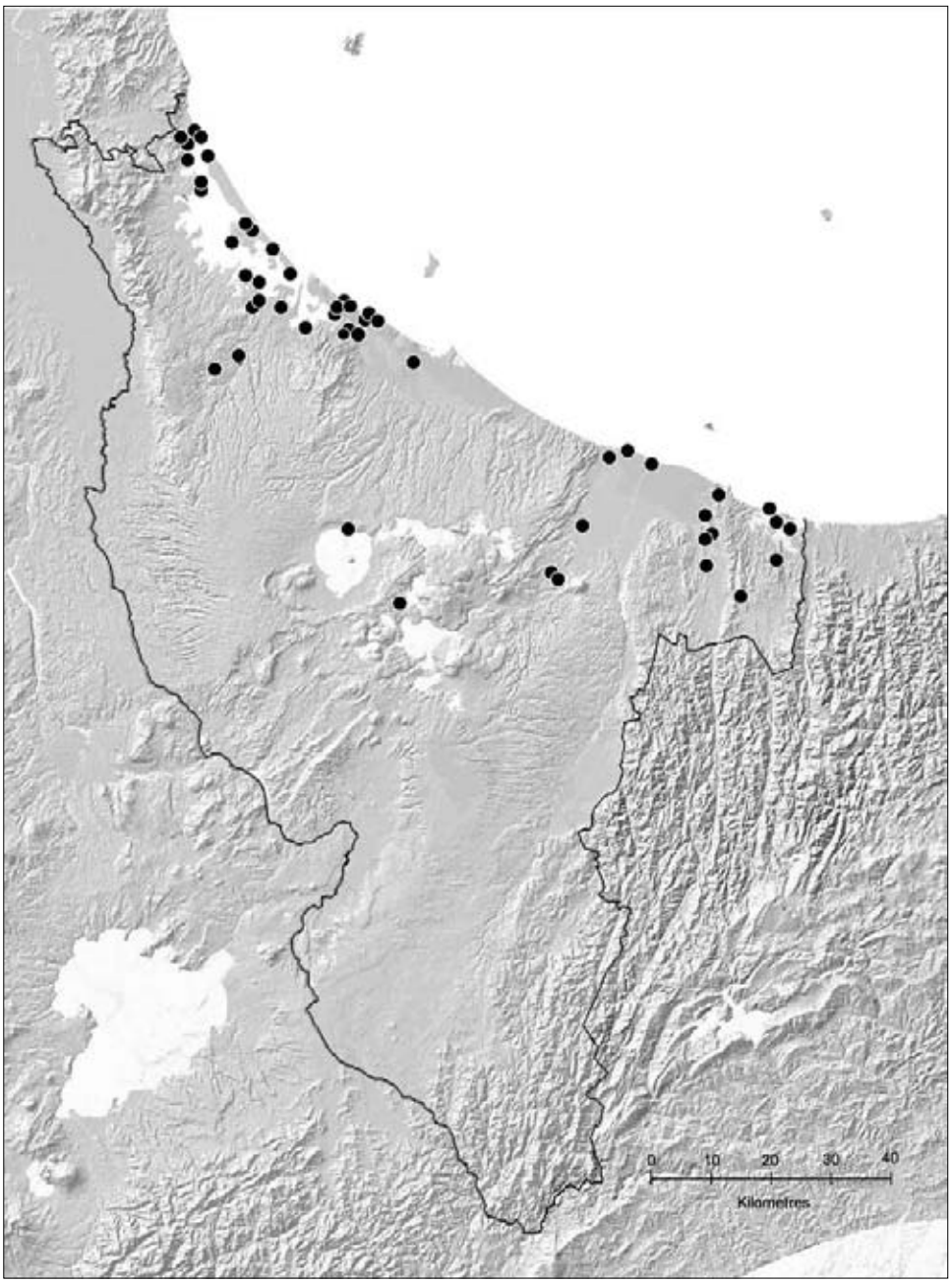

Figure A3.1. Distribution of C14 dated sites (sites in the Recording Scheme only) in the Bay of Plenty region.

The presence of human bone in the materials does not represent modern archaeological practice. The samples reported here as containing this were all submitted by people other than archaeologists for forensic identification purposes.

The distribution of dated material naturally closely follows the excavated sites plot, but illustrates a concentration around Tauranga/Papamoa, where samples collected from mitigation excavations have frequently been dated.

TABLE A3.2. CARBON 14 DATES LISTED IN THE NEW ZEALAND RADIOCARBON DATABASE.

This table of dates was sourced from the New Zealand Radiocarbon Database (http://waikato.ac.nz/nzcd/index.html; viewed June 2008). More information on the dates can be found at that source. CRA is the conventional radiocarbon age in years. Note: dates in this table are presented without the reservoir correction that is routinely applied to shell and other marine-sourced sample ages; dates with reservoir correction are more commonly found in archaeological publications.

LAB NO.	CRA ± ERROR	MATERIAL	SITE NUMBER	SITE NAME	CONTEXT
ANU0025	495 ± 78	Charcoal (unspecified)	U13/4	Kauri Point Pa	Sample from the first modified terrace on the pa.
ANU0026	230 ± 70	Charcoal (unspecified)	U13/4	Kauri Point Pa	Square L29–30. Sample from a depression in the floor of the pit.
ANU0046	395 ± 53	Charcoal (unspecified)	U13/4	Kauri Point Pa	Second shell midden, younger than the first defensive ditch.
NZ0592	404 ± 59	Wood (unspecified)	U13/4	Kauri Point Swamp	Sample from the base of the archaeological deposit.
NZ0593	692 ± 60	Wood (unspecified)	U13/4	Kauri Point Swamp	Sample from the upper part of the archaeological deposit.
NZ0809	285 ± 59	Charcoal (unspecified)	U13/4	Kauri Point Swamp	Sample from the upper part of the archaeological deposit, directly below the swamp; equivalent of topsoil.
NZ0810a	616 ± 60	Wood (unspecified)	U13/4	Kauri Point Swamp	Sample from 1 m beneath base of cultural deposits.
NZ0810b	597 ± 49	Wood (unspecified)	U13/4	Kauri Point Swamp	Sample from 1 m beneath base of cultural deposits.
NZ0811	417 ± 59	Wood (unspecified)	U13/4	Kauri Point Swamp	Sample from the base of swamp sediments.
NZ0812	435 ± 59	Charcoal (unspecified)	U13/4	Kauri Point Swamp	Sample from the base of the archaeological deposit.
NZ0813	553 ± 82	Charcoal (unspecified)	U13/4	Kauri Point Swamp	Sample from the base of a cultural deposit, stratigraphically later than sample NZ0582.
NZ1129	207 ± 43	Wood (*Leptospermum* sp.)	U16/83	Motuwhetero Island, Lake Okataina	Sample from palisade post, now submerged to depth of 22 feet.
NZ1897	469 ± 57	Charcoal (unspecified)	U13/45	Kauri Point undefended site	Square A-3. Sample from immediately above the floor of Pit L, in the fill of the bin pit.
NZ3455	581 ± 68	Moabone collagen (*Pachynornis elephantopus*)	-	Geological	
NZ4602	711 ± 40	Shell (*Austrovenus stutchburyi*)	U14/38	Ruahihi Pa	Area G, Feature 18. Fill of palisade posthole ix, below pink layer.
NZ4603	714 ± 32	Shell (*Paphies australis*)	U14/38	Ruahihi Pa	Shell midden 1, cooking area I, midden situated within topsoil.
NZ4604	796 ± 33	Shell (*Paphies australis*)	U14/38	Ruahihi Pa	Sample from below bank of promontory pa. Sample located in buried topsoil.
NZ4605	529 ± 32	Shell (*Paphies subtriangulata*)	U14/38	Ruahihi Pa	Area A, Feature 31. Rua. Cooking area III. Shells on top of stones in a rua within charcoally grey silt surrounding the stones.
NZ4659	672 ± 32	Shell (*Paphies subtriangulata*)	U13/50	Roretana Block, Athenree	Shell midden M2. Shells mixed into cultivated soil.
NZ4660	778 ± 33	Shell (*Paphies subtriangulata*)	U13/50	Roretana Block, Athenree	Shell midden M3, overlying cultivated ground.

