefact : - <u>Permits</u>	Isolated Find	
45-5-2427	IFSC 10;Cecil Park; <u>Contact</u>	AGD	56	297680	6247790	Open site	Valid	Artefact : - <u>Permits</u>	Isolated Find	
45-5-2429	CPSC 3;Cecil Park; <u>Contact</u>	AGD	56	297710	6248020	Open site	Valid	Artefact : - <u>Permits</u>	Open Camp Site	
45-5-2430	IFSC 7;Cecil Park; <u>Contact</u>	AGD	56	298590	6247980	Open site	Valid	Artefact : - <u>Permits</u>	Isolated Find	
45-5-2711	CDG1 <u>Contact</u>	AGD	56	293300	6252800	Open site	Valid	Artefact : - <u>Permits</u>	4577	1345,1539,473 7
45-5-3999	PAD 2001-6 <u>Contact</u>	GDA	56	295825	6248852	Open site	Valid	Potential Archaeological Deposit (PAD) : - <u>Permits</u>		
45-5-4006	Artefact Scatter PAD 2007-4 <u>Contact</u>	GDA	56	295792	6248524	Open site	Valid	Artefact : - <u>Permits</u>		
45-5-4007	Artefact Scatter 2008-4 <u>Contact</u>	GDA	56	297641	6248524	Open site	Valid	Artefact : - <u>Permits</u>		
45-5-4008	Isolated Object 2009-5 <u>Contact</u>	GDA	56	297443	6248524	Open site	Valid	Artefact : - <u>Permits</u>		

Report generated by AHIMS Web Service on 02/11/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : ESR Kemps Ck 7km

Client Service ID : 546950

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-4009	Isolated Object 2010-5	GDA	56	297432	6248202	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>								<u>Permits</u>
45-5-4010	Isolated Object 2011-5	GDA	56	297479	6248304	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>								<u>Permits</u>
45-5-4022	Artefact Scatter PAD 2023-846	GDA	56	299598	6249047	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>							4577	<u>Permits</u>
45-5-4049	PAD 2054-6	GDA	56	296512	6249100	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>								<u>Permits</u>
45-5-4675	Oakdale West Isolated Find (OW IF 2)	GDA	56	296627	6254876	Open site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>								<u>Permits</u>
45-5-4676	Oakdale West Isolated Find 3	GDA	56	295882	6254754	Open site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>								<u>Permits</u>
45-5-5259	Elizabeth Drive AFT 1	GDA	56	293377	6249426	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>								<u>Permits</u>
45-5-5260	Wylde MTB PAD1	GDA	56	298467	6248411	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>								<u>Permits</u>
45-5-5261	Wylde MTB PAD2	GDA	56	298498	6248258	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>								<u>Permits</u>
45-5-5262	Wylde MTB PAD 3	GDA	56	299151	6248697	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>								<u>Permits</u>
45-5-5274	Bakers Lane SLR AFT 1	GDA	56	295915	6254097	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>								<u>Permits</u>
45-5-5268	Kemps Creek IF-02	GDA	56	295030	6253859	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>								<u>Permits</u>
45-5-5269	Kemps Creek IF-01	GDA	56	294976	6253943	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>								<u>Permits</u>
45-5-5281	Cross Street Kemps Creek AFT 1	GDA	56	296973	6248376	Open site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 02/11/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : ESR Kemps Ck 7km

Client Service ID : 546950

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Mr.Matthew Kelleher,Kelleher Nightingale Consulting Pty Ltd (Generic users)							
45-5-5230	Elizabeth Precinct Isolated Find 03 (EPIF 03)	GDA	56	293375	6249980	Open site	Valid	Artefact : -	4577	
	Contact	Recorders	Artefact - Cultural Heritage Management - Pyrmont,Ms.Jennifer Norfolk							
45-5-5231	Elizabeth Precinct Isolated Find 02 (EPIF 02)	GDA	56	293466	6250004	Open site	Valid	Artefact : -		
	Contact	Recorders	Artefact - Cultural Heritage Management - Pyrmont,Ms.Jennifer Norfolk							
45-5-5232	Elizabeth Precinct Isolated Find 01 (EPIF 01)	GDA	56	293416	6249892	Open site	Valid	Artefact : -		
	Contact	Recorders	Artefact - Cultural Heritage Management - Pyrmont,Ms.Jennifer Norfolk							
45-5-5233	Elizabeth Precinct Artefact Scatter 01 (EPAS 01)	GDA	56	293412	6249873	Open site	Valid	Artefact : -		
	Contact	Recorders	Artefact - Cultural Heritage Management - Pyrmont,Ms.Jennifer Norfolk							
45-5-5301	Kemps Creek East (KCE) PAD	GDA	56	296543	6249177	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Mr.Andrew Costello,Jacobs Group (Australia) Pty Ltd - North Sydney							
45-5-5302	Kemps Creek West (KCW) PAD	GDA	56	296110	6249360	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Mr.Andrew Costello,Jacobs Group (Australia) Pty Ltd - North Sydney							
45-5-5303	Kemps North West (KNW) PAD	GDA	56	295455	6250265	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Mr.Andrew Costello,Jacobs Group (Australia) Pty Ltd - North Sydney							
45-5-5306	South Creek East (SCE)	GDA	56	293940	6251020	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Mr.Andrew Costello,Jacobs Group (Australia) Pty Ltd - North Sydney							
45-5-5307	South Creek West T1 (SCW T1)	GDA	56	293360	6251085	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Jacobs Group (Australia) Pty Ltd - North Sydney,Mr.Andrew Costello							
45-5-5308	South Creek West T2 (SCW T2)	GDA	56	293360	6251085	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Mr.Andrew Costello,Jacobs Group (Australia) Pty Ltd - North Sydney							
45-5-5315	MRP-OS2	GDA	56	296737	6253925	Open site	Valid	Artefact : -		
	Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Taylar Reid							
45-5-5316	MRP-OS1	GDA	56	294413	6252254	Open site	Valid	Artefact : -		
	Contact	Recorders	EMM Consulting - St Leonards - Individual users,Ms.Taylar Reid							

Report generated by AHIMS Web Service on 02/11/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : ESR Kemps Ck 7km

