YCCCART 2015 / Y 12
North Somerset HER 2016/ 010
Gradiometry Survey at Congresbury
(Mr Collins Field 15)

YATTON, CONGRESBURY, CLAVERHAM AND CLEEVE ARCHAEOLOGICAL RESEARCH TEAM (YCCCART)

General Editor: Vince Russett

Starting a 601 survey

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Abstract

YCCCART has a project to establish the extent of the Congresbury Roman pottery kiln sites. A gradiometry survey at this location has revealed possible Romano British kilns.

Acknowledgements

A Heritage Lottery Grant enabled the purchase, by YCCCART, of a Bartington 601 gradiometer without which this survey could not have been undertaken.

This survey would also not have been carried out without the willing permission of the landowner, Mr A Collins.

The authors are grateful for the hard work by the members of YCCCART in performing the survey and Vince Russett for editing the report.

Site Location

Fig 1: Site location indicated by the red arrow.

The surveyed field lies north of Wrington Road in Iwood. See GPS in site report at Appendix.

The field is privately owned.

Land use and geology

The field is used for grazing.
Geology is the Murcia Mudstone group – Mudstone and Halite stone

Historical & archaeological context

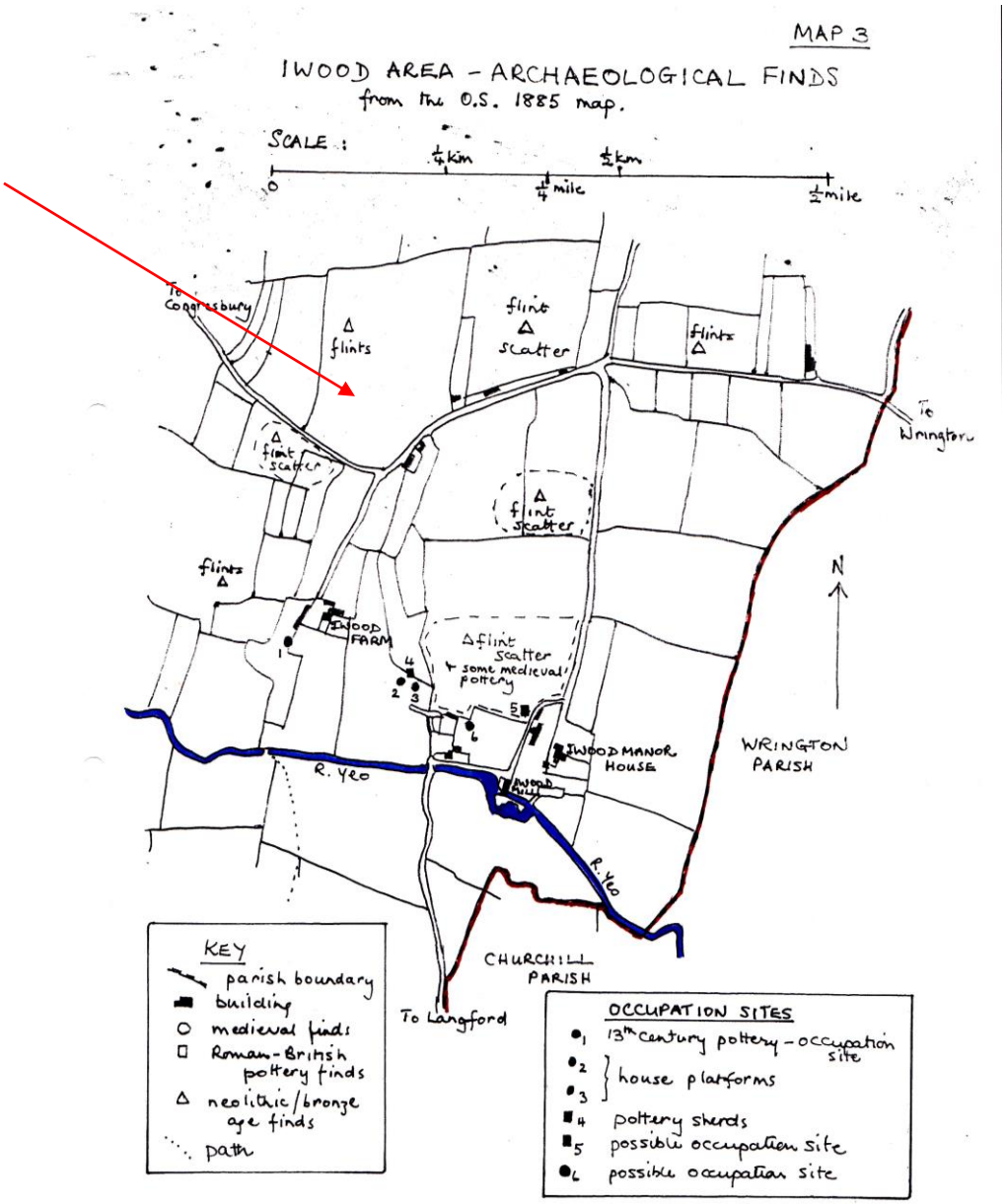


Fig 2: Iwood -Archaeological finds. Extract from Iwood Manor – MA Thesis by Gill Bedingfield.

