

**Archaeological Survey and Assessment of Effects:
Oranga Redevelopment Project
Unrecorded sites**

Prepared for:

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1. Executive Summary

No archaeological sites are recorded in the precinct.

Only a single shell midden is recorded in the vicinity. The cultural heritage inventory of the Auckland Council has recently recorded a historic site - the camp of the Ninth Contingent for the Boer War - close to Roosevelt Road, but we consider it might be in fact closer to Onehunga and not in the precinct. As this camp existed only for a few months in 1902, little might remain if it is within the precinct and under the HNZPT Act (2014) it is not considered archaeological.

The oral traditions alert to extensive kumara cultivations between Onehunga and Maungakiekie. The affected area sits right within those cultivations.

Reviews of early aerials reveal that earthworks were mainly restricted to the roads and pathways during the original residential development. Therefore around and under the existing houses the land surface is little changed from the grazing paddocks. The grazing paddocks were created from the original Maori land use of mixed bush and cultivations by burning the remaining bush and removing stone rows and stone mounds from the paddocks only. Rarely would have any sub surface archaeological features disturbed by those activities.

Test pits throughout the superlots indicate a landscape of modified soils and unmodified soils which could be interpreted as a pre-contact Maori landscape of cultivations protected by still standing areas of trees and bush. Only the area around Roosevelt Rd seemed to have undergone more extensive earthworks during the original development.

During the enabling earthworks, three of the superlots should be systematically monitored for further remains of those cultivations.

We consider there is the potential for subsurface archaeological remains on some of the superlots and as a precaution it is recommended that an application is made for a general archaeological authority to modify or destroy any as yet unrecorded archaeological sites within areas of redevelopment of the Oranga precinct with Heritage New Zealand Pouhere Taonga under the Heritage New Zealand Pouhere Taonga Act 2014.

Quality Information

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Cover photo: Aerial view of state houses at the “Harp of Erin Estate”, Oranga, Onehunga, Auckland, ca 8 October 1947. Alexander Turnbull Library PAColl-6203-07. This image actually shows the housing at the Oranga Estate.

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2. Glossary

Table 1: Archaeological terms.

C14	Dating method using the deterioration of Carbon 14 in living organisms
Firescoop	Fireplace used for various reasons (cooking, warming, etc.)
Hangi	Subterranean cooking oven using heated stones
Hapu	Māori sub tribe, part of a larger tribal federation
Kai moana	Seafood exploited by Māori including fish, shell fish and crustaceans.
Kainga	Māori undefended open settlement.
Kaumatua	Male elder(s) of a hapu (sub tribe)
Kuia	Female elder(s) of a hapu (sub tribe)
Mana Whenua	People of the land with mana or customary authority
Midden	Refuse from a settlement, mainly shell fish.
Pa	A site fortified with earthworks and palisade defences. Modern meaning differs from archaeological use of the word.
Pit	Rectangular excavated pit used to store crops by Māori
Posthole	Archaeological remains of a post used for various reasons
Prehistory	Period before European arrival
Rohe	Settlement area of a Māori sub tribe (hapu)
Terrace	A platform cut into the hill slope used for habitation or cultivation
Urupa	Burial ground
Wahi tapu	Sites of spiritual significance to Māori
Whare	Traditionally built Māori sleeping house

3. Introduction

3.1. Purpose and Scope

HLC and Housing New Zealand are planning redevelopment of an existing state housing precinct in Oranga, Auckland. Archaeology Solutions Ltd (ASL) has been commissioned by HLC to undertake a heritage assessment of the project. The assessment was undertaken to identify the possibility of recorded and/or unrecorded archaeological remains in the vicinity of the proposed enabling works of the project and to assess any impact the proposed works could have on any heritage values of the location.

This report outlines the results of the investigations.

This report has been prepared to identify any requirements under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) and as part of the required assessment of effects accompanying a resource consent application under the Resource Management Act (RMA).

This survey and report do not necessarily include the location of *wahi tapu* and/or sites of cultural or spiritual significance to the local Māori community who may need to be consulted for any information or concerns they may have regarding the proposed works.

3.2. Project Description

The re-development is organized into superlots, each with its own code. The purpose is mainly to replace single houses with two houses per lot, town houses or terraced housing. Most of it will be retained as state housing but some will be offered on the open market. Substantial upgrade of the stormwater and sewage system will be necessary. At this stage no detailed plans are available but it can be presumed that earthworks will be undertaken on all lots within Stage 1 and 2 as well as ancillary earthworks along the roads and the existing waste water system.

Detailed plans will be added as appendices once they become available.



Figure 1: Properties of Stage 1, elevation in 0.5m intervals, water, waste water and stormwater lines. Super lot codes are shown.

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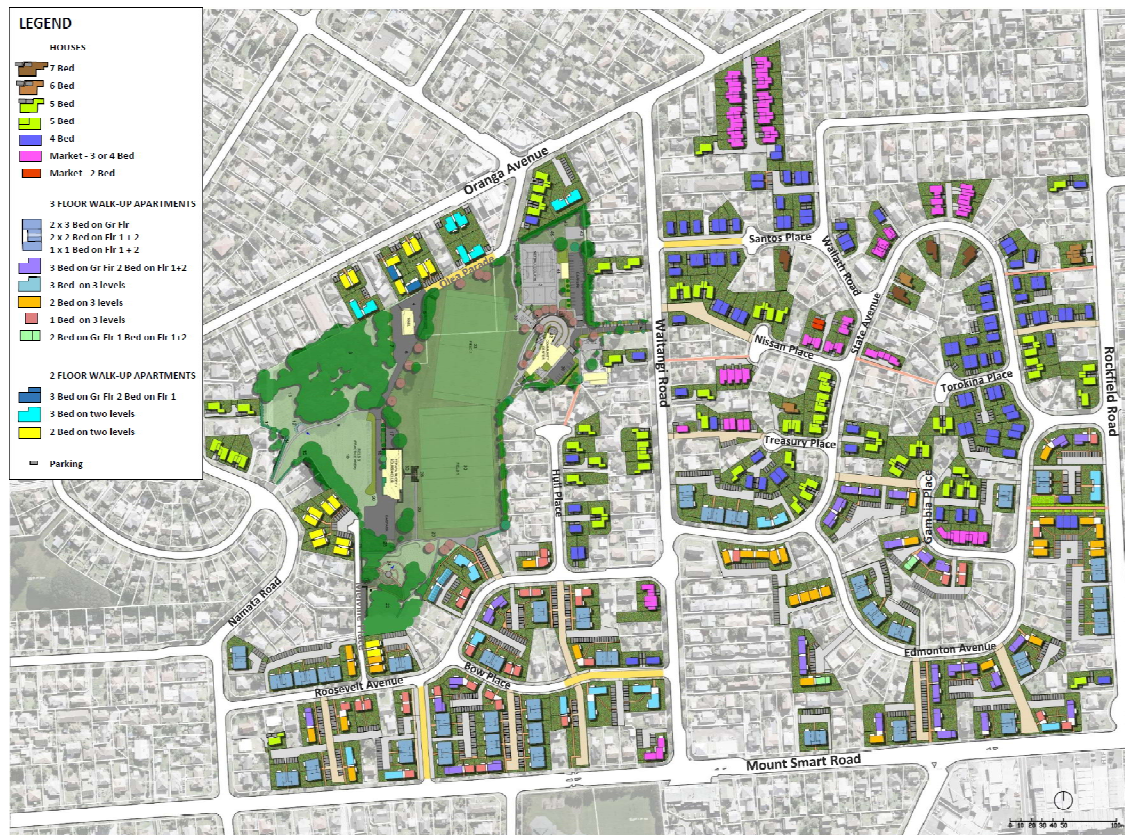


Figure 4: Scheme plan of redevelopment.

3.3. Legal description of land affected

Most of the properties are owned by Housing NZ. For the purpose of the proposed development individual properties are joined into so called superlots which will be developed together. Below is a list separated by stage 1, stage 2 and later stages and organised into superlots.

Table 2: Properties of Stage 1.

Superlots	Address	Appellation	Title
OR63	63 oranga	Lot 5 Deposited Plan 19300 Lot 6 Deposited Plan 19300 Part Lot 10 Block I Deposited Plan 9482	NA462/257 NA447/258 NA499/91
	59 oranga	Lot 1 Deposited Plan 103306	NA56D/1303
	part 6b wallath	Lot 2 Deposited Plan 103306	NA60C/894
ST55	53 state	Lot 4 Deposited Plan 341266	169716
	55 state	Lot 5 Deposited Plan 341266	169717
ST52	48c state	Lot 9 Deposited Plan 380207	321472
	50 state	Lot 10 Deposited Plan 380207	321473
	52 state	Lot 11 Deposited Plan 380207	321474
WT40	34 waitangi	Lot 5 Deposited Plan 418304	470186
	36 waitangi	Lot 4 Deposited Plan 418304	470185
	38 waitangi	Lot 3 Deposited Plan 418304	470184
	40 waitangi	Lot 2 Deposited Plan 418304	470183
	42 waitangi	Lot 1 Deposited Plan 41830	470182
WT60	60 waitangi	Lot 492 Deposited Plan 17735	NA16D/894
RC111	111 rockfield	Lot 101 Deposited Plan 37889	NA45A/468
RC121	121a rockfield	Lot 3 Deposited Plan 380207	321466
	121b rockfield	Lot 5 Deposited Plan 380207	321468
RC129	127 rockfield	Lot 1 Deposited Plan 195037	NA123B/508
	129 rockfield	Lot 2 Deposited Plan 195037	NA123B/509
ST66	54 state	Lot 2 Deposited Plan 195925	NA124C/72
	56 state	Lot 1 Deposited Plan 195925	NA124C/71
	58 state	Lot 84 Deposited Plan 37889	NA45A/462
	60 state	Lot 85 Deposited Plan 46712	NA45A/479
	62 state	Lot 86 Deposited Plan 46712	NA45A/480
	64 state	Lot 87A Deposited Plan 46712	NA45A/481
	66 state	Lot 87B Deposited Plan 46712	NA45A/1125
ED18	8 edmonton	Lot 3 Deposited Plan 55308	NA102D/501
	10 edmonton	Lot 4 Deposited Plan 55308	NA52D/451
	12 edmonton	Lot 147 Deposited Plan 37889	NA102D/504
	14 edmonton	Lot 146 Deposited Plan 55308	NA102D/503
	16 edmonton	Lot 145 Deposited Plan 55308	NA102D/502
	18 edmonton	Lot 144 Deposited Plan 55308	NA100C/268
ST41	41 state	Lot 3 Deposited Plan 341266	169715

Table 3: Properties of Stage 2.

Superlots	Address	Appellation	Title
RS16	14 roosevelt	Lot 358 Deposited Plan 37885	NA46C/1201
	16 roosevelt	Lot 1 Deposited Plan 400802	401474
	16A roosevelt	Lot 2 Deposited Plan 400802	401475
	18 roosevelt	Lot 3 Deposited Plan 400802	401476
WT50	50 waitangi	Lot 316 Deposited Plan 37885	NA99C/401
WT41	41 waitangi	Lot 12 Deposited Plan 37889	NA102A/680
WL5	5 wallath	Lot 2 Deposited Plan 414568	454760
	5a wallath	Lot 1 Deposited Plan 414568	454759
ST30	28 state	Lot 4 Deposited Plan 414568	454762
	30 state	Lot 5 Deposited Plan 414568	454763
ST45	45 state	Lot 167 Deposited Plan 47432	NA48C/162
SN13	13 santos	Lot 53 Deposited Plan 37889	NA44C/901
ST20	1 treasury	Lot 33 Deposited Plan 37889	NA22C/537
	2 treasury	Lot 32 Deposited Plan 46918	NA22C/541
	20 state	Lot 34 Deposited Plan 37889	NA51B/829
	13 nissan	Lot 35 Deposited Plan 37889	NA22C/539
RC159	157 rockfield	Lot 1 Deposited Plan 194450	NA123A/935
	159 rockfield	Lot 2 Deposited Plan 194450	NA123A/936
	161 rockfield	Lot 1 Deposited Plan 177165	NA109B/52
MN260	258 mt smart	Lot 213 Deposited Plan 37889	NA8B/1105
	260 mt smart	Lot 214 Deposited Plan 37889	NA1658/11
ED11a	9a edmonton	Lot 210 Deposited Plan 45978	NA8B/1103
	11a edmonton	Lot 211 Deposited Plan 4597	NA8B/1104
GM19	14 gambia	Lot 131 Deposited Plan 55308	NA102A/699
	15 gambia	Lot 1 Deposited Plan 55308	NA97B/792
	16 gambia	Lot 2 Deposited Plan 55308	NA97B/793
acquisition pending	17 gambia	Lot 133 Deposited Plan 37889	NA22B/1095
	18 gambia	Lot 134 Deposited Plan 37889	NA97B/794
	19 gambia	Lot 135 Deposited Plan 37889	NA61D/431
ST49	49 state	Lot 169 Deposited Plan 47432	NA48C/164
ST39	39 state	Lot 1 Deposited Plan 341266	169713
RC149	47 edmonton	Lot 2 Deposited Plan 196183	NA125A/843
	49 edmonton	Lot 1 Deposited Plan 196183	NA125A/842
	51 edmonton	Lot 4 Deposited Plan 194872	NA123B/268
	53 edmonton	Lot 3 Deposited Plan 194872	NA123B/267
	55 edmonton	Lot 180 Deposited Plan 45978	NA43A/495
	57 edmonton	Lot 2 Deposited Plan 194872	NA123B/266
	59 edmonton	Lot 1 Deposited Plan 194872	NA123B/265
	139 rockfield	Lot 242 Deposited Plan 37889	NA43A/492
	141 rockfield	Lot 241 Deposited Plan 45978	NA43A/498
	143 rockfield	Lot 240 Deposited Plan 45978	NA43A/497
	145 rockfield	Lot 239 Deposited Plan 45978	NA19A/1174

	147 rockfield	Lot 238 Deposited Plan 37889	NA43A/485
acquisition pending	149 rockfield	Lot 237 Deposited Plan 45978	NA69A/172
TR7	7 torokina	Lot 108 Deposited Plan 49062	NA107B/605

Table 4: Properties of Stages 3+.

