

The Adam Park Project

Metal Detector Survey Report No.5



**126 Watten Estate Road
3rd – 8th November 2010**

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Introduction

This metal detector survey took place between 3rd to 8th November 2010 at 126 Watten Estate Road. The tenants had kindly agreed to host a team of archaeologist for a two week metal detector survey of the garden. The aim of the survey was to recover any artefacts that may be associated with the fighting that took place from the 13th to 15th February 1942 and the use of the house as a POW accomodation from March 1942 until the end of October 1942.

It appears from the research into the history of the fighting at Adam Park that 126 Watten Estate Road was occupied by Japanese troops during the night of the 13th February and was used as a staging post to launch attacks into the Adam Park estate by the 2nd Battalion of the 41st Regiment IJA.

The 2nd Battalion's journey down the Malaya peninsular is vividly documented in the diary of Sgt Tadamasa Miyakubu who was attached to the HQ Company's Railway Advancement Unit and was primarily employed in the reconnaissance and reconstruction of the vital bridges the battalion needed to cross. Extracts of his diary appears in *Ningen no Kiroku Marei sen (The Human Documentary Malayan Campaign) Vol 1 and 2* by Shigetaka Onda (Onda 1988). Although Onda's work has been widely criticised at the time of its publication as being carefree with its interpretation of references it is believed the diary entries are genuine and as such provide an accurate account of the second battalions fight for Singapore.

Miyakubu recollects the fight for what could have been the Watten Park houses :

We advanced 1000m during dawn offensive and occupied a hill with houses after an intense battle. There were about 10 houses¹ for the white people atop a hill along the road. This is already a suburb of Singapore. We dug trenches under the floor and beside the houses to fight on. We took the houses on top of the hill, but there are still enemies in the houses down below², firing Czech³ guns and automatic pistols at us. We had to take those houses one by one.

In 1980 Shushin Kataoka published a history of the 41st Regiment entitled Fukuyama Sentaishi (History of the Fukuyama Regiment) which included chapters on the Malayan campaign. The work is a collection of firsthand accounts, casualty lists and 5th Division War Diary entries. It has been a difficult work to translate as it seems to drift between sources however it does have a very good section on the fighting in the environs of Adam Park by 2nd Machine Gun Company.

According to Kataoka, the company advanced under the cover of the barrage into what could be the Chasseriau Estate and the outskirts of Adam Park.

¹ According to the 1938 OS maps and aerial photos, the Watten (Chasseriau) estate had four houses on the hill, however each had large servants quarters attached which could have been mistaken as individual houses. There were two more houses and outbuildings at the foot of the hill. Houses No.16 and No.15 of Adam Park may have been included in Miyakubo's calculations

² Miyakubu is most likely talking about No.s16 and 15 in Adam Park looking down into No.6, No.13 and over to No.12 or houses on the Chasseriau Estate.

³ Probably means the Czech model Bren Guns.

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Our shelling was getting severe, too. Bullets were flying to and fro, and once in a while beautiful tracer shells would fly our way. Once we advanced a little, there were a cluster of white men's houses at the edge of Bukit Timah Highland. This was now the battle ground.

2nd Lt Isao Utsumi and 2nd Lt Takeo Ouchi had led the attack as platoon commanders. The houses had baby golf courses on the lawn and were luxuriously built two story buildings. In the hall, there were a few English magazines on a large electric gramophone, and dresses, lady's hats, and shoes were scattered everywhere. It even held a slight hint of a lady's perfume.

All around the house were over 200 trucks and cars, all with their windshields shot through, as if dragged into this point in Singapore by a seine from all over Malaya after losing tens of battles since Jitra.

From the house a little below, the enemy fired at us fiercely with automatic pistols. We had to take them down one by one. One shell hit a coconut tree behind the house, and a coconut fruit scattered. After the sound came the shells themselves, hitting everything around us, raining soil and pebbles on us. We could not lift up our heads or move our hands. We could not even keep our eyes open because of the severe shelling. Smoke filled the air, and we could not see anything. "Oh, this is where we die," was the only thought we had, nothing else (Kataoka 1980: 92 93).

It was hoped that the archaeology would verify whether the Watten Estate was indeed occupied by the Japanese and whether the houses had been defended by the Allies, in particular the 1st Battalion Cambridgeshire Regiment, as part of their defence strategy for the estate.