The map, Fig 2 above, shows Neolithic/Bronze Age finds in the surveyed field (indicated by the red arrow).

The North Somerset Historic environment record also shows that a flint scraper was found in this field (HER reference 07246)

Fig 2: Congresbury Tithe Map 1840 (Courtesy of the South West Heritage Trust. The map is held at the Somerset Heritage Centre. ref D\D/Rt/M/317). The surveyed field is incorporated in number 1656 on the map.

The Tithe apportionment record, relating to the 1840 map above, shows the field number 1656 as being owned and occupied by Benjamin Thayer. It is described as pasture called Lower Breaches and Harewoods.

Survey objectives

The survey was undertaken in order to continue to investigate the extent of the Congresbury Romano - British pottery kiln fields.

Methodology

The survey of field was undertaken in November and December 2015 by teams from YCCCART, using a Bartington 601 gradiometer, with settings as per the site record in the Appendix.

The completed survey was downloaded to a TerraSurveyor program.

TerraSurveyor composites were adjusted using the following filters:

Standard settings
1) Colour - Red Blue Green 2
2) Band weight equaliser
3) Grad shade
4) Despiked
5) Destriped
6) Clip SD2

The report was written in Microsoft Word 2013.

Results

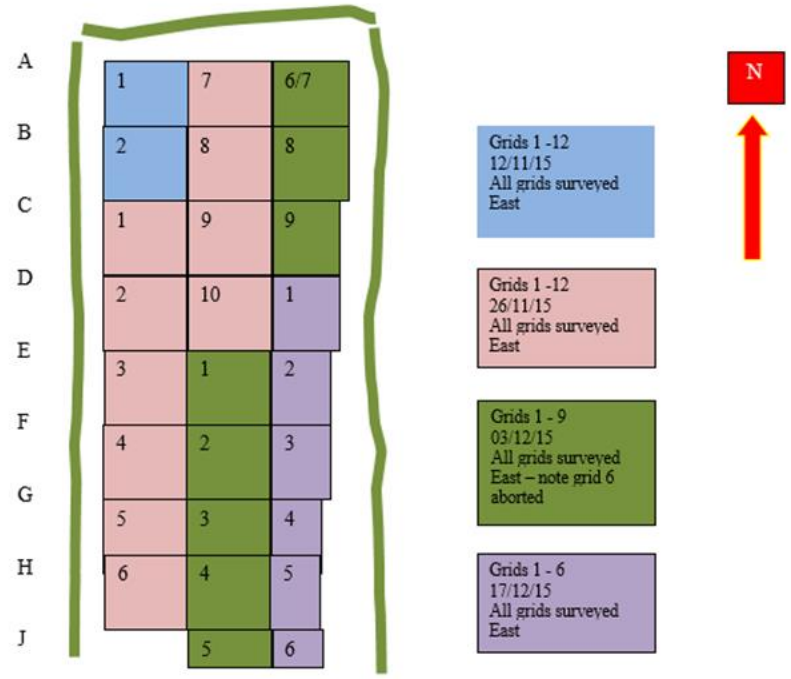


Fig 3: Grid lay out

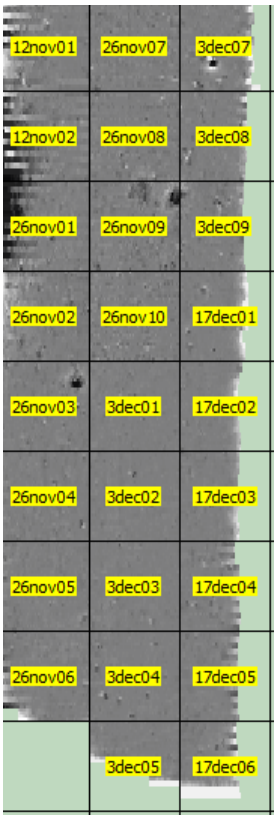


Fig 4: TerraSurveyor grids.