Superlots	Address	Appellation	Title
NM43	43 Namata Rd	Lot 384 Deposited Plan 37886	NA16D/900
NM39	39 Namata Rd	Lot 1 Deposited Plan 408496	430877
	37 Namata Rd	Lot 2 Deposited Plan 408496	430878
ML11	8 Melville Pl	Lot 375A Deposited Plan 48296	NA46C/1220
	9 Melville Pl	Lot 375B Deposited Plan 48296	NA31C/1102
	10 Melville Pl	Lot 376 Deposited Plan 41609	NA46C/1206
	11 Melville Pl	Lot 377 Deposited Plan 41609	NA26A/1054
NM13	11 Namata Rd	Lot 2 Deposited Plan 194929	NA123B/415
	13 Namata Rd	Lot 1 Deposited Plan 194929	NA123B/414
RS6	2 Roosevelt Ave	Lot 365 Deposited Plan 48296	NA46C/1219
	4 Roosevelt Ave	Lot 364 Deposited Plan 37885	NA46C/1202
	6 Roosevelt Ave	Lot 363 Deposited Plan 48296	NA46C/1218
	8 Roosevelt Ave	Lot 362 Deposited Plan 48296	NA38A/129
	10 Roosevelt Av	Lot 361A Deposited Plan 48296	NA46C/1216
	12 Roosevelt Av	Lot 361B Deposited Plan 48296	NA58C/480
NM5	1 Roosevelt Ave	Lot 277 Deposited Plan 51141	NA48C/793
	5 Namata Rd	Lot 275 Deposited Plan 37885	NA48C/881
RS15-A	5 Roosevelt	Lot 279 Deposited Plan 37885	NA48C/882
	7-9 Roosevelt	Lot 280 Deposited Plan 37885	NA57B/1096
	11 Roosevelt	Lot 281 Deposited Plan 37885	NA48C/813
	13 Roosevelt	Lot 1 Deposited Plan 195726	NA124C/19
	15 Roosevelt	Lot 2 Deposited Plan 195726	NA124C/20
RS15-B	192 MtSmart Rd	Lot 272 Deposited Plan 37885	NA48C/880
	194 MtSmart Rd	Lot 271 Deposited Plan 37885	NA48C/879
	196 MtSmart Rd	Lot 270A Deposited Plan 51141	NA48C/791
	198 MtSmart Rd	Lot 270B Deposited Plan 51141	NA48C/792
	200 MtSmart Rd	Lot 269 Deposited Plan 51141	NA48C/790
	202 MtSmart Rd	Lot 268 Deposited Plan 51141	NA48C/817
RS19	19 Roosevelt Av	Lot 284 Deposited Plan 51141	NA48C/819
MN210	206 MtSmart Rd	Lot 266A Deposited Plan 51141	NA48C/815
	208 MtSmart Rd	Lot 266B Deposited Plan 51141	NA48C/816
	210 MtSmart Rd	Lot 265 Deposited Plan 51141	NA18D/506
MN222	214 MtSmart Rd	Lot 4 Deposited Plan 123562	NA72A/585
	216 MtSmart Rd	Lot 3 Deposited Plan 123562	NA72A/584
	218 MtSmart Rd	Lot 260A Deposited Plan 51141	NA16D/891
	220 MtSmart Rd	Lot 260B Deposited Plan 51141	NA55B/464
	222 MtSmart Rd	Allotment 100 Small Lots Near Onehunga	NA105D/558
	3A Bow Pl	Lot 2 Deposited Plan 123562	NA72A/583

	5 Bow Pl	Lot 290 Deposited Plan 51141	NA55B/472
BW4	23 Roosevelt Av	Lot 285B Deposited Plan 51141	NA55B/469
	1 Bow Pl	Lot 286 Deposited Plan 37885	NA55B/462
	2 Bow Pl	Lot 287 Deposited Plan 37885	NA55B/463
	3 Bow Pl	Lot 1 Deposited Plan 187442	NA117C/96
	4 Bow Pl	Lot 2 Deposited Plan 187442	NA117C/97
MN228	224 MtSmart Rd	Part Lot 3 Block II Deposited Plan 9482	NA102D/553
	226 MtSmart Rd	Lot 1 Deposited Plan 194501	NA123A/941
	228 MtSmart Rd	Lot 2 Deposited Plan 194501	NA123A/942
	6 Bow Pl	Lot 291 Deposited Plan 51141	NA55B/473
	7 Bow Pl	Lot 292 Deposited Plan 51141	NA12B/1391
MN232	232 MtSmart Rd	Lot 255 Deposited Plan 37885	NA12B/1385
	8 Bow Pl	Lot 293 Deposited Plan 51141	NA12B/1392
	9 Bow Pl	Lot 294 Deposited Plan 51141	NA12B/1393
MN240	240 MtSmart Rd	Lot 250 Deposited Plan 37885	NA62D/978
BW11	234A MtSmart	Lot 254 Deposited Plan 51141	NA12B/1390
	10 Bow Pl	Lot 295 Deposited Plan 51141	NA12B/1394
	11 Bow Pl	Lot 296 Deposited Plan 51141	NA12B/1395
	6 Waitangi Rd	Lot 248 Deposited Plan 37885	NA12B/1381
	8 Waitangi Rd	Lot 247A Deposited Plan 51141	NA12B/1388
	10 Waitangi Rd	Lot 247B Deposited Plan 51141	NA12B/1389
BW15	12 Bow Pl	Lot 297 Deposited Plan 51141	NA13A/1126
	13 Bow Pl	Lot 298B Deposited Plan 51141	NA13A/1128
	14 Bow Pl	Lot 298A Deposited Plan 51141	NA13A/1127
	15 Bow Pl	Lot 299 Deposited Plan 51141	NA13A/1129
	12 Waitangi Rd	Lot 245 Deposited Plan 51141	NA13A/1125
BW19	18 Bow Pl	Lot 302 Deposited Plan 51141	NA71D/787
	19 Bow Pl	Lot 303 Deposited Plan 51141	NA48C/808
	25 Roosevelt Av	Lot 304 Deposited Plan 37885	NA48C/804
	27 Roosevelt Av	Lot 305 Deposited Plan 37885	NA48C/805
	29 Roosevelt Av	Lot 306A Deposited Plan 51141	NA48C/809
	31 Roosevelt Av	Lot 306B Deposited Plan 51141	NA48C/810
	33 Roosevelt Av	Lot 307 Deposited Plan 51141	NA48C/811
	35 Roosevelt Av	Lot 308 Deposited Plan 37885	NA48C/806
	37 Roosevelt Av	Lot 1 Deposited Plan 196347	NA124C/452
	39 Roosevelt Av	Lot 2 Deposited Plan 196347	NA124C/453
	41 Roosevelt Av	Lot 310 Deposited Plan 37885	NA1939/76
	43 Roosevelt Av	Lot 311 Deposited Plan 51141	NA13A/1130
WT18	18 Waitangi Rd	Lot 243B Deposited Plan 51141	NA13A/1123
	49 Roosevelt Av	Lot 314 Deposited Plan 37885	NA13A/1121
RS34	26 Roosevelt Av	Lot 352 Deposited Plan 37885	NA46C/1195
	28 Roosevelt Av	Lot 351 Deposited Plan 48296	NA46C/1215
	30 Roosevelt Av	Lot 1 Deposited Plan 195035	NA123B/504
	32 Roosevelt Av	Lot 2 Deposited Plan 195035	NA123B/505
	34 Roosevelt Av	Lot 349A Deposited Plan 48296	NA46C/1213
RS40	38 Roosevelt Av	Lot 4 Deposited Plan 426023	502509
	40 Roosevelt Av	Lot 5 Deposited Plan 426023	502510
HL3	1 Hull Pl	Lot 329 Deposited Plan 48296	NA105D/256
	2 Hull Pl	Lot 330 Deposited Plan 48296	NA30A/979

	3 Hull Pl	Lot 331 Deposited Plan 48296	NA30A/980
HL8	5 Hull Pl	Lot 11 Deposited Plan 418304	470192
	6 Hull Pl	Lot 334 Deposited Plan 48296	NA20B/393
	7 Hull Pl	Lot 7 Deposited Plan 418304	470188
	8 Hull Pl	Lot 8 Deposited Plan 418304	470189
ED5	3 Edmonton Av	Lot 1 Deposited Plan 188287	NA118A/895
	5 Edmonton Av	Lot 2 Deposited Plan 188287	NA118A/896
	5A/B State Ave	Lot 1 Deposited Plan 86955	NA44D/135
ST7	1 State Ave	Lot 207 Deposited Plan 37889	NA8B/1102
	3 State Ave	Lot 4 Deposited Plan 194908	NA123B/373
	5 State Ave	Lot 3 Deposited Plan 194908	NA123B/372
	7 State Ave	Lot 3 Deposited Plan 86955	NA44D/137
ST16	10 State Ave	Lot 22 Deposited Plan 46918	NA105D/275
	12 State Ave	Lot 23 Deposited Plan 46918	NA105D/276
	14 State Ave	Lot 24 Deposited Plan 37889	NA105D/277
	16 State Ave	Lot 25 Deposited Plan 37889	NA102A/682
WT31	2 State Ave	Lot 19 Deposited Plan 46918	NA102A/681
	4 State Ave	Lot 20 Deposited Plan 46918	NA105D/273
	6 State Ave	Lot 1 Deposited Plan 194908	NA123B/370
	8 State Ave	Lot 2 Deposited Plan 194908	NA123B/371
	29 Waitangi Rd	Lot 4 Deposited Plan 195209	NA123B/530
	31 Waitangi Rd	Lot 3 Deposited Plan 195209	NA123B/529
TR9	7 Treasury Pl	Lot 2 Deposited Plan 97815	NA53B/741
	8 Treasury Pl	Lot 28 Deposited Plan 46918	NA105D/279
	9 Treasury Pl	Lot 27 Deposited Plan 46918	NA105D/278
WT37	4 Treasury Pl	Lot 2 Deposited Plan 171643	NA104D/801
	5 Treasury Pl	Lot 1 Deposited Plan 171643	NA104D/800
	37 Waitangi Rd	Lot 3 Deposited Plan 416116	462508
	37A Waitangi R	Lot 2 Deposited Plan 416116	462507
NS9	8 Nissan Pl	Lot 1 Deposited Plan 196329	NA124C/423
	9 Nissan Pl	Lot 2 Deposited Plan 196329	NA124C/424
NS6	51 Waitangi Rd	Lot 1 Deposited Plan 139948	NA83A/713
	3 Nissan Pl	Lot 44 Deposited Plan 37889	NA44C/897
	4 Nissan Pl	Lot 43 Deposited Plan 37889	NA44C/896
	5 Nissan Pl	Lot 1 Deposited Plan 195586	NA123B/953
	6 Nissan Pl	Lot 2 Deposited Plan 195586	NA123B/954
NS1	1 Nissan Pl	Lot 46 Deposited Plan 37889	NA44C/899
	22 State Ave	Lot 47 Deposited Plan 37889	NA44C/900
	24 State Ave	Lot 48 Deposited Plan 37889	NA40C/596
SN10	6 Santos Pl	Lot 59A Deposited Plan 46918	NA44C/911
	7 Santos Pl	Lot 59B Deposited Plan 46918	NA44C/912
	8 Santos Pl	Lot 58 Deposited Plan 37889	NA44C/904
	9 Santos Pl	Lot 3 Deposited Plan 195360	NA123B/696
	10 Santos Pl	Lot 4 Deposited Plan 195360	NA123B/697
	57 Waitangi Rd	Lot 2 Deposited Plan 195999	NA124C/177
	59 Waitangi Rd	Lot 1 Deposited Plan 195999	NA124C/176
	61 Waitangi Rd	Lot 2 Deposited Plan 195360	NA123B/695
	63 Waitangi Rd	Lot 1 Deposited Plan 195360	NA123B/694
	65 Waitangi Rd	Lot 2 Deposited Plan 37889	NA1674/64

WL6B	6A Wallath Rd	Lot 3 Deposited Plan 96964	NA52C/1296
	6B Wallath Rd	Lot 2 Deposited Plan 103306	NA60C/894
	1 Santos Pl	Lot 63 Deposited Plan 37889	NA44C/906
	2 Santos Pl	Lot 6 Deposited Plan 195360	NA123B/699
	3 Santos Pl	Lot 5 Deposited Plan 195360	NA123B/698
ST42	36 State Ave	Lot 74 Deposited Plan 4671	NA45A/477
	38 State Ave	Lot 75 Deposited Plan 46712	NA45A/478
	40 State Ave	Lot 1 Deposited Plan 195744	NA124C/40
	42 State Ave	Lot 2 Deposited Plan 195744	NA124C/41
ST61	57 State Ave	Lot 8 Deposited Plan 341266	169720
	59 State Ave	Lot 174 Deposited Plan 37889	NA48C/202
	61 State Ave	Lot 175 Deposited Plan 37889	NA70A/494
	1 Torokino Pl	Lot 1 Deposited Plan 415529	459857
	2 Torokino Pl	Lot 2 Deposited Plan 415529	459858
ST31	31 State Ave	Lot 160 Deposited Plan 47432	NA48C/157
ST21	19 State Ave	Lot 155 Deposited Plan 47013	NA107B/603
	21 State Ave	Lot 156 Deposited Plan 47013	NA107B/604
ST15	11 State Ave	Lot 2 Deposited Plan 184256	NA115A/625
	13 State Ave	Lot 2 Deposited Plan 66102	NA22C/687
	15 State Ave	Lot 1 Deposited Plan 66102	NA54D/648
	2 Edmonton Av	Lot 1 Deposited Plan 184256	NA115A/624
ST67	63 State Ave	Lot 111 Deposited Plan 4906	NA107B/607
	65 State Ave	Lot 112A Deposited Plan 49062	NA107B/608
	67 State Ave	Lot 112B Deposited Plan 49062	NA107B/609
	8 Torokino Pl	Lot 109 Deposited Plan 49062	NA97B/943
	9 Torokino Pl	Lot 110 Deposited Plan 49062	NA107B/606
	40 Edmonton A	Lot 114B Deposited Plan 49062	NA107B/611
	42 Edmonton A	Lot 113 Deposited Plan 49062	NA107B/610
ED36	34 Edmonton A	Lot 117 Deposited Plan 49062	NA107B/612
	36 Edmonton A	Lot 116 Deposited Plan 49062	NA55A/1398
GM2	1 Gambia Pl	Lot 119 Deposited Plan 49062	NA107B/613
	2 Gambia Pl	Lot 120 Deposited Plan 49062	NA97B/944
	3 Gambia Pl	Lot 121 Deposited Plan 37889	NA24C/494
GM6	4 Gambia Pl	Lot 122 Deposited Plan 49062	NA107B/614
	5 Gambia Pl	Lot 123A Deposited Plan 49062	NA102D/218
	6 Gambia Pl	Lot 123B Deposited Plan 49062	NA102D/219
GM10	8 Gambia Pl	Lot 125 Deposited Plan 49062	NA107B/615
	9 Gambia Pl	Lot 1 Deposited Plan 196800	NA124C/767
	10 Gambia Pl	Lot 2 Deposited Plan 196800	NA124C/768
GM12	11 Gambia Pl	Lot 128 Deposited Plan 37889	NA107B/25
	12 Gambia Pl	Lot 129 Deposited Plan 37889	NA107B/26
ED23	21 Edmonton A	Lot 195 Deposited Plan 45978	NA43A/460
	23 Edmonton A	Lot 193 Deposited Plan 37889	NA43A/456
	266 MtSmart Rd	Lot 1 Deposited Plan 194105	NA123A/530
	268 MtSmart Rd	Lot 2 Deposited Plan 194105	NA123A/531
	270 MtSmart Rd	Lot 218 Deposited Plan 45978	NA43A/463
	272 MtSmart Rd	Lot 3 Deposited Plan 194105	NA123A/532
	274 MtSmart Rd	Lot 4 Deposited Plan 194105	NA123A/533
	276 MtSmart Rd	Lot 1 Deposited Plan 175301	NA107D/573

