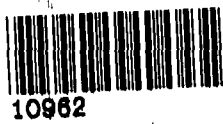


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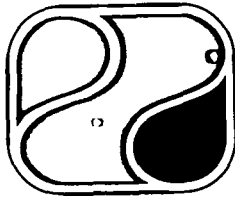
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DEPARTMENT:

TRANSIT DIRECTIONS

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HAURAKI CATCHMENT BOARD

YOUR REF:

OUR REF: 1/20/4/1

26 August 1985

The Regional Secretary for Transport,
Ministry of Transport,
Marine Division,
Private Bag,
AUCKLAND.


ATTENTION: Mr P. Spackman

Dear Sir,

EROSION - RAMARAMA STREAM MOUTH, WHIRITOA

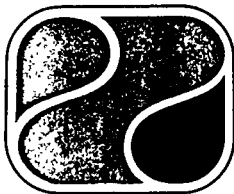
I append for your information a copy of a letter recently sent to Mr D. Cummings of Whiritoa concerning erosion to his property on the right bank of the Ramarama Stream.

Yours faithfully
D.H. Smith
ACTING GENERAL MANAGER


per.....
L.S. Hale
Assistant Secretary

lsh:cac

*copy to H/O
30/8/85*



HAURAKI CATCHMENT BOARD

YOUR REF:

OUR REF: 1/20/4/1

23 August 1985

Mr D. Cummings,
C/ Post Office,
Whiritoa,
VIA WAIHI.

Dear Sir,

EROSION - RAMARAMA STREAM MOUTH, WHIRITOA

Your letter dated 7 June 1985 is acknowledged. The area of erosion has since been inspected on behalf of Board by Messrs Dell and Jones and they report that the erosion that you refer to in your letter has been caused by the south-erly migration of the mouth of the Ramarama Stream.

Stream mouths on beaches tend to migrate backwards and forwards for various reasons, in this case possibly because of high seas, heavy rain and hence increased stream flow. With a change of conditions, the stream mouth may well move back to the north. However, it has to be stated that river and stream mouths have been known to migrate several hundred metres at times.

This stream erosion, (although it is related to wave dynamics in the stream mouth), is quite separate from the condition of the ocean beach as a whole which is not eroding. The ocean beach itself appears healthy enough in the opinion of Board staff although wind erosion from disturbed surfaces has to be guarded against.

Cross sections of the beach were resurveyed in July. Compared with earlier cross-sections it appears that perhaps some 50,000 cubic metres of sand may have moved offshore as a result of the high seas towards the end of June. (as a comparison, the sand mining at the southern end of the beach removes some 4000 cubic metres per annum). Nevertheless, the present beach level is still outside the 1978 line which has been taken as a marker, and the beach has stayed within the known/assessed envelope of cut and build since that date.

It is anticipated that the 50,000 cubic metres of sand will tend to move back inshore as weather conditions permit.

Returning to the matter of particular concern to you, (the mouth of the Ramarama Stream at the northern end of the beach), recent indications have been that it is already moving back to the north away from your property, as part of a cycle related to weather and other patterns. Measures to control the migration of the stream mouth by way of concrete or rock work would be expensive and almost certainly doomed to failure, giving perhaps a modicum of apparent protection for a time until a major storm event occurred. Marram grass has been planted along the foredune as a stability aid, largely to limit wind erosion. Such growth would, however, offer little resistance to a major storm event with ocean waves pounding the stream mouth and meeting higher stream levels due to rainfall in the stream catchment.

Subsidies for work to protect coastal subdivisions developed since October 1971 are not available in accordance with the stated policy of the National Water and Soil Conservation Authority. Any work which you might contemplate carrying out at your own expense would require the prior approval of this Board. However, as has been indicated in the foregoing, such work is likely to be ineffective in protecting your property. Any such monies would probably be better applied to shifting your house back on your section further away from the beach and stream mouth.

I trust that I have covered adequately the points made in your letter. Should you wish to discuss the matter further, or have further questions, I would be pleased to assist.

Yours faithfully
D.H. Smith
ACTING GENERAL MANAGER

per.....
L.S. Hale
Assistant Secretary

lsh:cac

Copy To: County Engineer,
Ohinemuri County Council,
P.O. Box 17,
PAEROA.

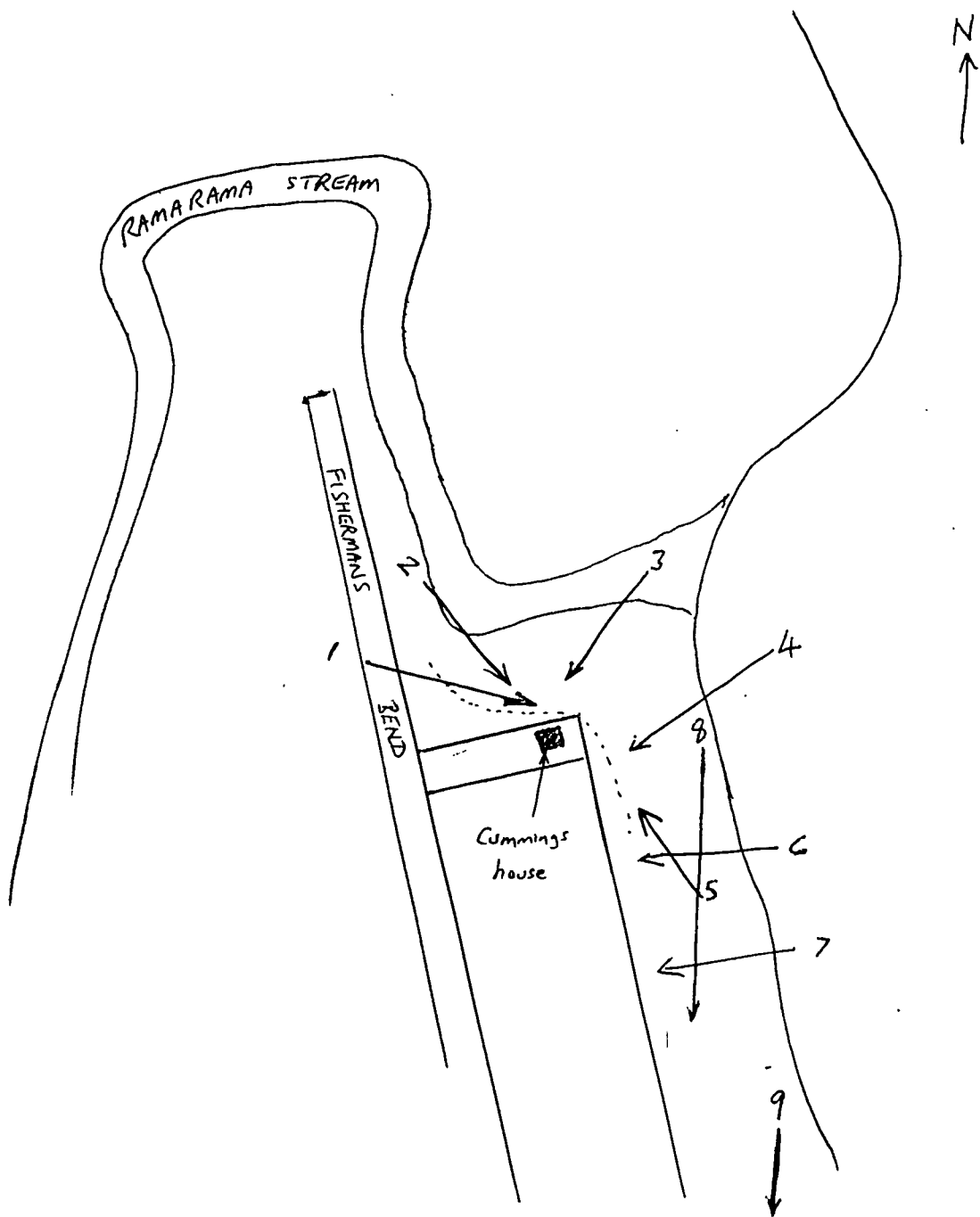
*Ministry of Transport
Marine Division,
Private Bag,
Auckland.*

Attn. Mr. P. Spackman

- Section owned by D. and E. Cummings

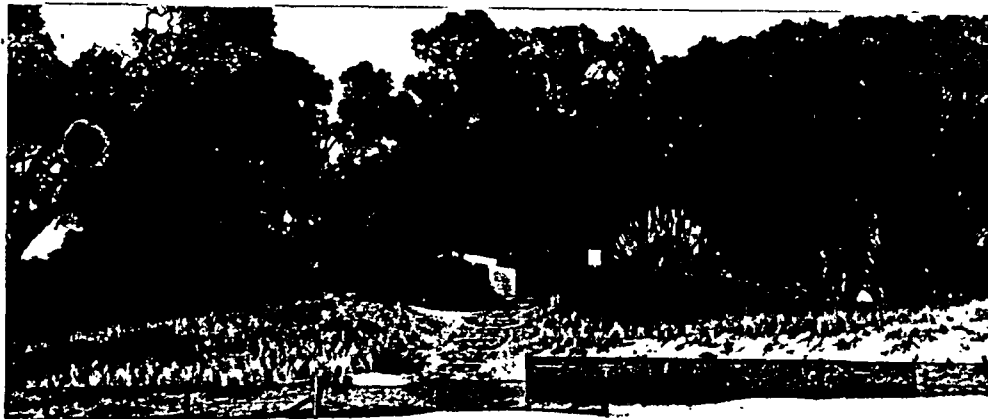
Whiritoa Beach
Recreation Res

al - Residential



Location plan for photos.

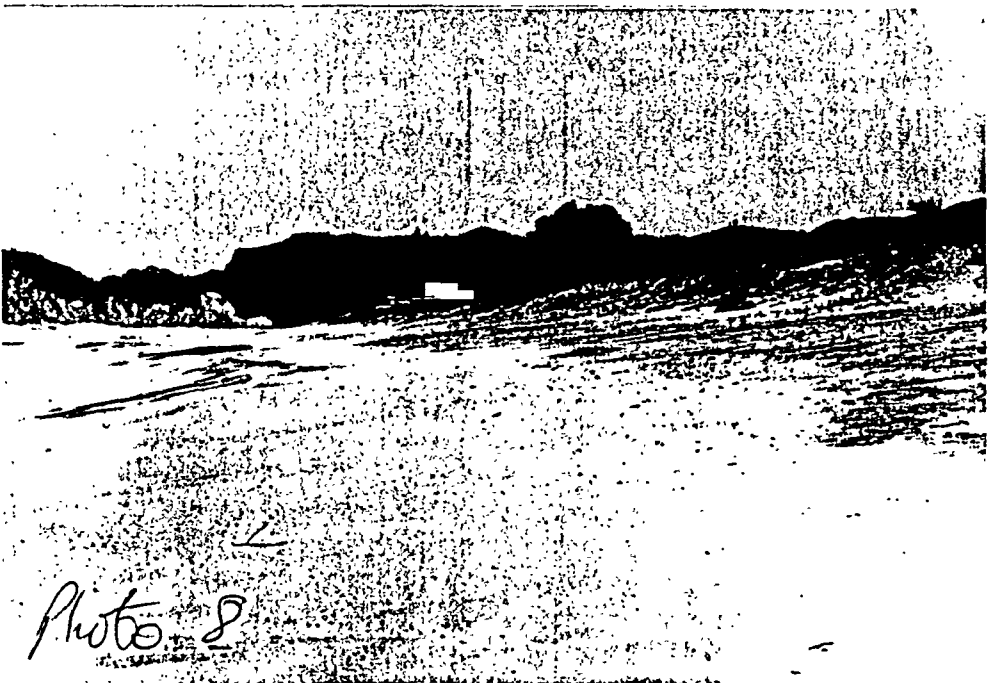
Sketch plan only - not to scale



Further south on ocean
beach. Sand is
accumulating in fences.

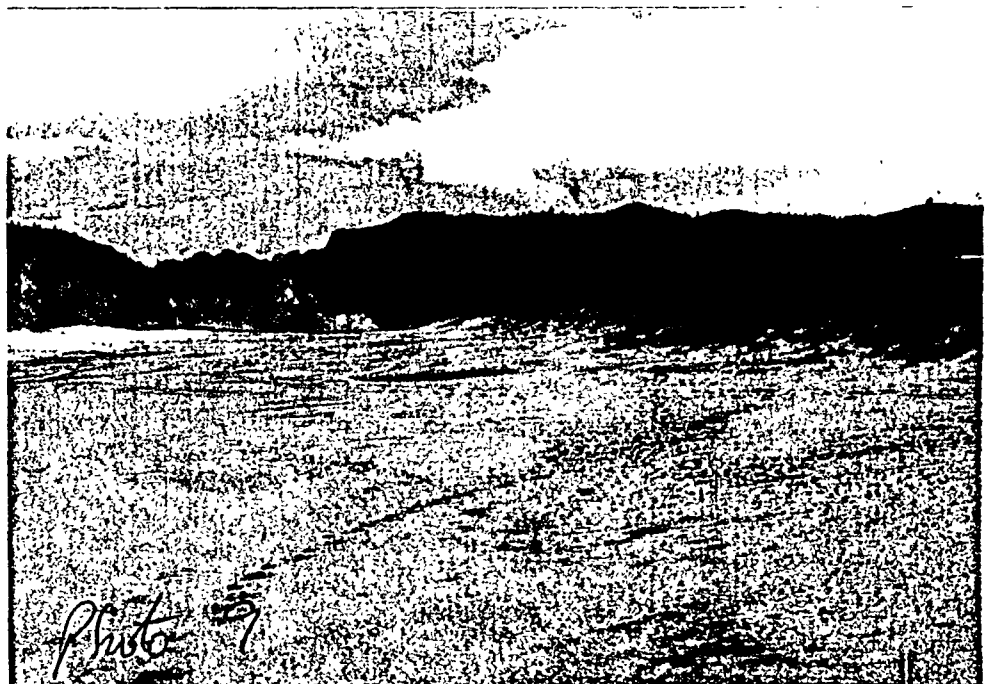


Photo 7



View to south along beach.
No apparent cutting of dune.

Photo 8



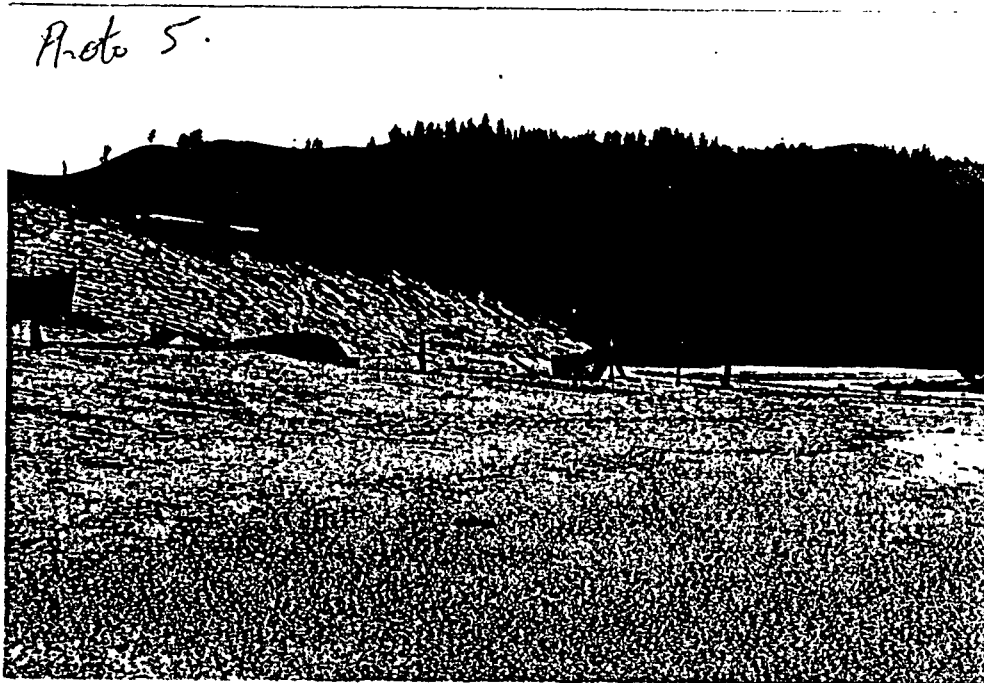
View to south end of
beach where mining
takes place.

No apparent cutting of dune.