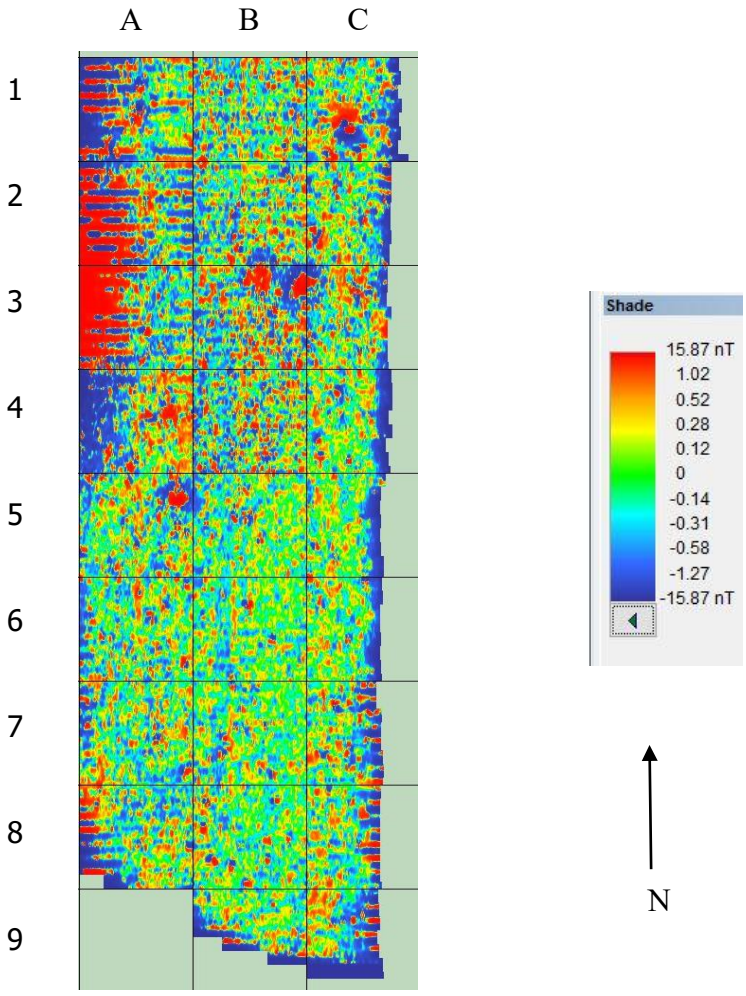


Fig 5: TerraSurveyor shade view colour image. High readings are red.

The results shown in Fig 5 above show:

1) Strong red and blue lines in grids 1A, 2A and 3A which result from a metal clad barn containing farm equipment, in the adjacent field.

2) Roman pottery kiln sites are generally indicated in gradiometry surveys by strong negative and positive peaks immediately adjacent to each other. The results contain, in grids 1C, 3B (top) and 5A (top right), such high positive peaks (in this case, coloured red), and adjacent or surrounding negative peaks (coloured blue).

