Excavations at the Ara Metua (*Ara Nui o Toi*) and Arai te Tonga, Rarotonga

Preliminary Report June 2023

Mathew Campbell, Jane Downes, Brendan Kneebone, Colin Richards, Deborah Russell & Kate Welham

List of Contents:

List of Figures:

Acknowledgements

We would particularly like to thank Tenga Mana and William Framhein not only for their great support, practical assistance and enthusiasm for our research, but also their friendship. Permission to undertake archaeological excavation at Arai te Tonga was kindly granted by the makea nd landowning families, Nga Pu Tapere o Tupapa Maraerenga, Te Aronga Mana o Arai Te Tonga ete au Atu Enua ote Koutu Arai Te Tonga. Numerous people generously shared their invaluable local knowledge and of these we would very much like to thank Tekeu Framhein. We are also very grateful for the practical support of Infrastructure Cook Islands, particularly Tenga Mana and Paul Maoate, and Ian Karika.

Support has also been given by the Cook Islands Government Ministry of Culture, Cook Islands Museum, and we thank Justina Nicholas (National Cook Islands Museum). We have also been helped by Jean Mason (Cook Islands Museum). Grateful thanks also go to Thomas Wynne. Finally, many Cook Islanders visited the excavations and offered lots of information (and sustenance!) and we warmly thank them for their enthusiastic support. This research was undertaken under Cook Islands Research Permit 21/17.

1. Introduction: the *Ara Metua* or *Ara Nui o Toi* at Arai te Tonga

Rarotonga is the largest of the Southern Cook Islands, which are located within central eastern Polynesia. The date of its initial colonization is far from clear. From oral accounts and genealogical sequences a date of around 1250 AD has been postulated (e.g. Campbell 2002, 148) for the earliest settlement by Polynesians arriving from Tahiti and Samoa. More recently, the settlement of the Cook Islands has been suggested to have been after Polynesian expansion into the 'core' areas of Easter Polynesia (e.g. Society Islands), which seems to occur c. 900 AD. Walter (1998) postulated a colonisation phase between c. 950 – 1250 AD. However, given the limited archaeological research conducted on Rarotonga, especially a lack of a clear radiocarbon chronology, the dates for initial colonization and subsequent social developments are unclear.