Continued on next page

Table A3.2—continued

LAB NO.	CRA ± ERROR	MATERIAL	SITE NUMBER	SITE NAME	CONTEXT
NZ4700	639 ± 27	Shell (*Paphies subtriangulata*)	U14/38	Ruahihi Pa	Shell midden 1, cooking area I. Midden located within topsoil.
NZ4800	352 ± 56	Peat	V15/80	Kohika Swamp pa	Square D17. Sample from a layer of structureless peat [40–45 cm below Tarawera ash] containing: wood chips, stones, bracken, fresh water mussel.
NZ4801	534 ± 56	Peat	V15/80	Kohika Swamp pa	Square D17. Sample from below a layer of structureless peat [65–69 cm below Tarawera ash] containing: wood chips, bracken, stone and shells.
NZ4802	727 ± 57	Peat	V15/80	Kohika Swamp pa	Square D17. Layer of fine, grey silt 105–110 cm below Tarawera Ash.
NZ4803	675 ± 84	Peat	V15/80	Kohika Swamp pa	Square D17. Sample in layer of brown silt, 130–132 cm below Tarawera ash.
NZ4804	654 ± 56	Peat	V15/80	Kohika Swamp pa	Square D17. Sample from the bottom of a layer of Kaharoa Ash [145–146 cm below Tarawera Ash], in a fine white silt to coarse sand layer.
NZ5183	635 ± 55	Shell (*Austrovenus stutchburyi*)	U13/44	Athenree pa	Shell lens in pit fill, under a defensive bank.
NZ5184	827 ± 56	Shell (*Paphies* sp., *Austrovenus* sp.)	U13/46	Athenree pa	Shell lens in pit fill, under defensive bank.
NZ5185	665 ± 55	Shell (*Austrovenus* sp., *Paphies subtriangulata*, *Paphies australis*)	U13/48	Athenree pa	Shell fragments in redeposited yellow tephra spoil, which was used to make defensive bank. The spoil was resting on buried soil under the bank.
NZ5186	668 ± 55	Shell (*Paphies* sp., *Austrovenus* sp.)	U13/49	Athenree pa	Section 1—buried topsoil under defensive bank. Topsoil disturbed with streaks of yellow tephra and shells.
NZ5278	708 ± 32	Shell (*Paphies subtriangulata*)	T13/31	Athenree pa	Sample from the interface between a layer of bracken fern soil above a layer of cultivated soil.
NZ5318	336 ± 56	Charcoal (*Cyathea dealbata*)	V16/211	Maruka II, Kawerau	Terrace 4, Square K4, south face of pit feature. Feature contained a ponga post in the bottom.
NZ6069	429 ± 75	Human bone	U16/-	Ohinemutu, Rotorua	Human remains found during excavations. Sample submitted by Rotorua hospital, no grid reference available.
NZ6202	716 ± 55	Shell (*Austrovenus stutchburyi*, *Paphies australis*)	U14/428	Oikemoke Pa, Te Puna, Tauranga	Buried, cultivated topsoil. Sample mixed with topsoil under defensive bank.
NZ6203	350 ± 32	Shell (*Austrovenus stutchburyi*)	U14/428	Oikemoke Pa, Te Puna, Tauranga	Shell midden on top of defensive bank.
NZ6204	755 ± 40	Shell (*Paphies australis*)	U13/593	Kauri Point pit site	Lot II, Baulk VIII—shell lens in fill of pit.

Continued on next page

Table A3.2—continued

LAB NO.	CRA ± ERROR	MATERIAL	SITE NUMBER	SITE NAME	CONTEXT
NZ6205	730±33	Shell (*Paphies australis*)	U13/903	Kauri Point cultivated garden	Concentrated shell midden on top of cultivated soil.
NZ6206	708±32	Shell (*Paphies australis*)	U14/156	Hubbard's Pa, Wairoa River	Fill below the third terrace from the top of the pa.
NZ6207	590±32	Shell (*Paphies australis*)	U14/155	Te Puna, Tauranga	Fill below a terrace on the north side of the pa. Sample from a dense layer of pipi shells.
NZ6214	869±55	Shell (*Austrovenus stutchburyi*)	U14/332	Matakana Island	Old buried, mixed topsoil under defensive bank.
NZ6215	639±54	Shell (*Paphies subtriangulata*)	T13/716	Goymer's Pa, Athenree	Terrace riser near top of pa.
NZ6216	807±56	Shell (*Paphies australis*)	U14/153	Leef's Pa, Te Puna, Tauranga	Sample from the base of fill, below raised defensive platform.
NZ6237	683±28	Shell (*Paphies australis*)	U14/155	Te Puna, Tauranga	Shell midden located on the outer edge of a terrace on the south side of the pa.
NZ6241	581±54	Shell (*Austrovenus stutchburyi*)	U14/181	Matakana	Shells on top of buried topsoil below a defensive bank, Matakana Island.
NZ6244	772±32	Shell (*Paphies subtriangulata*)	T13/747	Athenree	Shell mixed with charcoal in cultivated soil.
NZ6304	89±54	Charcoal (*Melicytus ramiflorus*—dominant; *Hebe* sp.—minor; *Leptospermum* sp.—minor)	U14/177 Tauranga	Welcome Bay Oven,	Umu-ti, 1.6 m in diameter and 0.9 m deep, containing rounded stones and a large quantity of charcoal.
NZ6373	717±32	Shell (*Paphies subtriangulata*)	V16/220	Kawerau V	Terrace 6, Feature 113—mall depression at the base of layer III.
NZ6572	490±51	Peat	V16/238	Maruka, Kawerau	Sample taken from a natural peat section between layers II and VII within an old swamp on the flats adjacent to the pit and terrace site.
NZ6580	596±32	Shell (*Paphies subtriangulata*)	V15/80	Kohika	Area C—a zone of intensive cooking activity. Sample from a fire scoop in layer C.
NZ6583	212±32	Wood (*Leptospermum* sp.)	V15/80	Kohika	Area B. Sample of a palisade post that stood at perimeter of Kohika site, during major period of occupation.
NZ6599	159±42	Charcoal (unspecified)	V15/80	Kohika	Area A—the top of the Kohika mound. Sample from the lower fill of a kumara storage pit.
NZ6611	157±32	Wood (unspecified)	V15/80	Kohika	Area B. Sample of a palisade post removed during period of defended occupation.
NZ6618	221±32	Wood (unspecified)	V15/80	Kohika	Area D, Square DD. Sample of a house post associated with early artificial occupation floors
NZ6619	190±39	Bracken fern (*Pteridium esculentum*)	V15/80	Kohika	Area D, Square DD—a deliberately-laid floor of bracken fern, underlying a clay floor and midden.