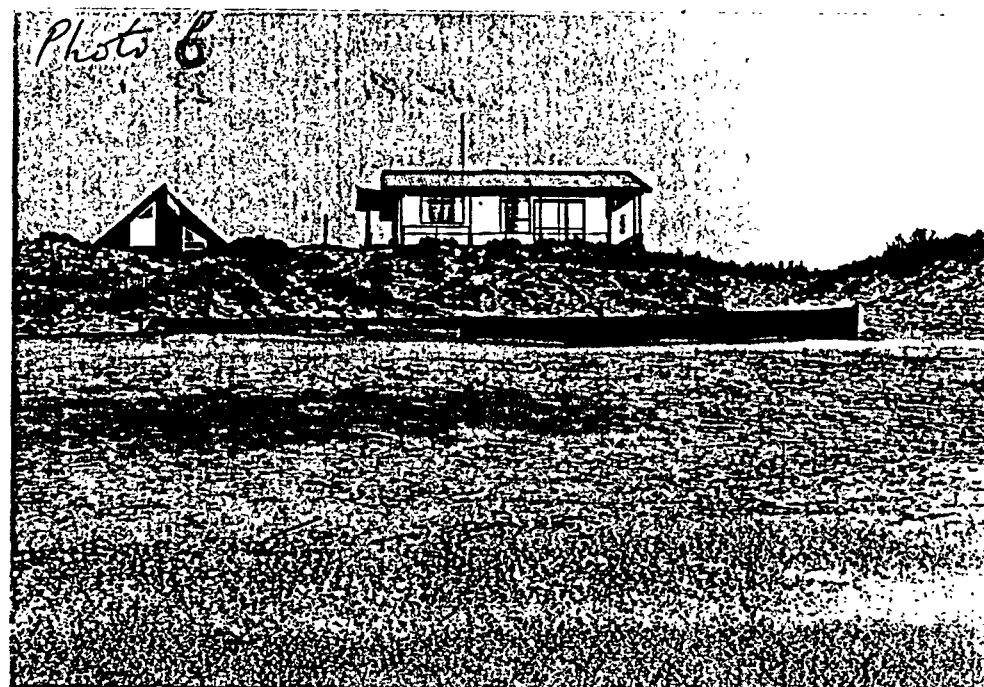
Photo 9



Frederic in front of Cummings
home (which is to right rear)



Looking north along beach
towards Ramarama stream



Next house along beach to
south.

Road is accumulated in
fence

Photo 1.



Right bank Ramarama Stream
looking seawards.

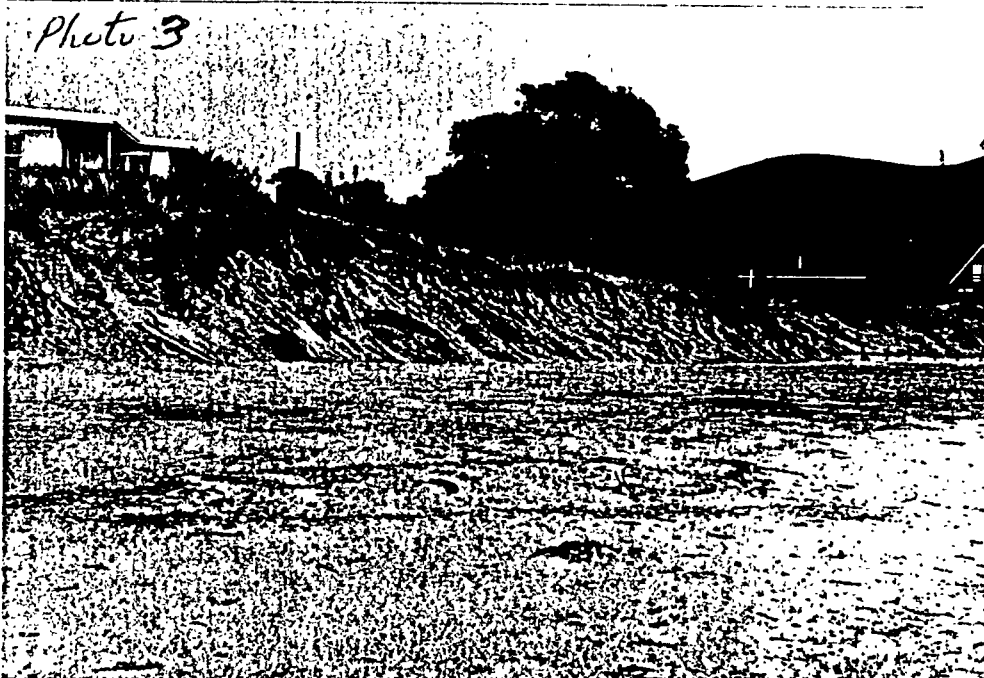
Photo 2



Right bank Ramarama Stream
looking seawards.

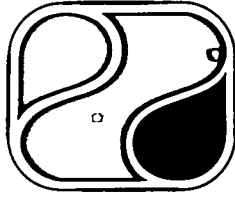
Humming home on right

Photo 3



Right bank Ramarama Stream
looking inland from mouth.

Humming home on left



HAURAKI CATCHMENT BOARD

YOUR REF:

OUR REF: 1/20/4

26 August 1985

Ministry of Transport,
Private Bag,
AUCKLAND.

ATTENTION: Mr P. Spackman


Dear Sir,

EASTERN COROMANDEL COASTAL INVESTIGATIONS

Enclosed is a copy of a research paper 'A preliminary investigation of the sediments on the eastern Coromandel inner shelf and implications for cross shelf transport'.

A Section of the paper details Whiritoa Beach and this may be of interest with regards to the present situation.

Yours faithfully,
D.H. Smith
ACTING GENERAL MANAGER


per.....
L.S. Hale
Assistant Secretary

LSH:CAC
ENC.

1985 Australasian Conference on Coastal and Ocean Engineering

A PRELIMINARY INVESTIGATION OF THE SEDIMENTS ON THE EASTERN
COROMANDEL INNER SHELF AND IMPLICATIONS FOR ACROSS-SHELF SEDIMENT
TRANSPORT

P.M. Dell¹, T.R. Healy² and C.S. Nelson²

ABSTRACT

Previous work has concluded that the predominantly headland-bay beaches of east Coromandel are isolated systems not nourished by a littoral drift. The present study was initiated to investigate the open questions of the relationship between beach and inner shelf sediments, and the potential for across-shelf sand migration to nourish the beaches.

Based on dredge and box-core sampling, scuba diving observations and an extensive side-scan sonar survey in water depths from 5 to 40 m, the major inner shelf sediment facies have been delineated. Off the typically medium (to coarse) sand beaches, fine sands supporting small-scale symmetrical ripples occur down to about 20 m depth, from 20 to 40 m depth a complex mix of medium to coarse sands including shell hashes and patches of fine sands occurs, and muddy very fine sands occupy deeper water. The offshore belt of coarse-grained sediments, which display textural overlap with the onshore beach sands, has locally extensive areas of symmetrical megaripples with shore-parallel crests. While the dynamics remain to be investigated, it is postulated that during onshore storm swells the megarippled coarse sediment can move shorewards under the influence of bottom mass transport, certainly to depths of 20 m, probably shallower, and possibly on to the beach.

INTRODUCTION

During 1978-1981 a base-line survey of the beaches along the eastern Coromandel Peninsula of North Island was begun by the Department of Earth Sciences, University of Waikato. The information was deemed necessary because of the increasing pressure that planning and subdivision was making on the coastline, and because in several areas the coastline was experiencing erosion problems. The survey provided a wealth of general textural and compositional information on the dune, beach and nearshore sediments at 27 beach localities along the Peninsula, as well as an assessment of the erosion/accretion state of each of these beaches (Fig. 1; Healy et al., 1981; Healy and Dell, 1982).

Based mainly on their geomorphology, sediment type and

¹ Hauraki Catchment Board, Te Aroha (now at Waikato Valley Authority, Hamilton, New Zealand).

² Department of Earth Sciences, University of Waikato, Hamilton, New Zealand.

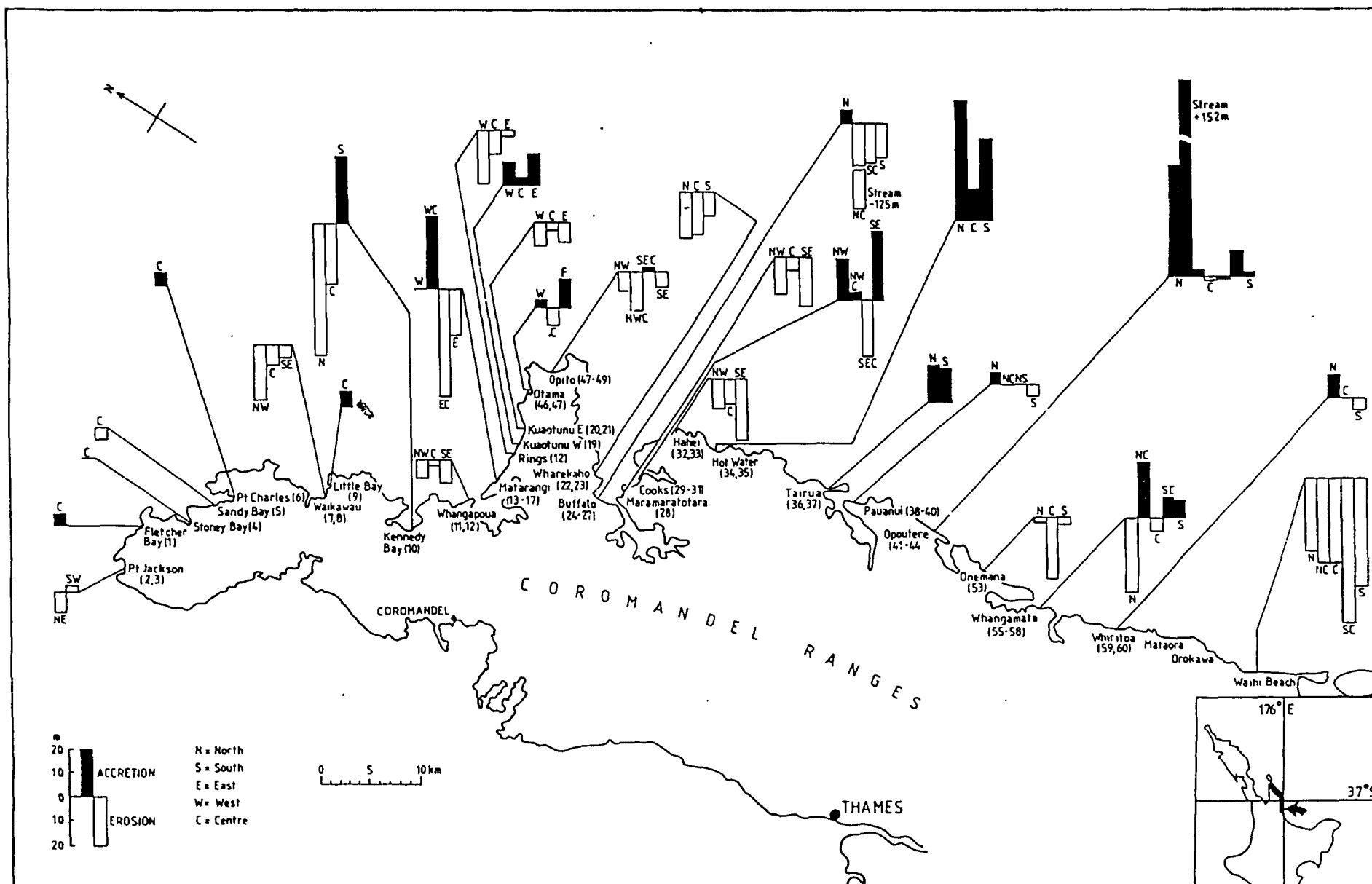


FIGURE 1: Locality map and erosion/accretion trends of beaches along the east Coromandel coast between 1945 and 1978 (after Healy et al., 1981).

erosion hazard potential, the beaches were classified into four categories:

1. Long barrier spit beaches (e.g., Matarangi, Pauanui and Opoutere). These are typically flat, fine sand beaches at their attached end, passing laterally to medium sand beaches with berm formation and offshore bar and ebb-tidal delta development at their distal end (Fig. 2a). They have demonstrated susceptibility to severe episodic erosion.

2. Pocket bay-head barrier beaches (e.g., Whiritoa, Onemana and Otama). These are steep, medium to coarse sand beaches, with prominent berms, but only incipient offshore bars. Off shore these coarse-grained sediments typically fine abruptly at about the 8 m isobath (see later). The beaches are high energy ones without evidence of marked dune erosion, although they have been prone to episodic cut-and-fill (Fig. 2b).

3. Moderate energy embayed beaches (e.g., Kennedy Bay, Simpsons, Opito and Cooks). These beaches have flat offshore profiles with little or no evidence of an offshore bar (Fig. 2c). They form in response to moderate swell waves and have been the most susceptible to storm damage.

4. Some beaches, such as Whangamata, Kuaotunu, Waikawau and Whangapoua, are more complex and do not fit well into any of the above classes.

One of the most important conclusions arising from the Coromandel Coastal Survey (Healy et al., 1981; Healy and Dell, 1982) was that, in the main, the east Coromandel coast consisted of a series of isolated headland-bay beach systems not nourished by a regional littoral drift. However, the question of possible onshore-offshore movement of sediment remained an open one and was responsible for seeding the present study.

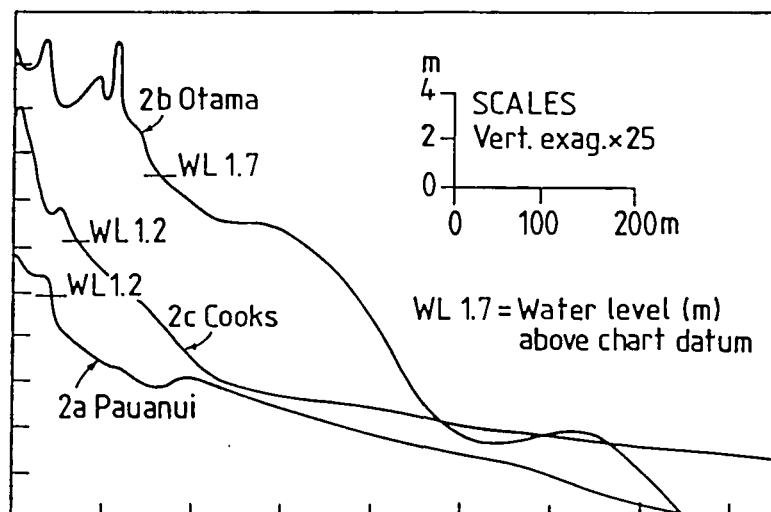


FIGURE 2: Typical dune-beach-nearshore profiles for the three beach categories along east Coromandel.

PRESENT SURVEY PROGRAMME

This study was initiated in 1984 in an attempt to determine the relationship between the on- and off-shore sediments and in particular to ascertain whether beach nourishment could be accomplished by across-shelf sediment movement. The information is particularly relevant to planning in relation to coastal development and the problems of erosion and beach mining, as well as assessing the potential of offshore sediments as an aggregate source. The study area extends from Waihi Beach in the south to Whangapoua in the north (Fig. 1) and has been concentrated on the inner shelf between about the 5 and 40 m depth contours. The programme to date has involved extensive dredge and box-core sampling, scuba diving and photography, and side-scan sonar mapping, and has enabled some locally very comprehensive records to be constructed of the nature, bedforms and texture of the inner shelf bottom sediments (e.g., Fig. 3).