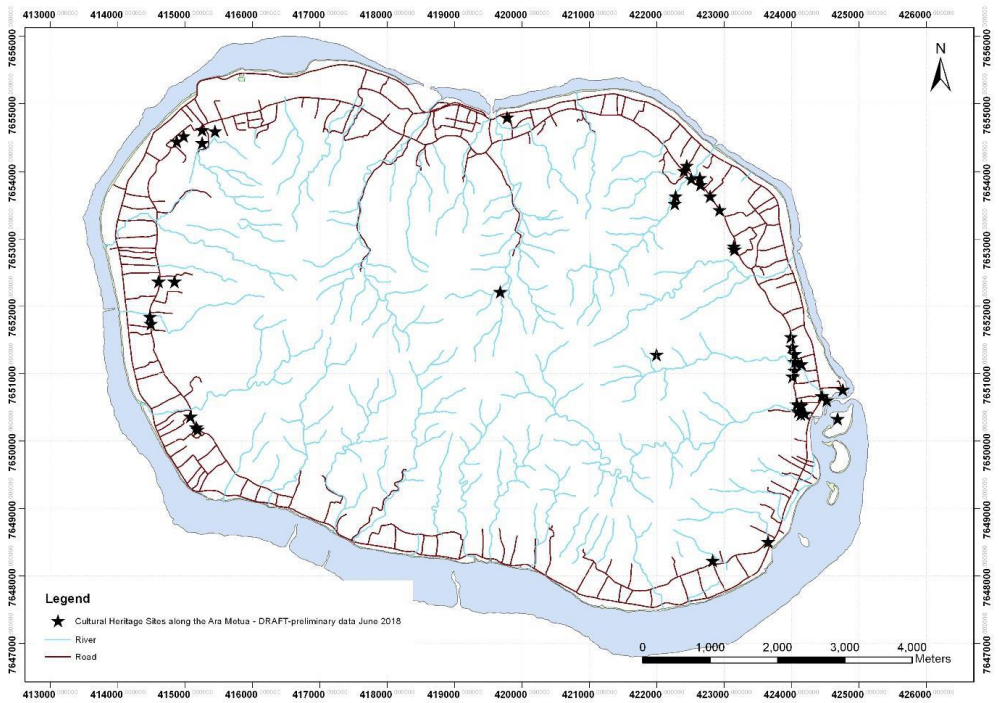

Figure 1. The Ara Metua encircles Rarotonga.

Although characterised as a 'typical high island' (Campbell 2006, 103), the topography of Rarotonga is rather unusual in having a continuous low coastal belt encircling central highlands. It is around this coastal belt that one of the largest 'monuments' in Polynesia was constructed: the Ara Metua (parent road) or great road of Toi (*Ara nui o Toi*) (Fig. 1). Pre-

contact encircling roads and paths occur elsewhere in Eastern Polynesian, most famously, the Ala Loa is known to have run around the coastline of the Big Island, Hawai'i, and its ritual circuit was a feature of the Makahiki ceremony (Mills 2002). Kathleen Routledge (1919) observed the remnants of a prehistoric circuit path on Rapa Nui (Easter Island), although today minimal traces remain.

However, what served to make the Ara Metua on Rarotonga outstanding among Polynesian roads was the reputed nature and scale of construction. For instance, in the *Material Culture of the Cook Islands* Peter Buck observes that 'the subject of stone-work cannot be dismissed without reference to the famous road in Rarotonga known as Te Ara-nui-a-Toi, The Great Road of Toi. This road runs completely around the island and stands further inland than the present Government road' (1927, 211), referred to now as Ara Tapu.

Figure 2. Photograph of the Ara Metua at 'Arerangi in 1926 (from Buck 1927).

An illustration of a section of the road near the *marae* of Arai te Tonga provides an indication of how the Ara Metua appeared early in the twentieth century (Fig. 2). Here the southern curb of the road creates a step, behind which a narrower paved road leads back towards 'the site of a house known as *H 'Arerangi*' (ibid, 212). This location is known to be the paepae of 'Arerangi which according to Percy Smith once contained a house 'where the *ariki* or high

chief (some member of the Makea family) of the island usually lived' (1903, 219). However, as Buck (1927, 212) points out, Smith in a published sketch of the 'Arerangi mistakenly described the stepped curb of the Ara Metua where it met the 'Arerangi entrance to be a series of stone seats. This paepae was uncovered by Duff and Duff between 1962-4, relocated in 2018 and excavated in 2019 (The frontage is of particular interest in that as shown in the 1927 photograph (Fig. 2) and Duff (1974), the paepae runs directly back from the road (see Campbell *et al.* 2019).

At this point the Ara Metua is surfaced with crushed white coral overlying coral blocks and to each side is a kerb of small black basalt boulders (Fig. 3). A line of thin vertical coral uprights creates a threshold between the road and paepae. 'Arerangi provides an insight into both the architecture and composition of the Ara Metua in the late nineteenth and early twentieth centuries, and the manner in which adjacent sites contemporary with the paepae were defined, especially the deployment of upright coral slabs to provide a threshold or division.

Figure 3. Aerial view of the Ara Metua at 'Arerangi note the *in-situ* basalt kerbing to both sides, and the line of coral uprights creating a threshold to the paepae.