Client Service ID : 546950

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-5234	Elizabeth Precinct PAD 03	GDA	56	293924	6249724	Open site	Valid	Potential Archaeological Deposit (PAD) :-		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont,Ms.Jennifer Norfolk							<u>Permits</u>
45-5-5235	Elizabeth Precinct PAD 02	GDA	56	293927	6249529	Open site	Not a Site	Potential Archaeological Deposit (PAD) :-		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont,Artefact - Cultural Heritage Ma							<u>Permits</u>
45-5-5236	Elizabeth Precinct PAD 01	GDA	56	293200	6249565	Open site	Valid	Potential Archaeological Deposit (PAD) :-, Artefact :-		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont,Artefact - Cultural Heritage Ma							<u>Permits</u>
45-5-5277	Cecil Park Water Reservoir AFT 1	GDA	56	299289	6248948	Open site	Valid	Artefact :-		
	<u>Contact</u>	<u>Recorders</u>	Mr.Matthew Kelleher,Kelleher Nightingale Consulting Pty Ltd (Generic users)							<u>Permits</u> 4577
45-5-2568	CGD5	AGD	56	293300	6253500	Open site	Valid	Artefact :-	Open Camp Site	98435
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting							<u>Permits</u>
45-5-2561	GLC1	GDA	56	299580	6249001	Open site	Valid	Artefact :-	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	Annie Nicholson,Mr.Matthew Kelleher,Kelleher Nightingale Consulting Pty Ltd (Ge							<u>Permits</u> 4577
45-5-2550	CGD1	AGD	56	293350	6252800	Open site	Valid	Artefact :-	Open Camp Site	98435
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting							<u>Permits</u>
45-5-2552	CGD3	AGD	56	293000	6252800	Open site	Valid	Modified Tree (Carved or Scarred) :-	Scarred Tree	98435
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting							<u>Permits</u>
45-5-2553	CGD4	AGD	56	293300	6252500	Open site	Valid	Artefact :- , Modified Tree (Carved or Scarred) :-	Open Camp Site,Scarred Tree	98435
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting							<u>Permits</u>
45-5-2554	CGD2	AGD	56	293000	6252900	Open site	Valid	Artefact :-	Open Camp Site	98435
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting							<u>Permits</u>
45-5-2307	P-CP9	AGD	56	298110	6248750	Open site	Valid	Artefact :-	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	Helen Brayshaw							<u>Permits</u>
45-5-2308	P-CP8	AGD	56	298580	6248760	Open site	Valid	Artefact :-	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	Helen Brayshaw							<u>Permits</u>
45-5-2310	KC/ED2;	AGD	56	297520	6248760	Open site	Valid	Artefact :-	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	Helen Brayshaw							<u>Permits</u>

Report generated by AHIMS Web Service on 02/11/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : ESR Kemps Ck 7km

Client Service ID : 546950

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-0604	Cecil Park 1	AGD	56	297350	6251470	Open site	Valid	Artefact : -	Open Camp Site	1283,98435
	<u>Contact</u>	<u>Recorders</u>	Smith,M Hanckel					<u>Permits</u>	694	
45-5-0605	Cecil Park 2	AGD	56	297600	6251780	Open site	Valid	Artefact : -	Open Camp Site	1283,98435
	<u>Contact</u>	<u>Recorders</u>	Smith,M Hanckel					<u>Permits</u>		
45-6-1775	Lec 9;	AGD	56	293200	6252700	Open site	Valid	Artefact : -	Open Camp Site	1345,98435
	<u>Contact</u>	<u>Recorders</u>	Mary Dallas Consulting Archaeologists (MDCA)					<u>Permits</u>		
45-6-1777	Lec10;	AGD	56	293180	6253070	Open site	Valid	Artefact : -	Open Camp Site	1345,97496,98 435,99352
	<u>Contact</u>	<u>Recorders</u>	Mary Dallas Consulting Archaeologists (MDCA)					<u>Permits</u>	1586,2056	
45-6-1778	Lec 11;	AGD	56	293300	6252820	Open site	Valid	Artefact : -	Open Camp Site	1345,98435
	<u>Contact</u>	<u>Recorders</u>	Mary Dallas Consulting Archaeologists (MDCA)					<u>Permits</u>		
45-6-1779	Lec 12;	AGD	56	293300	6252850	Open site	Valid	Artefact : -	Open Camp Site	1345,98435,99 352
	<u>Contact</u>	<u>Recorders</u>	Mary Dallas Consulting Archaeologists (MDCA)					<u>Permits</u>	2056	
45-5-0214	Kemps Creek;	AGD	56	296100	6248300	Open site	Valid	Artefact : -	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	Ms.Laila Haglund					<u>Permits</u>		
45-5-0215	South Creek	AGD	56	293800	6249900	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	362
	<u>Contact</u>	<u>Recorders</u>	Ms.Laila Haglund					<u>Permits</u>		
45-5-0496	Fleurs1 Fleurs Radio Telescope	AGD	56	293750	6250730	Open site	Valid	Artefact : -	Open Camp Site	961,1018,9843 5
	<u>Contact</u>	<u>Recorders</u>	University of Sydney					<u>Permits</u>		
45-5-3058	EV1	AGD	56	295751	6254547	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Jim Wheeler					<u>Permits</u>		
45-5-3028	EPTA3	AGD	56	294160	6254370	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>	2188	
45-5-3029	EPTA4	AGD	56	294850	6253540	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>	2188	
45-5-3030	EPTA5	AGD	56	295170	6253570	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>	2188	
45-5-3031	EPTA6	AGD	56	295210	6253410	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>	2188	
45-5-3032	EPTA10	AGD	56	293580	6253610	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>	2188	
45-5-3033	EPTA11	AGD	56	293340	6253690	Open site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 02/11/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : ESR Kemps Ck 7km