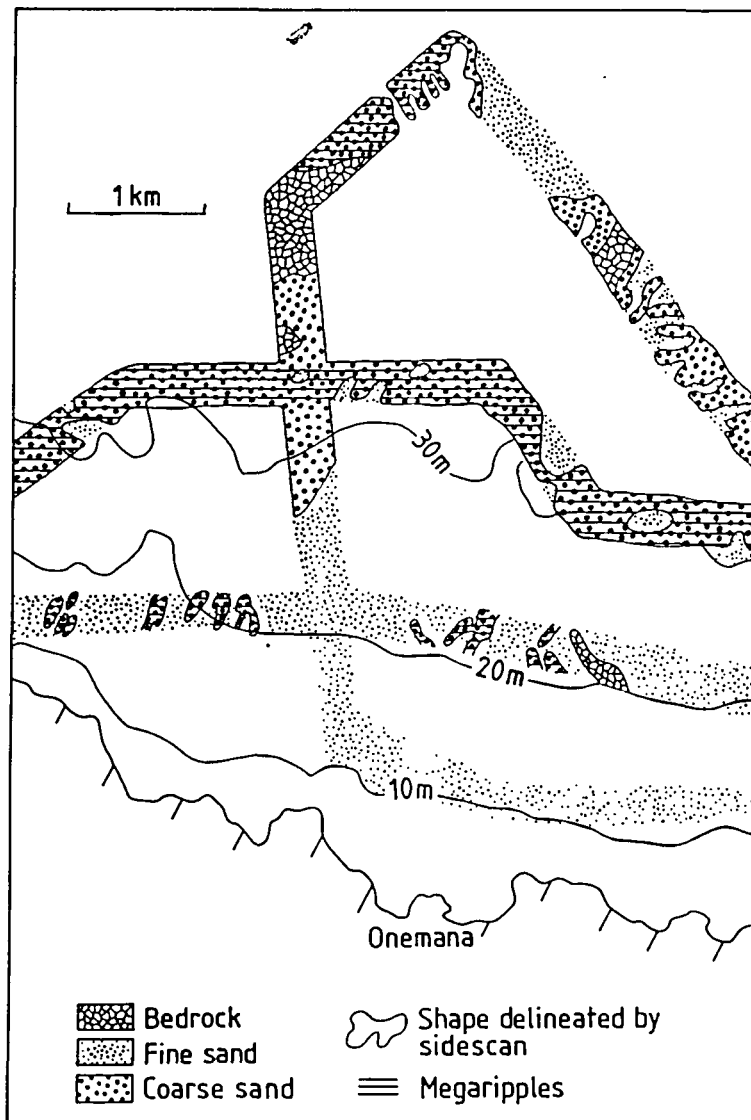


FIGURE 3: Nearshore sediment distribution map off Onemana based on side-scan records and bottom sampling.

Bottom Sediment Types

Analysis of side-scan sonar records enables definition of 11 different sonograph signals (Table 1), although these appear to relate to only four fundamentally-different substrate types: fine sands; medium to coarse sands; shell beds of horse mussels and/or scallops; and submarine rock outcrops. The shell bed and rocky bottom signatures have restricted distributions. The medium to coarse sand signature often required extensive dredging to distinguish predominantly terrigenous sands from shell hashes, or a mixture of both. These coarse-grained sediments frequently support symmetric megaripples with wavelengths from 0.7 to 1.2 m and heights of 0.1 to 0.3 m. Apart from some minor variations, the strike of the megaripples was more or less shore-line parallel and megaripple crests were typically continuous for distances of tens to hundreds of metres. Scuba diving showed that the areas covered by the fine sand signature often support small-scale symmetric ripples, from 0.1 to 0.2 m apart and 2 to 5 cm high. Like the megaripples, the ripple crests were generally oriented parallel to the coastline, but they rarely exceeded several metres length. In some areas the fine sandy substrate was hummocky with no clearly defined bedforms. An example of the kind of inner shelf sediment facies map produced from integrating the side-scan and textural information is shown for the Onemana and Whiritoa regions in Figs. 3 and 4a.

An outstanding feature common to the entire inner shelf region between Waihi Beach and Hot Water Beach is the occurrence of a distinctive textural boundary at about the 20 m isobath, separating inshore fine sediments from offshore coarser sediments. Despite some variation in the definition of the boundary, which is locally patchy, the shelf shallower than 20 m consists typically of very fine to fine (rarely medium) sands with small-scale ripples, while that deeper than 20 m and down to about 40 m consists of medium and coarse sands, gravels and shell hash, not uncommonly in the form of megaripples. However significant areas of fine sands occur within the offshore coarse sediment zone producing a very patchy sediment distribution pattern. Preliminary box-coring analysis shows alternating fine and coarse sand laminations in the sub-bottom sediments in the vicinity of the textural interfaces. Beyond the 40 to 50 m isobath, a featureless bottom of muddy very fine sands prevails.

The offshore megarippled areas are conspicuous and relatively widespread, and in many instances form distinctive fingers and patches of coarse sediment oriented obliquely through normal to the shoreline, surrounded by rippled fine sands (Figs. 3 and 4a). Analogous megarippled coarse sands have been recorded by Black and Healy (1983) on the ebb-tidal delta to Whangarei Harbour, Northland, and overseas examples are cited by Swift and Freeland (1978), D'Olier (1979) and Morang and McMaster (1980). Their occurrence on the east Coromandel shelf is evidence of periodic movement of coarse sediment in waters as deep as 20 to 25 m.

This study supports earlier contentions (Healy et al., 1981, Healy and Dell, 1982) that no significant littoral drift occurs along the east Coromandel coast. Evidence for this includes the

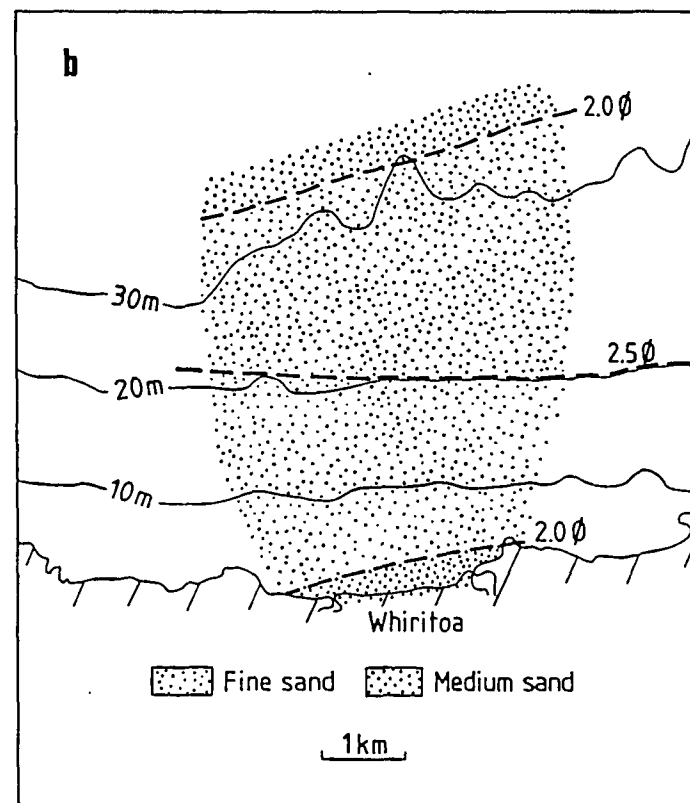
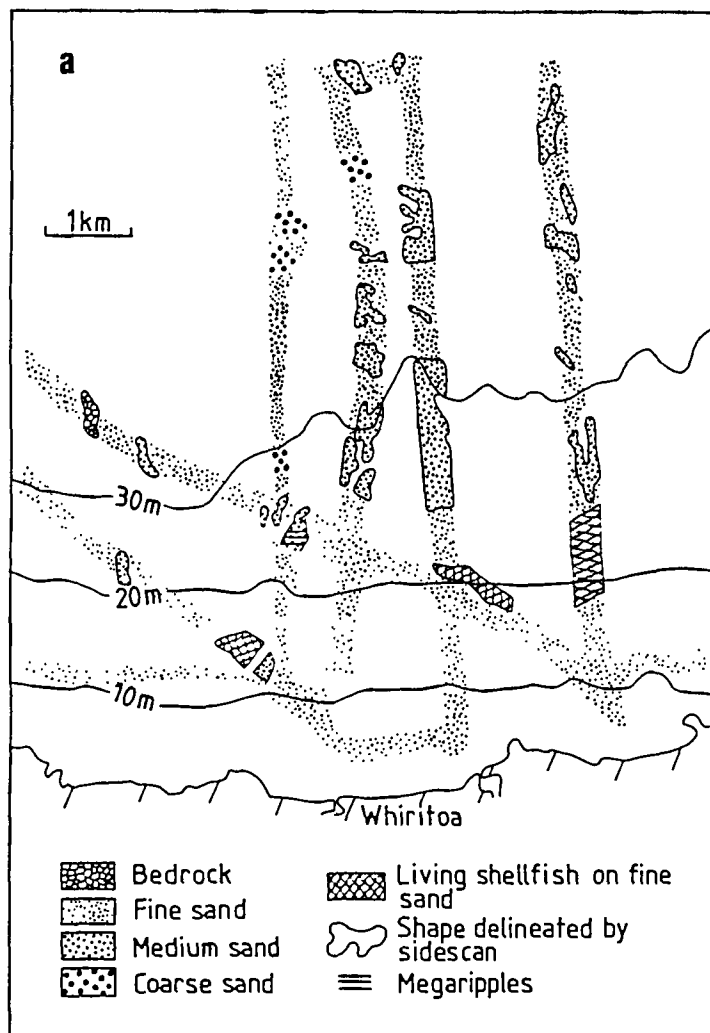


FIGURE 4: Comparison of nearshore sediment distribution maps at Whiritoa based (a) on our side-scan records and bottom sampling, and (b) on the textural analysis of bottom samples recorded by McLean (1979) and Willoughby (1981).

TABLE 1 - INTERPRETATION OF SIDE-SCAN SONOGRAPH SIGNALS.

<u>Signal</u>	<u>Interpretation</u>	<u>Verification</u>	
		<u>Dredging</u>	<u>Diving</u>
<u>1. Strong Reflector</u>			
(1a) Covers entire trace, clear definition of rocky bottom	Bedrock, possibly veneered by sand	-	YES
(1b) Isolated strong reflectors	Discrete boulders	-	-
<u>2. Featureless signal</u>			
(2a) Light fine granular pattern - no discernible bedforms	Fine sand lightly bed-formed - ripples, $\lambda = 0.1-0.2m$, $h = 2-5cm$	YES	YES
(2b) Dark fine granular pattern - no discernible bedforms	Coarse sand. Occurs as sheets and patches (shell hash) (see 3b)	YES	YES
(2c) Bland pale signal $\approx 2a$	Same as 2a	YES	-
<u>3. Rippled Signal</u>			
(3a) Distinctive signal with clear evidence of megarippled bedforms - often occurs in fingers, patches	Coarse sand, shell hash Megarippled (2b) $\lambda = 0.7 - 1.2m$ $h = 0.1 - 0.3m$	YES	YES
(3b) Dark fine grained signal, lightly bed-formed - intergrades with 2b	Coarse sand. Mega-rippling weak or not seen as side-scan is parallel to strike	YES	YES
(3c) Irregular large bed-forms	-	-	-
<u>4. Coarse Granular Signal - Discrete lumpy features</u>			
	Believed fine sand	-	-
<u>5. Sinuous Ribbon</u>			
	Steep face on lobe, runnel of sand	-	-
<u>6. Blebs - Isolated blurry reflections on a light fine granular background</u>			
	Isolated shell patches, horse mussel colonies	YES	YES
<u>7. Composite dark fine granular 2b, inter-meshed with 2a and cross lineations</u>			
	Scallop beds on fine sand. Sometimes dredge lines apparent	YES	-

wide variation in the sediment texture and, to a lesser extent, composition of adjacent beaches separated by prominent headlands, and the shore-parallel attitude of the megarippled and rippled bedforms.

Possible Across-shelf Sediment Movement : the Whiritoa Beach Situation

Several previous studies of the mineralogy and texture of the on- and off-shore sediments at Whiritoa (e.g., Christopherson, 1977; McLean, 1979; Healy, 1981; Willoughby, 1981) came to the same general conclusion that the beach system is essentially a closed one confined by bounding headlands to the north and south. Given this, it is of interest that despite long-term (about 30 years) sand mining on the beach the dune line has remained essentially stable (Healy et al., 1981). The textural data of McLean (1979) and Willoughby (1981) were interpreted by them to indicate the existence of three shore-parallel sediment zones (Fig. 4b): medium to coarse sands on the beach itself; fine sands in the nearshore region (about 8 - 30 m depth); and medium to coarse sands further off shore. On this basis, these earlier workers contended that there was no shoreward movement of the coarse-grained offshore sediment towards and/or on to the beach. However, the analysis in this survey of a much larger number of samples from off Whiritoa demonstrates that a complete textural transition occurs between the offshore and onshore areas (Fig. 5), a trend also noted elsewhere on parts of the New Zealand coastline (e.g., Schofield, 1978; Dahm and Healy, 1980, 1985). Moreover, shoreward sediment movement is suggested by the presence of the zones of megarippled sand fingers and patches on the sonographs (Figs. 3 and 4a), despite a present lack of information on the amounts and rates of sediment transport. In passing, because the offshore medium to coarse sands exhibit textural overlap with the beach sands (Fig. 5) they have potential for commercial extraction.

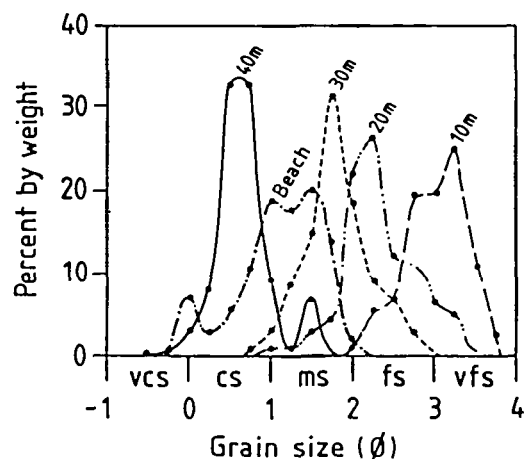


FIGURE 5: Grain-size of beach and nearshore sands at Whiritoa. Vcs, cs, ms, fs and vfs refer to very coarse, coarse, medium, fine and very fine sand respectively.

Some speculation concerning the ability for sediment movement can be made. Morang and McMaster (1980) suggested several mechanisms for the development of megarippled coarse sands off southwestern Rhode Island and favoured formation by rip current cells. This is unlikely in the Coromandel case because of the distance (up to 2500 m) of the megarippled zones from the beach. The possibility of wave generation of the megaripples was made by Morang and McMaster (1980) and is compatible with the occurrence of the megarippled sand fingers and patches off steep, coarse-grained, high energy beaches along the east Coromandel. For the megarippled coarse sand fingers at Whangarei Harbour, Black and Healy (1983) concluded that "there is little doubt that the bedforms have been modified by surface gravity waves, but their existence in a bed depression, and grain size evidence suggests the presence of a unidirectional current of unknown origin". Subsequently, Black (1983) concluded from wave refraction modelling that wave reinforcement from refraction processes was responsible for the formation of the megaripples.

Data on the wave climate for east Coromandel are sparse, although Dahm and Healy (1980) determined that typical shelf storm waves for the Bay of Plenty have average heights of 2.7 m and average periods of 7s. Assuming linear theory, orbital diameter d is given by

$$d = H e^{-kz_0} \quad (1)$$

where H is wave height, k is the wave number ($= 2\pi/L$) and z_0 is the depth to the centre of the orbit. For 20 m water depth, $d = 0.52$ m, giving an orbital velocity ($\pi d/T$) of 0.23 m.s^{-1} . This velocity is close to that required to suspend medium sand on the megarippled sea floor (Komar, 1976) and in the presence of any onshore unidirectional current could cause shoreward transport of coarse sediment. Such a current with a velocity of 0.15 m.s^{-1} was measured in about 20 m water depth off Pauanui and Tairua during an investigation of sediment dynamics (Dell, 1983). The onshore unidirectional current was believed to result from bottom mass transport associated with a large easterly storm.

CONCLUSIONS

1. The inshore zonation of sediments along much of the east Coromandel coast consists of a medium (to coarse) sand beach, a fine sand sea floor with small-scale symmetrical ripples down to about 20 m depth, and a more complex zone of sediments between 20 and 40 m depth, dominated by medium to coarse sands with significant areas of symmetrical megaripples, but including patches of fine sands. Beyond 40 to 50 m depth muddy very fine sand deposits occur.
2. Based on the sediment data from Whiritoa and theoretical considerations of wave climate it appears that during onshore storm swell conditions in the presence of a superimposed shore-directed unidirectional current the offshore megarippled medium to coarse sands can migrate shorewards, at least to depths of 20 m, probably shallower, and possibly on to the beach. However, the dynamic processes remain to be investigated.

3. It is unlikely that any major nearshore sediment drift occurs along the east Coromandel coast and that the beaches are essentially closed systems, possibly nourished by onshore sediment movement from the shelf during major storm events.