The houses in Watten Park went on to be used by British troops (Gordon Highlanders, Leicestershires and East Surrey Regiments) as an accommodation block during the time of the POW camp.

The objectives of this survey were therefore three fold:

- 1) To gauge through the archaeological record the intensity of the fight for the house.
- 2) To assess the potential for battlefield and POW archaeology on the rest of the Watten Estate
- 3) To reveal the evidence of the British POW occupation.

This was the third survey carried out in conjunction with local archaeologists and the first using volunteers from the neighbourhood and the British Association so time was also used to train those new to the programme.

10 working days were originally allocated to the survey but the first two days were lost at the due to the local authorities felling trees in the garden and there was continuing disruption as the landscaping teams moved onto the garden to repair the damage caused by the tree surgeons transport. In fact the team only remained for 4 full days as access to the garden remained limited by the landscaping work and the areas covered effectively revealed what role the building had played in the defence of Adam Park.



Fig 1 – 126 Watten Estate Road was one of 6 houses built on the hill adjoining Adam Park in the early 20th Century. The architecture reflects a Western European influence in line with the estate’s title.

The Survey Criteria and Area of Interest

Three transects were set out, ranging in length between 21m to 31m. Two were laid out on the small platform to the west of the main house and south of the ‘maid’s quarters’. This platform was chosen as it appeared to old ground very near to the house and would most likely have been fought over should the house have been attacked by the Japanese approaching from the west. It had however the distinct disadvantage of having been apparently used as a dumping ground for building material.

A preliminary field walk of the main area of the garden to the south of the house revealed the concrete post holes for a tennis court but no signs of trenches or fieldworks found in other gardens in Adam Park. There appeared to be few detector hits in this area. Therefore a third transit was set at right angles to the first two heading out across the western edge of the garden with the aim of assessing the potential for a full survey. T3 was 31m long and 5m wide.

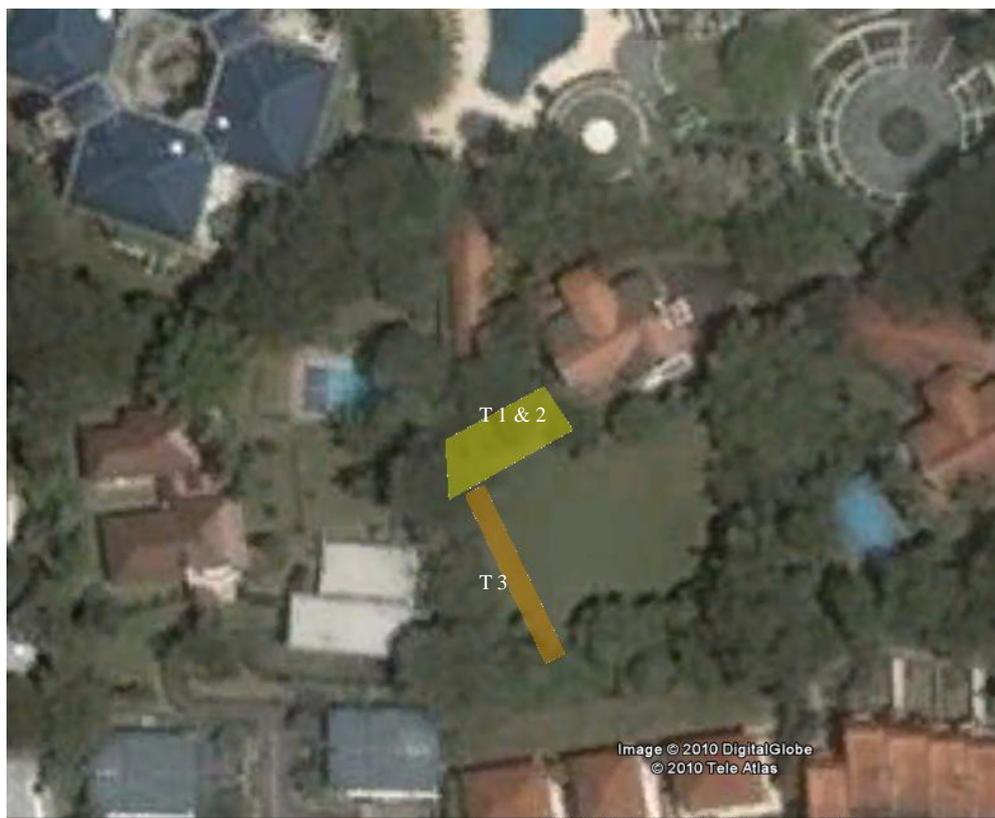


Fig 2 – The Google Earth image of the site showing the location of the transects. Yellow – Transects 1 & 2 and Orange – Transect 3.