Continued on next page

Table A3.2—continued

LAB NO.	CRA ± ERROR	MATERIAL	SITE NUMBER	SITE NAME	CONTEXT
NZ6662	684±32	Shell (*Paphies australis*)	U13/31	Te Kura a Maia, Tauranga	Shell lens within defensive bank.
NZ6688	747±28	Shell (*Paphies australis*)	U13/31	Te Kura a Maia, Tauranga	Sample from shell midden fill just below the highest platform on the pa.
NZ6692	599±32	Shell (*Paphies subtriangulata*)	U14/166	Wharo Pa, Tauranga	Shells forming the foundation of a terrace of the pa, terrace located below tihi on the north side.
NZ6703	524±32	Shell (*Paphies subtriangulata*, *Austrovenus stutchburyi*)	U14/242	Papamoa Pa No. 6, Tauranga	Sample from a grey soil layer under a defensive bank.
NZ6730	528±32	Shell (*Paphies subtriangulata*)	U14/125	Papamoa Pa No. 2, Tauranga	Fill below the highest platform on the pa. Sample from brown soil with lumps in indistinct lenses, with shell and charcoal.
NZ6747	504±54	Shell (*Paphies subtriangulata*)	U14/432	Papamoa No. 2, Tauranga	Fill below the highest platform on the pa. Sample from brown soil with lumps in indistinct lenses, with shell and charcoal.
NZ6752	585±28	Shell (*Paphies subtriangulata*)	U14/208	Mangatawa Pa, Tauranga	Dense-packed shell midden in fill, beneath platform, on the pa.
NZ6766	779±32	Shell (*Austrovenus* sp., *Paphies subtriangulata*)	U14/207	Mangatawa Pa No. 3, Tauranga	Sample in brown/yellow fill under tread of a major lateral terrace.
NZ6784	763±31	Shell (*Paphies* sp., *Austrovenus* sp., *Struthiolaria* sp.)	U14/238	Papamoa Pa No 1, Tauranga	Sample in yellow/brown soil fill, forming tread of lateral terrace on the pa.
NZ6791	777±33	Shell (*Austrovenus stutchburyi*, *Paphies australis*, *Paphies subtriangulata*)	W15/205	Hurst's Pa, Whakatane	Defensive bank of the pa at the western end. Sample from layer 5, which consists of oven stones, midden and subsoil fill, adjacent to the palisade line.
NZ6794	631±50	Shell (*Austrovenus stutchburyi*)	W15/126	Sisam's Pa, Whakatane	Sample from stock-eroded topsoil, in a bank above the western defences of the pa.
NZ6826	567±41	Shell (*Austrovenus stutchburyi*)	W15/144	Pa, Whakatane	Sample from recent colluvium, cut by road, below the defended area of the pa.
NZ6886	709±65	Shell (*Austrovenus* sp.)	W15/173	Pa, Matekerepu Historic Reserve, Ruatoki	Exposed midden on the western edge of the site. Shell in the topsoil of the platform pa.
NZ6894	713±28	Shell (*Austrovenus stutchburyi*)	W15/173	Pa, Matekerepu Historic Reserve, Ruatoki	Eroding midden. Shell in the topsoil of the platform pa.
NZ6901	587±48	Shell (*Austrovenus* sp.)	W15/173	Pa, Matekerepu Historic Reserve, Ruatoki	Sample from midden eroding inside the pa, beside the second ditch and bank system, from the southern end.
NZ7024	725±28	Shell (*Austrovenus stutchburyi*, *Paphies australis*)	U14/2240	Pa, Birch Avenue, Tauranga	Shell midden in lower part of topsoil, overlying cultivated soil.
NZ7045	602±48	Shell (*Paphies australis*)	U14/243	Pa, Papamoa, Tauranga	Shell midden overlying a filled-in defensive ditch.
NZ7046	616±48	Shell (*Paphies subtriangulata*)	U14/243	Pa, Papamoa, Tauranga	Shell lens in rua fill.

Continued on next page

Table A3.2—continued

LAB NO.	CRA ± ERROR	MATERIAL	SITE NUMBER	SITE NAME	CONTEXT
NZ7071	685 ± 50	Shells (mixed species)	U14/2482	Midden, Welcome Bay, Tauranga	Midden (46), associated with cultivated ground and pit cooking area.
NZ7072	725 ± 30	Shell (*Paphies australis*, *Austrovenus stutchbury*i, *Turbo smaragda*)	U14/2240	Pa, Birch Avenue, Tauranga	Shell midden in the fill of rua 4.
NZ7401	33 ± 63	Charcoal (fern stems [probably bracken]—95%; Angiosperm—5%)	W16/226	Pleistocene Terrace Pa, Whakatane	Sample from soil in fill of defensive ditch. Sample derives from fern growing and burnt in the base of the ditch, rather than fill thrown or pushed in.
NZ7543	595 ± 48	Shell (*Paphies subtriangulata*)	W15/121	Midden, Thomton Dune site, Rangitaiki Plains	Concentrated midden filling a pit dug into the original pumice topsoil cap of a sand dune.
NZ7546	194 ± 48	Charcoal (twigs, probably *Leptospermum scoparium*)	V15/1193	Whites Drain B, Kawerau	Black ash and lapilli layer containing copious amounts of charcoal. Layer is interpreted as a garden soil.
NZ8100	183 ± 39	Charcoal (unspecified)	U14/187	Ureturituri Pa, Matakana Island	Second period ditch and bank defence. Sample from the base of the cultural deposit, under the earliest bank of the three.
NZ8125	667 ± 36	Shell (*Paphies subtriangulata*)	U14/	Hunters Creek Midden, Matakana Island	Hunters Creek Section, northwest end. Sample from a shell midden beneath wind-blown sand, resting on buried soil.
NZ8187	677 ± 29	Shell (*Paphies subtriangulata*)	U14/	Hunters Creek Midden, Matakana Island	Hunters Creek Section, southeast end, shell midden No. 2. Sample from midden on buried topsoil, beneath the arm of a recent-looking parabolic dune.
NZ8311	751 ± 37	Shell (*Paphies australis*)	U14/2823	Matakana Island	Shell midden, 2 m thick, exposed in a marine cut bank. Sample from 5-cm-thick layer of charcoal and burnt shell in sand.
NZA0300	605 ± 143	Human bone	U16/-	Ngongotaha	Ground beneath old shed at Beaumonts Road. Sample submitted by the NZ Police.
NZA0301	751 ± 254	Human bone	U16/-	Ngongotaha	Ground beneath old shed at Beaumonts Road. Sample submitted by the NZ Police.
NZA0302	338 ± 147	Human bone	U16/-	Ngongotaha	Ground beneath old shed at Beaumonts Road. Sample submitted by the NZ Police.
Wk1218	0 ± 0	Charcoal (unspecified)	U15/35	Pa, Hamurana, Lake Rotorua	
Wk1219	230 ± 125	Charcoal (unspecified)	U15/35	Pa, Hamurana, Lake Rotorua	
Wk1220	280 ± 50	Charcoal (unspecified)	U15/35	Pa, Hamurana, Lake Rotorua	
Wk1221	0 ± 0	Charcoal (unspecified)	U15/35	Hamurana, Lake Rotorua	