2. The Ara Metua at Arai te Tonga: investigations 2018

Today, the position of the Ara Metua as it passes in front (north) of Arai te Tonga is reasonably well defined by a noticeable convex camber and the presence of a row of stone seats to the north and a long line of basalt boulders [203] fronting the *marae* to the south. In 2018 a trench was excavated to the west of the *marae* which not only provided evidence for the sequence of road construction, but also information regarding the relationship between the road and the *marae* (which is actually a *Koutou*, court or meeting place), and the different phases and chronology of the latter. In 1974 Parker wrote that:

> It is clear however that the road [Ara Metua] in its final form is associated with the final reconstructions of the major *marae*, none of which can be older than the immediate pre-contact century…….it may well be that the earliest reconstructions of the *marae* can be matched with earlier versions of the Ara Metua, but this could only be determined by extensive critical excavation, sectioning the road and linking the section to the phases of marae construction (1974, 68).

While the 2018 excavations (Downes *et al.* 2018) did not extend into the Arai te Tonga *koutou*, the trench did include the outer boundary stones on its western side (Fig. 12). These were clearly set on a layer of *kiri-kiri* hat ran downslope to merge with the lower surface of the Ara Metua. Hence, the basalt frontage at this point was either contemporary or slightly later than the initial construction of the Ara Metua.

Figure 4. The basalt boundary [005] stones of the western section of Arai te Tonga were set on a layer of *kiri-kiri* [006] at a high level above and later than the first Ara Metua.

From this stratigraphic relationship it is possible to suggest that this phase of *koutou* construction relates to a date a little after the earliest Ara Metua was built. The basalt blocks that form the outer boundary of Arai te Tonga revealed in the excavated area continue eastwards across the front of the *koutou* (Fig. 6.). However, in the eastern sector of the monument the basalt blocks are situated directly in front of a line of vertically set coral blocks (Fig. 5). From this observation it appeared that the coral uprights represent a facing for an elevated platform which may pre-date the addition of the basalt blocks. Under these circumstances, the eastern section of Arai te Tonga would be older that the Ara Metua. To pursue this question it was decided to excavate a trench at the front of the *koutou* in order to determine the exact relationship between these structural elements.

Figure 5. The basalt boundary stones at the east sector of Arai te Tonga lying in front of what appears to be earlier vertical coral facing slabs.

Figure 6. The eastern sector of Arai te Tonga from the north.

3. The Ara Metua at Arai te Tonga; excavations 2023

Originally it was planned to return to Rarotonga in 2020 to undertake this phase of fieldwork but this had to be abandoned due to the covid pandemic. A new date was set to examine the relationship between the Ara Metua and Arai te Tonga in June 2023, when an excavation trench measuring 2.5m x 2.5m was positioned directly in front of Arai te Tonga which included the current front of the *marae* represented by a line of basalt blocks [203] and the southern section of the Ara Metua.

3.1 The road

On removal of the topsoil a convex surface of highly compacted basalt pebbles [201] was encountered which represented the final metalled surface of the Ara Metua which probably dates from the mid twentieth century when the road was widened for motorized transport. This ran in from the north of the trench to within c. 0.7m of the front of the *marae* where it

merged with a stony soil [202] representing a ‘roadside’ area. Directly below the metalled surface a spread of coral sand [208] was present which ran in from the northern baulk for c. 1.1m, where it butted up against coral blocks [209]. Beneath which was a thick layer of small compact coral blocks [219] which was the upper surface of the Ara Metua. The presence of the coral sand [208] can be interpreted as either a bedding for the upper basalt metalling (the eroded upper surface of the older coral Ara Metua- probably late 1800s), or an actual coral upper surface to the old road (Fig. 7). The latter interpretation is favoured due to the presence of larger coral blocks [209] present along the southern edge providing a kerb for the sand layer.

Figure 7. The coral layer [208] exposed in the northern area of the trench.

At the southern edge of the coral road surface, beyond the coral stones [209], was a discrete spread of loamy soil [207] running east-west. Upon removal this was found to partially cover the irregular edge of the coral road surface [219] where kerbing blocks (presumably black basalt) had been robbed out and the hollows filled with a loamy soil [220]. Together the upper coral sand and lower coral blocks (with robbed out black basalt kerbing) correspond to the later Ara Metua as seen at ‘Arerangi (Fig. 3).