Client Service ID : 546950

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-3034	EP-1 1	AGD	56	295260	6253400	Open site	Valid	Artefact : -	2188	
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>	2188	
45-5-3035	EP-1 2	AGD	56	295190	6253500	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>	2188	
45-5-3036	EP-1 3	AGD	56	295240	6253710	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>	2188	
45-5-3095	PGH3	GDA	56	299004	6254512	Open site	Valid	Artefact : 2		103366
	<u>Contact</u> T Russell	<u>Recorders</u>						<u>Permits</u>		
45-5-2991	TCE 1	AGD	56	293300	6252700	Open site	Valid	Artefact : -		99352
	<u>Contact</u> T Russell	<u>Recorders</u>						<u>Permits</u>	2056	
45-5-4102	Kemps Creek IF1	GDA	56	295565	6253701	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4103	Kemps Creeks IF2	GDA	56	294737	6254040	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4104	Kemps Creek (logosoc1)	GDA	56	295307	6254094	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4105	Kemps Creek (logosoc2)	GDA	56	295265	6254066	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4525	Oakdale South IF2	GDA	56	297566	6254552	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4526	Oakdale South AS2	GDA	56	297513	6254618	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4527	Oakdale South IF1	GDA	56	297516	6254817	Open site	Valid	Artefact : -		104331
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4528	Oakdale South AS3	GDA	56	297508	6254390	Open site	Valid	Artefact : -		104331
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4529	Oakdale South AS4	GDA	56	297190	6253944	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4947	Oakdale South AS5	GDA	56	297775	6254796	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
45-5-4948	Oakdale South IF3	GDA	56	297752	6254842	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		

Report generated by AHIMS Web Service on 02/11/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : ESR Kemps Ck 7km

Client Service ID : 546950

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-5104	PAD 2	GDA	56	294516	6249243	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd, Miss. Jasmine Fenyvesi							<u>Permits</u>
45-5-5133	Oakdale West 18 Isolated Find 01	GDA	56	296303	6254317	Open site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont, Artefact - Cultural Heritage Ma							<u>Permits</u>
45-5-5134	Oakdale West 18 Artefact Scatter 02	GDA	56	296886	6254515	Open site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont, Artefact - Cultural Heritage Ma							<u>Permits</u>
45-5-5135	Oakdale West 18 Artefact Scatter 03	GDA	56	296777	6254242	Open site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont, Artefact - Cultural Heritage Ma							<u>Permits</u>
45-5-5136	Oakdale West 18 Isolated Find 02	GDA	56	296659	6254589	Closed site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont, Artefact - Cultural Heritage Ma							<u>Permits</u>
45-5-5137	Oakdale West 18 Artefact Scatter 01	GDA	56	297167	6254820	Closed site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont, Artefact - Cultural Heritage Ma							<u>Permits</u>
45-5-5187	MSP-01	GDA	56	294210	6254558	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Biosis Pty Ltd - Wollongong, Mrs. Samantha Keats							<u>Permits</u>
45-5-5188	MSP-02	GDA	56	293594	6253823	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Biosis Pty Ltd - Wollongong, Mrs. Samantha Keats							<u>Permits</u>
45-5-5189	MSP-03	GDA	56	293501	6253805	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Biosis Pty Ltd - Wollongong, Mrs. Samantha Keats							<u>Permits</u>
45-5-5190	MSP-04	GDA	56	293580	6253610	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Biosis Pty Ltd - Wollongong, Mrs. Samantha Keats							<u>Permits</u>
45-5-5037	UC AS 23	GDA	56	298800	6248150	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Extent Heritage Pty Ltd - Pyrmont - Individual users, Ms. Fenella Atkinson							<u>Permits</u> 4303
41-5-0014	M12-AS-04	GDA	56	294361	6250957	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Jacobs Group (Australia) Pty Ltd - Newcastle, Miss. Chelsea Jones							<u>Permits</u>
45-5-5186	Mamre Road Artefact Scatter 1901 (MAM AS1901)	GDA	56	295114	6253373	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	Artefact - Cultural Heritage Management - Pyrmont, Ms. Jennifer Norfolk							<u>Permits</u>
45-5-2615	Area D	AGD	56	292900	6253450	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting							<u>Permits</u> 1586

Report generated by AHIMS Web Service on 02/11/2020 for Aaron Olsen for the following area at Datum : GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : ESR Kemps Ck 7km

Client Service ID : 546950

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-3106	Kemps Creek (KC PAD 1)	AGD	56	296000	6248875	Open site	Valid	Potential Archaeological Deposit (PAD) : 1, Artefact : 1		97456,98064
	<u>Contact</u>	T Russell							<u>Permits</u>	
45-5-4374	CP AS1	GDA	56	298104	6249004	Open site	Valid	Artefact : 1		
	<u>Contact</u>				Mr.josh madden				<u>Permits</u>	
45-5-4937	M12-AS-01	GDA	56	297650	6248694	Open site	Valid	Artefact : -		
	<u>Contact</u>				Mr.Neville Baker,Sydney Water-Parramatta				<u>Permits</u>	
45-5-4749	M12 A4	GDA	56	293785	6251051	Open site	Valid	Artefact : -		
	<u>Contact</u>				Navin Officer Heritage Consultants Pty Ltd,Mrs.Nicola Hayes				<u>Permits</u>	
45-5-4767	M12 A5	GDA	56	296537	6249457	Open site	Valid	Artefact : -		
	<u>Contact</u>				Navin Officer Heritage Consultants Pty Ltd,Mrs.Nicola Hayes				<u>Permits</u>	
45-5-5330	Elizabeth Precinct Isolated Find 05 (EP IF 05)	GDA	56	293287	6249478	Open site	Valid	Artefact : -		
	<u>Contact</u>				Artefact - Cultural Heritage Management - Pyrmont,Ms.Alyce Haast				<u>Permits</u>	
45-5-5331	Elizabeth Precinct Isolated Find 04 (EP IF 04)	GDA	56	293336	6249535	Open site	Valid	Artefact : -		
	<u>Contact</u>				Artefact - Cultural Heritage Management - Pyrmont,Ms.Alyce Haast				<u>Permits</u>	
45-5-5358	OW 19 IF 2	GDA	56	296486	6254788	Open site	Destroyed	Artefact : -		
	<u>Contact</u>				Artefact - Cultural Heritage Management - Pyrmont,Artefact - Cultural Heritage Ma				<u>Permits</u>	
45-5-5359	OW 19 IF 1	GDA	56	296535	6254830	Open site	Destroyed	Artefact : -		
	<u>Contact</u>				Artefact - Cultural Heritage Management - Pyrmont,Artefact - Cultural Heritage Ma				<u>Permits</u>	
45-5-5340	MSP-05	GDA	56	294016	6254604	Open site	Valid	Artefact : -		
	<u>Contact</u>				Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats				<u>Permits</u>	
45-5-5341	MSP-06	GDA	56	294123	6254552	Open site	Valid	Artefact : -		
	<u>Contact</u>				Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats				<u>Permits</u>	
45-5-5342	MSP-07	GDA	56	294146	6254469	Open site	Valid	Artefact : -		
	<u>Contact</u>				Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats				<u>Permits</u>	
45-5-5343	MSP-08	GDA	56	294155	6254417	Open site	Valid	Artefact : -		
	<u>Contact</u>				Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats				<u>Permits</u>	
45-5-5344	MSP-09	GDA	56	294469	6253984	Open site	Valid	Artefact : -		
	<u>Contact</u>				Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats				<u>Permits</u>	
45-5-5345	MSP-10	GDA	56	294548	6253896	Open site	Valid	Artefact : -		
	<u>Contact</u>				Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats				<u>Permits</u>	
45-5-5346	MSP-11	GDA	56	293382	6254091	Open site	Valid	Artefact : -		
	<u>Contact</u>				Biosis Pty Ltd - Wollongong,Mrs.Samantha Keats				<u>Permits</u>	