	278 MtSmart Rd	Lot 2 Deposited Plan 175301	NA107D/574
ED31	25 Edmonton A	Lot 192 Deposited Plan 37889	NA1612/59
	27 Edmonton A	Lot 191 Deposited Plan 45978	NA43A/459
	29 Edmonton A	Lot 190 Deposited Plan 45978	NA8B/1083
	31 Edmonton A	Lot 189 Deposited Plan 45978	NA8B/1082
ED37	33 Edmonton A	Lot 188 Deposited Plan 52779	NA8B/1081
	35 Edmonton A	Lot 2 Deposited Plan 194808	NA123B/160
	37 Edmonton A	Lot 1 Deposited Plan 194808	NA123B/159
MN290	282 MtSmart Rd	Lot 1 Deposited Plan 194619	NA123B/81
	284 MtSmart Rd	Lot 2 Deposited Plan 194619	NA123B/82
	286 MtSmart Rd	Lot 223 Deposited Plan 45978	NA8B/1085
	288 MtSmart Rd	Lot 224 Deposited Plan 45978	NA8B/1086
MN294	290 MtSmart Rd	Lot 225 Deposited Plan 37889	NA8B/1087
	292 MtSmart Rd	Lot 226 Deposited Plan 37889	NA9D/1133
	294 MtSmart Rd	Lot 227 Deposited Plan 37889	NA8B/1089
RC167	167 Rockfield R	Lot 231 Deposited Plan 37889	NA8B/1090
RC161	151 Rockfield R	Lot 1 Deposited Plan 196155	NA125A/730
	153 Rockfield R	Lot 2 Deposited Plan 196155	NA125A/731
	155 Rockfield R	Lot 235 Deposited Plan 37889	NA24D/388
	157 Rockfield R	Lot 1 Deposited Plan 194450	NA123A/935
	159 Rockfield R	Lot 2 Deposited Plan 194450	NA123A/936
	161 Rockfield R	Lot 1 Deposited Plan 177165	NA109B/52
RC135	135 Rockfield R	Lot 91 Deposited Plan 46712	NA61A/538
	46 Edmonton A	Lot 90 Deposited Plan 37889	NA45A/463
OL3	1 Olea Rd	Lot 396 Deposited Plan 37886	NA16D/904
	3 Olea Rd	Lot 397 Deposited Plan 37886	NA16D/905
	41 Oranga Ave	Lot 395 Deposited Plan 37886	NA67C/864
	43 Oranga Ave	Lot 398 Deposited Plan 37886	NA16D/906
OL8	6 Olea Rd	Lot 394 Deposited Plan 49556	NA16D/915
	8 Olea Rd	Lot 393 Deposited Plan 49556	NA16D/914
OL16	12 Olea Rd	Lot 391 Deposited Plan 49556	NA16D/912
	14 Olea Rd	Lot 390 Deposited Plan 49556	NA16D/911
	16 Olea Rd	Lot 389 Deposited Plan 49556	NA16D/910
OR19	17 Oranga Ave	Lot 386 Deposited Plan 37886	NA16D/902
	19 Oranga Ave	Lot 387 Deposited Plan 37886	NA16D/903

3.4. Study Area

The Study Area is the front and backyards of the above listed properties in Oranga, Stage 1, 2 and later stages.

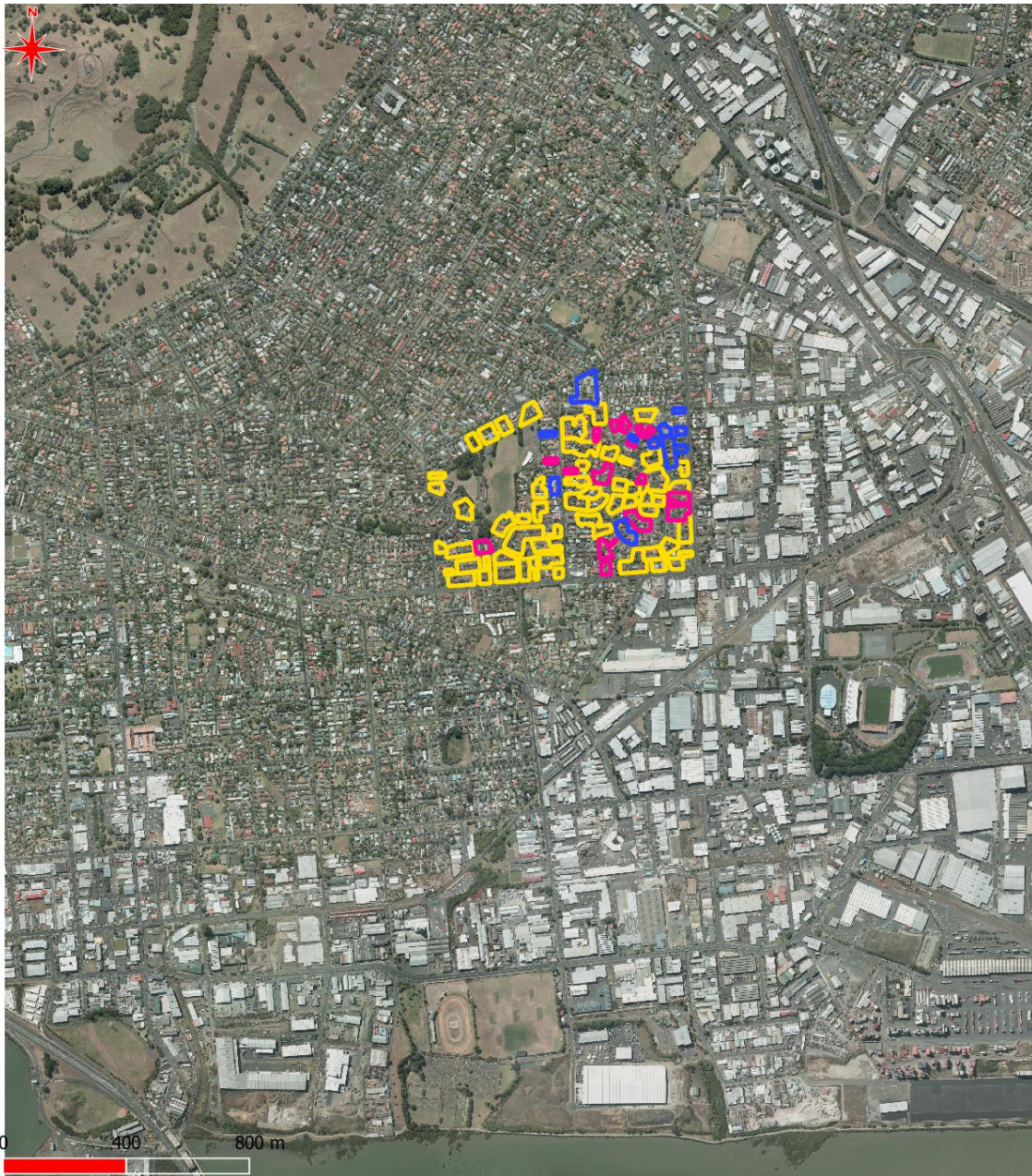


Figure 5: Location of study area between Maungakiekie and Onehunga, Auckland. Super lots of Stage 1 (blue), Stage 2 (red) and later stages (yellow).

4. Statutory Requirements

There are two main pieces of legislation in New Zealand that control work affecting archaeological sites. These are the *Heritage New Zealand Pouhere Taonga Act 2014* (HNZPTA) and the *Resource Management Act 1991* (RMA)

This assessment considers only archaeological sites as defined in the HNZPTA as outlined below.

4.1. Heritage New Zealand Pouhere Taonga Act 2014

Heritage New Zealand Pouhere Taonga (HNZ) administers the HNZPTA. The HNZPTA contains a consent (authority) process for any work affecting archaeological sites, where an archaeological site is defined as:

- “6(a) any place in New Zealand, including any building or structure (or part of a building or structure), that –*
- (i) was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where the wreck occurred before 1900; and*
 - (ii) provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and*
- 6(b) includes a site for which a declaration is made under section 43(1)”*

Any person, who intends carrying out work that may damage, modify or destroy an archaeological site, or to investigate a site using invasive archaeological techniques, must first obtain an authority from HNZ. The process applies to sites on land of all tenure including public, private and designated land. The HNZPTA contains penalties for unauthorized site damage or destruction

The archaeological authority process applies to all sites that fit the HPA definition, regardless of whether:

- The site is recorded in the NZ Archaeological Association Site Recording Scheme or registered by HNZ,
- The site only becomes known about as a result of ground disturbance, and/ or
- The activity is permitted under a district or regional plan, or a resource or building consent has been granted

HNZ also maintains the List of Historic Places, Historic Areas, Wahi Tapu and Wahi Tapu Areas. The List can include archaeological sites. The purpose of the List is to inform

members of the public about such places and to assist with their protection under the Resource Management Act (1991).

4.2. Resource Management Act 1991

Under Section 6 of the *Resource Management Act 1991* (RMA) it is stated that the protection of historic heritage is a matter of national importance,

“In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

[...]

(e) the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga

(f) the protection of historic heritage from inappropriate subdivision, use, and development.”

“Historic heritage” is defined in the RMA as being “those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures” and includes archaeological, architectural, cultural, historic, scientific and technological qualities.

Historic heritage includes:

- historic sites, structures, places, and areas
- archaeological sites;
- sites of significance to Māori, including wahi tapu;
- surroundings associated with the natural and physical resources (RMA section 2).

These categories are not mutually exclusive and some archaeological sites may include above ground structures or may also be places that are of significance to Māori.

Where resource consent is required for any activity the assessment of effects is required to address cultural and historic heritage matters (RMA 4th Schedule and the district plan assessment criteria).

Section 17 of the RMA states “Every person has a duty to avoid, remedy, or mitigate any adverse effect on the environment arising from an activity carried on by or on behalf of the person”, and this includes historic heritage.

In Auckland the Auckland Unitary Plan, Operative in part, has specific provisions for historic heritage and places of significance to mana whenua. Note that scheduled historic heritage places have a stronger protection than archaeological sites that are not scheduled in the Plan.

5. Methodology

5.1. Investigation Methodology

This assessment was carried out using both desktop research and site visits.

5.2. Desktop Research Methodology

Sources for desktop research include:

- NZ Archaeological Association (NZAA) online site recording database Archsite and associated site records
- LINZ database of historic maps and survey plans via Quickmaps
- Heritage New Zealand Heritage List/ Rārangī Kōrero of historic places, historic areas and wahi tapu areas
- Heritage New Zealand online reports database
- Auckland Council Geomaps GIS viewer
- Auckland Council Cultural Heritage Inventory (CHI)
- Auckland Council Archives (visited)
- Archives New Zealand (online resources and visit x 2)
- Local histories – published and unpublished
- Archaeological reports
- Aerial photographs
- National Library cartographic collection
- Alexander Turnbull Tiaki online collection
- Auckland Museum pictorial collections
- Geotechnical report, especially the bore logs.

5.3. Site Surveys

The majority of properties were visited and surface inspected. Two or three had a threat level indicated by Housing New Zealand and were not visited. Nonetheless this did not impact onto the conclusion drawn from the observation of the landscape and its heritage potential. A number of properties were visited jointly with the environmental team and their small test excavations were examined also. Most superlots were visited a second time and small spade sized test pits were dug to investigate the soil layering down to the natural

orange-brown subsoil. A third site visit was carried out to inspect the areas around the southern end of the precinct that are mainly in the later stages. The test pits were located within specific landscape features like along lava flows or in depressions between the ridge lines to help understand the use of the landscape in pre contact times.

An iwi representative accompanied the author during some of the site visits.

6. Background

6.1. Physical Environment

The area known as Oranga is situated between Maungakieie/One Tree Hill in the north and Onehunga in the south. The area is shown in geological maps to be within a basaltic lava flow from volcanic cones in the Auckland volcanic field (Kermode 1992 ; Edbrooke 2001). The topography of the area today is formed from the lava flow of the eruption of Maungakieie/One Tree Hill over 28,500 years ago (Lindsay and Leonard 2009:18).

These lava flows also provided the wider surrounds of Onehunga with a prolific amount of fresh water natural springs caused by the flow of water downwards from the Maungakieie and Rarotonga/Mt Smart lava flows (Hayward, Murdoch, and Maitland 2011). The springs of Onehunga were important sources of water to Maori, and were known as Waihihi or “the gushing waters” (Hayward, Murdoch, and Maitland 2011:49).