A spot check of the banking along the eastern border of the garden revealed no wartime artefacts and very few significant hits. The total area surveyed was estimated to cover 10% of the garden of the house.

An initial sweep of the proposed transects was carried out on each day before the full survey began using the ‘all ferrous’ setting on the metal detectors and a multitude of returns were registered. Therefore a full survey of all ferrous returns was deemed to be inappropriate given the time constraints.

One detector was used. A White’s Prizm Mk 2 metal detector was used as the preferred machine as its operation was simpler and was familiar to the majority of the team members after a brief training session. It was set to maximum sensitivity but to exclude ferrous materials (1st two settings muted). However detecting was hard work in comparison to earlier surveys. This was put down partly to the heavy rainfall experienced throughout the dig and the amount of ferrous items in the ground. Surveying the lower main platform of the garden also revealed a number of ‘Hot Rocks’ – stones which gave a reading on the detector. This was similar to the debris found in the foundations of the tennis court at No.17 Adam Park.



Fig3 – This picture shows the team working in T1 & 2 where the ground was hard , criss-crossed with tree roots and strewn with remnants of building material. The amount of ferrous items in the soil made picking out non-ferrous items very difficult.



Fig 4 – This image shows the area covered by T1 on the platform nearest the west end of the house.



Fig 5a and b – T2 looking east towards the house and T3 looking south along the western edge of the main garden platform

The ground was an urban garden with a covering in parts of ‘tropical broad leaved grass’ which was easy to uproot. It covered a layer of topsoil of between 10 – 15cms deep. There was some ingress of roots from neighbouring plants. This topsoil layer was laid on top of an orange clay layer as well as a foundation for the tennis court. Notably all the finds were in the topsoil although not stratified within this layer. T1 & T2 and among the trees and shrubs to the west of T3, was scattered with broken red / orange tiles and bricks.

Recovery of artefacts was done by trowel as there was a need to restore the garden to its original condition after each recovery. Location of the finds was recorded to within 5 cms by measuring tape. Latitudes and longitudes of the corners of the survey areas were taken from Google Earth.

The weather was fairly hot yet overcast and turned showery on one or two days. The team worked from 9.00am until 5.00pm on weekdays only to ensure minimal disturbance for the tenants.

The Location and Type of Artefacts

TAPP Finds Log for the survey is shown at Appendix 1.

It was hoped the amount of bullets and cartridges would increase the closer we surveyed to the house based on the assumption that the Cambridgeshire had fought in and around the building and in turn the Japanese were targeting these positions. However there was no ordnance found on the site and no evidence of a fight to take this building (See Summary of Artefact Collection and Appendix 1). What was noticeable was the increase of domestic rubbish and discarded building material the closer to the house we got which reflected the same distribution found at No 17 Adam

Park. The only items that could be connected to wartime occupation (shrapnel and webbing buckles) were however found in T1 reinforcing the theory that the platform was contemporary to the fighting.



Fig 5 – Contested spaces - the chickens spent much of the time foraging in the holes and displacing the carefully re-laid turf and bagged artefacts.

Summary of Artefact Catalogue

Out of the 101 items recovered, 5 could be considered as having direct relationship with the events of 1942. One or two other items which may have seemed unrelated when revealed have proven to be dateable to the 1940's and have become worthy of note in this section. There follows a summary of the items revealed and a full 'Finds Log' can be found at Appendix 1.

1. Cartridges and Bullets

There were no cartridges or bullets found during the survey.

2. Shell Fragments

A small collection of artifacts were categorized under the loose heading of 'shell fragments'. The majority of these pieces was small, made of brass or iron and had some kind of machine work on them. They were plotted onto the grids but there was little to be gained in studying the patterning as there were too few items. Suffice to say it appeared the garden did come under some form of barrage.