4. The textural properties of the coarse offshore sands in 20 to 40 m water depth make them suitable for possible commercial extraction.

ACKNOWLEDGEMENTS

We acknowledge the financial support given this project by the Hauraki Catchment Board and the considerable logistical support provided by the New Zealand Oceanographic Institute and Royal New Zealand Navy.

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54/14/7/57

28 August 1985

Head Office
SEO Harbours

Attention: T. Law



WHIRITOA BEACH - COMPLAINT MR D. CUMMINGS

As requested in your memorandum of 2 August 1985, I have investigated the complaint lodged by Mr D. Cummings, regarding the removal of sand from Whiritoa Beach.

During the course of my inquiries I interviewed Mr Cummings at his home at Whiritoa and spoke to Mr G. Williams, Vice President of the Whiritoa Rate-Payers Association. Mr Williams lives close to the site of the sand removal pit.

I also had discussions with the following persons:

- (1) Mr A. P. Walker, County Engineer, Ohinemuri County Council.
- (2) Mr Snelgar, Administration Manager, Provincial Transport Limited.
- (3) Messrs Hales, Jones and Dell, Hauraki Catchment Board.
- (4) Dr Terry Hume, Ministry of Works and Development Water Quality Centre.
- (5) Mr Athol Attwood, District Water and Soil Officer, Ministry of Works and Development, Hamilton.
- (6) Dr R. McLean, University of Auckland.

REMOVAL OF SAND

See photographs A and B. The background history of the sand pit is well documented. The pit is located at the south end of Whiritoa Beach on private Maori land and sand is removed as it builds-up in the pit, mostly by the action of exceptional high water levels caused by storms.

Sand has been removed from the site for many years and was originally authorised by the Maori Land Court. The Ohinemuri County Council does not involve itself in the licencing of the operation.

The present arrangement is that the Maori Trustees have a five year Agreement with Provincial Transport Limited to remove up to 4,000 m³ of sand per annum. In return the Transport Company pays a royalty to the land owners.

In actual fact, the full quantity of sand allowed in the Agreement is rarely removed and for the 12 months ending 31 July 1985, 2,040 m³ of sand had been removed. Sample figures from previous years are:

1978	2135 m ³
1979	3918 m ³
1980	2778 m ³

In comparison to other sand removal operations licenced by M.O.T., this operation at Whiritoa is quite small and as can be seen from the photographs it is quite unobtrusive.

From speaking to Mr Williams I gather that there is strong local feeling against the carriers who in his own words: "Race up and down the road at all hours and wake them up early on weekends carting sand."

SCIENTIFIC INVESTIGATION

See photograph C. The Hauraki Catchment Board has been interested in this sand operation for some time, particularly in view of the complaints made against it.

In 1984 with financial assistance from M.O.T. Paul Dell, then of the Hauraki Catchment Board commenced a detailed investigation of the sand system at Whiritoa and his report is shortly to be presented to the Hauraki Catchment Board.

Earlier investigation had led to the thinking that Whiritoa was a closed system. However, with lack of evidence of beach erosion, further studies were carried out and current research is showing off-shore sediment patterns to vary markedly from what was previously proposed.

Dr Hume has suggested that sand may be carried in from off-shore lodes, but generally all persons I spoke to are now satisfied that the removal of sand at its present level is not having a detrimental effect on the beach.

This is not to say that the state of the beach does not fluctuate under certain weather conditions, but as a rule it remains in a healthy condition.

It is interesting to note that in his letter to the Ohinemuri County Council dated 1 October 1980, A. K. Ewing (C.M.A.), M.O.T. (H/O Ref 54/15/48) stated that "inspection of the beach shows that it is in an accreted state with no evidence of erosion."

The Ohinemuri County Council is satisfied that the removal of sand from Whiritoa is not having a detrimental effect on the beach or causing any undue threat to properties along the beach front.

EFFECT ON MR CUMMINGS' PROPERTY

See photograph D. Mr Cummings' house (marked with x) is situated at the northern most end of Whiritoa Beach where it meets the Ramarama Stream, about 2 kilometres from the sandpit.

All this land was sub-divided by Broadlands about 12-15 years ago and although the sub-division was approved by the Ohinemuri County Council, it was not referred to the Catchment Authority for their comment.

I am advised by the Catchment Authority that had it been referred to them they would not have agreed to the sub-division taking place as planned.

Furthermore, Mr Cummings' house was actually built a few feet over the seaward boundary of his property so that in fact, it is closer to the dune-face than it should otherwise be.

As a result of exceptional hostile weather conditions last Queens Birthday Weekend (3 June 1985) high winds and seas caused the Ramarama Stream to

migrate inshore across the beach so that it began to scour the dune-face in front of Mr Cummings' Property. Naturally this alarmed Mr Cummings particularly as it started to undermine the fence surrounding his property just a few feet from his house.

Catchment Board and Council Officers inspected Mr Cummings' property that weekend and immediately afterwards planted the dune-face with marram grass to stabilise the sand. Their other recommendation was to line the dune toe with hay bails to deflect the stream, but this was not carried out.

The Catchment Board opposed the suggestion to place rocks along the dune-face as it was considered that wave deflection could possibly cause erosion elsewhere on the beach.

I am informed that Dr Jeremy Gibbs of Ministry of Works and Development has carried out investigations on some other east coast, rivers and streams and has found that depending on weather conditions, these streams can migrate up to 300 metres from their normal alignment.

Paul Dell has suggested that the Ramarama Stream could conceivably migrate up to 100 metres from its normal course and in his own words: "No matter what is done to protect Cummings' property, in the end the sea will have its way."

CONCLUSION

- (1) There is no conclusive evidence that the removal of sand at Whiritoa is leading to erosion of the beach or retreat of the foredune.
- (2) Migration of the Ramarama Stream leading to scouring of the dune-face in front of Mr Cummings' property is brought about by natural causes under certain inhospitable weather conditions, ie high seas and heavy rainfall.

RECOMMENDATION

That Mr Cummings be advised that the results of our investigation do not support his complaint that the removal of sand from Whiritoa is causing erosion of the beach or retreat of the fore-dune and accordingly this Ministry is not in a position to have the sand removal operation stopped.

P. D. Spackman
for Regional Secretary for Transport

Suggested draft reply to Mr D. Cummings:

Mr D. Cummings
P.O.
Whiritoa Beach
VIA WAIHI

Dear Mr Cummings

When I wrote to you on 24 July 1985 I advised that the Ministry of Transport would investigate the situation at Whiritoa Beach and you would be informed of the outcome.

That investigation has now been completed.

During the course of enquiries every effort was made to confer with Technical Experts who were familiar with Whiritoa Beach or who had involvement in monitoring and study of the local sand transport patterns.

Earlier investigations, as you pointed out in your letter, had led to the belief that Whiritoa was part of a closed sand system, however, beach monitoring was showing no evidence to support that assumption. Recent Scientific Studies have now shown that offshore sediment patterns vary

markedly from what was previously proposed and in the light of these studies we are led to the conclusion that the removal of sand is not causing erosion of Whiritoa Beach.

The scouring of the dune in front of your property is rather brought about by the natural migration of the Ramarama Stream under certain hostile weather conditions and in the final outcome there appears little that can be done to prevent this natural phenomenon occurring.

I am concerned that your property may be susceptible to further erosion such as occurred earlier this year and I would suggest you consult with Local Authorities in your area to determine the best course of action for you to take.

Yours sincerely

David Lange



26.550

8/8/85



8/8/85

26-550



50 55 550

8/8/85



8/8/85

SS0



26 550

8/8/85



11 11 75 550

2/5/55

MINUTE SHEET

Subject

Department:

Section:

File No.

Date:

To-

^{80P}
G. WILLIAMS 2 notes /k.

VICE PRES. RATEPAYERS

Don CUMMINGS aerial mapping - survey

CHILWICK CC

Engineer Mr. A. I. Walker (Paul)

Hawke's Bay Council

Dave Smith

Council have bought shares of Hawke's Bay Council
who have recommended a funding program

Superior photographs taken at Queen's beach by
weekend showing sand in front of house
falling away

Provincial Transport - Paeora

Optimism Council does not issue licence

Cathedral Commission - Laurie Donald

Council not concerned whether is a closed
system

MINUTE SHEET

Department:

Section:

File No.

Date:

Subject

To-

License used to be issued by Maori
land court. But was water for moon
trucks themselves.

ML 19123 ~~Maori~~ ^{Swamp} land

Provincial T/P PL Paeroa 8695

1978 2135 ⁴³

1979 3918 ⁴³

1980 2778 ⁴³

Mr Snelgar Admin Wgt.

W.V.A. Rodney Jones - Len Hales

Board feeling is that erosion by Cummings
house is a result of the stream ^{negative} boundary
caused by heavy seas, rather than as a
result of hard revault at the other end.
Paul Bell has prepared report.

Planting of grass in front of Cummings has
taken place.

not monitorily on Whiritoa - placed slightly
over boundary with result that boundary
was re-adjusted consequently house is

MINUTE SHEET

Subject

Department:

Section:

File No.

Date:

To-

Provincial Transport Mr Snodgrass Admin mgr.

Have an agreement with Maori landowners
to remove sand from Whararua.

agreement is for 5 yrs period

agreement is to remove up to 4000 ^{m³} PA
but current figure is only

can't

nearer to bank house than possibly otherwise
WMA refused to give consent to
subdivision 10-15 yrs ago
what they know now

Paul Dell

Jeremy Gibb in his investigation
of East Cape Benthos has found they migrate
up to 300 meters.

Paul Dell suggests this stream could
migrate up to 100 m.

Subject of an interview study

ROTOMAHANA STREAM

54/14/7/57

Ohinemuri County Council

Telephone: (0816) 8609
Address all Correspondence
to the County Manager.

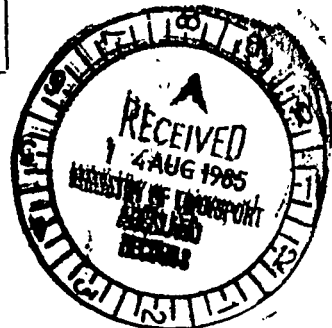
YOUR REFERENCE:

In Your Reply Please Quote:

A.P. WALKER

File No. 811

P.O. Box 17,
Paeroa.



12 August, 1985

Ministry of Transport,
Harbours and Foreshores Section,
Private Bag,
AUCKLAND

ATTENTION: MR P. SPACKMAN

Dear Sir,

RE: WHIRITOA BEACH - SAND EXTRACTION

Following your visit on 8 August, 1985, I have perused our file on the extraction of sand at Whiritoa Beach.

Enclosed is a copy of a letter which gives the names and addresses of the Trustees. Any contact we have had with the Trustees has been through Mr J.I. Howart. Provincial Transport Ltd of Paeroa hold a licence from the Trustees to extract sand for sale.

In 1980 Council obtained a legal opinion from a Senior Counsel on the sand extraction issue. A copy of this opinion was sent to the Secretary for Transport, Wellington. After Council had considered the opinion, it resolved that the Minister of Transport be requested to take legal action against Provincial Transport Limited under Section 244 of the Harbours Act 1950. A copy of the reply is also enclosed.

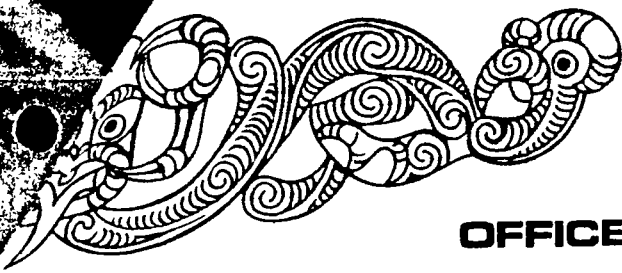
The Hauraki Catchment Board is still carrying out studies of the beach to try and establish if it is in fact a closed beach system as some geologists claim. I believe that you are aware of these studies.

I trust that the above information is of some assistance to you.

Yours faithfully,

A. P. Walker

A.P. WALKER
COUNTY ENGINEER



OFFICE OF THE MAORI TRUSTEE

YOUR REF.

OUR REF. 7/377 Closed

CHARLES HEAPHY BUILDING
ANGLESEA STREET
PRIVATE BAG, HAMILTON
TELEPHONE 84 579 (8 LINES)
TELEGRAMS: MAORIFAIRS

23 December 1977

The County Clerk,
Ohinemuri County Council,
P.O. Box 17,
PAEROA

Attention: M.W. Parker

Dear Sir,

WHANGAMATA 6B3B2 : SAND LICENCE

I refer to your letter of 20 December 1977.

The licence to Mr Carter expired on 30 September 1976 and the Maori Trustee no longer has any control or authority over this land.

The Maori Land Court on 24 November 1976 vested the land in Trustees under the provisions of Section 438 of the Maori Affairs Act 1953. The names and addresses of the Trustees are as follows :-

William Thomas Castle

135 Luke Street East,
OTAHUHU

Connie Greaves

P.O. Box 221,
WAIHI

Paul Kotara

59 Kiwitea Street,
Sandringham,
AUCKLAND

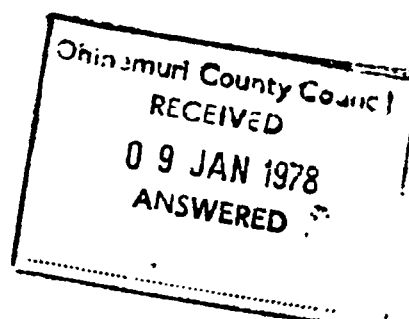
James Ian Howart

C/- McCaw, Smith and Arcus,
N.Z.I. Building,
Garden Place,
HAMILTON

I suggest you contact the Trustees as named above.

Yours faithfully,


(Mrs T. Taitoko)
for Maori Trustee



MINISTRY OF TRANSPORT

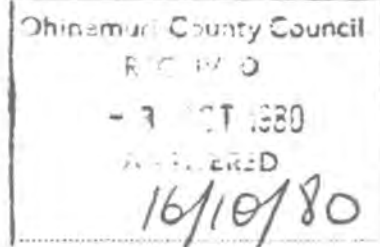
PRIVATE BAG, WELLINGTON 1
TELEPHONE: 721-253
TELEGRAMS: TRANSPORT

AURORA HOUSE,
THE TERRACE,
WELLINGTON 1

54/15/48

1 October 1980

The County Clerk
Ohinemuri County Council
P.O. Box 17
PAEROA



Dear Sir

SAND EXTRACTION - WHIRITOA BEACH

With reference to your letter of 29 August 1980 (811) and subsequent to the visit to the beach of officers from the County Council, Catchment Board, Ministry of Works and Development and Ministry of Transport.

In your letter the Ministry was advised that Council resolved to ask the Minister to take action under Section 244 of the Harbours Act.

Inspection of the beach shows that it is in an accreted state with no evidence of erosion. It would be extremely difficult to justify an application of Section 244.

Discussion in your offices gave an indication of a possible change in Councils attitude to this matter.

Before ^(replying) applying to the Ratepayers Association it would be of great help if the Ministry could be advised of Councils present attitude to sand extraction from Whiritoa Beach.

Yours faithfully

A.K. Ewing
for Secretary for Transport



MINUTE SHEET

Subject *Whimston Beach: Erosion
caused by sand removal*

Department: *M.D.T.*

Section: *Harbours & Foreshores*

File No. *54/15/48*

Date: *2/8/85*

To—
*Regional
Secretary*

*the attached correspondence has been
received from the Prime Ministers Office*

*Ministry of
Transport*

*I also enclose a copy of the relevant section
of the District Scheme.*

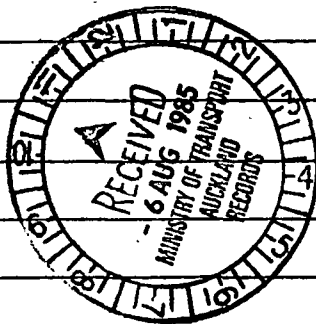
Auckland

*Would you please investigate the situation
and forward your report to this office*

*Attn
P.D. Spackman*

J C Lenn.

for Secretary for Transport.



MIN 1697



MINISTRY of TRANSPORT

AURORA HOUSE
62 THE TERRACE
WELLINGTON
NEW ZEALAND

PRIVATE BAG, WELLINGTON
TELEPHONE: 721 253
TELEX No.: NZ 31524

WHEN REPLYING
PLEASE QUOTE: 54/15/48

19 July 1985

The Minister of Transport

EROSION CAUSED BY SAND REMOVAL : WHIRITOA BEACH

1. On 21 June the Prime Minister's Private Secretary referred to you a letter received from Mr D. Cummings of Whiritoa Beach and asked that he be furnished with a draft reply.