Some of the lava flows still show up on the surface of the development area, but in between them the soil is brown friable soil overlaying orange-brown clotty subsoil, both originating possibly from volcanic ash. Modified planting soil can usually be identified by a high charcoal content, and therefore darker colour, as well as on occasions shell fragments mixed into the soil.

The physical environment of Oranga, and its relationship to the connecting landscapes of Onehunga and Maungakieie, has been shaped by its volcanic features, both by the lava flows and well draining volcanic soils. This physical environment would have shaped the heritage of the wider area and it is likely these volcanic features were part of a cultural landscape and central to identity for mana whenua, whether those features have been modified or not (Murdoch 2013:8).

6.2. Māori land use

Any deep understanding of historical land use and occupation by Māori in the Oranga area should be considered within the context of wider settlement of the Auckland region. The places identified to be of significance to Māori are not seen as being isolated from a wider cultural landscape that extends across the Tāmaki isthmus, northern Manukau and the associated coastal environment (Murdoch 2013:4). Given the brief scope of this assessment, any synthesis of the rich record of Māori oral traditions and whakapapa shall not be attempted here.

The area known as Oranga was situated between the significant pa of Maungakieie to the north, Rarotonga/Mt Smart to the east, and to the south the strategic settlement of Onehunga on the Manukau harbour. The surrounding Maungakieie area was extensively used for gardens with Māori taking advantage of the volcanic loams. When Waiohūa

occupied the area, Tahuri, mother of the last Waihoua paramount chief Kiwi Tamaki, had cultivations stretching from Maungakieie to Onehunga which were known as Nga Maara a Tahuri 'the cultivations of Tahuri' (Murdoch 2013:16; Paterson 2008:4). M.H. Wynyard wrote in 1903 that it was a common saying that: "'If you want to see the awgheto (i.e., caterpillars, particularly partial to the kumara), go to the farm of Takuri.' Which [says Wynyard] was a backhanded way of saying that the said farm of Takuri a lady of rustic propensities, who owned what is now mainly the One Tree Hill estate, was especially fruitful in kumaras" (Wynyard 1903:7).

After the defeat of Waihoua by Te Taou (a hapu of Ngati Whatua) and Kiwi Tamaki's subsequent death, the pa at Maungakieie was continued to be used by Tuperiri until his death. Stone (2007:56) states Maungakieie was then abandoned along with many of the other Tamaki pa of that time, as Te Taou focused on their Waitemata harbour locations. By the time European travelers first came to the Tamaki region, many of the pa sites and surrounding lands had reverted to thick scrub and bracken. Early European visitors also noted the volcanic soils on the lands south of Maungakieie (Figure 6). Gardening by Maori continued however on the soils of Onehunga, as when Onehunga was visited by John Logan Campbell shortly after arriving in 1840, he described the area as being "Ngatiwhatuas' kumera grounds" (Campbell 1881:292), but it is not known how far inland the gardens stretched at that later time.

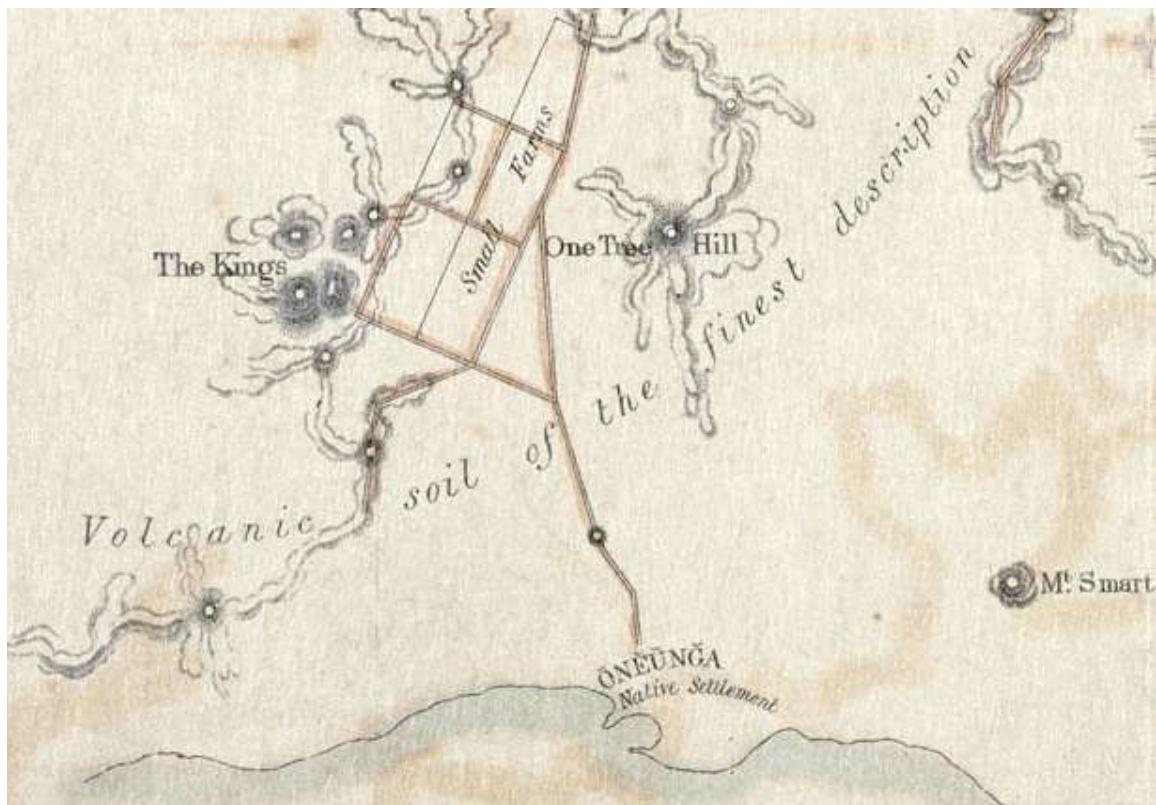


Figure 6 Detail from 1842 Map by Felton Mathew "Map of the Harbour of Waitemata, New Zealand, and of the adjacent country shewing the situation of Auckland, the capital of the colony, and also the isthmus which separates the waters of the Frith of Thames on the eastern from those of Manukao on the western coast from actual measurement with the chain and from a

trigonometrical survey, Felton Mathew, survr. genl., 1841" (Sir George Grey Special Collections, Auckland Libraries, NZ Map 6601).

6.3. Colonial Historical Context

The land upon which the present day Oranga suburb sits was an 800 acre part of a larger purchase of four blocks of land totaling 1400 acres in 1845 by settler and grocer Thomas Henry. This purchase included the land of Maungakiekie/One Tree Hill and was bought from Ngati Whatua chiefs for a total sum of £592.15. This purchase was recorded by Henry Hansen Turton as Deed No. 105 (Turton 1882:507) (Figure 7). Thomas Henry's purchase of 800 acres of land known as Waikaraka was conducted under pre-emption certificate 113, described as:

"No. 113. Eight hundred acres, situated on the south side of One Tree Hill, called Waikaraka, bounded on the north by the Native land on the east by Mr. Lorrigan's property, and Native land, on the south by the waters of the Manukau and on the west by Mr. Jackson's property and native land." (OLC Plan 178). Henry created a farm he called Mt Prospect (Stone 2007: 58)

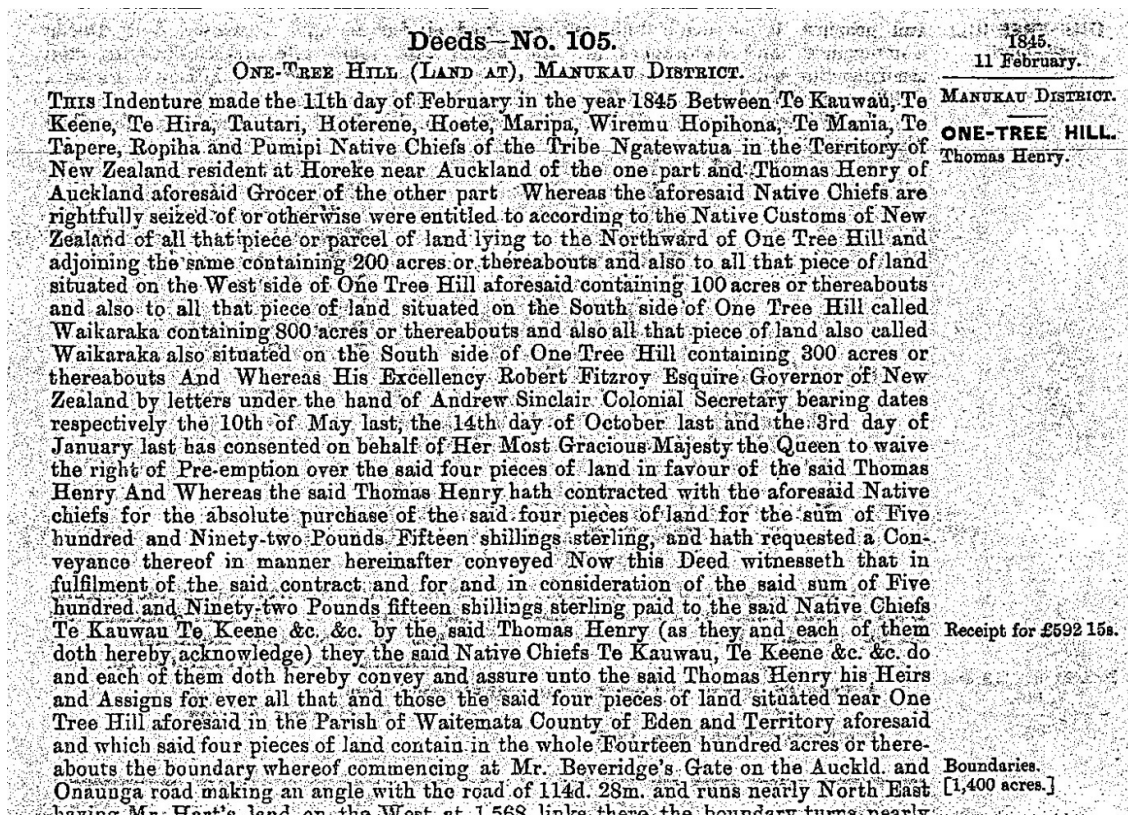


Figure 7 From H.H. Turton 1882 "Maori Deeds of Old Private Land Purchases in New Zealand, from the year 1815 to 1840, with pre-emptive and other claims" p.507

The land was subject to a claim for title (claim number 1084) (Figure 8), coming before Commissioner Matson in 1847 under the Land Claims Ordinance 1846. At the time of the claim for pre-emption certificate 113 he described purchasing these 800 acres for cash and goods of the value to approximately £130. The goods were described as consisting of twenty blankets, four pairs of trousers, six shirts, five coats, four waistcoats, six caps, four

handkerchiefs, twenty pounds of tobacco, two watches, four double barreled guns, six single guns, one cedar box, plus £20 cash. Thomas Henry described using this block of land as a sheep and cattle run since his purchase as it was adjoining his other blocks of land where he was residing. Henry's total amount of land was reduced from a total 1400 acres to 695 acres, and he was awarded compensation of £147.18 (OLC Plan 178). The Crown retained 130 acres as a Crown reserve, which included the volcanic cone and some surrounding land. This land is now substantially the One Tree Hill Domain (Stone 2007: 57). Henry was unhappy with what he had been granted, stating he was left with the very worst of the land in claim 1084. In 1853 Thomas Henry transferred all interests in all these land claims to Auckland merchants Brown and Campbell (OLC Plan 178). Stone records Thomas Henry as falling into debt with foreclosed mortgages, with the Mount Prospect purchased as a mortgagee sale by Brown and Campbell, and renamed One Tree Hill estate (Stone 2007: 58).

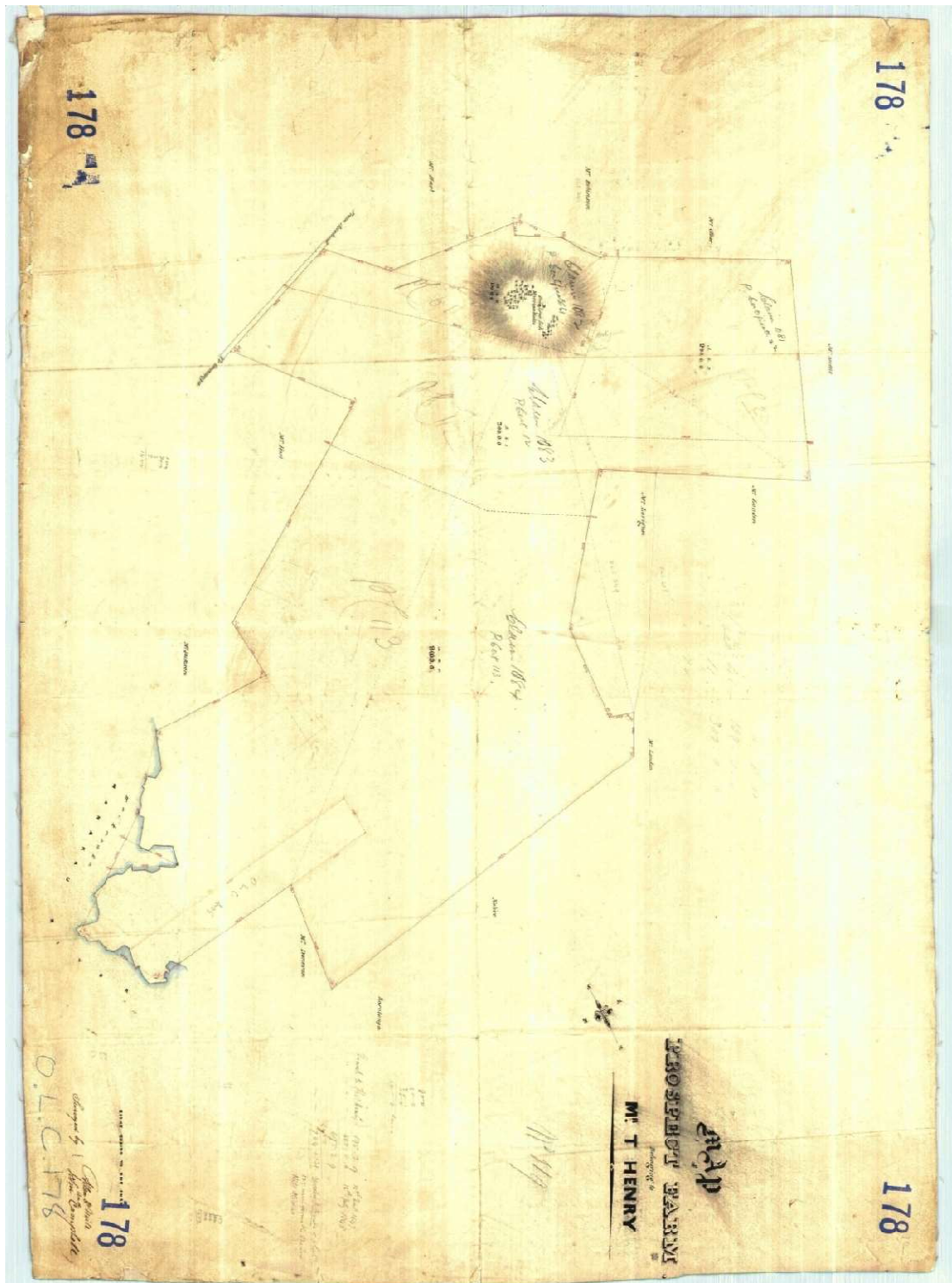


Figure 8 OLC 178 LINZ, "Map of Prospect Farm belonging to Mr. T. Henry", showing Claim 1081, 1082, 1083 and 1084