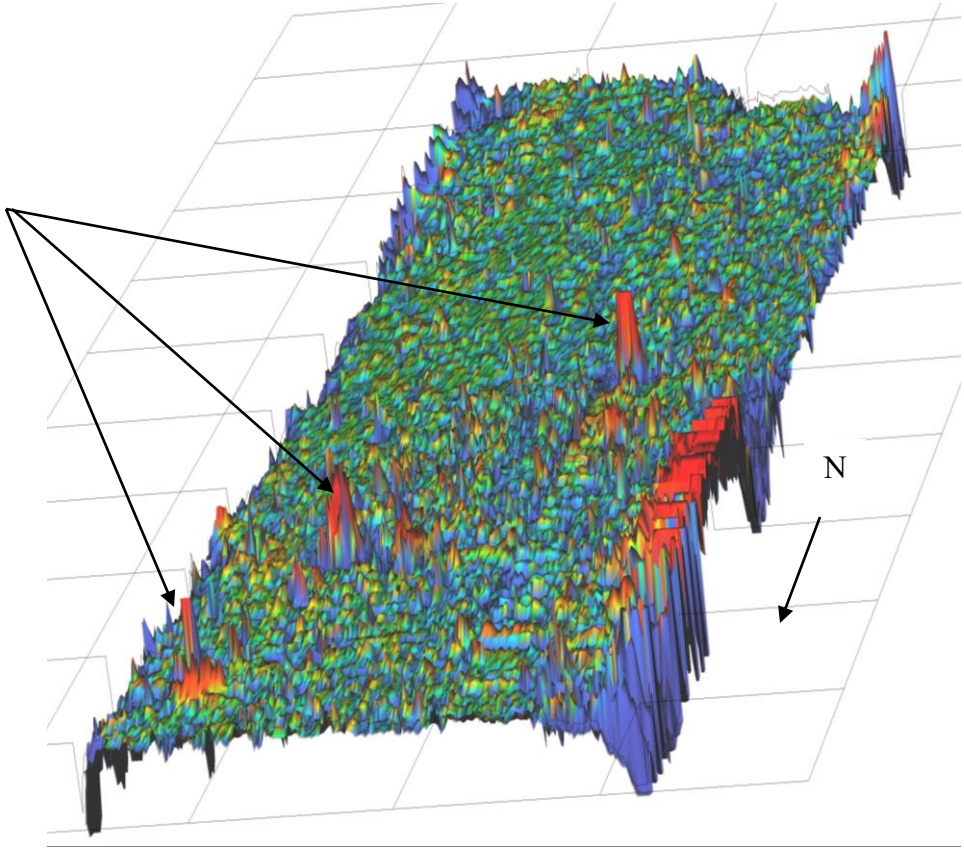


Fig 6: TerraSurveyor axonometric colour image. High readings are red.

The 3d image in Fig 6 above clearly shows the strong negative and positive peaks (indicated by the arrows) which possibly relate to Romano British pottery kilns.

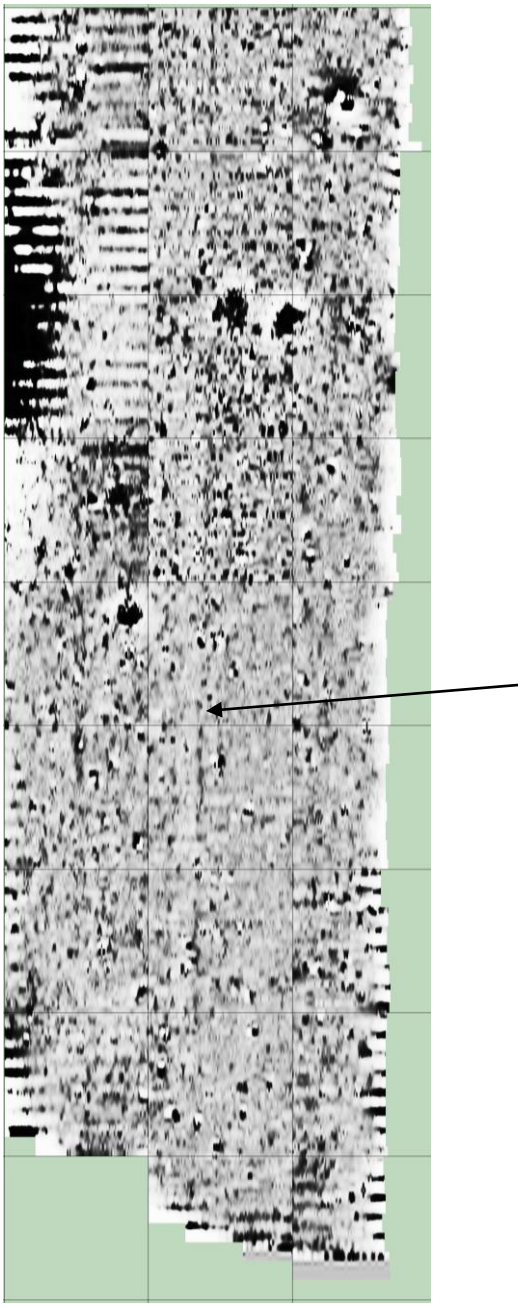


Fig 7: TerraSurveyor shade view black & white image (right). High readings are black.

The black and white image at Fig 7 above shows nothing further except perhaps a trackway going from north to south as indicated by the arrow.

Recommendations

Review when YCCCART pottery project complete.

References

South West Heritage Trust — *Congresbury Tithe Map 1840* Map is held at the Somerset Heritage Centre. Reference D\D/Rt/M/317.

Bedingfield, G. 1996 — *Iwood. How long has it existed as a discrete settlement unit and how did this affect its economy?* MA Dissertation. Bristol University 1996

North Somerset Historic Environment Record — *07246. Upper Palaeolithic scraper, Wrington Road*. Broomhead 1987.