Below the coral stones [219] a relatively thick layer (c. 12cms at northern baulk) of dark brown silty loam [246] ran down from the north and terminated at the coral blocks [209] (Fig. 8). Further south a layer of coral gravel [223] was revealed beneath [202], which seems to have been a laid coral surface running outwards (north) from the *marae*. This spread was present across the entire trench and represents the upper surface of the Ara Metua, and perhaps including an extended area directly in front of the *marae*.

Figure 8. West facing section of trench 3.

Beneath the upper coral layer [223] a lower spread of coral gravel [224] also ran the entire length of the trench, from the *marae* to the northern baulk (where it was identified as [253]). This is the primary surface of the Ara Metua and apart from being composed of larger more compact coral blocks in the northern area [523], where it acted as the road surface, it was undifferentiated apart from the stratigraphically distinct coral spreads [223/224] (Fig. 8). Significantly, at the base of the coral 'road' layer [253] patches of *kiri-kiri* were present but not in such quantity to be identified as a different layer as was present in the 2018 trench to the west.

Across the entire trench, beneath the spreads of coral gravel [223/4] and road surface [253] was a homogenous light-brown silty loam [247] which was observed in the test/sample cutting to be up to c. 0.22m in thickness. This deposit overlay a fairly similar layer of orange-brown silty loam [257] with a thickness of 0.15m, which in turn overlay a thick, c. 0.4m basal deposit of silty loam [258], below which was natural gravel [259].

Figure 9. The laid coral surface [223/4] and Ara Metua surface [253] from the south.

3.2 The *Marae*

Today, the front of Arai te Tonga is defined by a row of black basalt boulders. However, in 2018 it was noticed that behind this line the tops of coral uprights were visible in the grass (Fig. 5). The trench was positioned to investigate these coral uprights and determine both the sequence of construction of the front of the *marae*, and the relationship between any construction phases and the Ara Metua.

The removal of the topsoil [200] and underlying layer [202] in the southern area of the trench immediately revealed three parallel lines of stones at the front of the *marae*. The visible outer line of stones was not solely small basalt boulders but incorporated some coral blocks to the east, one of which [204] was exposed in the south-eastern baulk of the trench. This stone had actually slipped forwards at its base, indicating little external support for these slabs which represented the final facing of the *marae*. The thin pieces of coral that had been noticed showing through the ground surface on the *marae* were revealed to be two parallel lines of coral orthostats (Fig. 10).

It was clear that the final frontage of the *marae* as revealed in the excavation trench was composed of six basalt boulders [203], including a seventh large coral block [204] which had been set slightly further forward (and slumped) and partially ran into the east baulk. These had been placed on top of the lower spread of coral gravel [224]. The higher coral gravel [223] had then been laid, butting up against their front and sides fixing them in place. These were stratigraphically lower than expected as in the 2018 trench to the west, the line of basalt boulders was set slightly higher.

The first row of coral orthostats [206], was positioned c. 0.1m – 0.18m behind the outer basalt frontage [203]. These were clearly of an earlier date, in being set upright in a slot [252] cut into the lower silty loam layer [247]. The cut itself was difficult to distinguish but the fill of silty loam with coral pieces [261] was very clear. The presence of coral in the fill is significant, indicating the coral orthostats were erected at a time when *kiri-kiri* was present at the front of the *marae*; probably the lower coral surface [224]. The space between the front line of basalt [203] and the coral uprights [206] was completely filled with coral and basalt packing in a matrix of compact silty loam [205]. The line of coral orthostats [206] clearly represented an earlier facing to the *marae* platform that would have stood c. 0.35m high.