Figure 9 OLC 178 LINZ, "Map of Prospect Farm belonging to Mr. T. Henry", showing Claim 1084

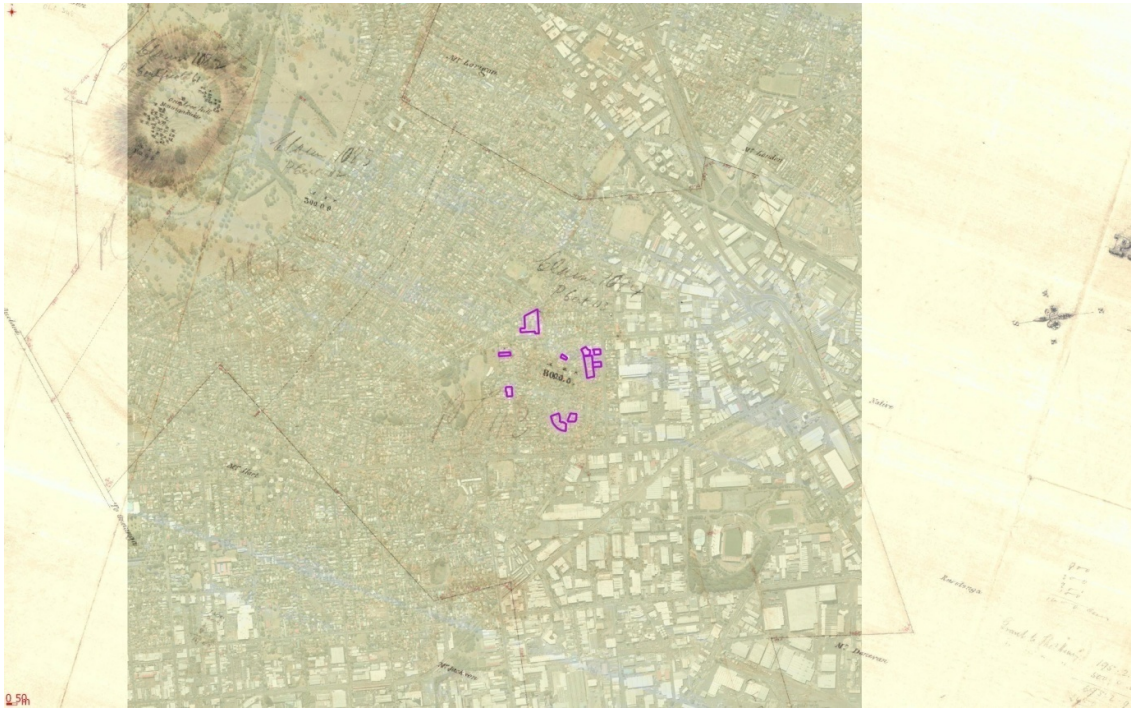
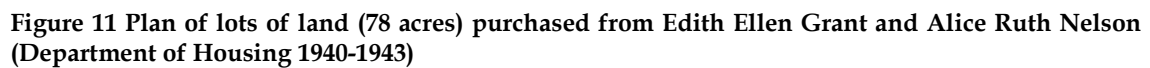


Figure 10 OLC 178 LINZ, showing Claim 1084 overlaid with HLC Oranga Stage 1 development areas

6.4. Subsequent Property History – the Oranga Estate

Subsequent property subdivision history is limited as pages are missing in the relevant deeds index at Archives New Zealand that makes this information difficult to uncover.

However, the story resumes in late 1941 when Cabinet gave approval to the Department of Housing Construction to purchase a number of large blocks of land for housing at Oranga. Alice Ruth Nelson (approx 59 acres) and Edith Ellen Grant (approx 18 acres) were the vendors of a substantial portion (Figure 11 and Figure 12), and their land had a government valuation of £6250. Their land was purchased at approximately £70 per acre. The land was described as being “of an uneven character”, but considered good dry volcanic land with good access to the industrial area of Penrose “yet sufficiently removed not to suffer any detrimental effects”. It was considered there would be 370 house units, including 59 2-house units, with the development cost per unit, including land, of £152 each (13 November 1941, Department of Housing 1940-1943 Archives New Zealand). Both properties appear to have been used as farm land, and sold without buildings on. There were likely farm buildings/sheds on Edith Grant’s land, as she was required to remove sheds and the foundations and associated debris. In a letter to the Director of Housing Construction dated 24 December 1941 it was stated she “was not taking very kindly to the idea of having to remove the concrete foundations of the sheds”, but in the end she agreed to do it (24 December 1941, Department of Housing 1940-1943 Archives New Zealand).



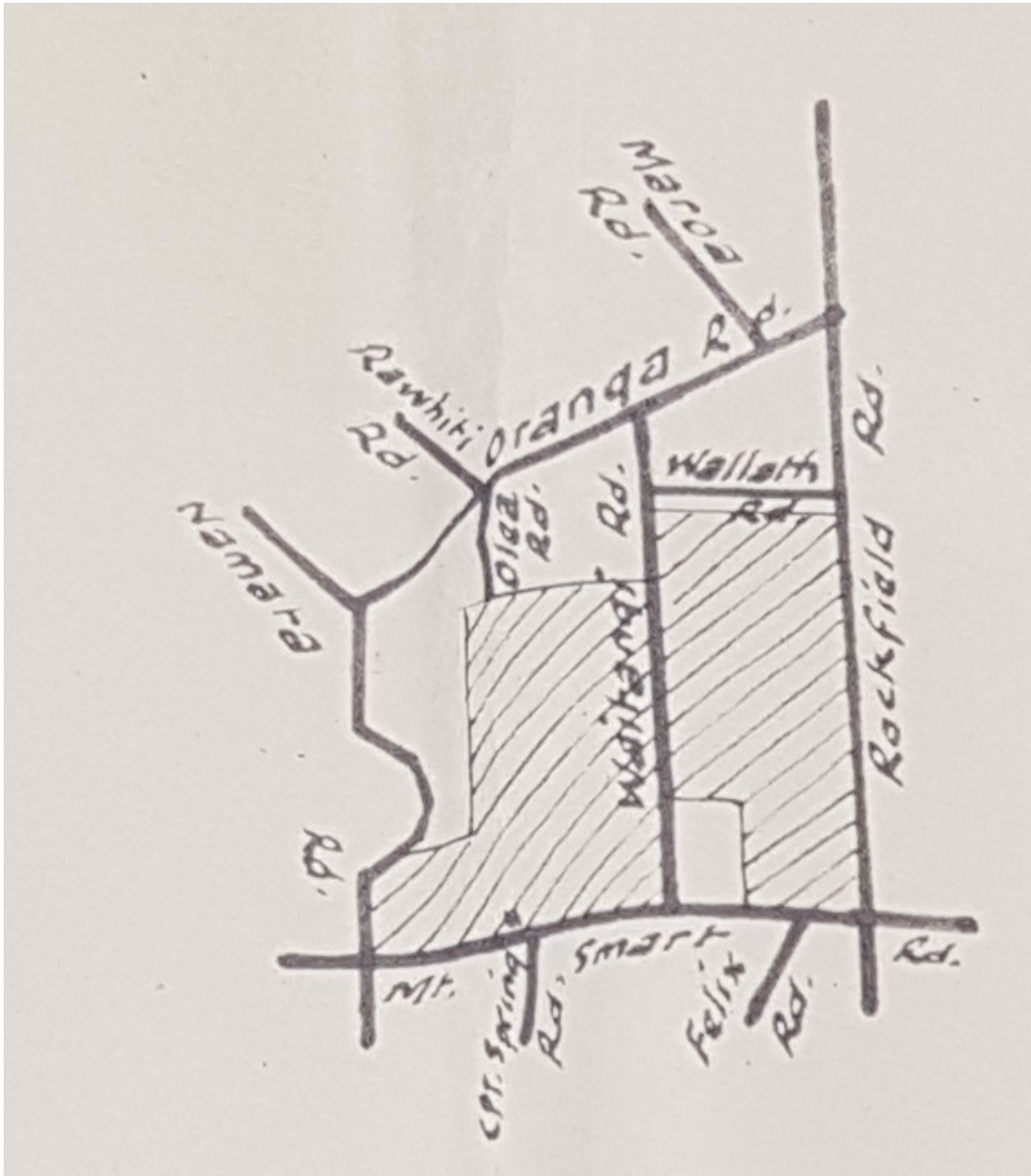


Figure 12 Inset from above plan of lots of land (78 acres) purchased from Edith Ellen Grant and Alice Ruth Nelson (Department of Housing 1940-1943)

On 19 May 1942 a memo to the Director of Housing Construction discussed the lands topography, stating the "roading system has been devised to ensure an absolute minimum of excavation, a matter of paramount importance having regard to the rocking nature of the terrain. Outcropping has been avoided and surface roading as been the main objective in layout" (Department of Housing 1940-1943 Archives New Zealand).

By July 1943 work on the development was well under way with blasting to create the sub-grade for roading. By this time a third of the rock walls had been removed, together with rock mounds. The walls probably related to historic farming, but the rock mounds may have been related to Maori garden systems. At this point it was commended on that work

was slow due to a lack of labour – possibly due to WW2 (16 July 1943 Department of Housing 1943-1956 Archives New Zealand). By October the road formation on the eastern part of the development was almost complete, together with all stone walls removed and continued removal of rock mounds (5 October 1943 Department of Housing 1943-1956 Archives New Zealand). Blasting to create the soakpits for stormwater drainage uncovered subterranean caverns or lava tunnels, with one soakpit being sunk 40 feet (12 metres) down before coming to loose scoria, although mostly good scoria was uncovered at about 12-15 feet (3.5 – 4.5 metres) down (Auckland Star 2 March 1944).

The design of the development was described as having “a series of vistas” with rounded intersections and “no blind spots for traffic, no straight speedways.....There will just be homes among gently undulating gardens and trim carriageways, flanked by wide paths” (Auckland Star 1 March 1944) (Figure 13).

CURVING ROADS A MODERN SUBURB HUNDREDS OF HOMES

No. 1.
(By H.McD.V.)

When the new community of 1500 persons is settled under the State housing plan on the Oranga block at Penrose, a task will have been finished in which that maid-of-all-work, the Works Department, has played a big part. Neatly kerbed with concrete blocks, roads have been scooped over the lower part of the 100-acre block, where contractors have started on the first instalment of 400 houses. The roads lie in flowing curves designed to offer a series of vistas. All intersections are rounded; there will be no blind spots for traffic, no straight speedways.

On the higher part of the south-eastern slopes of rugged volcanic land tilted towards the Manukau basin, the Works Department is noisily breaking down rocky outcrops, filling in gullies, combing out roads, blasting trenches for sewers and waterpipes. When the scars on the block are healed, the extent of its performance will be hidden. There will just be homes among gently undulating gardens and trim carriageways, flanked by wide paths. But on the skyline above the settlement a stony kopje rising from scattered out-thrusting rocks in what is a public reserve should be a reminder of the type of country the Department is smoothing out in Oranga.

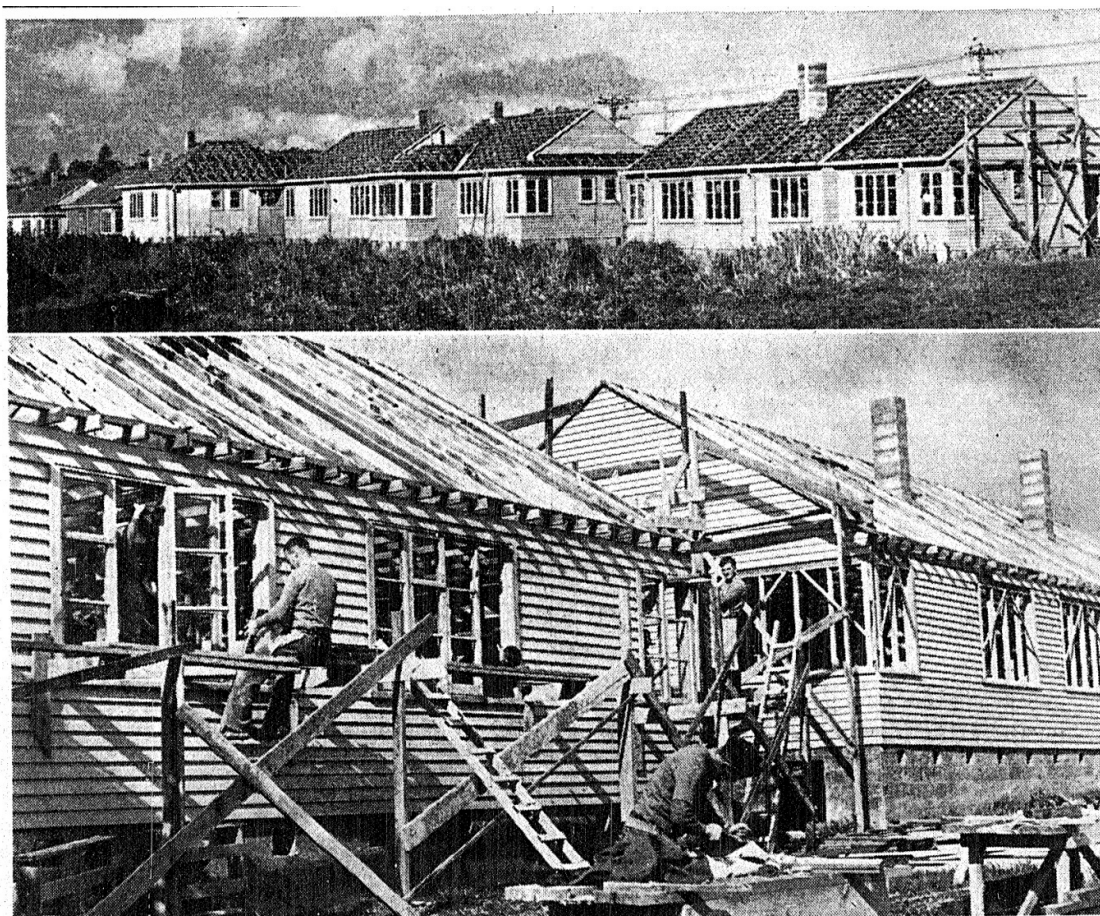
Birth Of A New State Settlement At Penrose



FOUNDATIONS LAID for the first block of houses on the big Government scheme on Oranga estate, Penrose.