Author: Chris Short

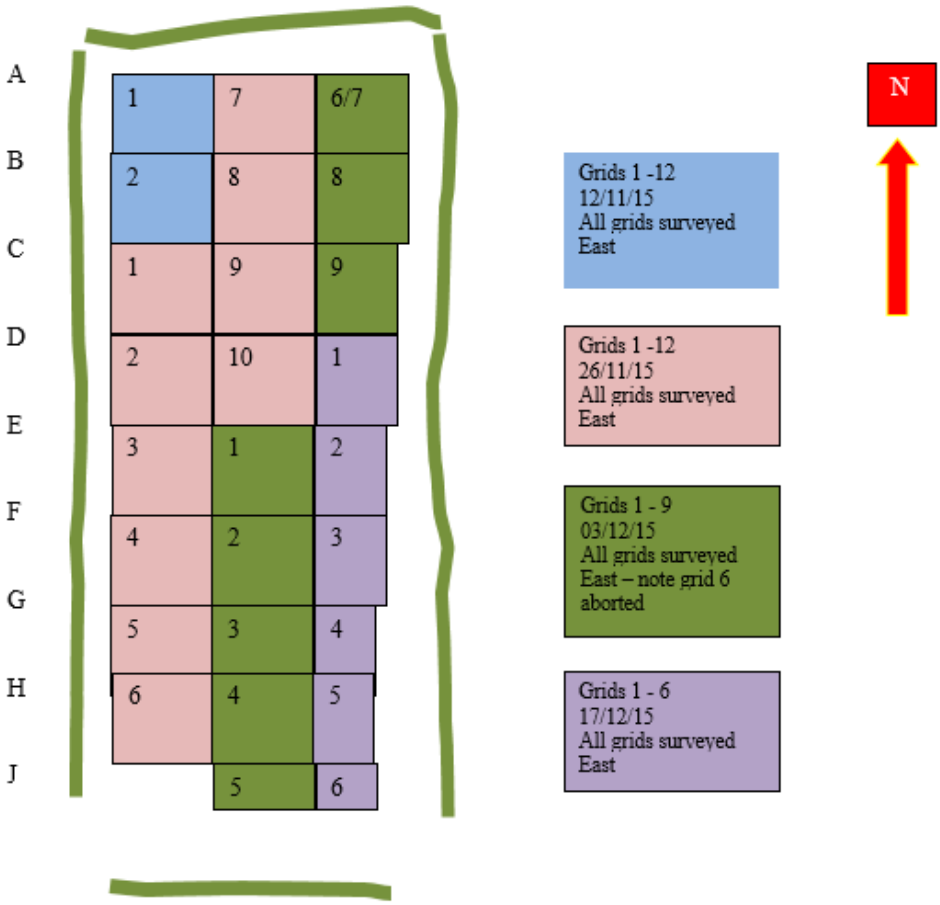
Date: January 2016

Appendix

Site Record

YCCCART Site Survey Project – Collins 15 – Congresbury Kilns projects			
Survey date		17 December 2015	
Report date		17 December 2015	
Type /Instrument		Grad 601	
		Pace :1.5m/s Lines/m : 1 Range:100nT Volume: High Sensors:2	Grid size: 30m x30m Pattern : Zig Zag Samples/m:2 (grid 1 only on 26/3/15 as reference) Samples/m:4 (other grids) Audio: On Threshold:30nT Reject:50 Hz
Location		Collins 15	
Ref		none	
Site name		Collins 15	
Landowner		Alan Collins	
Tenant			
HER ref			
Site type		Open land	
Description		Grass land	
Period			
Geology			
Land use		Grazing	
Survey team and conditions			
12/11/2015	Team	Peter English, Chris Short, David W, Arthur Langley, Dave Long, Liz	
	Weather	Grey, overcast, damp with fine drizzle later	
26/11/2015	Team	Pete Wright, Ian, Ferdie, Arthur Langley & Robert	
	Weather	Grey, overcast, damp, occasional fine drizzle.	
03/12/2015	Team	Ian, Ferdie, Arthur Langley & David W	
	Weather	Grey, overcast, damp.	
17/12/2015	Team	Pete Wright,Ian, Ferdie, Arthur Langley & David W	
	Weather	Grey, overcast, damp.	