Behind this line of coral [206], stood another row of six vertical coral blocks [211] (Figs. 10 & 11). Behind which, centrally positioned within the trench, was a distinctive rounded basalt boulder [216]. Due to the confines of the excavation trench it was difficult to establish a

stratigraphic relationship between the first [206] and second [211] row of coral uprights, although the latter appeared to be set at a lower level (which would indicate each of the different rows represented a forward movement of the *marae* frontage through time). There was a similar fill of silty loam and fragments of coral and basalt between each row of uprights; fill [205] between the outer basalt blocks [203] and inner coral orthostats [204], and [210] between the two lines of coral uprights [206] and [211]. There may have been an even earlier coral frontage as in the southern baulk another coral orthostat [262] was visible. This is slightly curious and would benefit further excavation as it assumes the correct position (in being parallel to the other coral orthostatic rows) but butts up against the distinctive rounded basalt boulder [216]. If the coral orthostat [262] is part of a row, there would be four different fronts to Arai te Tonga as it expanded through time.

Additional evidence that each line had once successively faced the *marae* came from an examination of the coral upright [243] positioned directly in front of the rounded basalt boulder [216]. This block [243] formed part of the second row of coral orthostats [211] and had clearly been pushed outwards (possibly by the basalt boulder itself). Yet, the coral orthostat [235] positioned directly in front (part of the first row of coral uprights [206]) remained vertical with no indication of having been pushed forward through pressure from the slumped coral orthostat [243] to the rear (Fig. 11). From this arrangement it is clear that the innermost coral uprights had been standing with nothing in front to impede its forward movement.

Figure 10. Excavating the three lines of coral and basalt forming the frontage of Arai te Tonga. The two inner lines of coral orthostats outer - [206] and inner [211] can been seen clearly to the right as can the large round basalt stone [216] in the centre.

Figure 11. The coral upright [243] (beneath scale) directly in front of the rounded basalt stone [216] had been pushed forward, but the stone [236] in front appears unaffected indicting it to have been erected after stone [243] had been pushed outwards.

Forward (north) of the outer basalt facing blocks [206], in the west side of the trench, a large horizontally-set, flat-topped basalt boulder [231] projected from the western baulk. Clearly visible in section, this stone had either been partially set into the basal silty loam deposit [247] or laid directly upon its upper surface. Either way, it clearly pre-dated the final basalt frontage [203] being more likely associated with the coral facing [206], as both surfaces of primary coral gravel [223/4] butted up against it. Directly behind (south) the stone [231] a thinner basalt slab [252] stood in a vertical position (Fig. 12). However, this stone [252] did not stand particularly high, making this arrangement unlikely to be a stone seat. Instead, it may be the boulder named *maringi-toto* or 'blood spilling', because on this stone were laid

the heads of the human victims brought there to be sacrificed to the gods (Smith 1903, 219). This identification is discussed below.

Figure 12. The basalt arrangement to the right of the coral orthostats with horizontal stone [231] and upright [252] is almost certainly the boulder named *maringi-toto* or 'blood spilling', which Percy Smith reported as a stone where the heads of human victims were laid to be sacrificed to the gods (1903, 219).

4. Discussion: Arai te Tonga and the Ara Metua

The outer line of basalt boulders [203] fronting Arai te Tonga were described by Duff as being 'in an obviously recent re-laid version'. This description is certainly valid for the line of basalt boulders extending the frontage westwards that were uncovered in the 2018/2019 excavation trench (see Downes *et al.* 2018). On excavation, they were found to be sitting relatively high in a soil that had formed at the base of the topsoil, slightly higher than the level of the coral component of the Ara Metua. However, in the 2023 excavation trench the corresponding basalt stones facing the *marae* were found to be much more deeply bedded, being placed on the upper surface of the lower coral gravel [224], with the higher coral gravel

surface [223] lapping up and butting against their outer faces. This provides a stratigraphic relationship between the basalt out face of the *marae* with the coral gravel surfaces of the Ara Metua.