Figure 13 Auckland Star 1 March 1944

Shortages of labour and materials, such as timber and roofing tiles (Figure 14) plagued the development, but by April 1945 the Auckland Star reported the first batch of 25 families had moved into the 440 new State houses on the Oranga Estate, although a scarcity of electric stoves was holding up further tenants moving into the houses (Auckland Star 10 April 1945).



STATE HOUSES NEARING COMPLETION.—Upper: Some of the houses in the Oranga block, Te Papapa, which are in an advanced stage of construction but on which work is delayed owing to the shortage of roofing tiles. There are approximately 900 houses in the block. Lower: Rehabilitated servicemen at work on houses in the Oakley Park block, New North Road.

Figure 14 NZ Herald 31 July 1945

6.5. Archaeological Context

Only one archaeological site (NZAA Site Recording Scheme #R11/315, CHI #5832), a shell midden, has been recorded in the vicinity of the proposed re-development. The site record is from 1975 and has apparently not been re-visited since then.

Record is attached as appendix to this report.



Figure 15: Likely location (as per description in the site record from 1975) of the site R11/315 west from the Oranga re-development area.

A reported historic site, CHI #21955, is recorded between Roosevelt Ave and Waitangi Ave. It is the Ninth Contingent camp for the Boer War and was occupied for a short time in 1902. Therefore it does not fall under the definition of an archaeological site as per NZHPT Act (2014).

Nonetheless it is still a historic site as recognized by its addition to the CHI. The camp consisted of rows of bell tents and some ancillary structures. It was a temporary installation and probably little is left of it in the ground. The pictures published in 1902 of the camp though show a small lake or stream where to wash the dishes and some 19th century cottages in the background. Historic maps from the turn of the century don't show any of the small subdivision in the Oranga area to facilitate those cottages. Therefore it seems more likely that the camp was closer to Onehunga and the Te Papapa train station than the inferred location of the CHI suggests. Consequently it is considered to be rather unlikely that the re-development on Oranga will encounter any remains of this military camp.

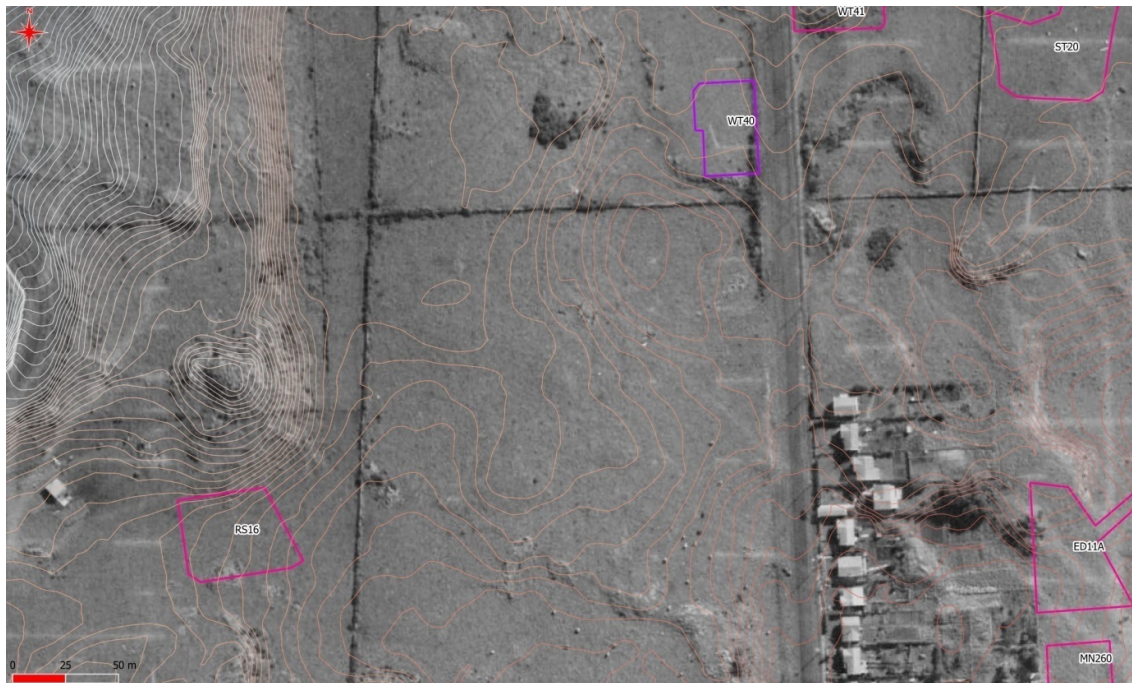


Figure 16: Area of the military camp as recorded in CHI. The small houses are according to the historic maps on a subdivision that is later than 1906 and were unlikely there in 1902.



Figure 17: Camp (Sir George Grey Special Collections, Auckland Libraries, AWNS-19020213-1-1)

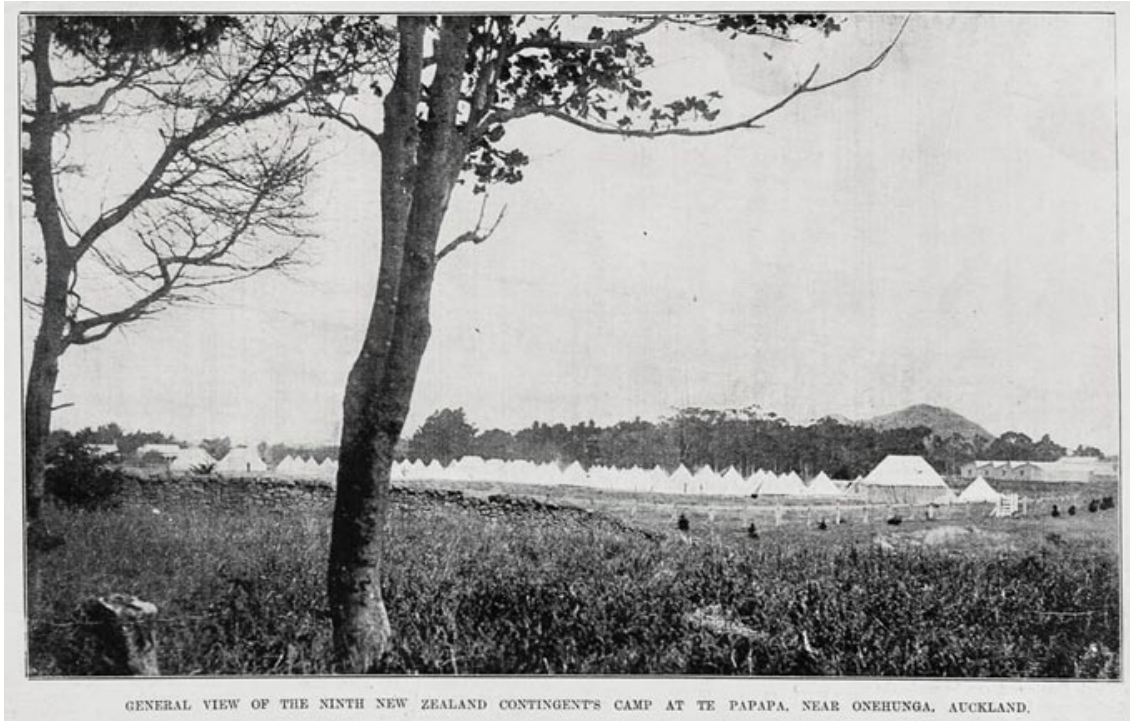


Figure 18: Camp, Mt Smart in background? (Sir George Grey Special Collections, Auckland Libraries, AWNS-19020213-1-2).

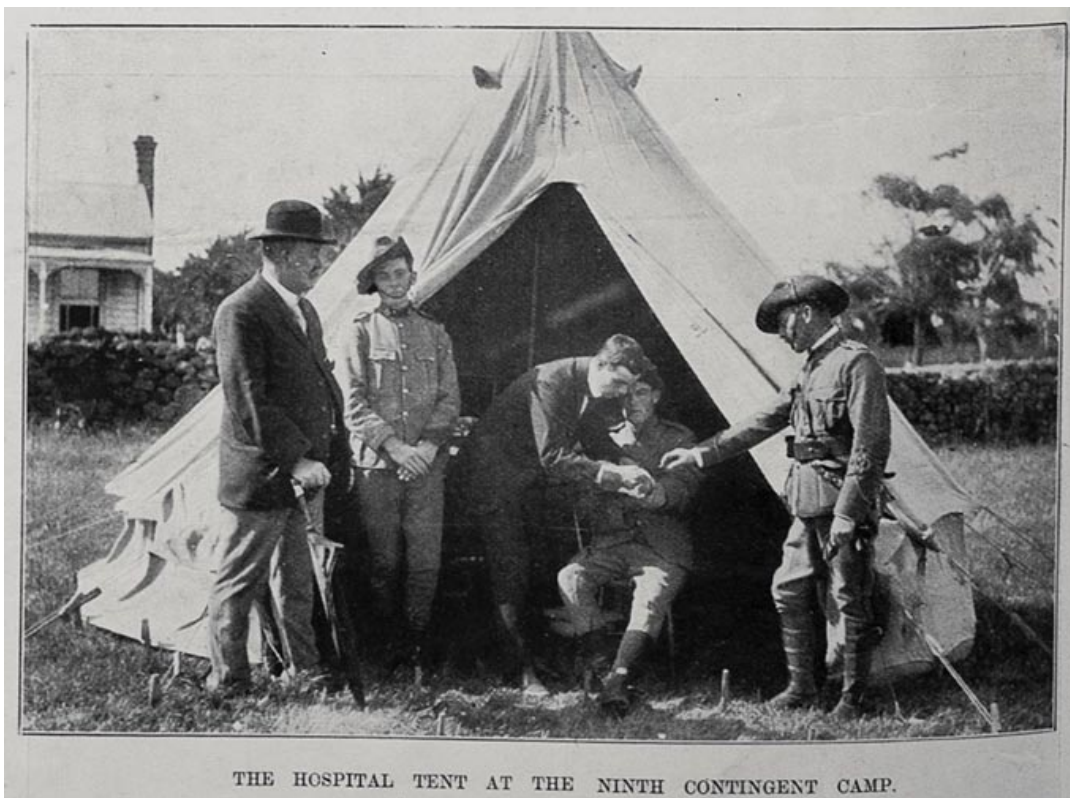


Figure 19: 19th century cottages and dry stone wall close by (Sir George Grey Special Collections, Auckland Libraries, AWNS-19020220-4-6).

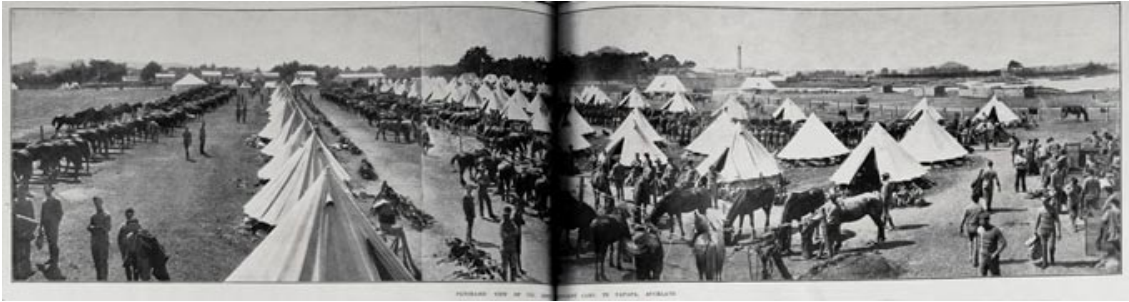


Figure 20: Camp, note chimney stack in the background (Sir George Grey Special Collections, Auckland Libraries, AWNS-19020320-6-1)



Figure 21: Camp with cottages and stone wall in the background (Sir George Grey Special Collections, Auckland Libraries, NZG-19020222-359-2).



Figure 22: Camp, "Washing the dishes" (Sir George Grey Special Collections, Auckland Libraries, NZG-19020301-404-2).

Table 5 Details of previously recorded heritage and archaeological sites in the vicinity of Oranga.

NZAA Site #	CHI #	Site Type/Name	Potential effects	Description
R11/391	5832	Shell midden	none	Shell midden recorded in 1975 and not relocated since.
-	21955	Military camp	Disturbance of sub-surface remains	Ninth contingent camp for the Boer War (1902); location not secure.

6.6. Previous archaeological surveys

The affected area has not been systematic surveyed previously.

6.7. Previous archaeological work within the area affected

There has no previous archaeological work been undertaken within the affected area.

6.8. Previous archaeological investigations in the surrounding area

The only archaeological investigation in the surrounding area was a damage report of a shell midden site to the south of the precinct and detailed descriptions of the two old Te Papapa railway stations. No archaeological features or material has been observed during those site visits for the stations and the context of the site visits is unknown.