2. I attach a suggested draft reply for the Prime Minister's signature, if you agree.

W. McCarroll
for Secretary for Transport

Enc1

6125/1965/1209c

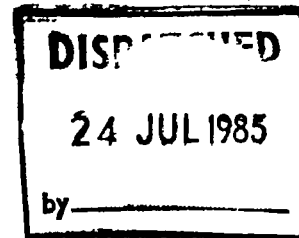


OFFICE OF THE MINISTER OF TRANSPORT

WELLINGTON

24-7 85

Prime Minister
Parliament Buildings
WELLINGTON



MR D. CUMMINGS : EROSION CAUSED BY SAND REMOVAL :
WHIRITOA BEACH

On 21 June, your Private Secretary asked me to supply a draft reply to the representations made to you by Mr D. Cummings, P.O., Whiritoa Beach.

I attach a suggested draft reply for your signature if you agree.

RICHARD PREBBLE

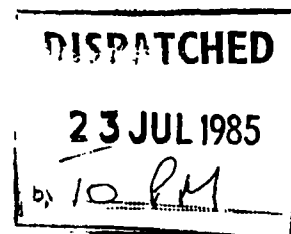
Hon. Richard W. Prebble
Minister of Transport

[Handwritten signature]
19
7
ASD
H.W. E0(4.6) 19/7
H.W. AAO 11.2.19/7

54/15/48
TL:CR
H&F
~~19-7-85~~

24-7-85

*Despatched
24/7.*



Mr D. Cummings
P.O.
Whiritoa Beach
VIA WAIHI

Dear Mr Cummings

Thank you for your letter of 8 June 1985 in which you express concern about sand removal from the vicinity of Whiritoa Beach. I can appreciate your concern over the erosion which is occurring.

The situation is that the area from which sand is being removed is Maori land vested in the Trustees under the provisions of Section 438 of the Maori Affairs Act 1953. As this area is above the high water mark ordinary spring tide the Ministry of Transport has no jurisdiction under the Harbours Act 1950 over sand removal unless excessive erosion results in which case Section 244 could be applied to limit or stop the sand removal.

In the circumstances it has been arranged that the Ministry of Transport will carry out urgent on site investigations. You will be informed of the outcome.

Yours sincerely

David Lange



Min 1697

PRIME MINISTER'S OFFICE



21 June 1985

Private Secretary
MINISTER OF TRANSPORT



Representations from:
Mr D Cummings, Post Office, Whiritoa Beach, via Waihi

The Prime Minister has asked that he be furnished with a draft reply to the attached representations.

This reply should be with the Prime Minister within one calendar month. If this is not possible an interim reply should be forwarded to this office.

Private Secretary

SECRETARY OF TRANSPORT

For draft reply. ✓
For reply to direction.
For comments.
Referred.

Mark L. Williamson
PRIVATE SECRETARY
FOR THE HON. R. W. PRAGG

251
Lange
2
The Prime Minister.

De Mr. Lange,

PLEASE WILL YOU HELP US ?

US : being the ratepayers and residents of Whiritoa Beach (an ocean beach ten miles north of Waihi).

OUR PROBLEM: The devastation of our beach due to extensive and continuous sand mining. Mechanical diggers excavate a huge pit at the southern end of the beach - allegedly on private property. By natural tide and wave action the excavated area is replenished by sand from the beach (which is less than a mile in length and enclosed by headlands). Thousands of tons of sand are trucked away annually - the result being that dunes and tussock which once protected the foreshore are now eroded to the extent that some beach front homes are in imminent danger of being lost to the sea.

By actual measurement, the dunes (between our home and the ocean) have been eroded 20 metres in the last 12 months - leaving only 10 metres of sand between our property and the sea. There is ample professional evidence to substantiate all this.

Very detailed and extensive surveys have been carried out by-
The Waikato University (Christophersen) 1972.

Dr. R.F. Mc Lean 1979.

Dr. T. Healy and M. A. Willoughby 1981.

All these written reports finish with a common decision - "That unless sand mining ceases, the beach will suffer very serious erosion".

The Whiritoa Ratepayers Association, has over many years, approached the Ohinemuri County Council, (who administer the area and collect our rates) the Hauraki Catchment Board, and the Marine Division of the Ministry of Transport, to have the sand mining stopped. The result to date - "awaiting the results of further surveys" (Hauraki Catchment Board) as "we do not have the authority to stop it" (Ohinemuri County Council).

Despite this, in a similar situation, when a storm caused beach sand to drift on to the section owned by Mrs. R. Wilson, Fisherman's Bend, she was ordered (the same day!) by the Ohinemuri County Council to return the sand to the beach. Under no circumstances would they allow her to remove sand - from her own property- and sell it. Different laws for different people.

After years of frustration and anger it seems we have no alternative other than a direct appeal to the head of our country.

It is obvious that your problems are many, and your work load enormous - but some of our homes are now threatened, and it seems an appeal to you is our last hope.

Sincerely yours,



D. Cummings,
P.O. Whiritoa Beach.
(vic Waihi).

ORDINANCE 4USE ZONING401 GENERAL401.1 Method of Presentation

This Ordinance specifies the types of zones within the District, predominant uses, controlled uses, conditional uses, bulk and location and other requirements relating to each zone.

Requirements relating to parking, subdivision and advertising for all zones are contained in Ordinances 5, 6 and 9 respectively.

401.2 Classification of Zones

The zones constituted for the purposes of the Scheme are shown on the District Planning Maps by distinctive notations.

402 RURAL A ZONE402.1 Zone Statement

The purposes of this zone is to ensure the continuing production of food and primary produce.

402.2 Predominant Uses

General Proviso: The following uses are permitted in this zone provided that where the use involves buildings and the building site is situated wholly or partly within a Scenic Protection Area the building will require the consent of the Council pursuant to a non-notified application.

1. Agriculture, except feed lots and buildings where animals or birds are housed or fed.
2. Horticulture.
3. Forestry.
4. Reserves as defined in the Reserves Act 1977 or the Maori Affairs Act 1953.
5. One dwelling for each independent farming unit.
6. Cottage industries and home activities in or ancillary to an existing dwelling.
7. Museums and the preservation and restoration of buildings and sites associated with gold mining or similar early development of the District.

8. The clearing of native forests, water catchment areas, including dams and associated works, after the Council or authorised officer has consulted the Hauraki Catchment Board and Regional Water Board.
9. Soil conservation and erosion control works.
10. Accessory buildings for any of the foregoing uses existing on the site.
11. Walkways as provided for by the Walkways Act 1975
12. Packing sheds.

402.3

Controlled Uses

1. Farm machinery workshops, transport depots and other small service industries ancillary to farming of any kind.
2. Buildings within Scenic Protection Areas, PROVIDED THAT the application shall clearly show:
 - (i) A standard of design harmonious with the scenic quality or historic character of the area.
 - (ii) Access and building location which minimises alteration to the natural landform and destruction of the natural vegetation.
 - (iii) Landscape proposals that restore any such alteration or destruction and generally enhance the site.
3. One dwelling in excess of that permitted as a predominant use. In each case this accommodation is to be required for persons engaged in work on that property or for elderly or handicapped relatives of the owner of the property.
4. Stalls that comply with Ordinance 7 and with access on to County roads.
5. Churches.
6. Schools, both public and private.
7. Wharves, storage and loading facilities adjacent to the Waihou River.
8. Camping grounds.
9. Halls rooms and buildings used for art or recreation.
10. Residential accommodation associated with quarries (See Rural B).
11. Racecourses, showgrounds and recreation grounds (not being a predominant use.)
12. Racing and training establishments for horses.
13. Veterinary clinics, animal boarding and breeding facilities.

Conditional Uses

1. Pig farming, poultry farming and animal feed lots.

Any application shall clearly show :

- (i) that the siting of buildings, and areas associated with the keeping of pigs, poultry or animals will not detract from the amenities of any adjoining residences or public buildings;
- (ii) that an adequate supply of water is available for the use;
- (iii) that the site is of sufficient size and contour to contain the use;
- (iv) that a suitable method of effluent disposal is available to avoid pollution of any adjacent land or any water course.

2. Works of a public utility not deemed to be a predominant use by virtue of Section 64 of the Act.
3. Quarries producing stone for roads, pavements and buildings; and mines;
PROVIDED THAT any application shall clearly show;
 - (a) the economic life of the quarry.
 - (b) the standard of buildings and land use that will protect the landscape;
 - (c) the provision of services;
 - (d) access;
 - (e) the method of disposal of wastes including tailings;
 - (f) the control of pollution.
4. Every public utility that is not referred to in Section 64 of the Act shall be deemed to be a conditional use.

Bulk and Location Requirements

The bulk and location requirements for predominant and controlled uses shall be :

- (i)

<u>Yards</u>	<u>Front</u>	<u>Side</u>	<u>Rear</u>	<u>Rear Site</u>
Residential buildings	7.5m	4.5m	7.5m	7.5m
Other buildings	15m	9m	15m	15m
Accessory buildings	15m	3.5m	3.5m	3.5m
- (ii) Maximum building height

Residential buildings	10 metres
Other buildings	15 metres
- (iii) Coverage
No restriction except for yard and parking requirements.

(iv) Bulk and Location Requirements - Conditional Uses

Requirements in respect of conditional uses will be set by Council as part of the conditions.

402.6 Further Requirements

Further requirements relating to the parking of vehicles, subdivision of land and advertising are to be found in Ordinances 5, 6 and 9.

403 RURAL B ZONE403.1 Zone Statement

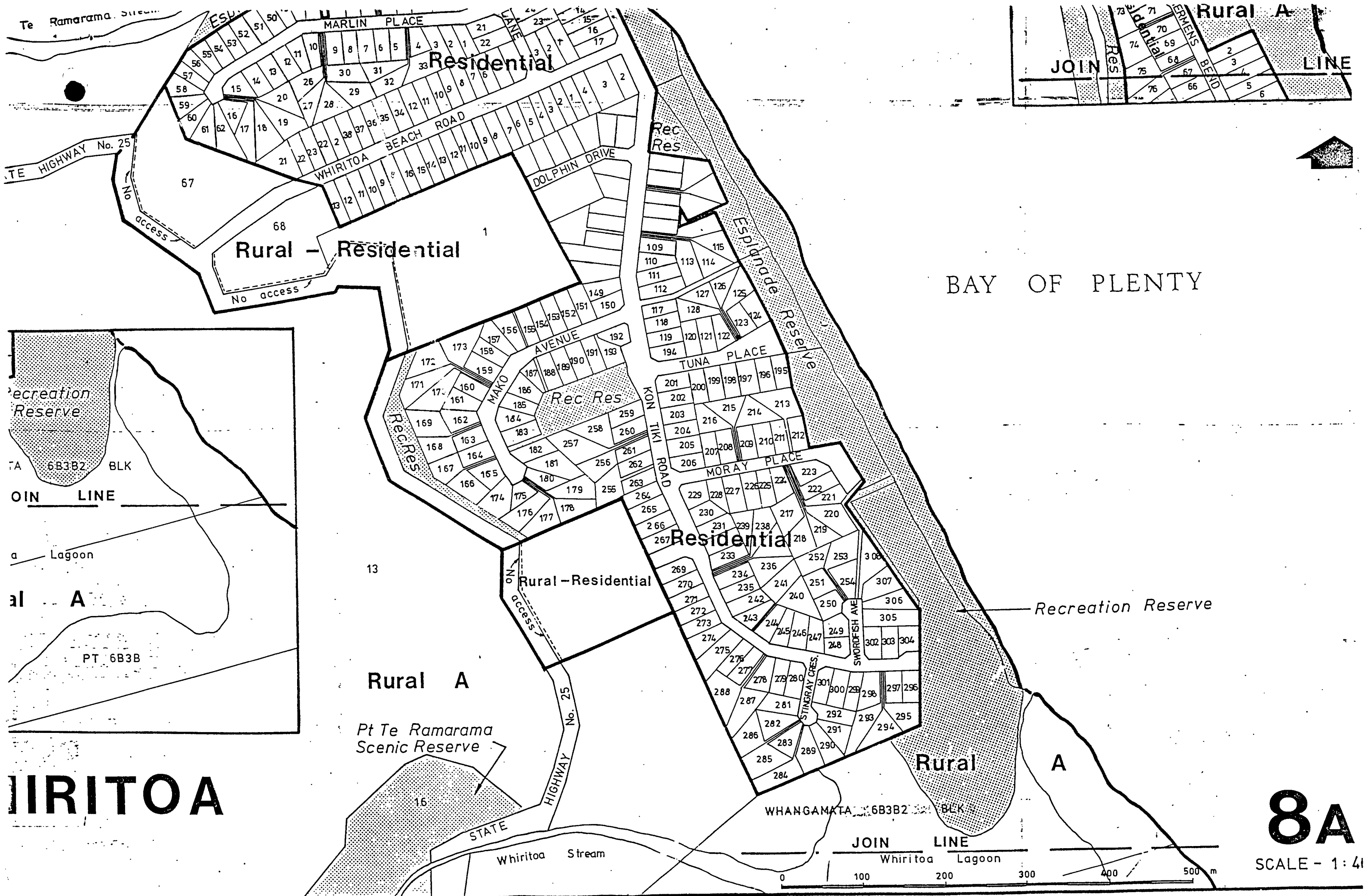
The purpose of this zone is to protect watershed and coastal areas from erosion, to maintain the present ecological balance of the region and to encourage afforestation where it will assist with the prevention of erosion and control of water run-off.

403.2 Predominant Uses

1. Forestry.
2. Soil conservation and erosion control works.
3. Museums and the preservation and restoration of buildings and sites associated with gold mining or similar early development in the District.
4. Reserves as defined in the Reserves Act 1977 or the Maori Affairs Act 1953.
5. Walkways as provided for by the Walkways Act 1975.
6. The clearing of native forests, water catchment areas, including dams and associated works, provided that the proposal has been referred to the Hauraki Catchment Board and Regional Water Board.
7. Agriculture, except feed lots and buildings where animals or birds are housed or fed.

403.3 Controlled Uses

1. One dwelling in association with each













Whitton

5/21



Whitton

5/81



Whirlpool

5/21



Rubbish Dump - Whangapoua Estuary:



Whiston

5/31



Whitton

5/81

File 54/14/7
2 return

Our ref: 54/15/48
Your ref: 811

26 May 1981



The County Clerk
Ohinemuri County Council
P.O. Box 17
PAEROA

Dear Sir

SAND EXTRACTION - WHIRITOA BEACH

Your letter of 20 May for the attention of Mr Ewing refers, which I have been asked to acknowledge.

We note that your Council is to ask the Hauraki Catchment Board to consider carrying out further investigations and to suggest possible financing of such a study.

No doubt we shall hear again when the Catchment Board has considered the matter.

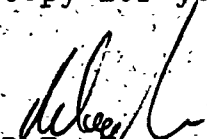
Yours faithfully

R.P. Taylor
for Secretary for Transport

The Regional Secretary
AUCKLAND

Attention: RMO

Copy for your information, with copy of letter under reply.


R.P. Taylor
for Secretary for Transport

17/15
Ohinemuri County Council

54/15/48

Telephone: 8609

Address all Correspondence to
the County Clerk.

YOUR REFERENCE: 54/15/48

In Your Reply Please Quote:

M.W. PARKER

File No. 811

P.O. Box 17,
Paeroa.

20 May 1981

Secretary for Transport,
Ministry of Transport,
Private Bag,
WELLINGTON



ATTENTION: Mr Ewing

Dear Sir,

RE: SAND EXTRACTION, WHIRITOA BEACH

At a meeting of the Council's Planning Committee held on 3 February 1981, a deputation was received from the Whiritoa Ratepayers' Association, comprising Mr H. Moore, President, and Mr P. Cooke, Vice-President, who made verbal submissions relating to the above. Mr R.W. Harris, Chief Engineer to the Hauraki Catchment and Regional Board, was present during the discussion by invitation from the Committee.

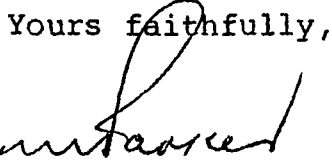
At the end of the discussion, Mr Moore was asked to forward a written copy of his verbal submissions, but these were not received until 21 April 1981. A copy is enclosed for your information.