Line Number	Transit	Item Number	Description	Location	Notes
8	1	8	Shell fragments	6.27m x 8.80m	Screw thread
12	1	12	Shell fragments	2.20m x 9.70m	
17	1	17	Shell fragments	4.80m x 11.20m	



Fig 6 – Three pieces of 'shrapnel' – irregular and bearing machining marks found in T1 suggests the house did come under some kind of bombardment.

3. Webbing Buckles

There were two buckles found on site during the surveys.

Line Number	Transit	Item Number	Description	Location	Notes
13	1	13	belt buckle	2.20m x 9.60m	25mm internal width
48	1	48	Webbing belt buckle	3.59m x 0.97m	25mm internal width

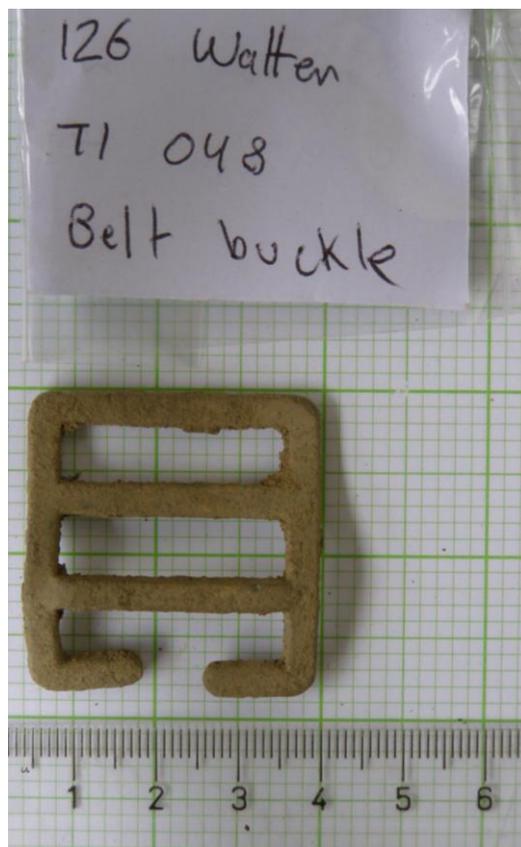


Fig 7 a and b – The two buckles found on T1 suggests the presence of Allied servicemen on the site.

Item 126/1/48 is part of the Type 37 webbing issued to Allied and Commonwealth soldiers. The two bar buckle was for adjusting the length of the braces over the shoulder and were located above the ammunition pouches. The extra bar facilitated the attachment of the pack onto the webbing. Item 126/1/13 may be off a 'Sam Brown' belt. It can take a 25mm belt and has a single prong.



Fig 8 a and b– Images showing the position of the buckle 126/1/48 on the Type 37 webbing and the single pronged buckle on a contemporary ‘Sam Brown’ belt.

Other Related Artifacts

1. Dutch East Indies 2 ½ Cents Coin Brooches – Item 126/2/004 and 126/2/001

Debatably the most notable items to be recovered from the survey at 126 Watten Estate Road were a pair of 1945 (P) 2½ cents Dutch East Indies Coins which had been made into brooches.





Fig 9 a -d – The coins both of the same design were clearly marked 1945 and the clips had been fitted to the reverse side suggesting the potential wearer would be more interested in showing the Dutch coat of arms rather than the Javanese and Malay script.

These are a very common 1945 2½ Cents Netherlands East Indies made out of bronze weighing 12.5 gram with a diameter of 31mm. On the obverse side we have a smaller crowned Dutch weapon shield and on the reverse side Javanese and Malayan text. The edge of this coin is plain. Over 200 million coins of this type were minted Netherlands and Netherlands East Indies coins of the 1941-1945 period were struck at U.S. Mints and would bear the mint marks of either ‘P’ for Philadelphia, ‘D’ for Denver or ‘S’ for San Francisco.

It may be relevant that both coins are dated ‘1945’ and because of that have been converted into tokens in order to commemorate the end of the war. Alternatively the coins may simply have been reused as play pieces for children’s dressing up.

2. Coins – 1941 Straits Settlement Coin

A comparatively large number of coins were found during the survey, many of which post dated the war years, however, one coin in particular was of interest when considered in context of the POW camp.