Continued on next page

Table A3.2—continued

LAB NO.	CRA ± ERROR	MATERIAL	SITE NUMBER	SITE NAME	CONTEXT
Wk1222	0 ± 0	Charcoal (unspecified)	U15/35	Hamurana, Lake Rotorua	
Wk1740	460 ± 55	Charcoal (*Melicytus ramiflorus*)	V16/211	Maruka, Kawerau	Trench 9. Sample from hangi within layer Vie.
Wk1741	400 ± 55	Charcoal (*Hebe* sp.)	V16/243	Maruka, Kawerau	Trench 2. Sample from possible firescoop within layer Vic.
Wk1742	360 ± 55	Charcoal (*Hebe* sp., *Leptospermum scoparium*)	V16/220	Maruka, Kawerau	Terrace 6. Sample from a possible hangi (feature number 100) in the base of layer III.
Wk1743	520 ± 80	Charcoal (*Cyathea dealbata*—95%; *Phyllocladus* sp.—5%)	V16/220	Maruka, Kawerau	Terrace 6. Sample from a pit roof (Feature 181) at the base of layer III.
Wk1744	370 ± 55	Charcoal (*Kunzia ericoides*)	V16/219	Maruka, Kawerau	Terrace 4. Sample taken from hangi (Feature 10) at the base of layer III.
Wk1745	350 ± 55	Charcoal (*Cyathea dealbata*)	V16/219	Maruka, Kawerau	Terrace 4. Sample from large storage pit, measuring 11.84 m × 5.6 m × 2.4 m deep, within layer 5c.
Wk1765	670 ± 45	Shell (*Paphies australis*)	W15/35	Tauwhare, Whakatane	Principal surviving earthworks of a major pa.
Wk2713	800 ± 50	Shell (*Paphies australis*)	U14/539	Grant Place storm water pipeline, Papamoa	Trench 2—terrace/midden, sand layer 2—cultural layer.
Wk2714	540 ± 50	Shell (*Paphies australis*)	U14/539	Grant Place storm water pipeline, Papamoa	Knoll A, lens B.
Wk2715	490 ± 50	Shell (*Paphies australis*)	U14/539	Grant Place storm water pipeline, Papamoa	Area 2, knoll A, sand layer 2—sample from the floor of the cultural layer.
Wk2716	830 ± 60	Shell (*Paphies australis* or *Struthiolaria papulosa*)	U14/539	Grant Place storm water pipeline, Papamoa	Hangi floor 1, Sand layer 3—cooking floor activity area in the sand dunes. Sample from the trench wall.
Wk2717	659 ± 50	Shell (*Paphies australis*)	U14/539	Grant Place storm water pipeline, Papamoa	Trench 2—terrace/midden.
Wk3623	690 ± 50	Shell (*Paphies subtriangulata*)	U14/1717	Royal Palm Beach, Papamoa	Area A—concentrated area with large midden scatter (c. 400 m^2), Midden 10, layer 2.
Wk3630	760 ± 50	Shell (*Paphies subtriangulata*)	U14/1717	Royal Palm Beach, Papamoa	Area A, Midden 5, layer 2—shell midden consisting primarily of tuatua. Sample from a concentrated area within a large midden scatter.
Wk3631	820 ± 50	Shell (*Paphies subtriangulata*)	U14/1717	Royal Palm Beach, Papamoa	Area A, Midden 13, layer 2—large midden scatter forming a 10–15-cm band below the turf.
Wk3632	760 ± 50	Shell (*Paphies subtriangulata*)	U14/1717	Royal Palm Beach, Papamoa	Area A, Midden 15, layer 3—lower cultural layer 27–34 cm.
Wk3633	730 ± 50	Shell (*Paphies subtriangulata*)	U14/1717	Royal Palm Beach, Papamoa	Area B, Midden 3, layer 2—large midden scatter forming a 10–15-cm band below the turf.

Continued on next page

Table A3.2—continued

LAB NO.	CRA ± ERROR	MATERIAL	SITE NUMBER	SITE NAME	CONTEXT
Wk3634	810 ± 50	Shell (*Paphies subtriangulata*)	U14/1717	Royal Palm Beach, Papamoa	Area E, layer 2—large midden scatter forming a 10–15-cm band below the turf.
Wk3635	690 ± 50	Shell (*Paphies subtriangulata*)	U14/1717	Royal Palm Beach, Papamoa	Area G, Midden 2, layer 2—large midden scatter forming a 10–15-cm band below the turf.
Wk3750	710 ± 50	Shell (*Paphies australis*)	W15/9	Tupitika Pa, Whakatane	Subterranean storage pit that was used as a midden.
Wk3751	660 ± 50	Shell (*Paphies subtriangulata*)	U13/46	Athenree	Palisade posthole from an early phase of pa development.
Wk3752	600 ± 50	Shell (*Paphies subtriangulata*)	V15/1209	Robbie's Midden, Tarawera River	Sample from the base of a 50-cm-deep shell midden, at a depth of 70 cm below ground level in a 120-cm profile.
Wk3753	600 ± 50	Shell (*Austrovenus stutchburyi*)	W15/363	Uretara Island, Ohiwa Harbour	Sample from a firescoop (at a depth of 60 cm) in a stratified midden on the northeastern end of the island.
Wk3754	660 ± 50	Shell (*Paphies australis*)	W15/9	Tupitika Pa, Whakatane	Subterranean storage pit that was used as a midden.
Wk3755	720 ± 50	Shell (*Paphies subtriangulata*)	U13/46	Athenree	Palisade posthole from an early phase of pa development.
Wk4189	800 ± 50	Shell (*Paphies subtriangulata*)	U14/2841	Papamoa	Southwest Quad, Feature 57. Sample from below the layer 2 midden.
Wk4190	730 ± 50	Shell (*Paphies subtriangulata*)	U14/2841	Papamoa	Southwest Quad, Feature 51—bin pit. Sample from shell fill.
Wk4191	840 ± 50	Shell (*Struthiolaria papulosa*)	U14/2841	Papamoa	Trench A, Square I4, layer 2—midden, spit 1.
Wk4192	760 ± 50	Shell (*Paphies subtriangulata*)	U14/2841	Papamoa	Southwest Quad, Square AE, layer 2—midden, spit 1.
Wk4493	750 ± 40	Shell (*Paphies subtriangulata*)	U14/2844	Papamoa	Spreading unit I—sample from midden.
Wk4494	730 ± 40	Shell (*Paphies subtriangulata*)	U14/2844	Papamoa	Spreading unit 1–2 Boundary—sample from midden.
Wk4495	710 ± 40	Shell (*Paphies subtriangulata*)	U14/2844	Papamoa	Spreading unit 3. Sample from midden directly beneath topsoil.
Wk4645	740 ± 50	Shell (*Paphies subtriangulata*)	U14/1720	Royal Palm Beach, Papamoa	Layer 2—large midden scatter forming a 10–15-cm band below the turf.
Wk4646	700 ± 50	Shell (*Paphies subtriangulata*)	U14/2794	Royal Palm Beach, Papamoa	Layer 2—large midden scatter forming a 10–15-cm band below the turf.
Wk4647	810 ± 50	Shell (*Paphies subtriangulata*)	U14/1796	Royal Palm Beach, Papamoa	Layer 2—large midden scatter forming a 10–15-cm band below the turf.
Wk4648	700 ± 50	Shell (*Paphies subtriangulata*)	U14/1796	Royal Palm Beach, Papamoa	Layer 2—large midden scatter forming a 10–15-cm band below the turf.
Wk4649	690 ± 50	Shell (*Paphies subtriangulata*)	U14/1796	Royal Palm Beach, Papamoa	Layer—large midden scatter forming a 10–15-cm band below the turf.