Table 6 Previous archaeological investigations in the surrounding area

NZAA Site #	Location	HNZ Authority	Description	Reference
R11/3108	29 Heretaunga Ave, Ta Papapa	Damage report	Shell midden and toki.	NZAA Site Record.
R11/2741 & 2912	Two locations for the historic Te Papapa railway station.	-	Detailed historic description of older and newer Te Papapa railway station.	NZAA Site Records.

7. Results of Site Survey and Research

All superlots of Stage 1 and 2 were investigated with at least one spade sized test pit, approximately 20 in total. The area of the later stages was tested where gaps in the coverage were. About 30 test pits were dug. The aim of the test pits was to see differences in the soil layers across different landscape features. Any differences are likely to indicate human intervention with the natural soil formation processes.

Over the entire landscape significant differences in the depth, layer sequence and colour of the topsoil could be observed. The subsoil is in all areas very similar: a hard, clotty orange brown clayey loam from volcanic ash.

The attached three examples are typical for the soil layers encountered.

TP 1 shows three layered deep topsoil whereby the modern topsoil is slightly different to the layer below, which is darker and has flecks of charcoal in it. This indicates made planting soils in this area.

TP 2 shows dark brown topsoil with a gradual interface to the subsoil. This indicates an undisturbed topsoil / subsoil sequence, which would be typical for areas that have been left in bush during pre Contact times and have not been ploughed during European land use.

TP 3 shows again very deep topsoil mixed with charcoal and the occasional small piece of shell. This again indicates modified soils for the purpose of planting crops.

It is not uncommon in the South Auckland area to find fragmented shell mixed into planting soil (Puketutu, East Tamaki). As described previously, the area between Onehunga and Maungakiekie were well known for their fertile gardens (Murdoch 2013 ; Paterson 2008).

Using the results from all test pits and the still existing landscape features a model of the Oranga area has been drawn up showing a band of bush separating two areas of cultivations.

A third area might have been used for cultivations. This is today mainly the playing fields and the landscape seems to indicate well suited flat areas, nonetheless as no superlots are located there, we don't have any ground data to support this interpretation. West and south of the playing fields no dark or mixed topsoil was encountered and it seems that the originally broken up landscape was more modified than any other area and that it might have been covered in bush too or at least not used for mixed planting soils.

Some of the areas of the re-development, like OR63, are too disturbed to be included into this model. These areas however are unlikely to contain archaeological features due to the modern disturbances.



Figure 23: TP 1 on the left. Possible modified soil layer between modern topsoil and natural subsoil. TP 2 on the right. Unmodified topsoil / subsoil sequence.



Figure 24: TP 3 showing a deep layer between modern topsoil and natural subsoil.

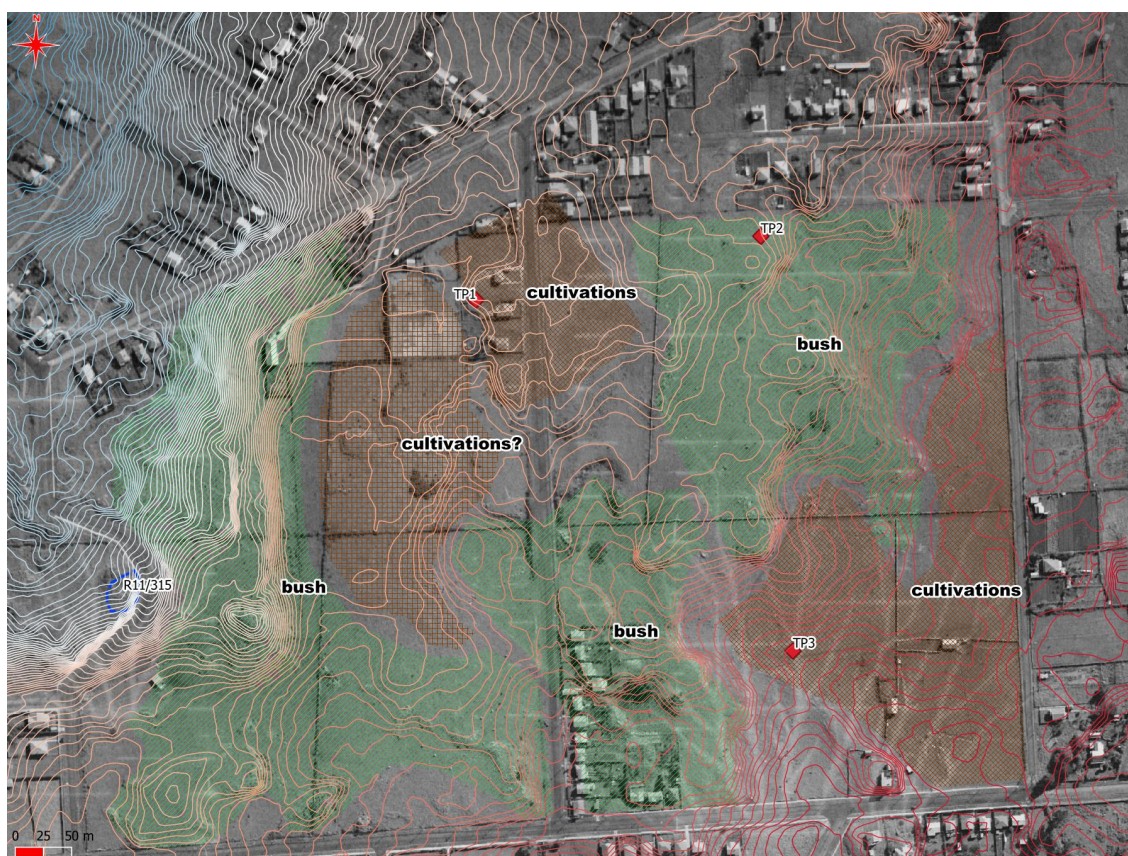


Figure 25: Interpretation model of the pre Contact landuse.

8. Discussion

No archaeological site has been recorded within the area covered by the superlots in the Oranga precinct. The closest is a small shell midden.

A reported historic site, a military camp of 1902, is recorded within the area, but there are doubts of the accuracy of the location. No ground or sub surface features were observed previously or during the current survey to support the recorded location.

The comparison of the 1940 to the 1955 aerials show that the earthworks were mainly constricted to the roads, service trenches and some soak pits for storm water. Despite the colourful descriptions of the works in the papers at the time, war restrictions and shortage of labour seemed to have had an impact and earthworks were limited to the bare essentials. This means that any archaeological sub surface features that survived European farming could still be in place in the back yards and under the houses. The test pits confirm that many places were not touched by the 1940s earthworks (see Figure 26).

The test pits done on the superlots indicate substantial differences in the topsoil / subsoil sequence. It is considered that those differences indicate a pre Contact landscape of a patchwork of native bush and cultivations. This is consistent with the oral traditions.

A general and coarse model of this patchwork showing a band of bush on the high ground separating two areas of cultivations. A third area of cultivations is suggested on the basis of the flat landscape in the area which is now mainly occupied by the playing fields in a reserve. West and south of it are extensive lava flows. Outside the reserve it seems likely that the landscape was flattened to allow for the original houses to be built. No dark topsoil or mixed topsoil would indicate that the area was originally covered in bush.

In the superlots WT60, WT50, RC147, RC159, GM19 and ED18 the testpits show deep soil layers with mixed in charcoal and the very occasional small piece of shell. Within these superlots at least we have reasonable grounds to suspect that Maori planting soil is still present. Maori horticulture falls within the definition of an archaeological site in the HNZPT Act 2014, as it is physical evidence of human activity pre 1900 that can be observed using archaeological methods like profiling. And it can contribute to our knowledge of the pre Contact history of the Oranga area.

The risk of encountering any archaeological remains outside the horticultural areas of the model is quite low. Within the horticultural areas there is a reasonable probability to find still intact planting soil layers, fencelines, drains, possibly even shelter structures, fireplaces, drying fire platforms and small storage pits. If any of these additional structures is observed it is more likely to achieve a useful interpretation in the two larger areas rather than the one or two properties 'superlots'. For example one or two 'random' postholes in a single property could add up to a post hole row of a fence line between garden beds in the larger superlots of RC147 and ED18/GM19, which are two superlots very close together. It seems therefore expedient to focus any efforts within these two areas (RC147 and ED18/GM19). See Figure 24.

It is an opportunity to develop the presented coarse model into a much finer model answering questions about size and layout of individual fields, fence lines and or pathways between them and small scale habitation sites within the gardens with a few whare and hangi.

To mitigate this risk it is suggested to undertake a program of archaeological monitoring during the demolition and enabling earthworks phases. The current plan for earthworks starts with the demolition or removal of the existing houses, followed by excavating some of the slightly contaminated soil under and around the houses and sheds. The remaining topsoil will be removed. After this each superlot is leveled or leveled in steps in preparation for the final plans and detailed earthworks if necessary.

After the decontamination most superlots will have the footprint of the houses removed to a depth of around 300 mm with at least three profiles per house. This will allow observation of the soil layers along longer profiles without any additional earthworks. This would be most informative within the superlots as marked up for monitoring or systematic monitoring in Figure 27.

The next phase of enabling earthworks of leveling the sections and removing more topsoil could be utilized with little extra effort from the earthmoving crews to create during this process temporary profiles roughly every 10 or so metres in the two areas of RC147 and ED18/GM19 (systematic monitoring).

Documentation of these soil profiles using digital photography can be done 'on the fly'. Any archaeological features other than planting layers like fire places or post holes can be recorded during this time too and if surveying is done using a small low flying drone and photogrammetry, it is a rapid exercise.

This methodology will record any interesting details of a Maori gardening system fast and efficiently.

An authority from HNZPT will be required to be able to observe, excavate and document any archaeological features including planting soil layers.

And it seems to extend this same authority over the low risk areas too as a precautionary measure is a sensible step as part of the risk management. Otherwise those areas will require an Accidental Discovery Protocol and if anything is discovered an additional authority will have to be applied for with a delay of the enabling earthworks by 2 to 3 months.

The risk of any delays during the enabling earthworks and construction phases is largely minimized, though not completely eliminated, using the recommended methodology. Nonetheless any delays will be hours or days, not months.



Figure 26: 1940 aerial - before the subdivision.



Figure 27: 1955 aerial - after the subdivision.

9. Constraints and Limitations

The interpretation of the pre Contact Maori landscape is based on small intrusive test pits only.

This survey and report do not necessarily include the location of *wahi tapu* and/or sites of cultural or spiritual significance to the local Māori community who may need to be consulted for any information or concerns they may have regarding the proposed works.

10. Archaeological Values

10.1. Assessment Criteria

“Archaeological values relate to the potential of a place to provide evidence of the history of New Zealand. This potential is framed within the existing body of archaeological knowledge, and current research questions and hypotheses about New Zealand’s past. An understanding of the overall archaeological resource is therefore required” (NZHPT 2006).

The following value assessment is based on Gumbley (1995), Walton (2002).

The assessment criteria are split into two sections: Main Archaeological values and Additional values:

The first archaeological values look at an *intra (within the) site context*.

- **Condition:**
How complete is the site? Are parts of it already damaged or destroyed?
Condition varies from undisturbed to destroyed and every variation in between. It is also possible that the condition of various parts of the site varies.
- **Rarity/Uniqueness:**
Rarity can be described in a local, regional and national context. Rarity can be rare as a site, or rarely examined or today a rare occurrence in the records.
- **Information Potential:**
How diverse are the features to be expected during an archaeological excavation on the site?
How complete is the set of features for the type of site?
Can the site inform about a specific period or specific function?

The second set of archaeological values are *inter site (between sites) context* criteria:

- **Archaeological landscape / contextual value:**
What is the context of the site within the surrounding archaeological sites?
The question here is the part the site plays within the surrounding known archaeological sites. A site might sit amongst similar surrounding sites without any specific features. Or a site might occupy a central position within the surrounding sites. Though a site can be part of a complete or near complete landscape, whereby the value of each individual site is governed by the value of the completeness of the archaeological landscape.
- **Amenity value:**
What is the context of the site within the physical landscape?
This question is linked to the one above, but focuses onto the position of the site in the landscape. Is it a dominant site with many features still visible or is the position in the landscape ephemeral with little or no features visible? This question is also concerned with the amenity value of a site today and its potential for onsite education.
- **Cultural Association:**
What is the context of the site within known historic events or to people?

This is the question of known cultural association either by tangata whenua or other descendant groups. This question is also concerned with possible commemorative values of the site.

Additional values can include (NZ Historic Places Trust (NZHPT) 2004):

- 1 Architectural
- 2 Historic
- 3 Scientific
- 4 Technological
- 5 Aesthetic/Visual impact
- 6 Cultural

The last value, cultural, acknowledges if there is an impact onto Māori cultural values. This assessment will not evaluate these, but rather state their relevance in relation to the other values.

In addition, the Auckland Unitary Plan (Part 1, Chapter B: 5.2.2) outlines a place as having historic heritage value if it has one or more of the following values:

Identify and evaluate a place with historic heritage value considering the following factors:

- (a) historical: the place reflects important or representative aspects of national, regional or local history, or is associated with an important event, person, group of people, or with an idea or early period of settlement within New Zealand, the region or locality;
- (b) social: the place has a strong or special association with, or is held in high esteem by, a particular community or cultural group for its symbolic, spiritual, commemorative, traditional or other cultural value;
- (c) Mana Whenua: the place has a strong or special association with, or is held in high esteem by, Mana Whenua for its symbolic, spiritual, commemorative, traditional or other cultural value;
- (d) knowledge: the place has potential to provide knowledge through archaeological or other scientific or scholarly study, or to contribute to an understanding of the cultural or natural history of New Zealand, the region, or locality;
- (e) technology: the place demonstrates technical accomplishment, innovation or achievement in its structure, construction, components or use of materials;
- (f) physical attributes: the place is a notable or representative example of:

- (i) a type, design or style;
- (ii) a method of construction, craftsmanship or use of materials; or
- (iii) the work of a notable architect, designer, engineer or builder;
- (g) aesthetic: the place is notable or distinctive for its aesthetic, visual, or landmark qualities;
- (h) context: the place contributes to or is associated with a wider historical or cultural context, streetscape, townscape, landscape or setting.