Survey area		notes		readings		
		size	walk direction	max	min	mean
Date	Grid number					
12/11/2015		Setting out base line and grids for whole field				
	1	30 x 30	East	+98.8	-99.6	-0.9
	2	30 x 30	East	+90.6	-25.5	+2.5
26/11/2015	1	30 x 30	East	+86.7	-9.8	+4.3
	2	30 x 30	East	+18.5	-20.7	-2.0
	3	30 x 30	East	+36.2	-11.5	-2.6
	4	30 x 30	East	+17.6	-29.0	-1.0
	5	30 x 30	East	+15.6	-12.6	-1.4
	6	30 x 30 M & R last 2 traverses	East	+42.7	-44.1	-2.0
	7	30 x 30	East	+9.2	-11.2	-2.0
	8	30 x 30	East	+16.5	-22.0	-2.5
	9	30 x 30	East	+30.4	-11.4	-2.7
	10	30 x 30	East	+9.7	-83.8	-3.2
03/12/2015	1	30 x 30	East	+22.4	-12.2	-0.2
	2	30 x 30	East	+17.2	-23.3	-0.2
	3	30 x 30	East	+77.3	-100	-0.4
	4	30 x 30	East	+38.8	-21.4	-0.4
	5	30 x 30 M & R	East	+5.7	-51.5	-3.0
	6	M & R	East	aborted		
	7	M & R	East	+100	-100	-2.6
	8	M & R	East	+93.7	-35.3	-1.7
	9	M & R	East	+39.4	-100	-1.7
17/12/2015	1	30 x 30 M & R- Power line East side of grid	East	+14.6	-42.7	-1.5
	2	30 x 30 M & R - Power line East side of grid	East	+4.5	-15.4	-1.1
	3	30 x 30 M & R - Power line East side of grid	East	+7.9	-17.2	-1.1
	4	30 x 30 M & R	East	+12.1	-38.4	-1.3
	5	30 x 30 M & R	East	+8.2	-10.2	-1.1
	6	Partial M & R	East	+10.2	-91.7	-12.2



Setting out detail

Position H on base line –
To posts1 – 3.8m
To post 2 – 5.65

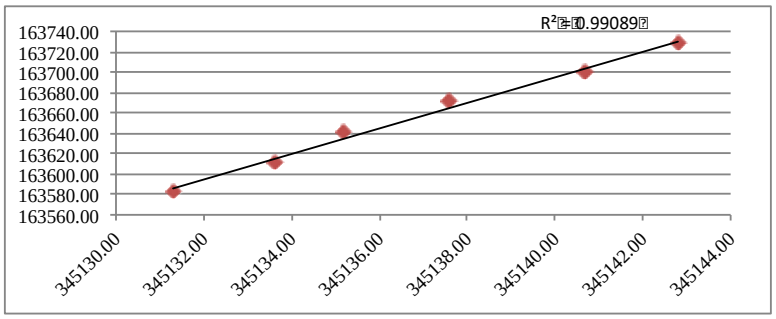
Position A on base line –
To tree trunk – 15.30 m
To gate post – 26.0 m

Position of quiet spot –
E 345145.1
N 163551.7

Grid Ref. All ST

	eastings	northings
A	345142.80	163728.10
B	345140.70	163699.40
C	345137.60	163671.70
D	345135.20	163641.00
E	345133.60	163610.60
F	345131.30	163582.40
G		
H	345531.12	163551.60
I		
J		

quiet spot 345145.1 163551.7



HAZARD AND RISK ASSESSMENTS

Severity of hazard:	**Likelihood:**	**Population (no. of persons who could be affected):**	**Risk Factor :**
1= Minor injury 2= Serious injury 3= Major injury or fatality	1= Unlikely 2= Likely 3= Very likely or inevitable	1= 1-5 persons 2= 6-20 persons 3= 21+ persons	Severity x Likelihood x Population (min 1, max 27)

Location: Collins 15 **Activity/Equipment: 601** **Date of assessment:30 July**
Assessor:Arthur Langley

Nature of hazard	Slips, trips, falls	Dust	Noise	Fire/Explosion	Exposure to harmful substances	Entrapment	Impact	Contact	Entanglement	Ejection	Electric shock	RSI/Eyestrain	Manual handling	Other. Dog faeces	**MAX. RISK FACTOR**
Severity	1	0	0	0	0	0	0	1	0	0	0	1	1	1	
Likelihood	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Population	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

Control methods and timescale

Ground is on slope so survey will be walked across slope to avoid walking up and down. Members will wear substantial footwear and long trousers which will deal with any uneven ground, wet grass, long grass to protect skin from any stumbles plus any infection by deer ticks. Need to wear gloves and/or wash hands after surveying.