Report generated by AHIMS Web Service on 02/11/2020 for Aaron Olsen for the following area at Datum :GDA, Zone : 56, Eastings : 292944 - 299944, Northings : 6247883 - 6254883 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

APPENDIX B

TEST PIT REGISTER

Test square ID	Area	Spit depth (cm)	Spit count	Max. Depth (cm)	Soil profile	Disturbance
A1	1	5	6	30	5cm of dark brown humic loam overlying reddish brown silty clay loam to 25cm. Bioturbated boundary to orange brown basal clay.	Sparse clay patches throughout; disturbed basal clay.
A2	1	10	1	10	Medium brown silty clay loam. Clear transition to reddish brown silty clay base.	Patchy clay throughout. Truncated and mixed.
A3	1	10	3	30	Mixed soil and red brown clay. Red brown basal clay	Mixed and truncated.
A4	1	10	3	23	Brown silty clay loam over orange clay base	Patchy clay.
A5	1	10	1	12	Mixed soil and red brown clay. Red brown basal clay	Mixed and truncated.
A6	1	10	3	30	10cm of dark brown humic loam; decreasing humic content with depth; bioturbated transition to red brown silty clay.	Appears intact.
A7	1	10	4	36	Dark brown humic silty loam to 20 cm, decreasing humic content with depth; bioturbated transition to red brown clay.	Appears intact.
A8	1	10	2	20	Brown silty clay loam over mottled orange clay base	Appears intact.
A9	1	10	2	19	Mixed soil and clay; disturbed red brown basal clay	Truncated and mixed
A10	1	10	1	10	Mixed soil and clay; disturbed red brown basal clay	Truncated and mixed
A11	1	10	1	12	Mixed soil and clay; disturbed red brown basal clay	Truncated and mixed
A12	1	10	2	22	Dark brown humic loam to 8cm; reddish brown silty clay loam with increasing clay and bioturbated boundary to red brown clay base.	Slightly mottled, possibly ploughed.
A13	1	10	2	18	Mixed soil and clay; disturbed red brown basal clay	Very mixed
A14	1	10	2	15	Brown silty clay loam; disturbed orange clay base	Slightly mottled, possibly ploughed.
A15	1	10	2	18	Dark brown silty clay loam, increasing clay content with depth; bioturbated orange brown clay base.	Appears intact.
B1	1	10	5	50	Redeposited local clay and soils with clear boundary to original dark brown humic topsoil at around 30cm. Clay increasing towards base; clear boundary to red brown silty clay base.	30cm of fill. Intact below.

Test square ID	Area	Spit depth (cm)	Spit count	Max. Depth (cm)	Soil profile	Disturbance
B2	1	10	4	38	Redeposited local clay and soils with clear boundary to original dark brown humic topsoil at 15cm with fine gravels. Clay increasing towards base; clear boundary to red brown silty clay base.	15cm of fill. Intact below.
B3	1	10	3	36	Redeposited local clay and soils with clear boundary to original dark brown humic topsoil at 13cm. Clay increasing towards base; clear boundary to red brown silty clay base.	13cm of fill. Intact below.
B4	1	10	5	45	Redeposited local clay and soils with clear boundary to original dark brown humic topsoil at 20cm. Clay increasing towards base; clear boundary to red brown silty clay base.	20cm of fill. Intact below.
B5	1	10	4	35	Redeposited local clay and soils with clear boundary to original dark brown humic topsoil at 16cm. Clay increasing towards base; clear boundary to red brown silty clay base.	Approx. 16cm of fill. Intact below.
C1	2	10	2	15	Brown clayey loam; gradual transition to orange brown silty clay. Ironstone pebbles <10%.	Shallow profile, possibly truncated
C2	2	10	2	20	Brown clayey loam; gradual transition to orange brown silty clay. Ironstone pebbles <10%.	Faintly mottled, possibly ploughed and eroded.
C3	2	10	2	16	Brown clayey loam; gradual transition to orange brown silty clay. Ironstone pebbles <10%.	Faintly mottled; quite clumpy; possibly ploughed and eroded.
C4	2	10	2	19	Brown clayey loam; gradual transition to orange brown silty clay. Ironstone pebbles <10%.	Faintly mottled; possibly ploughed and eroded.
C5	2	10	2	19	Brown clayey loam; gradual transition to orange brown silty clay. Ironstone pebbles <10%.	Faintly mottled; quite clumpy; possibly ploughed and eroded.
C6	2	10	2	15	Brown clayey loam; gradual transition to orange brown silty clay. Ironstone pebbles <10%.	Faintly mottled; quite clumpy; possibly ploughed and eroded.
D1	4	10	3	26	Medium grey brown silty clay loam with clear transition to reddish brown silty clay base	Appears intact.
D2	4	10	2	21	Medium grey brown silty clay loam, scattered ironstone <10mm; bioturbated clay from 17cm onto red brown silty clay base.	Appears intact.
D3	4	10	2	21	Dark brown humic silty clay loam, scattered charcoal flecks; clear transition to reddish brown silty clay base	Appears intact.