10.2. Archaeological Values Assessment

No sites are recorded in the area. Test pits indicate the potential of pre Contact or early Contact Maori gardens / horticultural system.

For the assessment this potential is considered and assessed.

Table 7: Summary of archaeological values.

Sites	Value	Assessment
Unrecorded horticultural sites	Condition	The 1940s and 1950s development left the subsurface under the houses and in the backyards largely undisturbed. Within these specific areas any archaeological sub surface features could be still in good condition. Nonetheless within the roads and service trenching it will be most likely completely destroyed. Thus condition is likely very variable.
	Rarity/ Uniqueness	Horticultural system will have at some time or another the entire area of Tamaki Makaurau, nonetheless they have been rarely recorded.
	Contextual Value	The context of living and working within horticultural system is well known from historic sources and oral traditions but has rarely been investigated.
	Information Potential	The information potential to tell us more about the daily life ways of Maori is reasonable good.
	Amenity Value	Visibility to the general public is practically nonexistent. Any outreach would need interpretative panels or the like.
	Cultural Associations	The connection to Waihoua iwi and later groups is well known from oral traditions.

10.3. Additional values assessment

Table 8: Summary of additional values.

Sites	Value	Assessment
Unrecorded horticultural sites	Architectural	n/a.
	Historic	n/a.
	Scientific	n/a.
	Technological	The relationship between 'natural' and 'cultural' environment within Maori society could add knowledge to our modern approach to horticulture.
	Aesthetic/Visual impact	n/a.
	Cultural	Part of Kiwi Tamaki's mother's gardens.

The possibility of a burial site is excluded from the value assessment as separate procedures would come into effect on the event of discovering a burial.

The Auckland Unitary Plan requires looking at the proposed development within the wider landscape. All archaeological sites are recorded in the Cultural Heritage Inventory as well as the barn to the northwest and a wreck within the bay. Neither the barn nor the wreck would be impacted by excavation of burials or armouring the foreshore.

Table 9: Historic Heritage values assessment relating to the Auckland Unitary Plan (ChB:5.2.2)

Site	Value	Assessment
Unrecorded horticultural sites	Historical: the place reflects important or representative aspects of national, regional or local history, or is associated with an important event, person, group of people or idea or early period of settlement within New Zealand, the region or locality	The extensive horticultural systems were a draw card for Tamaki Makaurau for centuries and attracted people from many places of the North Island. At the end of the sequence it secured Maori economic power in the years before the Land Wars.

	Social: the place has a strong or special association with, or is held in high esteem by, a particular community or cultural group for its symbolic, spiritual, commemorative, traditional or other cultural value	No particular community or cultural group has a specific relationship to the potential gardens to best of the knowledge of the authors.
	Mana Whenua: the place has a strong or special association with, or is held in high esteem by, Mana Whenua for its symbolic, spiritual, commemorative, traditional or other cultural value	No special relationship is known to the authors of this report.
	Knowledge: the place has potential to provide knowledge through scientific or scholarly study or to contribute to an understanding of the cultural or natural history of New Zealand, the region, or locality	The information potential to tell us more about the daily life ways of Maori is reasonable good.
	Technology: the place demonstrates technical accomplishment, innovation or achievement in its structure, construction, components or use of materials	The relationship between 'natural' and 'cultural' environment within Maori society could add knowledge to our modern approach to horticulture.
	Physical Attributes: the place is a notable or representative example of a type, design or style, method of construction, craftsmanship or use of materials or the work of a notable architect, designer, engineer or builder.	Any surviving gardens will be representative of the gardens once covering many areas between the volcanic cones on Tamaki Makaurau.
	Aesthetic: the place is notable or distinctive for its aesthetic, visual, or landmark qualities	n/a
	Context: The place contributes to or is associated with a wider historical or cultural context, streetscape, townscape, landscape or setting	Part of well known pre Contact gardens between Maungakiekie and Onehunga.

11. Assessment of Effects

The assessment of effects follows the basic guidelines for preparing assessment of environmental effects that includes a discussion on the nature of environmental effects (MfE 1999). It should be remembered that an archaeological excavation of a site mitigates only the loss of archaeological information but not the loss of the site and its contextual, cultural and educational values (NZHPT 2006).

Effects must be considered,

of how much of the site will be affected

if the future risk of damage is increased

whether a design change may avoid adverse effects on the site(s)

The actual effects are unknown at this stage as no definitive features have been observed during the survey. Any investigation is a precautionary measure to minimize the risk of delays to the development.

The risk of encountering archaeological features is quite variable between the various superlots of Stage 1 and 2. Some quite disturbed areas have a minimal risk, though it cannot be completely excluded.

Many superlots have a small risk of encountering archaeological sub surface features and a few of them have a reasonable risk of Maori horticultural features still in situ. See the list in the recommendations for details.

The majority of the super lots in the later stages seem to be within the low risk category. No detailed list has been drawn up as the results of the first two stages will provide more details to be used for the later stages.

The houses will be demolished on site rather than removed. This means that there is little impact onto the ground other than the house piles being drawn from their postholes.

The impact through earthworks is three fold:

- The “halo” decontamination under and around houses and sheds has an excavation depth to a maximum of 300 mm. This is the depth any Maori garden soil layer would start and therefore there is little impact through the decontamination.
- The remainder of the topsoil will be removed. The test pits have shown that the depth of the topsoil is quite variable through the Oranga precinct. Depths range from 100mm to 400mm deep in Stage 1 and 100mm to 500mm in Stage 2. At this stage existing services will be removed requiring shallow trenching and backfilling. Small localised undercutting of soft spots and or uncertified fill areas may occur after the topsoil stripping and will be reinstated with either site clays or imported aggregates. Any remains of Maori planting soils will be likely removed or at least severely damaged at this stage.
- The final levelling comprises cut and fill of up to 1000 mm but mostly much less. No detailed plans have been drawn up for this yet. Each super lot that is not naturally level will be

stepped into several terraces as required. The cut for each terrace could damage or destroy any archaeological features and the fill could modify any site without destroying it. But the full depth of the cut of 1000mm is only necessary on the superlots with steeper slopes. These platforms will need to be established by the builders and will likely include fill using imported clays and or aggregates. Some future house floor levels in some areas will need to be 500mm above the 100yr flood plain once defined in the SMP. It is not envisaged much cut after topsoil stripping due to underlying rock; it will be more building up of levels than lowering of existing levels.

We are currently identifying and confirming with Watercare some potential wastewater line replacements and repairs. They may wish to divert a couple of public wastewater lines within Stages 1 and 2 to a more suitable location. Thus there will be replacements or new lines to a depth of approximately 1500mm. Stormwater will include new Soakholes using a 1050mm diameter man hole to a depth of approx. 1500mm and the usual shallow service trenching within each new house site.

11.1. Site Management & Mitigation

Possible methods to protect sites, and avoid, minimize or mitigate adverse effects will be discussed.

The following mitigation process for the risk of uncovering unrecorded archaeological features is proposed:

- Archaeological induction of all contractors.
- Low and minimal risk areas will be covered by **spot monitoring** of the enabling earthworks.
- Some of the moderate risk areas will be **monitored** after the decontamination during the enabling earthworks.
- In three superlots (RC147 and ED18/GM19) **systematic monitoring** will be undertaken by slightly modifying the top soil removal methodology from random to 10 metre sections. This will create soil profiles roughly every 10 metres which can be observed for archaeological features. Soil profiles are recorded using digital photography. Surveying using low flying drone (about 3 – 5 m height only).
- Sample, record, analyse and date any archaeological features using standard archaeological methods.
- If substantial remains are found, interpret the results and display them using modern dissemination methods in a publicly accessible space along the final constructed development. It could also include interpretation resources for local schools (“Sense of place”, “Place-making”).

To allow for this suggested mitigation process a general Authority to Modify unrecorded archaeological sites is to be sought from HNZPT under the Heritage New Zealand Pouhere Taonga Act 2014.

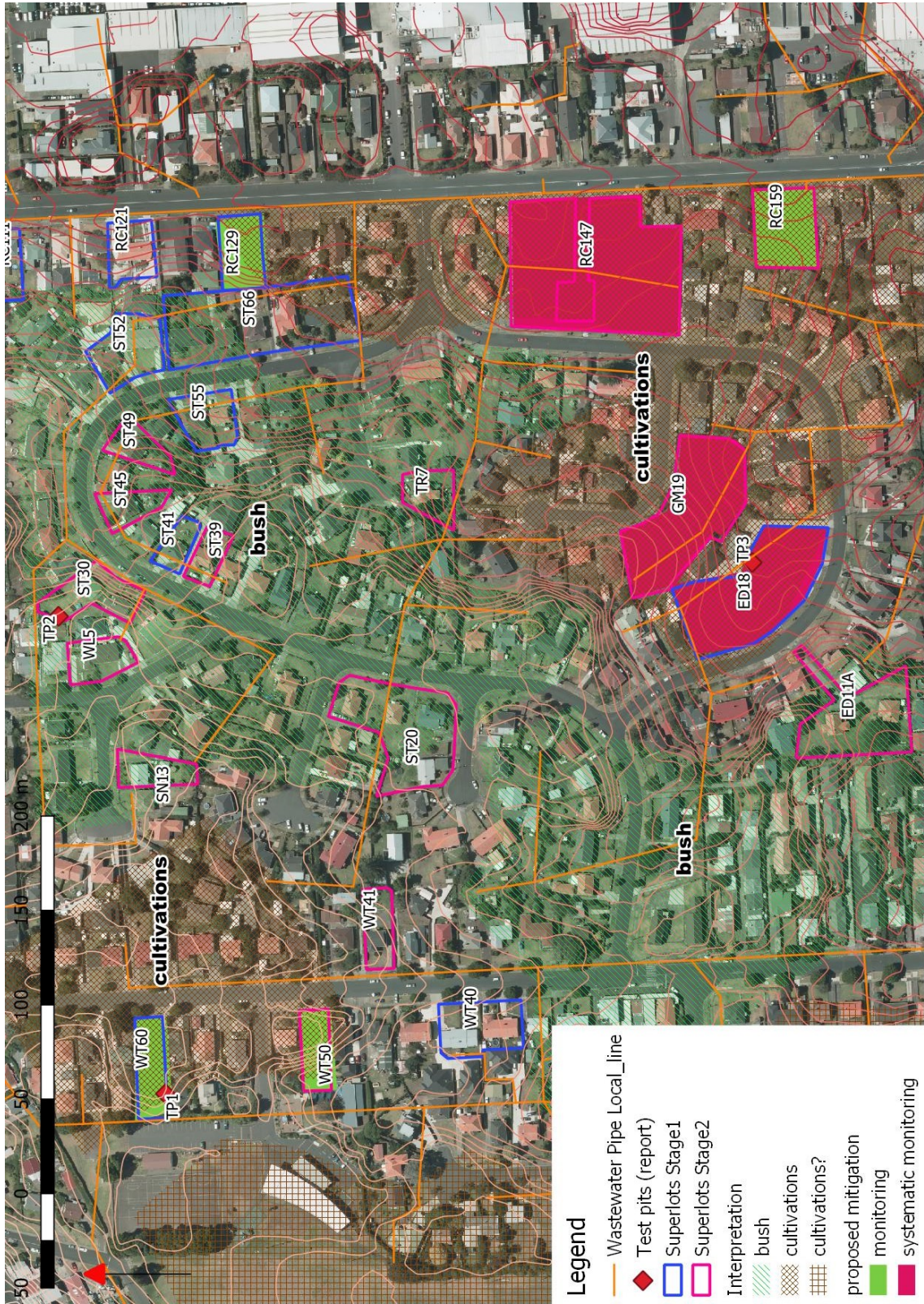
Table 10: Risk management of Stage 1.

Superlots	Risk	Action	Systematic Monitoring
OR63	minimal	Induction	
ST55	low	Induction/ sporadic monitoring	
ST52	low	Induction/ sporadic monitoring	
WT40	low	Induction/ sporadic monitoring	
WT60	moderate	Induction/ monitoring	
RC111	low	Induction/ sporadic monitoring	
RC121	moderate	Induction/ sporadic monitoring	
RC129	moderate	Induction/ monitoring	
ST66	Low / moderate	Induction/ sporadic monitoring/	
ED18	moderate	Induction/ monitoring/ profiling	X
ST41	low	Induction/ sporadic monitoring	

Table 11 Risk management of Stage 2.

Superlots	Risk	Action	Systematic monitoring
RS16	low	Induction/ sporadic monitoring	
WT50	moderate	Induction/ monitoring	
WT41	moderate	Induction/ sporadic monitoring	
WL5	low	Induction/ sporadic monitoring	
ST30	low	Induction/ sporadic monitoring	
ST45	low	Induction/ sporadic monitoring	
SN13	low	Induction/ sporadic monitoring	
ST20	low	Induction/ sporadic monitoring	
RC159	moderate	Induction/ monitoring	
MN260	low	Induction/ sporadic monitoring	
ED11a	low	Induction/ sporadic monitoring	
GM19	moderate	Induction/ monitoring/ profiling	X
ST49	low	Induction/ sporadic monitoring	
ST39	low	Induction/ sporadic monitoring	
RC149	moderate	Induction/ monitoring/ profiling	X
TR7	low	Induction/ sporadic monitoring	

Risk management of later stages according to the results of the first two stages.



12. Conclusions & Recommendations

No archaeological features have been recorded during the survey or were previously recorded within the precinct. One historic feature is recorded within the precinct but its location is doubtful.

There is a variable risk from minimal to reasonable throughout the superlots of Stage 1 and 2 to encounter Maori gardening features.

It is recommended that an application is made for an Authority to Modify unrecorded Archaeological Sites with Heritage NZ to mitigate this risk for all superlots in both stages.

It is recommended to undertake the following steps according to the variable risk in each superlot (see tables above):

1. Induct all subcontractors before the removal of the houses and the enabling earthworks
2. Spot monitoring on the low risk superlots after decontamination during top soil stripping (enabling earthworks)
3. Monitoring of demolition and top soil stripping.
4. Systematic monitoring during top soil stripping on three super lots (RC147 and ED18/GM19).

13. Acknowledgments

The author would like to thank iwi for advice, Nigel Denny for the active help during the field work as well as the project manager and HLC for detailed discussions of the project.

14. Appendix

- Development drawings

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