Mr Harris informed the Committee that in his opinion the research and reports up to the time of the meeting gave insufficient evidence to decide whether or not Whiritoa Beach was a "closed system". He felt that further off-shore investigations were needed, but it would be a matter for his Board to decide. He added that for the investigations to be done properly it would require a large inflow of finance.

The recommendation of the Committee that the Catchment Board be asked to consider carrying out further investigations and to suggest how the work could be financed was subsequently adopted by the Council.

A reply to the Council's letter conveying the above decision to the Board is now awaited.

Yours faithfully,


M.W. PARKER
COUNTY CLERK

SUBMISSIONS TO OHINEMURI COUNTY COUNCIL TOWN & COUNTRY
PLANNING COMMITTEE BY:

WHIRITOA RATEPAYERS ASSOCIATION

21 APR 1981

ANSWERED

2. FEBRUARY 1981

Thank you for the opportunity to attend this meeting of Council. As your time is valuable, our verbal submission will be kept as brief as possible.

The Council is the prime planning authority for the area and was responsible for approving the subdivision of Whiritoa. As indicated in your letter of 29 August, 1980, the Council's position in respect of sand mining is that Council would wait until after the decision by the Minister of Transport. We are here today to review the evidence and to respectfully request that Council now act to use its powers without delay to protect the valuable public and private property at Whiritoa.

As your letter states, the advice of your Senior Counsel was for you to so act, should other authorities fail to act.

The Council acted very responsibly in respect of the proposed sand mining at Mataora Bay. Expert witnesses appeared on behalf of Council and the Hauraki Catchment Board at the Planning Appeal. Some of this testimony is pertinent today. Mataora is a closed beach, which means that no new sand is entering the beach system. It was on these grounds that Council opposed the sand extraction. At the appeal Dr Healy from Waikato University stated:

- P7 (v) If sand extraction is to occur in a closed system beach the result will be:
- a) erosion of the frontal dune causing retreat of the dune face.
 - b) a lowering of the general beach height as depletion of the beach sand continues.
 - c) If extraction rates are severe enough, I expect that the entire beach sand could disappear.
 - d) Sand extracted would not be naturally replenished by littoral drift.

When asked about the adjacent Whiritoa Beach, Dr Healy stated:

"Our research has shown that there appears to have been a reduction in sand volume on Wh. beach and there has been erosion of the dunes on occasions. This has been masked to some degree by sub-division development. Research has shown that there were only 50 000 cubic metres of sand in reserve on Wh. beach in the badly erosive year of 1974.

If sand mining continues and this reserve is lost, then in future bad erosion episodes, the dune will retreat, leading to property damage.

Q Why was 1974 an erosive year?

A It was erosive mainly due to the meteorological condition. The beaches undergo cyclical erosion and accretion according to the weather and wave conditions. Under erosive storm events the frontal dune which acts as a reservoir of sand would be eroded out. Under accretion conditions, the sand from the offshore bar will reform the beach and will be brought back again.

Eventually the dune will be restored. "It is important that the frontal dune is available for this cycle. Should sand be removed from the frontal dune, or indeed any part of the beach or offshore bar, this dynamic equilibrium system will be eroding the frontal dune in a long term sense."

As you know, the Whiritoa Ratepayers have been very concerned for many years about the stability and future life of their sections and this has slowed down development of Whiritoa. Mr Christopherson's very exhaustive studies using special measuring equipment concluded that Whiritoa was a closed beach.

Despite requests from Ratepayers following the 1978 storms, it was decided to conduct a further study, during which time the sand continued to be extracted.

The key question to be resolved by this study was the nature of the Whiritoa beach system; ie: "was it a closed system?" You advised Ratepayers in the 1979 rate notice :

WHIRITOA:

Sand Pit : Following a meeting between representatives of Council and The Hauraki Catchment Board, the Board requested Dr R.F. McLean of the Geography Department, University of Auckland, to prepare a report to examine a contention of Mr Max Christopherson of the University of Waikato, that the Whiritoa Beach sand system is partially or possibly a completely closed system.

Dr McLean's report of December 1979 leaves no room for doubt. His conclusions read :

CONCLUSIONS:

(3) An evaluation of potential sources and sinks indicates the Whiritoa system operates effectively as a "closed sediment system", one that does not receive or lose significant amounts of sand through natural processes. The present major loss is undoubtedly through sand mining at the southern end of the beach and the quantities extracted are not offset by contemporary inputs.

(4) Within the system itself there are large exchanges of sand between its four morphological components: beach, lagoon, nearshore and foredune. There is also evidence to suggest that the amount of sand available in relation to impinging wave-wind energy (particularly storm waves) is insufficient to maintain an equilibrium profile without continued erosion of the foredune. In this sense the beach-nearshore zone is undernourished.

(5) In these circumstances it is most probable that continued sand mining will further deplete the reservoir and induce further erosion.

Scientists of Dr McLean's calibre are careful people. There is no absolute certainty when dealing with nature. Therefore, when Dr McLean states that further erosion is "MOST PROBABLE", this is a very strong statement for a scientist to make.

The Council accepted the McLean report and refer to it in the recent Whiritoa Reserve Management Plan.

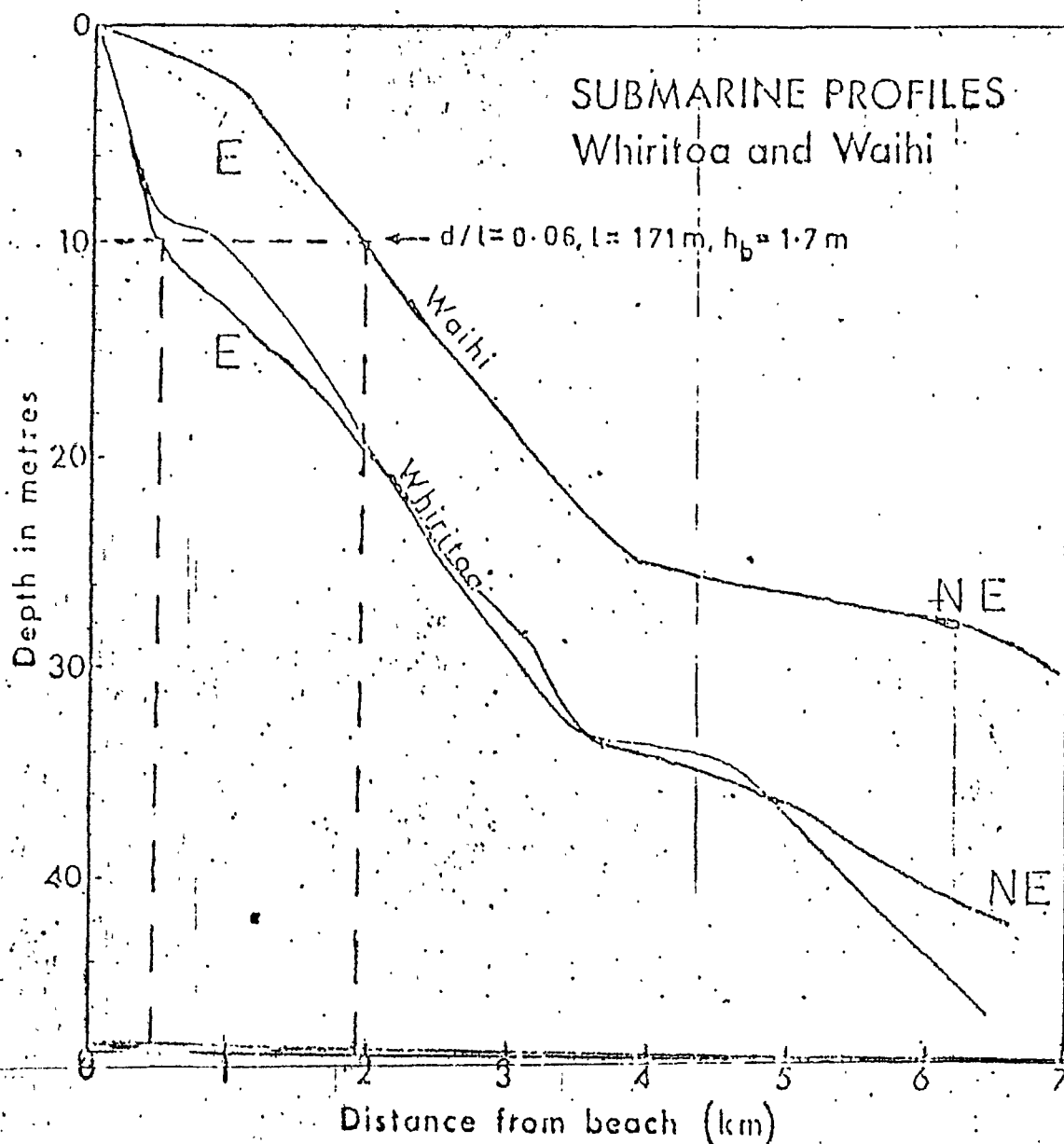
"A recent report (McLean) on the Whiritoa sand system indicates that it is a "closed system" with both natural supplies and losses to the system being quite small on a year-by-year basis.

Also evident was the fact that because the total amount of sand in the system is not large, the foreshore will always be under threat from sea erosion, especially during storms."

It should be recalled that subsequently the Council saw fit to impose building restrictions on the combined surf club and Community Hall because of the risk of erosion.

Dr Healy's evidence showed only 50 000 m³ of sand in reserve in 1974. The sand reserve which is some times at sea and sometimes on the beach is the only safety factor protecting the foredunes. This sand absorbs the energy in the waves and so prevents undercutting of the dunes. Whiritoa is a much steeper beach than other beaches such as Waihi. As a result the storm waves impinge on beach with considerable energy.

Diagram of the Submarine Profiles of Whiritoa and Waihi :



The Ratepayers are concerned at the long term effects. With good weather the sand should accrete on the beach and be taken to sea during a storm. After the storm it is returned to the beach. Naturally, there is also constant minor shifts of sand along the beach caused by tide and winds.

In the letter of 28 March 1979, Council advised us that the following sand quantities were extracted :

1974	4,932	cubic yards
1975	5,750	" "
1976	7,231	" "

ie: Total of : 17 913 cubic yards over 3 years

We do not have subsequent figures, but know that the contractors are authorised to take up to 4,317 m³ p.a.

In the 1974 storm the effects were detected and reported by Mr Christopherson. By 1978 approximately 25 000 m³ or half the safety margin in the reserve was gone. In the storm in 1978, the foredunes were severely attacked. Local residents and regular visitors, as well as photographs show that the dunes have not recovered at all since these storms. What will happen at Whiritoa if there is a major storm in 1981 or a future year? With a constantly reducing protective reserve, we are concerned that an Omaha situation with all its less than satisfactory expensive protective works will be needed at Whiritoa.

It is true that some minor sand movements caused by wind have caused an accumulation of sand at a fence line, as observed by the Ministry of Transport on 17 September, 1980. This is merely part of the cycle movements described by Dr Healy.

On page 10 of his report, Dr McLean states that Whiritoa sand is a non-renewable resource. We contend that when land use policy is determined by this Council, then this sand has a value for the protection of the foredunes and as a recreational area for the district. The Council's own plan for Whiritoa's reserves acknowledges its value.

This reserve has both local and regional importance as it is the only easily accessible beach between Waihi Beach and Whangamata.

With a non-renewable resource, such land use value outseigns any short-term commercial uses of the sand. Council provided the planning guidance and approvals for Whiritoa and by doing so, created a direct obligation to act to protect and preserve the valuable public and private asset created and largely paid for by the Whiritoa Ratepayers.

Since the completion of McLean report in December 1979, various Government and local bodies have been involved. A good summary is provided by our Solicitor's letter of 21 August 1980.

Fortunately the weather has been good since 1978, but this obviously cannot continue. Major storms occur at irregular intervals and the subdivision must be safeguarded against erosion when these storms occur. Even a major storm once in 20 years, must be guarded against! In 1970 the ocean penetrated the subdivision.

WHIRITOA

BEACH

ALTERED

erty. It was evident that the sea had washed over the sand pit and just flowed down Kon Tiki Road, the county engineer, Mr D. H. Stewart, reports.

Other points of likely future penetration are the low areas formed by the subdividers bulldozing the tops of dunes into adjacent open areas.

* * * * *

To summarize :

1. Whiritoa is a closed beach.
2. In 1974 there were only 50 000 cubic m in reserve.
3. In 1978 the storm severely damaged the sand dunes and penetrated the subdivision down Kon Tiki Avenue. No recovery of the dunes is evident.
4. Since 1974 some 30-40 000 m³ of sand has been taken from the closed beach system reserve.
5. There is now a very small reserve left on the beach and this places all property at risk during future storms.
6. The Ratepayers believe and request that Council act now.

The McLean study confirmed the conclusions of the Christopherson study. We see no merit or value in any further studies. With the reserve margin almost depleted, there is not time left. The sand mining must be stopped immediately. It may already be too late to prevent damage at the next storm and the consequential and inevitable ensuing litigation.

At Omaha which was also designed by Broadland's Engineers, the effects of sand extraction were not fully apparent for 20 years.

At Whiritoa there is now such a slender safety margin left, that it would be irresponsible for Council to continue to GAMBLE with nature using a Public Beach and Ratepayers property as the stake.

Accordingly, we ask that this Committee today, recommend that the Ohinemuri County Council act today to permanently stop the sand mining, using the various powers vested in the Council.

OH-1212
Ohinemuri County Council

FILE

Telephone: 8609

Address all Correspondence to
the County Clerk.

In Your Reply Please Quote

M.W. PARKER

File No. 811

P.O. Box 17,
Paeroa.

YOUR REFERENCE: 54/15/48

24 December 1980

Secretary for Transport,
Ministry of Transport,
Private Bag,
WELLINGTON

ATTENTION: Mr Ewing

Dear Sir,

RE: SAND EXTRACTION - WHIRITOA BEACH

Further to my letter of 16 October 1980 I have to advise you that following a discussion with Mr R.W. Harris, Chief Engineer to the Hauraki Catchment Board, the Town and Country Planning Committee recommended to Council that in light of the inconclusive information available regarding the effect of sand mining on Whiritoa Beach no action be taken against the contractors at this stage.

The recommendation was adopted by Council and it approved of the Committee agreeing to receive a deputation from the Whiritoa Ratepayers' Association at its next meeting to be held on 3 February 1981.

I will advise you of the outcome of this meeting in due course.

Yours faithfully,

M.W. Parker
M.W. PARKER
COUNTY CLERK

5.2.81

sent by air to Wellington

10-2-81

Copy to Mr. Jackson - 17/2/81

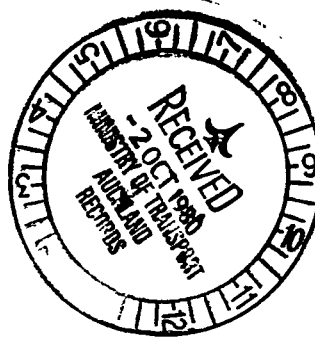
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→ Regional Secretary
Marine Division
Ministry of Transport
Private Bag
AUCKLAND

ATTENTION Mr Spackman

Secretary
Marine Division
Ministry of Transport
Private Bag
WELLINGTON

ATTENTION Mr M Ewing





**Ministry of Works
and Development**

District Office

Dey St.

Private Bag, Hamilton

Telephone 62 899

Telex NZ 2777

Inquiries to Mr A K Attwood Date 24 September 1980 Ref 96/130000

~~Commissioner~~ of Works

ATTENTION Mr R K Howard

WHIRITOA BEACH

Your reference 75/10/56 of 29 May 1980 to Hauraki Catchment Board.

... Attached are two copies of plan 2/398/1/3204/1 prepared by the district surveyor from Title surveys ranging from 1896 to 1975 of the foreshore in the vicinity of the 6B3B2 block of Maori Land on which the sand pit is sited. The plan has been prepared with the use of a plan variograph and hence is not as accurate as one prepared from offsets from a coordinated line. For the purposes of the exercise though it clearly shows that MHWM has progressed about 40 metres seawards over the years and hence can be said to be at variance with Christopherson and McLean reports.