Continued on next page

Table A3.2—continued

LAB NO.	CRA ± ERROR	MATERIAL	SITE NUMBER	SITE NAME	CONTEXT
Wk4650	710 ± 50	Shell (*Paphies subtriangulata*)	U14/2813	Royal Palm Beach, Papamoa	Layer 2—very large midden scatter 10–20 cm under the turf, covering the top and north-facing slope of a large dune.
Wk4651	740 ± 50	Shell (*Paphies subtriangulata*)	U14/2813	Royal Palm Beach, Papamoa	Layer 2—very large midden scatter 10–20 cm under the turf, covering the top and north-facing slope of a large dune.
Wk4652	670 ± 50	Shell (*Paphies subtriangulata*)	U14/2813	Royal Palm Beach, Papamoa	Layer 2—very large midden scatter 10–20 cm under the turf, covering the top and north-facing slope of a large dune.
Wk4653	720 ± 50	Shell (*Paphies subtriangulata*)	U14/2814	Royal Palm Beach, Papamoa	Midden scatter containing several layers of shell, alternating whole and crushed material, some mixed with ash. Sample from layer 3—a lens of clean, whole tuatua shell.
Wk4654	680 ± 40	Shell (*Paphies subtriangulata*)	U14/2814	Royal Palm Beach, Papamoa	Midden scatter containing several layers of shell, alternating whole and crushed material, some mixed with ash. Sample from layer 3—a lens of clean, whole tuatua shell.
Wk4655	670 ± 50	Shell (*Paphies subtriangulata*)	U14/2814	Royal Palm Beach, Papamoa	Midden scatter containing several layers of shell, alternating whole and crushed material, some mixed with ash. Sample from layer 3—a lens of clean, whole tuatua shell.
Wk4656	660 ± 50	Shell (*Paphies subtriangulata*)	U14/2814	Royal Palm Beach, Papamoa	Midden scatter containing several layers of shell, alternating whole and crushed material, some mixed with ash. Sample from layer 3—a lens of clean, whole tuatua shell.
Wk4659	670 ± 50	Shell (*Paphies australis*)	U13/46	Anatere	Trench 4—undefended settlement. Sample from the terrace foundation, layer 9—soil and shell midden.
Wk4660	780 ± 50	Shell (*Paphies australis*)	U13/46	Anatere	Area 4a—undefended settlement. Sample from a firescoop in layer 12.
Wk4661	700 ± 50	Shell (*Paphies australis*)	U13/46	Anatere	Area 4a—undefended settlement. Sample from a shell lens in layer 7.
Wk4662	710 ± 50	Shell (*Paphies subtriangulata*)	U13/46	Anatere	Trench 4—undefended settlement. Sample from the terrace foundation, layer 22—soil and shell midden.

Continued on next page

Table A3.2—continued

LAB NO.	CRA ± ERROR	MATERIAL	SITE NUMBER	SITE NAME	CONTEXT
Wk5259	810±50	Shell (*Paphies subtriangulata*)	U14/-	Royal Palm Beach, Papamoa	Area D, Midden 4—midden located on a compacted terrace/ possible living floor. Sample from layer 4—compact dark grey/black loamy sand c. 8 cm deep.
Wk5814	770±50	Shell (*Paphies subtriangulata*)	U14/2860	Papamoa	Trench C—midden with garden soils. Sample from cultural layer 2.
Wk5815	850±50	Shell (*Paphies subtriangulata*)	U14/2860	Papamoa	Trench C—midden with garden soils. Sample from cultural layer 3.
Wk5816	820±50	Shell (*Paphies subtriangulata*)	U14/2860	Papamoa	Trench C—midden with garden soils. Sample from cultural layer 3.
Wk5817	710±50	Shell (*Paphies subtriangulata*)	U14/1722	Papamoa	Trench D—midden with garden soils. Sample from cultural layer 1C. Midden A, Trench B—midden with garden soils. Sample from cultural layer 2D.
Wk5818	640±50	Shell (*Paphies subtriangulata*)	U14/534	Papamoa	Midden A, Trench B—midden with garden soils. Sample from cultural layer 2D.
Wk6136	750±50	Shell: cockle (*Austrovenus stutchburyi*)	W15/-	Huirau Ridge, south of Ohiwa Harbour, Eastern Bay of Plenty	Midden, discrete lens within A horizon.
Wk7037	530±50	Shell: pipi (*Paphies australis*)	W15/582	Eastern side, Ohiwa Harbour, Eastern Bay of Plenty	Area A, sample 1 from section.
Wk7038	610±40	Shell: pipi (*Paphies australis*)	W15/582	Eastern side, Ohiwa Harbour, Eastern Bay of Plenty	Area A, sample 2 from section.
Wk7039	650±40	Shell: tuatua (*Paphies subtriangulata*)	W15/582	Eastern side, Ohiwa Harbour, Eastern Bay of Plenty	Area B, sample from section.
Wk7040	620±45	Shell: pipi (*Paphies australis*)	W15/582	Eastern side, Ohiwa Harbour, Eastern Bay of Plenty	Area C, sample from section.
Wk7041	600±40	Shell: cockle (*Austrovenus stutchburyi*)	W15/582	Eastern side, Ohiwa Harbour, Eastern Bay of Plenty	Area D, Square C10, layer 2.
Wk7042	560±40	Shell: cockle (*Austrovenus stutchburyi*)	W15/580	Eastern side, Ohiwa Harbour, Eastern Bay of Plenty	Sample No. 2 from section.
Wk7043	590±45	Shell: cockle (*Austrovenus stutchburyi*)	W15/581	Eastern side, Ohiwa Harbour, Eastern Bay of Plenty	Square B4, layer 3.
Wk7044	640±45	Shell: pipi (*Paphies australis*)	W15/581	Eastern side, Ohiwa Harbour, Eastern Bay of Plenty	Square B6, layer 2.
Wk7045	730±50	Shell: tuatua (*Paphies subtriangulata*)	W15/-	Ohope spit, Eastern Bay of Plenty	13 May 95, square 033, tuatua pocket layer 2, northeast corner of square.
Wk7046	800±50	Shell: cockle (*Austrovenus stutchburyi*)	W15/–	Ohope spit, Eastern Bay of Plenty	Square R30, layer 3.