From these observations we can begin to gain a picture of Arai te Tonga as initially constructed and standing as a platform over c. 0.4m in height. Although lacking definitive evidence it is highly likely that this construction preceded the Ara Metua in its earlier form as a coral surfaced road. Nonetheless, it is equally as certain that a pathway would have passed the front of the marae. In being faced with a line of close-fitting highly decorated fan coral orthostats [211], the marae would have had a striking appearance (Fig. 13)

Figure 13. Decorative corals employed as orthostats to front the remodelled front of Arai te Tonga.

From this first construction we witness a sequence of remodelling of the *marae* frontage beginning with the erection of a second line of decorative coral orthostats [206] (Fig. 13). Judging from the stratigraphic relationships, it is the first line of coral orthostats [206] which

relates to the Ara Metua in its earlier form. This would indicate a date in the mid to late fifteenth century AD.

Apart from the front expansion of Arai te Tonga, two anomalous basalt stones were encountered which in the past had conflicting narratives. The first is the large round basalt boulder [216] which before excavation could be seen poking through the grass on the *marae* (Fig. 14). Initially, this was identified as the 'offering stone' on the basis of Duff's plan (1974, 29). This was also pointed out as the boulder named *maringi-toto* or 'blood spilling' stone. We suggest this identification is incorrect, and the actual *maringi-toto* is the large basalt slab [231] seen in the western section beyond the outer basalt and coral boundary (see Fig. 12).

Figure 14. The boulder [216] that was initially considered to be the 'offering stone' illustrated on Duff's plan (1974, 29), is flanked by coral orthostat [262] which may be part of a fourth line of coral facing slabs.

The identification of the large basalt block revealed in the western section as *Maringi-Toto* 'blood spilling' stone is particularly important, as according to Duff it was not only the sacrificial stone recorded by Percy Smith but was also known as *Puera* from *pu'era*: to open or disclose. Smith has this stone positioned further to the west in his plan of the site,

describing it as for ‘Potika-taua (or Te Aiki-taraare), which seat was called puera, meaning to open or disclose, because it was through this priest that Makea declared his decision on any matter before him’ (1902, 219). This stone is further commented on by Savage who describes how it is a location which could be stood on by the high priest, Potiki-Taua when making an ‘announcement or disclosure or delivering an ultimatum to the assembles arikis’ (2012, 275). Together this suggests a confusion between one or two different stones at the front of Arie te Tonga, which only further excavation can resolve. The nature and function of the large and prominent boulder [216] is also unknown, and further investigation is desirable. Together these elements provide a need for further investigations at the front of this important *marae*.

5. Conclusion

The 2023 investigations at Arai te Tonga were aimed at examining the frontage of the *marae*, particularly the role and status of the coral uprights observed behind the current basalt line currently defining its northern edge. It was also hoped to provide some evidence as to the appearance of Arai te Tonga as it was presented after initial construction. A further goal was to provide stratigraphic links between the face, or front of the *marae* and the Ara Metua which had been dated to c. AD1450-1500 through radiocarbon dates obtained from 2019 samples. In all these goals we were successful, and further samples for radiocarbon dates have been taken.

We can now, with some confidence, suggest Arai te Tonga was already standing when the coral surfaced Ara Metua was built. Direct stratigraphic evidence for the date of the earliest incarnation of the *marae* will require further fieldwork (planned for 2024). The appearance and frontal architecture of the earliest phases of the Arai te Tonga has also been established as a coral faced platform standing c. 0.4m in height. We can also trace its successive enlargement as it incrementally moves northwards to the position seen today by the line of basalt boulders [203]. Further work would be aimed at extending the 2023 trench further south to see if there is a third line of coral orthostats marking the front of the original marae.

Figure 15. Aerial view of the 2023 excavations at Arai te Tonga.

The confusion over the stones at the front remains and it is an important question to address. Some resolution can be achieved by expanding the 2023 trench further west c. 2.5m to the remaining seat marked '*a*' on Smith's 1902 plan. This would enable the intermediate area to be examined and remains of any seats uncovered and recorded.