You will note that the plan depicts two lines attributable to the 1918 survey. One line is the reproduction from the plan of that year (ML 10985) and the other is the reproduction from the plan of 1975 which adopted in part the 1918 survey. This difference is attributable to scaling and plotting errors. I am forwarding copies of the plans to Marine Division Auckland and head office, Hauraki Catchment Board and Dr T R Healy of the University of Waikato.

The Hauraki Catchment Board has still not responded to your above referenced letter. I understand that they are not willing to take a firm line of action until further data is to hand. In view of the progression of MHWM I believe that there is no urgency in funding being made available from the limited NWASCO funds. Any further research should in the first instance in my opinion, be limited to minerological analyses and characteristic ash shower configurations and not to expensive off shore drilling.

B J Butcher
District Commissioner of Works
Per

(A K Attwood)

Encls

Wide format was located here in this file

To view the wide format image(s) please go to the end of this document

The numbers listed below are also on the wide format image(s) that belong here

5383

MINUTE SHEET

Subject:

Department:

File No.: 54/14/7

Date: 17/4/80

'Whiritoa'

To -

Inspected 17/4/80.

In the light of McLean's report beach inspected. There was no immediate evidence of erosion, however the deficit that is already in the system could show itself any time when the right set of storm conditions occur.

The Catchment Board are looking for the closure of the sand mining. The Whiritoa subdivision could experience erosion problems in the future and filter removal would only be detrimental to the 'health' of the beach, as it is a closed system.

Meeting with the council showed that they are reluctant to force a decision and are seeking a legal standing under which acts to proceed.

There is no problem existing at 'Whiritoa'. Mr Whitehouse assured them the Ministry would take action under Section 273 of the Harbours Act 1950 if they

BRING-UP

30/5/80

Initials: RLM

MINUTE SHEET

Subject:

Department:

File No.:

Date:

To -

did not proceed in the direction
of ~~sea~~ quashing sand removal.
Problem is further complicated
by 'Blue water right' of the
Maori land.

Suggestions put forward
were financing of studies
similar to Whistoa for other
beaches under 'miri' pressure
- funded by Ministry.

At the moment the initiative
for further action lies with
the council.

FILE 54/14/7

P.O. Box 7
Te Aroha

Please Quote

2/3/126000-131000

R. W. Ho S.C. B.E.
Chief Engineer

J. M. Morrison,
Secretary.

HAURAKI CATCHMENT BOARD and REGIONAL WATER BOARD

In your reply

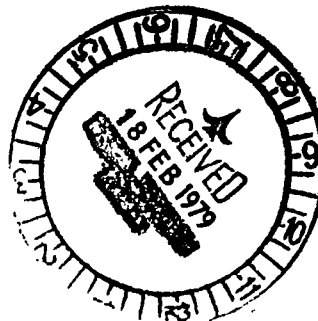
ref. your 54/14/7
Pt.2 dated 10.10.78

Telephone 48-099

Telegraphic Address "Catchment"

59 WHITAKER STREET,
TE AROHA

The Regional Secretary for Transport,
Ministry of Transport,
Private Bag,
AUCKLAND



14 February 1980

Dear Sir,

WHIRITOA BEACH REPORT

I have to advise that the above report, produced by Dr R.F. McLean on Board's commission, was presented to Board at its last meeting, and ... adopted. I enclose a copy for your information.

Yours faithfully,
J.M. Morrison
SECRETARY

LSH:CJK

per.....

L.S. Hale

Rmo
→

18 FEB 1980

see comment, conclusions p 10 & 11.

and in this report a NON-RENEWABLE RESOURCES

A report to the
Hauraki Catchment Board
on

**Dimensions of the Whiritoa sand system
and implications for sand mining
and shore erosion**

by
R.F. McLean
Department of Geography
University of Auckland

December 1979

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----------------------------------------------	----

Cover photograph: Whiritoa beach from the north,
January 1973

DIMENSIONS OF THE WHIRITOA SAND SYSTEM
AND IMPLICATIONS FOR SAND MINING AND SHORE EROSION

INTRODUCTION

In October 1978 I was asked by the Hauraki Catchment Board to comment on the sand resources of Whiritoa beach and on the relationship between sand mining and shore erosion. This request followed reports on the occurrence of severe beach erosion at Whiritoa during July-August 1978. At that time local residents suggested the commercial extraction of sand from the pit at the southern end of the beach was a contributing factor.

An earlier report on "The effect of sand mining on the erosion potential of Whiritoa beach" prepared by M.J. Christopherson (1977) as an M.Sc. thesis in Earth Science, University of Waikato, was made available to me by the Board. That study described in detail the wave climate of Whiritoa beach and dune sand texture, mineralogy and provenance, and beach profile and volumetric changes based on weekly surveys carried out during 1974. In 1974 a number of erosional events occurred such that following the autumn storms of 1974 (which eroded an estimated 112,000 cubic metres from the beach) a reservoir of only about 50,000 cubic metres of sand was left between the base of the fore-dune and the sea. Christopherson considered the beach system at Whiritoa was 'closed' to replenishment from outside sources and argued that because of this, the continued mining of some 4,000 cubic metres of sand per year would quickly deplete the sand reservoir and cause beach erosion and dune recession. He recommended the cessation of sand mining.

to whom
It should be noted that Christopherson's observations were essentially restricted to the subaerial and intertidal portion of the beach; he did not investigate the nature of the topography or sediments in the nearshore zone below low water mark nor the areas further offshore and alongshore. Because there is obviously an exchange of sediment between the beach and its adjacent nearshore zone as well as the possibility of subtidal sediment transfer alongshore, the real seaward and lateral boundaries of the Whiritoa sand system were not positively or sufficiently determined. Further, the input potentials of the streams that drain the Whiritoa catchment and exit via lagoons at the northern and southern ends of the beach were not fully evaluated. Without such information conclusions on the effects of extracting sand from the beach system cannot be too assertive. It was with these points in mind that the present investigation was undertaken.

PURPOSES

The objectives of this report are to:

- (1) Describe some of the physical properties of Whiritoa beach sand and to compare these with sediments from other local environments.
- (2) Delimit the spatial dimensions of the Whiritoa sand system particularly its seaward and alongshore boundaries, the boundaries being identified by a marked change in sediment type.
- (3) Assess the potential sources and sinks of this sand and the magnitude of contemporary inputs and outputs to the system.
- (4) Consider the implications of this information for sand mining and shore stability.

Of a large number of possible properties that could be utilized to describe the sediments only the two simplest, mean grain size and sorting are used here for it was found that the resolution of these descriptors achieved the stated purposes and that further measures would yield little additional practical information.

DATA AND PROCEDURES

In May 1979 five profiles were surveyed across the beach from foredune datums to below the water line, and continued offshore for up to 1.5 km using echo-sounding techniques. Survey results are given on HCB drawing No. 1833.

Sediment samples were collected on the transects, elsewhere in the bay and offshore at Whiritoa as well as at a number of other sites between Whangamata to the north and Mataora to the south. A total of 54 samples was obtained; locations are shown on Figure 1.

Samples were sieved at $\frac{1}{2} \phi$ (phi) intervals by A. Willoughby at the University of Waikato who supplied the basic data to me. From these histograms and cumulative frequency curves were constructed, Folk percentile values abstracted and standard (Folk) grain size parameters for mean size and sorting (standard deviation) calculated. All samples were inspected under the binocular microscope but no quantitative mineralogical work was carried out. In November 1979 stream, lagoon and onshore sediment and rock samples were collected from Whiritoa but only two samples from the Whiritoa stream/

lagoon and two from Ramarama stream/lagoon have so far been graded and inspected. The location of these samples is given in Figure 1.

BATHYMETRY

Figure 2 is a general bathymetric map of the Whiritoa area based on enlargements of the 1:100,000 Hydrographic Charts NZ 534 and 541. Sample depths as calculated in the field are also shown; these tend to indicate consistently deeper depths for equivalent positions than the published charts. The hydrographic charts indicate that the sea floor off Whiritoa is shallow and slopes gently offshore in regular fashion such that the 100 m depth contour is 24 km offshore and the 50 m depth contour 9-9.5 km from the coast. Towards the land the gradient incrementally increases until in depths between 8-9 m below low water mark there is an abrupt steepening. This important bathymetric change of slope is clearly shown on the five echosounding traverses run off Whiritoa in May 1979 (HCB, Drawing No. 1833).

Figure 3 shows the inshore part of three of these runs together with the beach profiles; profile 1 is from the northern end of the beach, profile 3 from the centre and profile 5 from the southern end. This diagram shows (1) that the morphology and gradients are comparable along the length of Whiritoa and (2) that the effective morphologic base of the beach passes below low water and down to the seaward edge of what is defined here as the 'nearshore face'. Note also that the break of slope occurs consistently at a distance of 180-225 m from low water mark, and that it remains within the confines of the embayment limited by the cliffs and rocks to the north and Otonga Point to the south (Figure 2). This topographic change in slope coincides with the major change in sediment type and effectively delimits the seaward boundary of the Whiritoa sand system (see below).

SEDIMENT TYPES

During the plotting of size frequency distributions, calculation of Folk statistics and microscope inspection of bulk samples it became clear that the whole sample suite (more than 60 samples) could be divided into various types and sub-types classified on the basis of the environments from which they were obtained. A number of environments or sub-environments were distinguished:

Stream

Lagoon

Foredune

Nearshore (0-8 m below LWM)

Inshore I. (8-16 m below LWM)

Inshore II (16-24 m below LWM)

Offshore I. (24-32 m below LWM)

Offshore II (32-40 m below LWM)

Differences between some of these deposits are very marked; others are more subtle. Similarities and differences are illustrated in a number of ways below.

1. Size frequency envelopes

curves

Size frequency/derived from histograms give a visual impression of the relative quantities of material in each size grade, in this case based on $\frac{1}{2}$ phi intervals. Among other things they indicate the nature of a sample's size distribution including the absolute range of sizes present, the modal size (most frequently occurring size), sizes that are particularly well represented (high % frequency) and sizes that are deficient (small % frequency) in the sample.

Individual frequency curves for different depth zones in the marine environment were superimposed and the envelopes within which all curves fell are shown pictorially in Figure 4. The overall modal trend depicted is one of a general shift towards the right away from the beach (ie. seaward fining) though from Inshore II to Offshore II ^{there} is a movement back towards the left (ie. offshore coarsening). Also note:

(i) The absence of silt and clay in all samples.
(ii) The lack of fine (2-3 ϕ) and very fine sand (3-4 ϕ) in the beach and nearshore samples and conversely the virtual absence of medium (1-2 ϕ) and coarse sand (0-1 ϕ) in the inshore sediments. There is thus very little overlap between the first pair and second pair of deposits which suggests there is little mixing of sands between the nearshore and inshore zones.

(iii) Included on the nearshore plot are two shallow water samples from Waimama Bay at the north end of Whiritoa and one from inside Otonga Point at the south end (see Figure 1 for locations). These samples (especially 40 and 41) are clearly different from those at equivalent depths off Whiritoa in that they are much finer and only have a slight overlap with the bulk of the samples. It is this sort of evidence that permits conclusions on the lateral (longshore) extent of the Whiritoa sand system.

(iv) Offshore sediments possess a bimodal (two peaked) distribution

suggesting they are composed of mixtures of two quite discrete sand sizes, one fine (similar to the inshore samples) the other coarser (more akin to the mode in the nearshore sediments).

(v). Minor modes on the left of the distributions all represent the presence of broken or whole shell fragments in the coarse sand sizes. These occur most notably in the beach materials.

2. Mean grain size versus sorting

Mean size is a function of the size range of available materials and the amount of energy imparted to the sediment by the transporting medium (wave, wind, stream, current). Sorting or standard deviation is the spread or dispersion of sizes within a sample and depends in part on inherent grain size, fluctuations in energy of the transporting medium and variations in source materials. A plot of mean size against sorting summarizes a point for each sample which can be seen in relation to all other samples.

Figure 5 is such a diagram based on values for all Whiritoa samples listed in the appendix, excluding the dune samples whose values fall within the field delineated by the beach samples. It is obvious from this figure that grouping occurs such that differences within-environments are less than between-environments, though there is some overlap notably between the beach and nearshore samples on the one hand and the three deepest zones on the other. Note also:

(i). The largest variation is for the beach samples principally because of the presence of varying quantities of coarse shell fragments; their presence increases both the size and sorting values.

(ii). The beach samples grade into the adjacent nearshore field and clearly indicates mixing between the subaerial beach and its subtidal continuation.

(iii). There is no overlap between the nearshore zone and the zone immediately to seaward (Inshore, 9-16 m). Instead a significant break exists on the size-sorting plot between those two environments (a gap of a whole phi unit) which suggests there is little exchange of sands between them.

(iv). Paradoxically the group of sands closest in character to those from the beach and nearshore are from the deepest water, but there is no obvious pathway on the plot to suggest a physical linkage between them.

(v). The stream and lagoon samples are markedly different from

should have
divided categories

the others most notably in terms of their sorting values.

3. Average textural characteristics

The discreteness of the size/sorting groupings portrayed in Figure 5 suggests that it is valid to describe each environment in terms of its typical textural characteristics. Table I gives the numeric averages (or grand means) of size and sorting together with the appropriate (Folk) verbal descriptors based on values listed in the appendix.

TABLE I
AVERAGE MEAN SIZE and SORTING

Environment	Av. mean size mm	ϕ	Av. sorting ϕ	Comment
Stream	0.55	0.86	1.22	Poorly sorted coarse sand
Lagoon	0.26	1.91	1.25	Poorly sorted medium sand
Foredune	0.42	1.24	0.51	Moderately well sorted medium sand
Beach	0.48	1.05	0.53	Moderately well sorted medium sand
Nearshore (0-8 m)	0.37	1.42	0.55	Moderately well sorted medium sand
Waimama Bay (0-8 m)	0.16	2.67	0.41	Well sorted fine sand
Inshore I (8-16 m)	0.16	2.67	0.41	Well sorted fine sand
Inshore II (16-24 m)	0.15	2.71	0.53	Moderately well sorted fine sand
Offshore I (24-32 m)	0.20	2.35	0.51	Moderately well sorted fine sand
Offshore II (32-40 m)	0.30	1.75	0.58	Moderately well sorted medium sand

Apart from the stream and lagoon sands, which are poorly sorted (wide range of sizes) all the other environments possess well or moderately well sorted sediments (narrow range of sizes) the best sorted being those from the inshore zone. In terms of mean size the sediments can be classed as fine or medium sands (range of diameters from 0.15 to 0.50 mm) excluding those from the stream bed. The finest sands occur in the inshore zones between depths of 8-24 m. Seaward and landward of this belt diameters increase. Note also that the Waimama Bay sands from depths shallower than 8 m possess identical characteristics to those between 8-16 m off Whiritoa.

4. Spatial pattern of sediments

Figure 6 is a map of bed sediments contoured at 0.5 ϕ intervals. It clearly shows that the sea floor off Whiritoa is mantled in fine sand (2-3 ϕ) and that coarser medium sands (1-2 ϕ) are restricted to a narrow fringe along the shoreline and in a deeper water zone some 4.5 km from the coast. It should be noted that the finest material within the fine sand belt extends inshore almost to the submarine toe of the beach so that there is an abrupt change in sediment type and slope immediately offshore from the beach. It is also clear that fine sands come in very close to the cliffs and rocks at Waimama Bay and Otonga Point immediately to the north and south of Whiritoa. Seawards, below depths of about 20 m there is a gradual coarsening of sediment in the fine sand belt such that sand roughly comparable in texture to that along the beach is reached in depths greater than 32 m. Importantly there is no obvious dispersal pattern that links the two deposits.

5. Sand composition

No detailed work on the constituent composition of the materials collected for this investigation has been carried out (but see Christopherson, 1977 for some mineralogical data). However each sample was inspected under the binocular microscope and it became abundantly clear during this inspection that there were five gross compositional types in the sands of the area. These are summarized as follows:

Stream - dominantly rough dull angular lithic (rock) fragments with occasional unpolished quartz and feldspar grains.

Lagoon - dominantly subrounded polished quartz sand (similar to beach) but with angular shell fragments and high brown silt/clay component (10 %).

Beach/nearshore - dominantly subrounded highly polished quartz sand with subsidiary feldspar and coloured shell fragments; heavy minerals abundant in finer fraction.

Inshore - dominantly fine angular glass shards with dull small broken shell fragments and feramifera. Whole bivalves - alive when collected.

Offshore - dominantly subangular-subrounded quartz and feldspar grains (variable polish), angular glass fragments and heavy minerals abundant in fine fraction.