Appendix 4

FAUNAL ASSOCIATIONS

Tables A4.1 and A4.2 present the animal species that have been recorded in association with archaeological sites in the Bay of Plenty region. In most cases, the association will indicate the use of the animals for food.

TABLE A4.1. FISH.

SITE	REFERENCE	BARRACOUTA *Thyrsites atun*	SNAPPER *Pagrus auratus*	TUNA *Thunnus* sp.	TREVALLEY *Pseudocaranx dentex*	JACK MACKEREL *Tracburus novaezelandiae*	BLUE MACKEREL *Scomber australasicus*	MACKEREL SP.	KAHAWAI *Arripis trutta*	GURNARD *Chelidonichthys kumu*	FLOUNDER *Rhombosolea* sp.	SHARKS/RAYS	SPOTTY *Notolabrus celidotus*	BLUE MAOMAO *Scorpis violaceus*	BLUE MOKI *Latridopsis ciliaris*	RED COD *Pseudophycis bachus*	BLUE COD *Parapercis colias*	TARAKIHI *Nemadactylus macropterus*	JOHN DORY *Zeus faber*	HAPUKU *Polyprion* sp.	ESTUARINE STARGAZER *Leptoscopus macropygus*	LEATHERJACKET *Parika scaber*
U13/46	Phillips & Allen 1996b	✓	✓	?	?	✓																
U14/2894	Hooker 1999b							✓														
W15/584	Bowers & Phillips 1997a		✓						✓	✓												
Matakana midden 8	Leach et al. 1994						✓	✓		✓		✓										
Matakana midden 10	Leach et al. 1994							✓			✓		✓	✓								
Matakana midden 22	Leach et al. 1994									✓												
Matakana midden 27	Leach et al. 1994		✓		✓											✓		✓				
Matakana midden 35	Leach et al. 1994	✓					✓	✓	✓	✓	✓	✓	✓		✓							
Matakana midden 38	Leach et al. 1994	✓			✓			✓		✓	✓	✓										
W15/9	McGovern-Wilson 1995b	✓	✓		✓							✓			✓	✓		✓				
W15/90	Grouden 1995	✓	✓					✓	✓	✓	✓							✓	✓			
U14/1945	Campbell 2004							✓														
Kohika V15/80	Irwin et al. 2004	✓	✓		✓	✓	✓		✓	✓		✓	✓				✓	✓	✓	✓	✓	✓

TABLE A4.2. MAMMALS AND BIRDS.

SITE	REFERENCE	WHALE	NZ FUR SEAL *Arctocephalus forsteri*	POLYNESIAN RAT (PACIFIC RAT, KIORE) *Rattus exulans*	DOG *Canis familiaris*	PARAKEET *Cyanoramphus* sp.	PIGEON *Hemiphagus novaeseelandiae*	KAKA *Nestor meridionalis*	PUKEKO *Porphyrio melanotus*	KIWI *Apteryx* spp.	BROWN KIWI *Apteryx mantelli*	SCAUP *Aythya novaeseelandiae*	BROWN TEAL *Anas chlorotis*	GREY DUCK *Anas superscilliosa*	BANDED RAIL *Gallirallus philippensis*	ALBATROSS SPP. THALASSARCHE, 3 DIFFERENT SIZES	GREAT ALBATROSS *Diomedea* spp.
W15/584	Bowers & Phillips 1997a			✓		✓	✓										
W15/9	McGovern-Wilson 1995b				✓			✓									
Matakana midden 38	Marshall et al. 1994b			✓													
Kohika V15/80	Irwin et al. 2004	✓	✓		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Appendix 5

CULTURAL TOURISM AND ARCHAEOLOGY IN THE BAY OF PLENTY CONSERVANCY

By Jenny Cave and Garry Law

The Bay of Plenty area is one of the most remarkable in New Zealand in terms of the inseparability of culture from the natural landscape. It possesses a deep history of prolonged and intensive Maori heritage due to its rich climate, good soils, protected waterways and its primarily coastal approaches, which are both protected and isolated by the Kaimai-Mamaku Ranges. The region saw some early colonial settlements and Episcopal missions, and has experienced conflict and large-scale technological change. Its scenic beauty, wide range of endemic and introduced flora and fauna, and the cultural landscapes as evidenced by sculpted hillsides, sacred grounds, living spaces and built environments give the region potential for cultural, heritage, industrial and eco-tourism, as well as adventure and event tourism. This section will explore the actual and potential role of archaeological sites in cultural tourism in the Bay of Plenty area.

Cultural tourism is a niche form of tourism whereby cultural sites, events, attractions and/or experiences are marketed as primary tourist experiences. It often involves, if only for commercial reasons, the creation of purpose-built cultural attractions for tourists and the modification of, or provision of access to, everyday leisure and natural attractions in ways that create opportunities for tourists to encounter cultures that are 'different' from their own. These encounters are often carefully programmed to be short, authentic and controlled. Such cultural tourism attractions have grown in popularity over the last 20 years. There is a positive correlation between the development of facilities and tourism experiences that are targeted at tourists but also available for local residents (McKercher 2001; Boyd 2002).

In the context of New Zealand, cultural tourism has been defined as 'domestic and international visitors engaging in experiences that are uniquely Aotearoa', specifically those that 'enable more depth of interaction with and understanding of our people, place and cultural identity, recognising that Maori is indigenous and unique to Aotearoa/New Zealand' (Cultural Tourism Working Party 2000). New Zealand's identity is strongly linked to a sense of place, and New Zealand depends upon the preservation and utilisation of its open landscapes, especially natural and cultural heritage landscapes, for its long-term economic future and to retain its cultural niche in the world. Even in the most populated places, New Zealanders want to be solitary occupants of beautiful, tranquil places—despite the fact that in many places a busload of tourists could arrive at any moment (Ryan & Cave 2005). It is also true that cultural tourism destinations can be overwhelmed with visitors, to the detriment of the experience. Beard & Ragheb (1980) suggested that the achievement of positive tourism experiences is strongly linked to a sense of belonging (that is identity) with a place. Many local authorities now include

preservation, care, lifestyle and aesthetics of the natural environment, and access to it, in their Community Plans (e.g. Taranaki, Hauraki, Taupo, Banks Peninsula, Southland, Nelson, Tasman and Westland).