Test square ID	Area	Spit depth (cm)	Spit count	Max. Depth (cm)	Soil profile	Disturbance
D4	4	10	2	20	Dark brown humic silty clay loam, scattered charcoal flecks; bioturbated transition to red brown silty clay base	Appears intact.
D5	4	10	2	20	Dark brown silty clay loam; ironstone pebbles <10mm;	Appears intact.
D6	4	10	2	17	Dark brown humic silty clay loam, scattered charcoal flecks; bioturbated transition to reddish brown silty clay base	Appears intact.
D7	4	10	3	26	Reddish brown silty clay loam; scattered gravels; clear transition to reddish brown clay base	Appears intact.
D8	4	10	2	18	Dark brown silty clay loam over reddish brown silty clay.	Appears intact.
D9	4	10	3	27	Dark brown silty clay loam over reddish brown silty clay.	Appears intact.
D10	4	10	3	26	Dark brown silty clay loam over reddish brown silty clay.	Appears intact.
E1	2	10	2	18	Dark brown silty clay loam, very clumpy; shale, ironstone, baked clay, charcoal inclusions; red brown silty clay base, evidence of burning continues.	Clumpy and mixed; appears to have been ploughed.
E2	2	10	2	22	Sparse topsoil over yellowish brown silty clay; very weak and crumbly; very clayey from 15cm; yellow brown silty clay base.	Clumpy and mixed; appears to have been ploughed and eroded.
E3	2	10	2	16	Sparse topsoil over yellowish brown clumpy clay; yellow brown silty clay base.	Clumpy and mixed; appears to have been ploughed and eroded.
E4	2	10	2	22	Sparse topsoil over yellowish brown clumpy clay; yellow brown silty clay base.	Clumpy and mixed; appears to have been ploughed and eroded.
E5	2	10	2	20	Sparse topsoil over yellowish brown silty clay; very weak and crumbly; very clayey from 15cm; yellow brown silty clay base.	Clumpy and mixed; appears to have been ploughed and eroded.
E6	2	10	2	20	Reddish brown silty clay loam; scattered gravels; irregular boundary to red brown clay at 14cm.	Appears mixed
E7	2	10	2	23	Thin topsoil over reddish brown silty clay loam; irregular transition to red brown clay.	Appears mixed
F1	4	5	4	25	Yellowish brown silty clay loam, ironstone of varying sizes up to 8cm diameter; bioturbated zone over reddish brown clay base.	Appears intact,; root channel in base.
F2	4	10	2	18	Dark brown silty clay loam; sparse ironstone pebbles <20mm; reddish brown silty clay base.	Intact
F3	4	10	4	38	Dark brown silty clay loam; sparse ironstone pebbles <20mm; reddish brown silty clay base.	Intact

Test square ID	Area	Spit depth (cm)	Spit count	Max. Depth (cm)	Soil profile	Disturbance
F4	4	10	3	26	Reddish brown silty clay loam, scattered baked clay flecks and nodules, soil appears ashy; dark red brown heat affected clay.	Appears mixed
F5	4	10	3	23	Dark brown silty clay loam; sparse ironstone pebbles <50mm; reddish brown silty clay base.	Appears intact.
F6	4	10	4	34	Medium brown brown silty clay loam, charcoal flecks, sparse gravels; increasing clay towards brown clay base;	Appears intact.
F7	4	10	4	36	Dark brown silty loam; irregular boundary to loamy clay from around 30 cm; Reddish brown silty clay base	Appears intact.
F8	4	10	4	47	Reddish brown silty clay loam small shale fragment from spit 1 and increasing in size with depth; Up to 60% rock to 20cm in size in base of test pit.	Natural rock outcrop?
F9	4	10	2	20	Dark brown silty clay loam, small ironstone pebbles; reddish brown clay base	Appears intact
F10	4	10	3	25	Dark brown silty clay loam, small ironstone pebbles, reddish brown clay base.	Appears intact
G1	4	10	3	25	Medium brown silty clay loam; charcoal and Fe flecks; bioturbated transition to yellowish brown clay.	Appears intact
G2	4	10	3	30	Medium brown silty clay loam; transition to yellowish brown clay base	Appears intact
G3	4	10	3	28	Dark brown silty clay loam with ironstone gravel; transition to orange clay base	Appears intact
G4	4	10	2	18	Dark brown silty clay loam with ironstone gravel; transition to orange clay base	Appears intact
G5	4	10	3	24	Grey brown silty clay loam; transition to reddish brown silty clay	Appears intact
H1	4	10	3	25	Grey brown silty clay loam; transition to reddish brown silty clay	Appears intact
H2	4	10	3	28	Medium brown silty clay loam; transition to yellow brown silty clay	Appears intact
H3	4	10	4	34	Dark brown silty clay loam; clear transition to dark yellowish brown silty clay	Appears intact
H4	4	10	2	20	Dark brown silty clay loam with ironstone gravel; transition to orange clay base	Appears intact
H5	4	10	3	23	Grey brown silty clay loam; transition to yellowish brown silty clay	Appears intact
I1	3	5	3	16	This topsoil. Mixed red clay and sparse silty loam to 10cm; very	Very little soil horizon remaining. Disturbed clay only.

