

# A RADIOCARBON DATE FOR THE ARCHAIC BURIAL CONTEXT (N44/97) AT HAHEI

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*Abstract.* Radiocarbon results obtained on charcoal from Site N44/97 at Hahei are reported and their significance is assessed.

Salvage excavations of an Archaic burial context at N44/97, Hahei, Coromandel Peninsula, on behalf of the Auckland Museum, were reported on earlier (Edson & Brown 1977). Radiocarbon results obtained for two samples of charcoal, collected in 1976 while carrying out these investigations, have now been received. The dates, provided by the New Zealand Radiocarbon Dating Laboratory, Institute of Nuclear Science, N.Z.D.S.I.R. (Lower Hutt), are as follows.

<i>Sample No.</i>	<i>Excavation Context</i>	<i>N.Z. Radiocarbon No.</i>	<i>Age</i>
N44/97(1)	Square B <sup>2</sup> , bottom of Layer II	N.Z. 4344	Post Bomb
N44/97(2)	Square B <sup>1</sup> , charcoal lense in Layer III	N.Z. 4345	
		A(old T <sup>1/2</sup> )	760 ± 50
		B(new T <sup>1/2</sup> )	790 ± 60
		C(new T <sup>1/2</sup> corrected for secular effect)	740 ± 50

## *Significance of the results*

The NZ 4344 Post Bomb age determination for sample N44/97(1) is most likely explained by contamination of Layer II as the result of greater general disturbance, through bulldozing, to this part of the site than was realised at the time of the investigation. Characterised by charcoal lumps and sizeable *haangi* stones contained in a 10-16 cm deep, grey-black, charcoal-enriched, sandy matrix, Layer II was interpreted as the basal remnant of an oven area exposed to weathering. Its inferred stratigraphic relationship to Layer IV in the control section on Lot 20 of Wigmore Road (Edson & Brown 1977: 29-30) is not so much in question as is its integrity as an undisturbed stratum.

The second sample, giving an age determination of NZ 4345A 760 + 50 (old half-life), was collected from the thin lense of very fine charcoal (wood species unidentified) in the north-west quadrant of Square B<sup>1</sup> and in close proximity to the spot where the burial context (since destroyed) with its spectacular grave gifts had been discovered in December, 1975. A single radiocarbon date on charcoal from oven debris recovered in close proximity to, nonetheless in unproven association with, an important archaeological find, would normally be treated with extreme caution. As there were insufficient quantities of bone collagen and shell recovered from the excavation for radiocarbon dating purposes, an attempt was made, therefore, to check the validity of the



above result by means of obsidian dating. One grey and five green obsidian flakes from N44/97 were subjected to an experimental radiochemical method of hydration shell measurement by a research student at the University of Waikato (Lowe n.d.). The results, presented as uncorrected dates BP (Lowe n.d.: 88, 90, 94), are as follows.

<i>Artefact Accession No.</i>	<i>Excavation Context</i>	<i>Uncorrected Age</i>
AR6024/19 (green obsidian)	B <sup>2</sup> Layer II	600 ± 41
AR6047/1 (green obsidian)	B <sup>4</sup> Layer II	510 ± 38
AR6047/3 (green obsidian)	B <sup>4</sup> Layer II	632 ± 44
AR6059/17 (green obsidian)	B <sup>2</sup> Layer II	600 ± 53
AR6059/15 (grey obsidian)	B <sup>2</sup> Layer II	961 ± 104
E47418 (green obsidian)	Surface find 1975	480 ± 43

The technique of obsidian dating is still at a developmental stage generally (Davidson 1975: 37; Green 1964: 134-136; Leach 1977: 136; Lowe n.d.: 2-22; Tuggle, Cordy & Child 1978: 58) and the above results are far from conclusive. These are based on the known site thermal constant for Kauri Point some 75 km to the south of Hahei. It would be simplistic to argue that these ages should be corrected back slightly in time and that the anomalies provided by samples 47418 and 6059/15 could be explained by the former's exposure to weathering and the consistently older ages reached for grey obsidian by Lowe. Errors in and anomalies amongst these uncorrected ages may be due to a host of factors — inherent physical properties, environmental and cultural factors, procedural errors etc. All that may be concluded with certainty is that the obsidian from N44/97 provides a general indication of the site's age which is independent of but not inconsistent with the antiquity implied by the early radiocarbon date.

The radiocarbon age of NZ 4345 A  $760 \pm 50$ , when adjusted for the new half-life and corrected for secular effect, provides a calendrical date of 1210 AD  $\pm 50$  years. The result is significant in several respects. Firstly, it establishes time-depth for prehistoric activity at Hahei. Further, it represents an important addition — at a geographically intermediate location — to a group of early radiocarbon dates on material derived from archaeological excavations at Sarah's Gully, Skipper's Ridge, and Tairua. The earliest of these dates are NZ 594 878  $\pm 49$  BP on charcoal from Layer II, N44/2 at Tairua (Green 1967: 83), subsequently, and as a result of NZ 1875 570  $\pm 60$  BP on shell (Green *in* Rowland 1976: 6), thought to be too early; NZ 358 810  $\pm 50$  BP on wood from N40/9, the Sarah's Gully settlement, rejected in favour of NZ 359 650  $\pm 50$  BP on charcoal (Green 1963: 66; 1970: 21); NZ 1740 A 807  $\pm 57$  BP on charcoal for N40/7 at Skipper's Ridge, which Davidson (1974: 50; 1975: 36) accepts on the basis of the archaeological evidence and the relative compatibility of hydration rim measurements on obsidian flakes between this and other sites known to be early.

On the basis of the demonstrably close morphological affinities and their associations between the Hahei and Wairau Bar ornaments, it was intimated by Edson & Brown (1977: 34) that there may be a temporal link between these two sites. Comparison of the single radiocarbon date for N44/97 with those obtained for S29/7 strengthens the case for broad contemporaneity. Radiocarbon dates for Wairau Bar include NZ 50 850  $\pm 50$  and Y204 935  $\pm 110$  on charcoal, NZ 1835 780  $\pm 80$  BP on human collagen, NZ 1837 680  $\pm 50$  BP on shell aragonite and NZ 1838 590  $\pm 60$  BP on moa-bone collagen (Trotter 1975: 90).



Direct evidence for physical contact between N44/97 and Marlborough is confined, for the present, to a single flake struck from a polished adze of metasomatised, black argillite derived from the Nelson-D'Urville Island Mineral Belt. Perhaps more intriguing than the question of direct contact between these two sites which, by the shortest sea-route, are 900 km apart, are the implications provided by the rare association of distinctively Wairau Bar type ornaments with an already well-developed Coromandel aspect of Archaic material culture. The full significance of this association for the broader canvas of New Zealand prehistory needs to be explored further.

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