Tourism has a multiplier effect that can be felt throughout a community (Collier 1999), as increased income for tourism businesses and public sector-funded tourism attractions results in increased money in local economies due to the influx of people from outside the region. Tourism is one of New Zealand's largest export industries. Tourism expenditure in New Zealand reached $18.6 billion for the year ended March 2006, $8.3 billion of which was spent by international tourists and $10.3 billion by domestic tourists (comprising household, business and government) (Statistics New Zealand 2007b). Tourism-related industries are, however, subject to seasonal visitor flows and exogenous shocks that put people off travelling, e.g. the terrorist attacks of September 11 2001 or the SARS virus.

The Bay of Plenty area has a population of around 267 700 (6% of the New Zealand population). The median age is 2 years older than the national median of 36 years. Maori ethnicity is 13% higher than the national average. Population growth is projected to be negligible for the next 10 years (Statistics New Zealand 2007a). In 2006, visitor numbers to the Bay of Plenty reached 3.2 million per year (Ministry of Tourism 2007b). In 2007, the Bay of Plenty was New Zealand's fifth most popular domestic tourist destination, with a 5.8% share of the total nights spent in an area (Auckland was the most popular, with 13.3%). It also ranked sixth nationally in terms of favoured day trips (made mostly from the Waikato region) (Ministry of Tourism 2007a). The peak visitor season is summer (December–February) and the peak month is January, when numbers increase to 250 000; numbers then drop to around 60 000 in winter (Ministry of Tourism 2008). To cater for this large number of tourists, the region has many tourism infrastructure facilities such as hotels, motels, retail stores and cafes (Kelly 2003).

Cultural, heritage, agri-tourism and adventure tourism are burgeoning areas of tourism in the Bay of Plenty area, which is already well known for its eco-tourism charter fishing, diving and swimming with dolphins activities. There is potential for relationships with foreign tour wholesalers, the cruise ship sector (which utilises the deep water port) and backpacker tourist websites, to bring to the Bay of Plenty visitors from other countries who wish to experience a 'real kiwi' and 'authentic Maori' lifestyle (Cave et al. 2003).

Rotorua is one of the main centres of cultural tourism in New Zealand. Cultural assets and geothermal and volcanic features combine to form a node of cultural and environmental tourism in the greater Rotorua area. Tourism in the Rotorua area attracts and sustains other different, competing and complementary businesses, which also contribute to the economy of the area. The principal cultural attractions around Rotorua are the New Zealand Maori Arts and Crafts Institute, the model village at Whakarewarewa, the Tamaki Brothers' Maori Village, Ohinemutu, the Government Bathhouse/ Rotorua Museum and Te Wairoa buried village. The latter is New Zealand's only commercial archaeological site and has recently added an award-winning interpretation centre.

The cultural aspect most presented at Rotorua is, of course, Maori, though interpretation at Te Wairoa covers the 19th-century European visitor experience, as do the exhibits at The Bathhouse. One art and craft operation—the Jade Factory—makes explicit links to the heritage of Maori carving of nephrite. The presentation of Maori culture at Rotorua has been criticised as being sanitised and popularised. The points of connection with the past generally relate to language, song, dance and traditional history, rather than to objects or sites from the past, the principal exception being the Rotorua Museum. Largely, though, the presentation is of a living culture, and the popularity of the products and the area means that this approach must be meeting a need. The Tamaki Brothers' Maori Village at Rotorua is based on 'authentic' recreations of indigenous performance arts, structures, customs, food and art/crafts repackaged for cross-cultural understanding and entertainment, which, although modern in their interpretation, are authorised by Maori elders and can therefore be considered 'authentic' (Ryan 2002). Authenticity of performance is the 'pull' that attracts visitors to the particular attractions (Cave et al. 2003).

Cultural tourism at Rotorua has a long history. Te Arawa sided with British forces during the New Zealand Wars and facilitated European access into its territories when other iwi that were opposed to settlement were resisting road construction. This led to the district being seen as one that was both safe to visit and easily accessible. Even before the arrival of the railway, tourists were visiting Rotorua through Tauranga (Town Wharf opened 1871) via the Oropi-Ngawaro road. Tourism reached new heights with the opening of the railway to Rotorua in 1894, which helped to overcome the loss of the famous Pink and White Terraces during the 1886 Tarawera eruption.

Archaeological heritage is presented and interpreted at the following five Department of Conservation sites in the Bay of Plenty area:

- Okere Falls power station, where the pioneer energy generation facility is presented.
- Galatea Redoubt sites, where there are well-presented interpretation boards.
- Tauwhare Pa, Ohope—a well-maintained complex of three pa, which have some visualisation of archaeological results, with posts standing in the sites of former posts that were revealed in excavation by postholes. The interpretive signs at this site have not been maintained to the original standard.
- Some of the Karangahake gold and silver mining and ore processing sites that are within the Bay of Plenty Conservancy area, though the better tracks and interpretation are across the river in the adjacent Waikato Conservancy, where the site complex is entered.
- The Waiorongomai Goldfield, where most of the archaeological remains are less accessible than at other locations, although there is good interpretation at the site entry.

Information about these sites is not readily available to visitors planning trips. The DOC website (www.doc.govt.nz) provides variable amounts of information about them, some of which is more oriented towards school parties. Little interpretation is provided at other non-DOC sources of

information. However, the booklets and leaflets available at the Whakatane Museum do form a good guide to the heritage features of that area, many of which are archaeological.

On the internet, the site http://dayout.co.nz provides a comprehensive list of heritage attractions in the Bay of Plenty region; however, they are only briefly covered. The New Zealand Archaeological Association website www.nzarchaeology.org contains a section on Bay of Plenty archaeological sites for cultural tourists, with a comprehensive set of links. The sites covered there include:

- Te Kura a Maia Pa, Bowentown
- Te Kaputerangi—'Toi's Pa', Kohi Point Walkway, Whakatane
- Te Koutu Pa, Okataina
- Te Wairoa—The Buried Village
- Papamoa Hills, Wharo Pa, Tauranga
- Galatea Redoubt, Murapara
- Gate Pa Battle Site, Tauranga
- Te Ranga Battle Site, Tauranga
- Monmouth Redoubt, Tauranga
- Mt Maunganui/Mauao
- Tauwhare Pa, Ohope
- Waiorongomai
- Okere Falls Power Station, Rotoiti
- Karangahake
- White Island Sulphur Works

The Historic Places Trust website has relatively little information about the Bay of Plenty area. The registered archaeological sites appear in the internet version of the Trust Register of Historic Places, but with only basic location information; and on the Trust website, none of the featured places to visit are in the Bay of Plenty area.