Test square ID	Area	Spit depth (cm)	Spit count	Max. Depth (cm)	Soil profile	Disturbance
					disturbed red clay over dense plastic clay base.	
I2	3	10	1	10	Thin topsoil over mixed red clay/soil. Plastic red clay base.	Very little soil horizon remaining. Disturbed clay only.
I3	3	10	1	9	Thin topsoil over clumpy mixed red clay/soil. Plastic red clay base.	Very little soil horizon remaining. Disturbed clay only.
I4	3	10	1	10	Thin topsoil over clumpy mixed red clay/soil. Plastic red clay base.	Very little soil horizon remaining. Disturbed clay only.
I5	3	10	1	10	Thin topsoil over cracked clumpy mixed red clay/soil. Plastic red clay base.	Very little soil horizon remaining. Disturbed clay only.
I6	3	10	2	23	Dark brown clayey loam; cracked and clumpy; reddish brown clay base.	Appears mixed and truncated.
I7	3	10	1	10	Mixed dark brown loam and yellow brown clay; yellow brown clay base.	Appears mixed and truncated.
J1	3	10	3	30	Disturbed reddish brown clayey silt, sparse ironstone gravels. Irregular transition to disturbed red brown clay at around 16cm. Excavated into clay to ensure not a clay capping.	Very disturbed profile; clumpy and irregular clay patches.
J2	3	10	1	10	Thin topsoil over cracked clumpy mixed red clay/soil. Plastic red clay base.	Very little soil horizon remaining. Disturbed clay only.
J3	3	10	1	10	Slightly humic in top 5cm; overlies mixed red clay/soil and Plastic red clay base.	Very little soil horizon remaining. Disturbed clay only.
J4	3	10	1	10	Thin topsoil over clumpy mixed red clay/soil. Plastic red clay base.	Very little soil horizon remaining. Disturbed clay only.
J5	3	10	2	12	Thin topsoil over cracked clumpy mixed red clay/soil. Plastic red clay base.	Very little soil horizon remaining. Disturbed clay only.
J6	3	10	1	10	Thin topsoil over cracked clumpy mixed red clay/soil. Plastic red clay base.	Very little soil horizon remaining. Disturbed clay only.
J7	3	10	2	12	Cracked clumpy brown clayey silt on brown clay.	Truncated and disturbed.
K1	3	10	1	10	Thin topsoil over cracked clumpy mixed red clay/soil. Plastic red clay base.	Very little soil horizon remaining. Disturbed clay only.
K2	3	10	1	10	Thin topsoil over cracked clumpy mixed red clay/soil. Plastic red clay base.	Very little soil horizon remaining. Disturbed clay only.
K3	3	10	1	8	Thin topsoil over cracked clumpy mixed red clay/soil. Plastic red clay base.	Very little soil horizon remaining. Disturbed clay only.
L1	5	10	4	37	Orange brown silty clay loam with ironstone gravel; transition to orange clay	Appears intact

Test square ID	Area	Spit depth (cm)	Spit count	Max. Depth (cm)	Soil profile	Disturbance
L2	5	10	3	23	Dark brown to orange brown silty clay loam with ironstone gravel; transition to orange clay	Appears intact
L3	5	10	3	29	Dark brown silty clay loam with ironstone gravel; transition to orange clay	Appears intact
L4	5	10	2	20	Dark brown to orange brown silty clay loam with ironstone gravel; transition to orange clay	Appears intact
L5	5	10	2	14	Dark brown to orange brown silty clay loam; transition to orange clay	Appears intact
L6	5	10	2	15	Orange brown silty clay loam with charcoal piece; transition to orange clay	Appears intact
L7	5	10	2	14	Orange brown silty clay loam with ironstone gravel; transition to orange clay	Appears intact
L8	5	10	3	24	Reddish grey brown silty clay loam with ironstone gravel; transition to reddish brown silty clay	Appears intact
L9	5	10	3	27	Reddish grey brown silty clay loam with ironstone gravel; transition to reddish brown silty clay	Appears intact
L10	5	10	3	26	Reddish brown silty clay loam with ironstone gravel; transition to reddish brown silty clay	Appears intact
L11	5	10	2	18	Reddish brown silty clay loam with ironstone gravel; transition to reddish brown silty clay	Appears intact
L12	5	10	2	18	Reddish brown silty clay loam with ironstone gravel; transition to reddish brown silty clay	Appears intact
L13	5	10	2	20	Orange brown silty clay loam with ironstone to gravel; transition to orange clay	Appears intact
L14	5	10	2	17	Dark brown to orange brown silty clay loam with ironstone gravel; transition to reddish brown clay	Appears intact
L15	5	10	2	19	Reddish brown silty clay loam; transition to orange clay	Appears intact
L16	5	10	3	24	Orange brown clay loam with ironstone gravel; transition to orange clay base	Appears intact
L17	5	10	2	16	Orange brown silty clay loam; transition to orange clay	Appears intact
L18	5	10	2	18	Reddish brown silty clay loam with ironstone gravel; transition to reddish brown clay base	Appears intact
L19	5	10	2	15	Orange brown silty clay loam; transition to orange clay	Appears intact

Test square ID	Area	Spit depth (cm)	Spit count	Max. Depth (cm)	Soil profile	Disturbance
L20	5	10	2	20	Reddish brown silty clay loam with ironstone gravel; transition to reddish brown clay base	Appears intact
L21	5	10	2	20	Medium brown silty clay loam; transition to orange clay	Appears intact
L22	5	10	3	24	Dark brown silty clay loam with ironstone gravel; transition to orange clay base	Appears intact
L23	5	10	2	18	Dark brown silty clay loam with ironstone gravel; transition to orange clay base	Appears intact
L24	5	10	2	13	Orange brown silty clay loam; transition to orange clay	Appears intact
L25	5	10	2	16	Orange brown silty clay loam; transition to orange clay	Appears intact
L26	5	10	2	19	Orange brown silty clay loam with ironstone gravel; transition to orange clay	Appears intact
L27	5	10	2	16	Orange brown silty clay loam with ironstone gravel; transition to orange clay	Appears intact
L28	5	10	2	13	Orange brown silty clay loam with ironstone gravel; transition to orange clay	Appears intact
M1	4	5	6	28	Reddish grey brown to reddish brown silty clay loam with mottling; transition to yellowish brown clay	Mottling suggests disturbance and/or redeposition
M2	4	10	2	17	Dark reddish brown silty clay loam; clear transition to yellowish brown clay	Appears intact; clay appears heat affected
M3	4	10	2	20	Yellowish brown silty clay loam with ironstone gravel; clear transition to reddish silty clay base	Appears intact
M4	4	10	3	23	Reddish grey brown to reddish brown silty clay loam; transition to red brown clay	Appears intact
M5	4	10	2	13	Yellowish brown silty clay loam; transition to reddish brown silty clay	Possibly truncated
M6	4	10	2	13	Yellowish grey brown silty clay loam with ironstone gravel; clear transition to reddish brown silty clay	Possibly truncated
M7	4	10	2	16	Dark reddish brown silty clay loam; transition to brown clay	Modern materials at 7cm indicates disturbance
M8	4	10	2	18	Dark reddish brown silty clay loam with scattered baked clay and charcoal; transition to reddish brown clay	Possibly disturbed
M9	4	10	3	24	Grey brown silty clay loam with iron fleckas and mottling; transition to reddish brown silty clay	Modern materials at 5cm, mottling and baked clay indicate disturbance