Bibliography

Campbell, M. 2001. *Settlement and landscape in late prehistoric Rarotonga, Southern Cook Islands*. Unpublished PhD thesis, University of Sydney.

Campbell, M. 2002. Ritual landscape in pre-contact Rarotonga. *Journal of the Polynesian Society* 111 (2): 147-70.

Campbell, M. 2006. Memory and monumentality in the Rarotongan landscape. *Antiquity* 80: 102-117.

Campbell, M., J. Downes, C. Richards, L. Shaw, F. Torres H. & K. Welham, 2019. *Excavation and survey of the Ara Metua (Ara Nui o Toi) and related sites at Arai te Tonga.* Preliminary Report for Cook Island Government.

Downes, J., Jane Downes, J. Mulville, C. Richards & K. Welham, with T. Mana and P. Maoate.2018. *Excavation of the Ara Metua (Ara Nui o Toi) at Arai te Tonga Preliminary report May – June 2018.* Preliminary Report for Cook Island Government.

Duff, R. 1974. Introduction and summary, in Trotter, M. M. (ed.), *Prehistory of the Southern Cook Islands*. Canterbury Museum Bulletin 6, Christchurch: Canterbury Museum, 9-21.

Buck. P. (Hiroa, Te Ro), 1927. *The material culture of the Cook Islands (Aitutaki)*. New Plymouth: Thomas Avery & Sons.

Mills, P. R. 2002. Social integration and the Ala Loa: reconsidering the diversity of trails in Hawaiian exchange. *Asian Perspectives* 41(1): 148-66.

Parker, R. H. 1974. Survey of the Ara Metua, in Trotter, M. M. (ed.) 1974. *Prehistory of the Southern Cook Islands*. Canterbury Museum Bulletin 6, Christchurch: Canterbury Museum, 63-69.

Routledge, K. 1919 [2005]. *The mystery of Easter Island*. Rapa Nui: Museum Press.

Savage, S. 2012 [1962]. *A dictionary of the Maori language of Rarotonga*. Auckland: Trends New Zealand Ltd.

Smith, S. P. 1903. Arai Te Tonga, the ancient marae at Rarotonga. *Journal of the Polynesian Society* 12 (4): 218-20.

Trotter, M. M. (ed.) 1974. *Prehistory of the Southern Cook Islands*. Canterbury Museum Bulletin 6, Christchurch: Canterbury Museum.

Walter, R. 1998. *Anai'o: the archaeology of a fourteenth century Polynesian community in the Cook Islands*. Auckland: New Zealand Archaeological Association Monograph 22,

Appendix 1.