Table 2 – Coins Found During the Survey of 126 Watten Estate Road

Line Number	Transit	Item Number	Description	Location	Notes
6	1	6	Coin	1.16m x 1.88m	Flower shape
7	1	7	Coin	0.75m x 1.74m	
11	1	11	Coin	0.10m x 9.26m	
30	1	30	Coin	2.65m x 14.70m	
31	1	31	Coin	4.47m x 14.60m	1988
39	1	39	Coin	4.30m x 16.98m	1973
45	1	45	Coin	0.55m x 18.20m	Sixpence dated 1953
94	2	17	Coin	16.80m x 0.65m	10 cents
100	3	1	Coin	8.30m x 3.20m w	Dated 1941

The Straits Settlement 1 cent piece dated 1941 would not be an important find in other contexts but here, when you consider POW's got paid a mere 10 cents a day for working on the Shrine, the loss of this coin would have meant much more.



Fig 10 – 1 Cent Straits Settlement Coin dated 1941.

Conclusions

This survey was notable for what was not found rather than what was. The complete absence of bullets and cartridges in ground which was proven to be contemporary with the fighting gives a clear indication that 126 Watten Estate Road was not fought over as were the other houses at Adam Park. The shrapnel suggests the house was targeted perhaps as part of a preliminary bombardment to the assault mentioned by Kataoka but there is no evidence to say that D Coy positions in the west end of the Adam Park estate were extended as far as No 126. If they were then they were given up without a fight.

Neither was there any definitive evidence of the occupation of the houses by the British POW's. The belt buckles did however place British service personnel in the garden and it is likely these were lost by the POWs as theirs was the most extended period of occupation.

The survey at 126 just goes to prove that a site located on the battlefield does not have to necessarily reveal a bucket full of bullets. The distribution of artifacts across Adam Park is not, by any means, uniform and only from carrying out a number of dispersed surveys across the estate will a pattern of conflict be revealed.

Appendix 1 - TAPP - Finds Log – November 2010 Survey at 126 Watten Estate Road

Line Number	Transit	Item Number	Description	Location	Notes
1	1	1	Bottle Top	0.90m x 5.4m	
2	1	2	hook	1.30m x 4.2m	
3	1	3	soda cap top	5.40m x 5.75m	
4	1	4	Bottle Top	4.55m x 5.7m	
5	1	5	metal ring	4.83m x 7.40m	
6	1	6	coin	1.16m x 1.88m	Flower shape
7	1	7	coin	0.75m x 1.74m	
8	1	8	shrapnel	6.27m x 8.80m	
9	1	9	metal tube	4.74m x 8.80m	
10	1	10	tip of knife blade	1.10m x 9.0m	
11	1	11	coin	0.10m x 9.26m	
12	1	12	shrapnel	2.20m x 9.70m	
13	1	13	Webbing belt buckle	2.20m x 9.60m	
14	1	14	pieces of metal	5.26m x 10.0m	
15	1	15	pieces of metal	2.33m x 10.2m	
16	1	16	can	0.57m x 10.30m	
17	1	17	brass metal shard	4.80m x 11.20m	
18	1	18	screw	0.50m x 11.30m	
19	1	19	foil	3.55m x 12.4m	
20	1	20	piece of clay	2.98m x 12.4m	
21	1	21	metal piece	4.36m x 12.80 m	

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22	1	22	side of battery	1.18m x 12.80m	
23	1	23	piece of metal	2.63m x 14.10m	
24	1	24	metal bits of nail	4.80m x 13.50m	
25	1	25	assorted metal pieces	4.75m x 13.0m	
26	1	26	tool	5.31m x 13.5m	
27	1	27	metal ring	3.14m x 13.9m	
28	1	28	metal piece	0.07m x 14.40m	
29	1	29	piece of metal	1.20m x 14.65m	
30	1	30	coin	2.65m x 14.70m	
31	1	31	coin	4.47m x 14.60m	Malay
32	1	32	metal twirl	5.70m x 15.60m	
33	1	33	metal plate plus screws	4.85m x 16.0m	
34	1	34	foil / marble / plug	4.26m x 15.70m	
35	1	35	wire	1.70m x 16.30m	
36	1	36	big metal plate	0.90m x 16.50m	
37	1	37	spring and nail	1.80m x 16.20m	
38	1	38	door bolt	2.83m x 17.30m	
39	1	39	coin	4.30m x 16.98m	
40	1	40	piece of metal	4.60m x 16.98m	
41	1	41	metal ring	4.62m x 16.98m	
42	1	42	toothpaste tube	4.67m x 17.80m	
43	1	43	Bottle Top	3.15m x 17.70m	
44	1	44	curtain hook	2.20m x 17.90m	
45	1	45	coin	0.55m x 18.20m	
46	1	46	piece of metal	0.95m x 18.60m	
47	1	47	nail / glass / button	3.50m x 18.80m	