Test square ID	Area	Spit depth (cm)	Spit count	Max. Depth (cm)	Soil profile	Disturbance
M10	4	10	3	27	Reddish brown silty clay loam with iron flecks and mottling; transition to yellow brown silty clay loam	Mottling may suggest disturbance
N1	6	10	3	25	Dark reddish brown mixed soil and clay; transition to red clay	Appears mixed
N2	6	10	3	22	Dark reddish brown mixed soil and clay; transition to disturbed red clay	Highly disturbed market garden. Plastic sheet fragments throughout.
N3	6	10	3	21	Dark reddish brown mixed soil and clay; transition to disturbed red clay	Highly disturbed market garden. Plastic sheet fragments throughout.
N4	6	10	3	27	Dark reddish brown mixed soil and clay; transition to disturbed red clay	Highly disturbed market garden. Plastic sheet fragments throughout.
N5	6	10	3	29	Dark reddish brown mixed soil and clay; transition to disturbed red clay	Highly disturbed market garden. Plastic sheet fragments throughout.
N6	6	10	3	30	Dark reddish brown mixed soil and clay; transition to disturbed red clay	Highly disturbed market garden. Plastic sheet fragments throughout.
N7	6	10	3	28	Dark reddish brown mixed soil and clay; transition to disturbed red clay	Highly disturbed market garden. Plastic sheet fragments throughout.
N8	6	10	3	25	Dark reddish brown mixed soil and clay; transition to disturbed red clay	Highly disturbed market garden. Plastic sheet fragments throughout.
N9	6	10	2	23	Reddish brown loamy clay with ironstone fragments; abrupt transition to red clay	Highly disturbed market garden. Plastic sheet fragments throughout.
O1	6	10	3	30	Dark red brown mixed soil and clay with ironstone gravel; transition to red brown clay	Highly disturbed market garden.
O2	6	10	4	35	Dark red brown mixed clay and soil; ironstone gravels; disturbed red brown plastic clay base.	Highly disturbed market garden bed; plastic sheet fragments throughout.
O3	6	10	4	35	Dark red brown mixed clay and soil; ironstone gravels; disturbed yeollw brown plastic clay base.	Highly disturbed market garden bed; plastic sheet fragments throughout.
O4	6	10	3	32	Dense mixed clay and soil; scattered baked clay; highly disturbed red brown clay base with charcoal inclusions.	Highly disturbed market garden bed.
O5	6	10	3	22	Dense mixed clay and soil; scattered baked clay; dense disturbed basal clay from around 15cm.	Highly disturbed market garden bed; plastic sheet fragments to 15 cm depth.
O6	6	10	4	29	Reddish brown mixed clay and soil; scattered baked clay; disturbed transition to red brown clay from 25 cm depth.	Highly disturbed market garden bed; plastic sheet fragments throughout.

Test square ID	Area	Spit depth (cm)	Spit count	Max. Depth (cm)	Soil profile	Disturbance
O7	6	10	3	31	Very clumpy mix of clay and soil; natural rock fragments; disturbed reddish brown basal clay; rock fragments continue.	Highly disturbed market garden bed; plastic sheet fragments throughout.
P1	6	10	2	23	Reddish brown mixed silty clay; disturbed red brown clay base.	Highly disturbed market garden bed.
P2	6	10	3	30	Well mixed yellowish brown soil and clay; heavily disturbed transition to reddish brown plastic clay.	Highly disturbed market garden bed; plastic sheet fragments throughout.
P3	6	10	3	28	Well mixed yellowish brown soil and clay; heavily disturbed transition to reddish brown plastic clay.	Highly disturbed market garden bed; plastic sheet fragments throughout, continues into basal clay.
P4	6	10	2	18	Clumpy clay mixed with silty loam; very compact yellow brown silty clay.	Highly disturbed market garden bed; plastic sheet fragments throughout.
P5	6	10	2	16	Predominantly yellow brown clay mixed with silty loam; very compact yellow brown silty clay base.	Highly disturbed market garden bed.
P6	6	10	2	18	Predominantly yellow brown clay mixed with silty loam; compact yellow brown silty clay base.	Highly disturbed market garden bed.
P7	6	10	4	33	Dark brown clayey loam; uniformly mixed; very dense dark reddish brown basal clay.	Highly disturbed market garden bed.
Q1	6	10	3	30	Reddish brown to dark yellowish brown compact and disturbed clayey mixed soil; reddish brown plastic basal clay.	Highly disturbed market garden bed.
Q2	6	10	3	26	Reddish brown compact and disturbed clayey mixed soil; clay clumps; reddish brown plastic basal clay.	Highly disturbed market garden bed.
Q3	6	10	2	17	Dark yellowish brown disturbed clayey mixed soil; red plastic basal clay undulating due to ploughing.	Highly disturbed market garden bed.
R1	6	10		23	Dark brown clayey soil, very compact; reddish brown plastic clay base.	Highly disturbed market garden bed.
R2	6	10	1	10	Mottled reddish brown clayey soil; mottled clay base.	Highly disturbed market garden bed.
R3	6	10	2	16	Yellowish brown compact clayey mixed soil; reddish brown basal clay.	Highly disturbed market garden bed.
R4	6	10	2	18	Yellowish brown compact clayey mixed soil; reddish brown basal clay.	Highly disturbed market garden bed.
R5	6	10	3	26	Yellowish brown compact clayey mixed soil; reddish brown basal clay.	Highly disturbed market garden bed.
R6	6	10	4	37	Yellowish brown compact clayey mixed soil; dark brown silty basal clay.	Highly disturbed market garden bed.
R7	6	10	3	22	Yellowish brown compact clayey mixed soil; reddish brown silty basal clay.	Highly disturbed market garden bed.