While brochures about individual heritage attractions are commonly displayed in hotels, motels, museums and the like, there appear to be no comprehensive guides to heritage assets of the region in leaflet or booklet form that are accessible to visitors. Accommodation providers often mention local attractions, but outside Rotorua heritage attractions get little exposure by this route in the Bay of Plenty area. Te Aroha and Katikati are the only towns in the conservancy that cultivate a heritage image (Porteous 1997).

A small number of tourism operators offer tours throughout the Bay of Plenty area. In the Rotorua area, many of these offer multi-site cultural tours of the region; however, none in the western Bay of Plenty specialise in this. Guides to White Island point out the sulphur mining remains to people on their tours.

Clearly, although the Bay of Plenty region has a great archaeological heritage, this asset is currently being under-utilised. Rotorua, with its existing visitor attractions, might seem to be a good place to develop an archaeological heritage aspect. However, many of the existing attractions are already

satisfying the cultural visitors' needs, and with the publicly-accessible archaeological sites in the area being generally less remarkable than elsewhere, they may be a difficult to develop further.

The concentrations of notable archaeological sites in other parts of the Bay of Plenty area, especially those clustered around Tauranga, provide likely alternatives for consideration. The tourism opportunities presented by the new regional park centred on the Papamoa pa complex and a proposed Tauranga Museum would be considerable if they were developed. The museum could be an integrating body for the heritage resources of the western Bay of Plenty rather than a stand-alone institution. It would not, however, include material relating to the eastern areas of the region.

Visitors to the Bay of Plenty area are predominantly domestic New Zealanders from the Waikato region (in a ratio of three to one), but international visitors make up a higher proportion of accommodation nights. Visitors are dominantly holidaymakers. This contrasts with the rest of New Zealand, where business and family travel are relatively more important. Tourism in the Bay of Plenty is localised by geography and travel time (2–3 hours by car from Auckland).

The total visits by all travellers to the Bay of Plenty area are forecast to increase by 1.1% per annum, to reach 3.45 million in 2013—an increase of 254 300. While these numbers appear large, 90% of the visitors are actually New Zealanders, and most of these are from the Waikato region, on holiday, visiting friends and relatives (49%) during 3 months of summer. International traveller numbers are small. Domestic business travel is smaller by comparison (under 6%) and foreign education students make up 3% of the international figure.

Domestic traveller numbers are expected to fall slightly (by 1.5%) over the next few years. They typically stay 3.2 nights with friends and relatives rather than in commercial accommodation. International visitor numbers are expected to increase from 8.3% to 9.8% in the next 7 years. Most come from Australia (35%) and the UK (23%) to visit friends and relatives (44%). On average, visitors stay 4.6 nights in the Bay of Plenty and spend $153 per person per visit (Ministry of Tourism 2007b).

Recent research suggests that reliance on numeric counts of visitorship is no longer a reliable way to assess the impact of tourism on a region. Different visitor types have been identified as giving different 'yields' to the New Zealand economy. 'Coach tourists' bring the largest amount of money into an area per capita (simplistically, the amount spent per visitor per visit night). 'Free and independent travellers' who drive in private or rented cars and set their own timetables and visit agendas were the second highest spenders per head. 'Home visitors' spent the least amount of money in an area, while 'camping' and 'backpacker' tourists were medium spenders, ranking 3rd and 4th respectively (Becken et al. 2007). This information is important when considering the future of tourism in the region against the actual and forecast profiles.

As noted above, around 50% of visitors to the Bay of Plenty are 'Home Visitors', which is the lowest yielding tourist type in terms of 'new money' brought into the economy from outside; thus, the likelihood of domestic tourism itself netting extensive revenue is also low. Nonetheless, the

outdoors experience, rich cultural landscape and scenic beauty of the region might be leveraged to increase the proportion of international visitors to the area by encouraging 'free and independent' drivers to steer away from the main arterial routes; as well as encouraging walking, trekking and land-based sightseeing activities, which are preferred by over 80% of backpackers (compared to 66% of non-backpacker visitors) (Ministry of Tourism 2005). Events are also known to be a factor in the holiday decision-making of one in every four domestic holiday visitors (Angus & Associates Ltd 2007). A constraint for all international tourism planning, however, is the distance of the Bay of Plenty from Auckland (the main gateway to the country), the lure of Rotorua as a 'must see' destination, and distance from main arterial routes.

International tourism in the region centres on Rotorua. Tourists from Asia make up a higher proportion of visitors to this region than the average for the whole country. Geothermal and Maori cultural attractions feature highly in international visitor activities, but less so in activities of domestic tourists. This indicates that the greatest opportunity for increasing heritage visitation lies with the dominant car-borne domestic tourists, and in areas away from the already well-provided-for Rotorua area.

Much better use could be made of regional guides in internet and printed form. Better opportunity could be taken for themed road directional signage, inclusion of such information in GPS systems, interpretation at the sites and use of that interpretation to suggest other places to visit. Promotion of cultural visitation, environmental experiences and eco-tourism opportunities to tour operators and, particularly, accommodation providers is also likely to be beneficial.

However, caution should be exercised in the development of cultural tourism resources. Research in New Zealand and Australia has shown that people with a strong, purposeful interest in culture represent only about 3–7% of the total numbers who actually visit sites of cultural interest—the remaining visitors are motivated by reasons that range from simply accompanying others who express an interest, having somewhere to take children, or being there because it was part of an arranged itinerary, through to having an actual interest, but in a wider context than the simply cultural (Ryan & Huyton 2000, 2002; McKercher & du Cros 2002; Cave 2002; McIntosh 2004). A survey of domestic holidaymakers at Mt Maunganui showed that the top ten summer activities of choice were going to the beach, eating out, shopping for clothes, walking or hiking, visiting hot pools, swimming with dolphins, going on harbour cruises, shopping for sporting gear, taking chartered fishing trips and shopping for gifts. In contrast, visiting museums, art galleries and cultural heritage sites ranked much lower in the list (Kelly 2003).

When implementing cultural tourism, issues to be considered include:

- Who decides what is 'authentic', who presents authenticity, and who takes part—cultural communities, local governments, individuals and/or entrepreneurs?

- Does 'authentic' content mean an objectively 'historical stopped clock' undertaken by researchers; a cultural community '(re)constructed pre-colonial' view of traditional cultural practices; or 'contemporary culture' authorised by community elders?
- Does authentic presentation mean that cultural tourists experience 'real' participation in language, custom and practice of family, spiritual and community life; themed 'performance snapshots'; interpreted tours and short controlled encounters; information panels at venues or sites without human interaction; or interpreted visual experiences of archaeological heritage sites and other complexes?

Tourism as a sector is one of the few industries wherein supply can generate demand if its operation is imaginative, well-designed and efficient. For example, the world was not actually demanding a theme park based on Mickey Mouse, but the actualisation of Walt Disney's vision has created one of the most visited destinations in the world (Wasko et al. 2001). Thus, it is possible for the most unlikely of products and locations to become successful if it is carefully researched, designed and advocated for as distinctive from other destinations.

New Zealand Government