Context List

200. Topsoil

201. Basalt pebble/block upper road metaling

202. Dark-brown loam with c. 25% coral pebbles in front of marae

203. Line of basalt boulders – front of marae (see 225-230).

204. Slumped vertical coral block – eastern stone of line [203].

205. Packing between outer external boulders [203], [204] and coral uprights [206].

206. Outer line of vertical coral slabs facing marae.

207. Line of brown loam along S edge of Ara Metua – fill of robbed out basalt kerbstones?

208. Coral sand beneath upper road metalling [201] – surface of earlier Ara Metua

209. Blocks of coral towards S edge of road Ara Metua.

210. Fill between outer [206] and inner [211] line of coral uprights.

211. Second line of vertical coral slabs facing marae.

212. Fill/layer behind (south) of coral uprights [211].

213. Coral packing around some basalt boulders [203] – part of [223].

214. Broken and complete basalt cobbles in matrix [221] packing post-hole [215].

215. Cut of post-hole.

216. Basalt boulder punctuating two lines of coral uprights [211 & 217] – 'offering-stone'.

217. Third line of coral uprights facing marae.

218. Recumbent basalt block in west side of trench in front (north) of basalt boulders (203).

219. Coral cobble surface of Ara Metua – below coral sand [208].

220. Negative impression of robbed-out basalt kerbing south side of Ara Metua.

221. Silty loam matrix for packing [214].

222. Post-pipe of post-hole (215).

223. Upper layer/surface of coral pebbles between marae and road.

224. Lower coral layer/surface between marae and road.

225. Basalt boulder, part of [203].

226. Basalt boulder, part of [203].

227. Basalt boulder, part of [203].

228. Basalt boulder, part of [203].

229. Basalt boulder, part of [203].

230. Basalt boulder, part of [203].

231. Basalt boulder running of trench to W.

232. Packing between front row of basalt boulders and outer coral uprights

233. Coral upright slab outer row.

234. Coral upright slab outer row.

235. Coral upright slab outer row.

236. Coral upright slab outer row.

237. Coral upright slab outer row.

238. Coral upright slab outer row.

239. Coral upright slab second row.

240. Coral upright slab second row.

241. Coral upright slab second row.

242. Coral upright slab second row.

243. Coral upright slab second row.

244. Coral upright slab second row.

245. Stoney layer beneath coral surface of the Ara Metua.

246. Dark 'humic' layer beneath [245]

247. Grey-brown silty layer beneath lower coral surface [224].

248. unused

249. Packing stones for post-hole [250]

250. Post-hole sectioned by east baulk.

251. Fill of post-hole [250].

252. Upright basalt stone behind stone [231] (the offering stone).

253. Coral blocks and gravel – road surface of Ara Metua.

254. Cut for coral orthostat [237].

255. Circular pit/post-hole between the two post-holes in eastern area.

256. Fill of [255].

257. Layer below [247].

258. Layer below [257].

259. Natural gravel below [258].

260. Upright stone in in south-east corner.

261. Fill of cut [254].

262. Coral orthostat revealed in south section.

Appendix 2

Small finds list

Small Find number	Context	Material
150	212	Basalt – butt end of broken adze
151	212	Basalt flake
152	223	Basalt flake
153	223	Basalt fragment probable broken flake
154	223	Basalt flake
155	223	Basalt – probable broken flake
156 toki	223	Basalt flake – large, definite shaping before breakage – blade edge.
157	223	Basalt flake
158	223	Basalt flake – large
159	223	Basalt flake – small, probably cortex
160	223	Basalt flake
161	223	Basalt flake – large
162	224	Basalt flake – small, complete feather termination and

		negative flake scars
163	224	Basalt flake – large, broken, step termination.
164	223	Basalt flake – small, complete feather termination and negative flake scars
165	224	Basalt – butt end of broken pre-form, broken platform, Negative scars both surfaces, broken early in manufacture.
166	223	Basalt flake – complete, feather termination
167	223	Basalt flake – small, broken
168	223	Basalt piece – likely butt end of pre-form – negative flaking scars on the dorsal surface.

Appendix 3.

Drawings

15. Plan trench 3 (two sheets).
16. Plan trench 3 overlay (lower layers).
17 Plan and section [215]
18. Section west-facing
19. Section east facing
20. Section north facing

Appendix 4.

Soil samples List

40. [222] charcoal and environmental
41. [221] charcoal and environmental
42. [223] charcoal and environmental

43. [246] charcoal and environmental
44. [224] charcoal and environmental
45. [247] charcoal and environmental
46. [247] charcoal and environmental
47. [247] charcoal and environmental
48. unused
49. unused
50. [257] charcoal and environmental
51. [257] charcoal and environmental
52. [257] charcoal and environmental
53. [247] charcoal and environmental
54. [258] charcoal and environmental
55. [258] charcoal and environmental
56. [258] charcoal and environmental
57. [258] charcoal and environmental
58. [258] charcoal and environmental
59. [258] charcoal and environmental
60. [258] charcoal and environmental
61. [258] charcoal and environmental
62. [258] charcoal and environmental
63. [258] charcoal and environmental
64. Micromorphology [258] sample 1
65. Micromorphology [258] sample 2
66. Micromorphology [258] sample 3
67. Background sample.