Test square ID	Area	Spit depth (cm)	Spit count	Max. Depth (cm)	Soil profile	Disturbance
R8	6	10	3	23	Reddish brown mixed clayey soil; mottled with reddish clay flecks; reddish brown basal clay.	Highly disturbed market garden bed.
R9	6	10	2	17	Yellowish brown over reddish brown mixed clayey soil; mottled reddish brown basal clay.	Highly disturbed market garden bed.
R10	6	10	3	24	Reddish brown mixed clayey soil; undulating yellow brown basal clay.	Highly disturbed market garden bed.
S1	6	10	1	10	Reddish brown mixed clayey soil; reddish brown silty clay base.	Highly disturbed market garden bed.
S2	6	10	2	12	Reddish brown mixed clayey soil; reddish brown silty clay base.	Highly disturbed market garden bed; plastic sheet fragments throughout.
S3	6	10	3	23	Reddish brown mixed clayey soil; reddish brown silty clay base.	Highly disturbed market garden bed; plastic sheet fragments throughout.
S4	6	10	2	21	Yellowish brown clumpy, cracked mixed clay and soil; indistinct transition to hard set cracked clays.	Highly disturbed market garden bed.
S5	6	10	2	20	Reddish brown mixed clayey soil; mottled with reddish clay flecks; reddish brown basal clay.	Highly disturbed market garden bed.
S6	6	10	15	15	Yellowish brown mixed clayey soil; yellowish grey brown clay base.	Highly disturbed market garden bed.
S7	6	10	25	25	Reddish brown silty clay loam; shale fragments throughout; red brown clay base.	Highly disturbed market garden bed; plastic sheet fragments throughout.
T1	6	10	1	10	Mixed red brown silty clay loam; clumps of basal clay; disturbed red brown plastic basal clay.	Highly disturbed market garden bed; plastic sheet fragments throughout.
T2	6	10	2	18	Mixed red brown silty clay loam; clumps of basal clay; disturbed red brown plastic basal clay.	Highly disturbed market garden bed; plastic sheet fragments throughout.
T3	6	10	3	30	Yellowish brown mixed clayey soil; yellowish grey brown clay base.	Highly disturbed market garden bed; plastic sheet fragments throughout.
T4	6	10	1	10	Yellowish grey brown silty clay loam with some clay nodules; mottled yellow/reddish basal clay with sandstone inclusions.	Highly disturbed market garden bed; wood post remains.
T5	6	10	3	24	Yellowish grey brown silty clay loam with some clay nodules; mottled yellow/reddish basal clay with shale.	Highly disturbed market garden bed; degraded shale fragments.
T6	6	10	3	30	Yellowish grey brown silty clay loam with some clay nodules; mottled yellow/reddish basal clay with shale.	Highly disturbed market garden bed; degraded shale fragments.
T7	6	10	3	22	Reddish brown mixed clayey soil; Reddish brown basal clay.	Highly disturbed market garden bed; plastic sheet fragments throughout.
T8	6	10	1	10	Reddish brown mixed clayey soil; Reddish brown basal clay.	Highly disturbed market garden bed.

Test square ID	Area	Spit depth (cm)	Spit count	Max. Depth (cm)	Soil profile	Disturbance
T9	6	10	1	10	Reddish brown mixed clayey soil; Reddish brown basal clay.	Highly disturbed market garden bed; plastic sheet fragments throughout.
T10	6	10	2	14	Reddish brown mixed clayey soil; Reddish brown basal clay.	Highly disturbed market garden bed; plastic sheet fragments throughout.

APPENDIX C

ARTEFACT CATALOGUE

Transect	Test Unit	Spit	Artefact type	Raw Mat	Colour	Form	Ctx type	Ctx %	Platform (flakes)	Term (flakes)	Ret Type	Scar Dir (cores)	Scar # (cores)	Platform # (cores)	MD (mm)	L (mm)	W (mm)	Th (mm)	Weight (gm)	Note / Comments / Photos /Tool type
B		1	1 CF	S	Red		IN	0	FL	F					10.95	9.5	10.29	4.37	0.4	
B		5	3 ANG	S	Grey										20.2	20.2	14.95	14.86	3.8	
F		5	2 CT	S	Red		IN	0							29.69	27.61	15.33	6.89	3.1	Backed Silcrete blade with retouch.
F		7	1 CF	S	Red		IN	0	FL	F					24.59	23.72	14.63	6.03	2.3	
J		6	1 CT	S	Red		IN	0							25.92	25.67	8.23	4.7	1	Broken backed blade. Conjoined two pieces.
L		5	1 DF	S	Red		COBB	26-50		F					23.73	17.93	16.43	10.61	3.2	Broken distal flake with cortex.
L		7	1 CF	S	Red		IN	26-50	FL	F					11.83	11.71	9.55	3.28	0.4	
L		9	1 BC	S	Red		COBB	1-25			Unidirection		1	1	26.84	20.5	26.3	14.31	7.6	
M		1	2 DF	S	Red		IN	0	FL	F					8.81	6.34	9.68	2.08	less than 0.3 gm	
M		1	3 CF	S	Red		IN	0	FL	F					14.3	10.48	12.33	2.46	0.3	
M		4	2 CT	S	Red		IN	0							26.13	22.52	12.18	5.89	1.5	Backing or use wear.
P		6	1 CF	S	Red		IN	0	FL	F					14.93	14.93	8.05	3.96	0.3	
R		3	1 CF	S	Red		IN	0	FL	F					13.09	12.77	12.59	5.27	0.8	

Artefact type:
CF=complete flake, PF=proximal flake, DF=distal flake, SPLITR=longitudinal split flake right side, SPLITL=longitudinal split flake left side, RF=Retouched flake, C=core, BC=broken core, CT=complete tool, BT=broken tool, A=anvil, M=muller, GR=grinding stone, ANG=angular fragment, N=non-diagnostic.

Raw material:
S=Silcrete, CH=Chert, Q=Quartz, QTZ=Quarzite.

Form:
EXP=expanding, BP=bipolar, BLO=block, IN=indeterminate.

Cortex type:
COBB=cobble/water rolled, QAR=quarried, IN=indeterminate.

Cortex:
0, 1-25, 26-50, 51-75, 76-99, 100.

Platform:
PL=plane, FL=flaked, FCT=faceted, CTC=cortical, CR=crushed/bipolar.

Termination:
F=feather, S=step, H=hinge, P=plunge.