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48	1	48	belt buckle	3.59m x 0.97m	
49	1	49	Not used		
50	1	50	Not used		
51	1	51	Not used		
52	1	52	Not used		
53	1	53	Not used		
54	1	54	Not used		
55	1	55	Not used		
56	1	56	Soda can opener	2.79m x 0.97m	
57	1	57	Ring	1.20m x 7.00m	
58	1	58	metal bottle top	0.40m x 8.10m	
59	1	59	screw	0.65m x 14.85m	
60	1	60	screw	0.65m x 14.85m	
61	1	61	piece of metal	0.27m x 21.0m	
62	1	62		1.37m x 20.2m	
63	1	63	nail	1.70m x 20.5m	
64	1	64	vial perfume bottle	1.53m x 19.50m	
65	1	65	3 x metal hinge	1.00m x 19.0m	
66	1	66	metal circle	2.30m x 19.10m	
67	1	67	deformed metal	0.8m x 18.5m	
68	1	68	Bottle Top	3.10m x 19.20m	
69	1	69	Not used		
70	1	70	piece of metal	1.30m x 0.38m	
71	1	71	piece of metal	0.50m 3.30m	
72	1	72	screw drvier head	0.86m x 4.80m	
73	1	73	piece of metal	2.83m x 18.2m	

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74	1	74	Bottle Top	1.38m x 14.3m	
75	1	75	plug	2.50m x 5.20m	
76	1	76	Glass/ nail / fibre		
77	1	77	toy car	4.75m x 8.52m	
78	2	1	Coin Brooch	1.65 m x 0.10m	
79	2	2	Lump of Iron	3.65m x 0.20m	
80	2	3	Marble	3.25m x 1.20m	
81	2	4	Coin Brooch	4.10 x 2.75m	
82	2	5	Small Piece of Light Metal	5.70m 2.60m	
83	2	6	Latch	6.30m x 2.34m	
84	2	7	Hot Rocks	7.10m x 3.40m	
85	2	8	Machined Large Fragment	7.70m x 1.75m	Poss Brass
86	2	9	Key	9.10m x 1.92m	
87	2	10	Chrome Fitting Fragment	10.70m x 0.88m	
88	2	11	Chrome Fitting Fragment	11.45m x 0.50m	
89	2	12	Hot Rocks	12.40m x 1.20m	
90	2	13	Aluminium Rod	13.00 x 2.60m	15cm long
91	2	14	Bottle Top	13.50m x 0.73m	
92	2	15	Hot Rocks	15.70m x 2.30m	
93	2	16	Tile	15.95m x 0.80m	
94	2	17	Coin	16.80m x 0.65m	
95	2	18	Hot Rocks	16.80m x 2.30m	
96	2	19	Bottle Top	18.90m x 0.90m	
98	2	20	Bottle Top	19.80m x 2.17m	
99	2	21	Button	20.90m x 1.90m	
100	3	1	Coin	8.30m x 3.20m w	

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101	3	2	Thin Strip Metal	9.48m x 0.24m w	20mm Wide
102	3	3	Tile marble	12.57m x 0.40m E	
103	3	4	Battery Part	12.90m x 0.45m E	
104	3	5	Metal pipe	14.50m x 2.28m E	
105	3	6	Foil	15.50m x 2.90m E	
106	3	7	Bottle Top	24.75m x 1.00m W	
107	3	8	Lump of Iron	29.10m x 2.00m E	
108	3	9	Aluminium Rod	31.45m x 2.70m E	

Appendix 2 – Sketch Map of Survey Area Showing Disposition of Notable Finds