Four of these five types are illustrated in the coloured photomicrographs in Figure 7. Note the major contrasts between the stream, beach and inshore samples and the similarity between the beach and nearshore samples, and that from offshore.

beach
of shell
- allowed for?

Excluding the biogenic materials these gross compositional characteristics are consistent with a derivation from acid volcanic rhyolitic rocks which outcrop along the eastern Coromandel Peninsula. However they are also similar to the younger rhyolites and ignimbrites of the Taupo-Rotorua volcanic zone around the central Bay of Plenty.

WHIRITOA SAND SYSTEM

1. Whiritoa sand type

From the sediment data presented above it is apparent that the Whiritoa beach sands are comparable in gross terms to those of the adjacent nearshore zone on one side and the foredune on the other. All three environments possess sediments that can be classified texturally as clean, well to moderately well sorted medium to coarse sands. Median diameters fall mostly in the range of 0.35 to 0.55 mm. These sands are all similar in appearance being whitish-grey with flecks of black (heavy mineral) pink and gold (shell fragments). They are dominantly quartzose-feldspathic in composition with subordinate shell and heavy minerals. The light minerals and shells are subrounded and highly polished. It is these characteristics that distinguish the 'Whiritoa sand type' from other sands in the area both on- and offshore.

2. Dimensions of the Whiritoa sand system

The area covered by the Whiritoa sand type is quite small. Its maximum dimensions are shown on Figure 6 by the shaded belt of medium sand along the beach. Offshore the seaward limit is clearly defined by the major break in slope and sediment type at the base of the nearshore face (Figure 3). This occurs consistently along the beach-front at a depth of 8-9 m below low water mark and at a distance of 180-225 m from the water-line, narrowing in a northerly direction. Alongshore the boundary is less obvious topographically but still can be identified. To the north, though the narrow cliff-foot rock-strewn tidal beach at Waimama Bay does possess sands broadly similar to those at Whiritoa, the sea floor immediately offshore is carpeted with much finer sands which represent the inshore limit of the fine sand belt (Figure 6). Effectively the northern boundary can be accepted as aligned with the rocks immediately north of the Ramarama lagoon exit. In the south the alongshore boundary occurs further seaward of the cliffline (off the hole-in-the-wall) but the position of sample 35 (Figures 1 and 6) represent the transition from the Whiritoa sand facies to the inshore facies. There is no evidence from this investigation to suggest that Whiritoa type sands extend around the headlands at either Otonga Point or Waimama Bay.

Onshore the boundary was not investigated in detail. Whiritoa sands occur in the frontal dune but do not extend much further west than a line marked by the settlement's north-south road. Landward of this a second dune consists of deeply weathered yellow brown sands mantled with lapilli tephra with occasional bedrock exposures. However to all intents and purposes this landward boundary is academic and the natural active margin of the system can be regarded as the shore base of the foredune. In the lagoons at the northern and southern end of the settlement Whiritoa sands are found up to 200 m from the beachline at which point they are diluted by brown silts and clays and organic matter.

3. Sources and losses and system dynamics.

There is no evidence to suggest that large quantities of fresh sand are being contributed to the Whiritoa system at the present time from external sources. The volcanic rocks within the catchment are on the whole very deeply weathered. Hand pestle and mortar crush tests on a number of samples from road exposures and cliffs to the north and south indicated that the 'rocks' broke down mainly to clay sized particles; only rarely were sand sized phenocrysts and crystals released.

Potential contemporary sources of Whiritoa sand are listed below together with a comment on their likely contribution.

- (1) Streams - possibly supply minor quantities of Whiritoa type sand, but certainly not large amounts. Stream beds and banks are dominated by lithic gravels and clays and only small amounts of sand most of which consists of rock fragments and rarely crystalline material (see Figure 7).
- (2) Cliffs - very minor contribution through debris slides, rock falls and abrasion. Breaks down into soft clays and not granular sands.
- (3) Offshore - nil. There is no evidence to suggest that the medium sands in depths greater than 30 m over 4 km offshore reach the beach. Inshore sands are too fine to settle permanently in the beach-nearshore zone.
- (4) Alongshore - nil. There is no evidence to indicate littoral movement of medium-coarse sands around the headlands to the north and south of Whiritoa.
- (5) Biogenic - minor. Molluscs are found in the intertidal and

subtidal zone of the adjacent cliffs and rocks and along the beach. Breakdown of these does continually supply fragments to the system, but in small quantities. (Christopherson, 1977, p 40, noted that 2-10 % of the weight of the Whiritoa beach samples were organic calcium carbonate).

Thus, apart from quite minor amounts of stream and cliffed derived sands and biogenic materials the Whiritoa sand system does not receive any fresh sediment. It is not possible to put precise figures on the amounts supplied by stream-cliff-biogenic sources but in my opinion the quantities would be of the order of tens to a few hundred cubic metres, certainly less than 1000 cubic metres per year.

Natural sand losses from the system are also small. Our data suggests there is little loss either seaward of the nearshore zone or alongshore. Grain to grain impacts in the turbulent beach nearshore zone would cause some abrasion of particles but is regarded as unimportant considering the durability of the sands. The major natural loss of sand is into the lagoons at the ends of the beach which are part of the system itself. These act as temporary sinks for beach materials but are periodically flushed during freshes, though there is evidence to suggest that the long-term trend is one of more permanent infill by marine sands.

It thus becomes clear that the Whiritoa sand system contains a finite amount of sand that has slowly accumulated over the last few thousand years, and, that on a year-by-year basis both natural supplies and losses to the system are quite small. In this sense the sands at Whiritoa can be regarded as a non-renewable resource.

In the absence of compensating inputs the extraction of some 3-5,000 cubic metres per year through sand mining practices over the last decade or so must have depleted the quantity of sand in the system and will further reduce the total if the practice continues in future.

Though the external natural supplies and losses are of small magnitude sand transfers within the system are continuously operating in the manner outlined by Healy (1974). Given the general wind-wave energy regime and the calibre and quantity of material available exchanges between the major morphologic components of the system (foredune, beach, nearshore, lagoon) of a large magnitude can be expected. In the long-term this is apparent from the presense of air-fall Kaharoa ash (890 ± 80 yr B.P.) beneath the foredune (Pullar, et. al, 1977) and in the short term by the fact that over

100,000 cubic metres of sand was lost from the beach during a storm in 1974 (Christopherson, 1977), presumably mainly into temporary storage in the nearshore zone. The magnitude of such sand movements suggests that the foredune base will always be under threat. Thus the greater the quantity of sand maintained in the beach and nearshore zones the 'healthier' the dune will be as these areas serve as buffers to dune-toe erosion. Any process that depletes the total quantity of sand in these zones will diminish the buffer's effectiveness and enhance the likelihood of dune recession.

CONCLUSIONS

(1) The beach, dune and nearshore sediments at Whiritoa can be described as clean, well to moderately well sorted medium to coarse shelly feldspathic quartzose sands. They are clearly distinguishable from other sands within the area, especially the fine to very fine glassy sands that mantle the seabed immediately off the beach and alongshore.

(2) The extent of the Whiritoa sand system is small and confined. Offshore the boundary is defined by a break in slope and sediment type at a depth of 8-9m below LWM and a distance of 180-225m from the water-line. Alongshore the boundary is less obvious but it does not extend much further than the beach's northern and southern termini. Whiritoa type sands do not extend around the headlands.

(3) An evaluation of potential sources and sinks indicates the Whiritoa system operates effectively as a 'closed sedimentary system', one that does not receive or lose significant amounts of sand through natural processes. The present major loss is undoubtedly through sand mining at the southern end of the beach and the quantities extracted are not offset by contemporary inputs.

(4) Within the system itself there are large exchanges of sand between its four morphological components; beach, lagoon, nearshore and foredune. There is also evidence to suggest that the amount of sand available in relation to impinging wave-wind energy (particularly storm waves) is insufficient to maintain an equilibrium profile without continued erosion of the foredune. In this sense the beach-nearshore zone is undernourished.

(5) In these circumstances it is most probable that continued sand mining will further deplete the reservoir and induce further erosion.

REFERENCES

- Christopherson, M.J. (1977) The effect of sand mining on the erosion potential of Whiritoa beach. M.Sc. thesis in Earth Science, University of Waikato.
- Healy, T. (1974) The equilibrium beach: a model for real estate development and management of the coastal zone in the northeast of New Zealand. Proc. 8th N.Z. Geography Conf., 319-324.
- Pullar, W.A., Kohn, B.P. & Cox, J.E. (1977) Air-fall Kaharoa ash and Taupo pumice, and sea-rafted Loisel's pumice, Taupo pumice, and Leigh pumice in northern and eastern parts of the North Island, New Zealand. N.Z. Jl. Geol. Geophys. 20(4): 697-717.

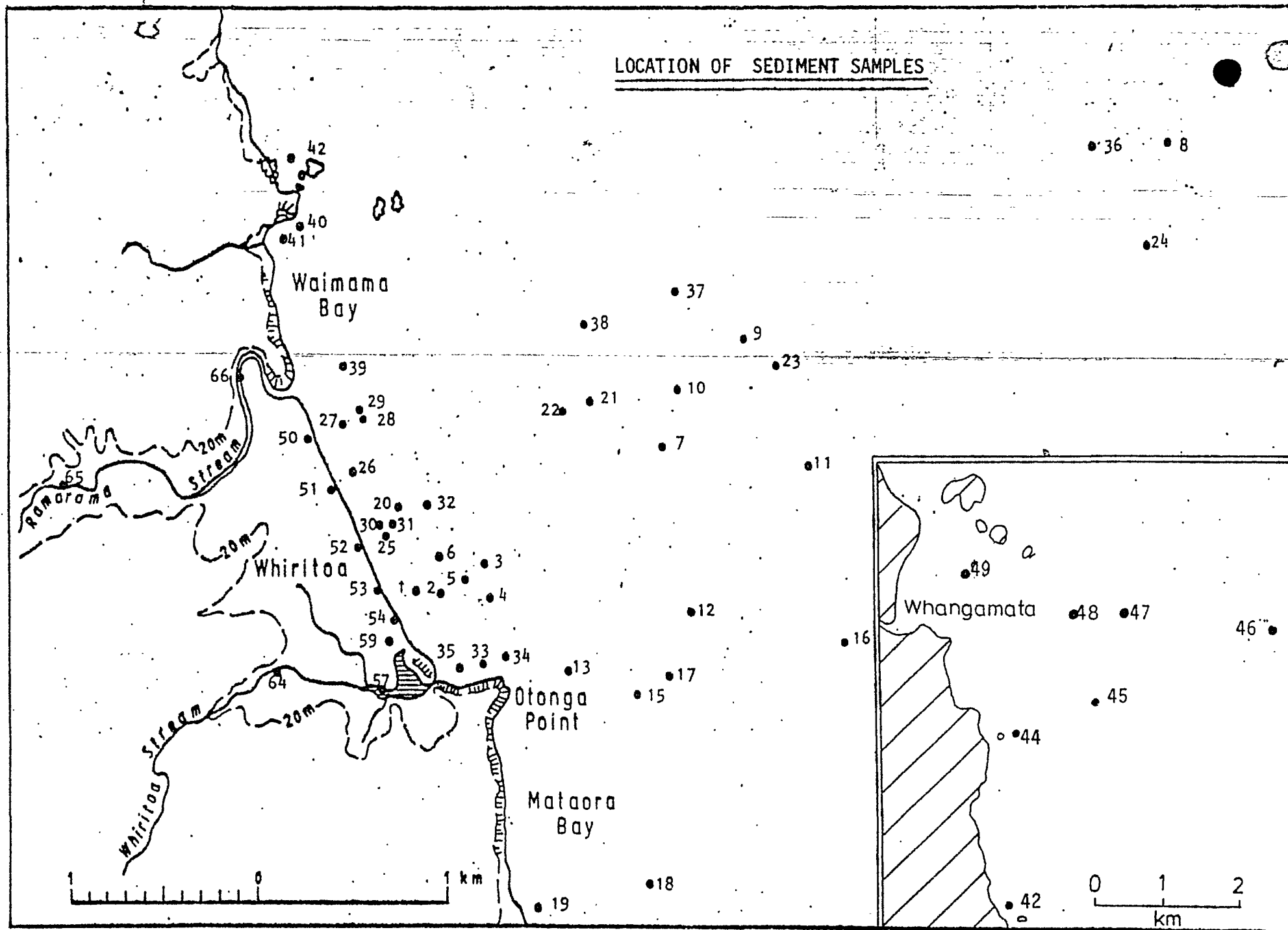


FIGURE 1

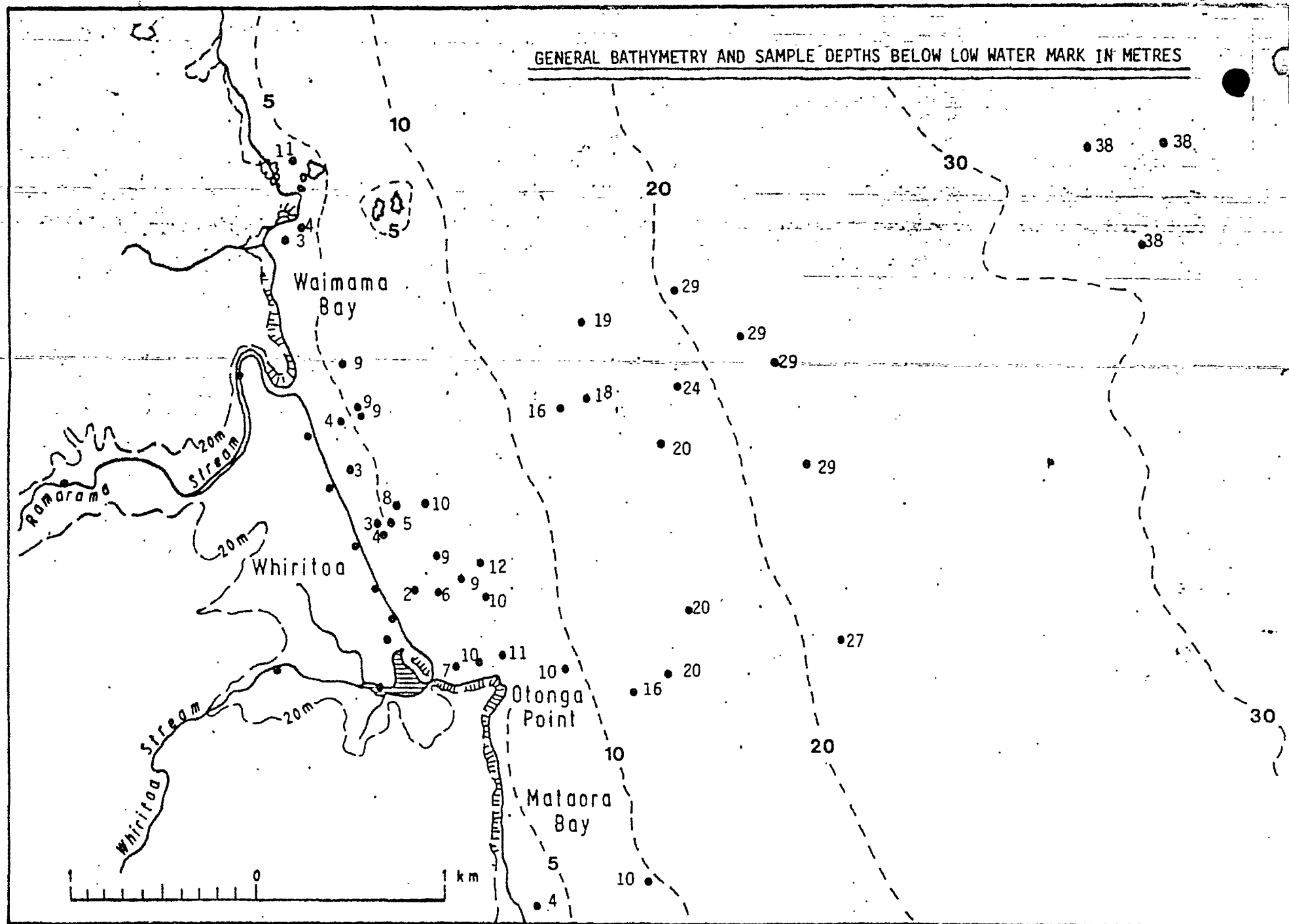


FIGURE 2

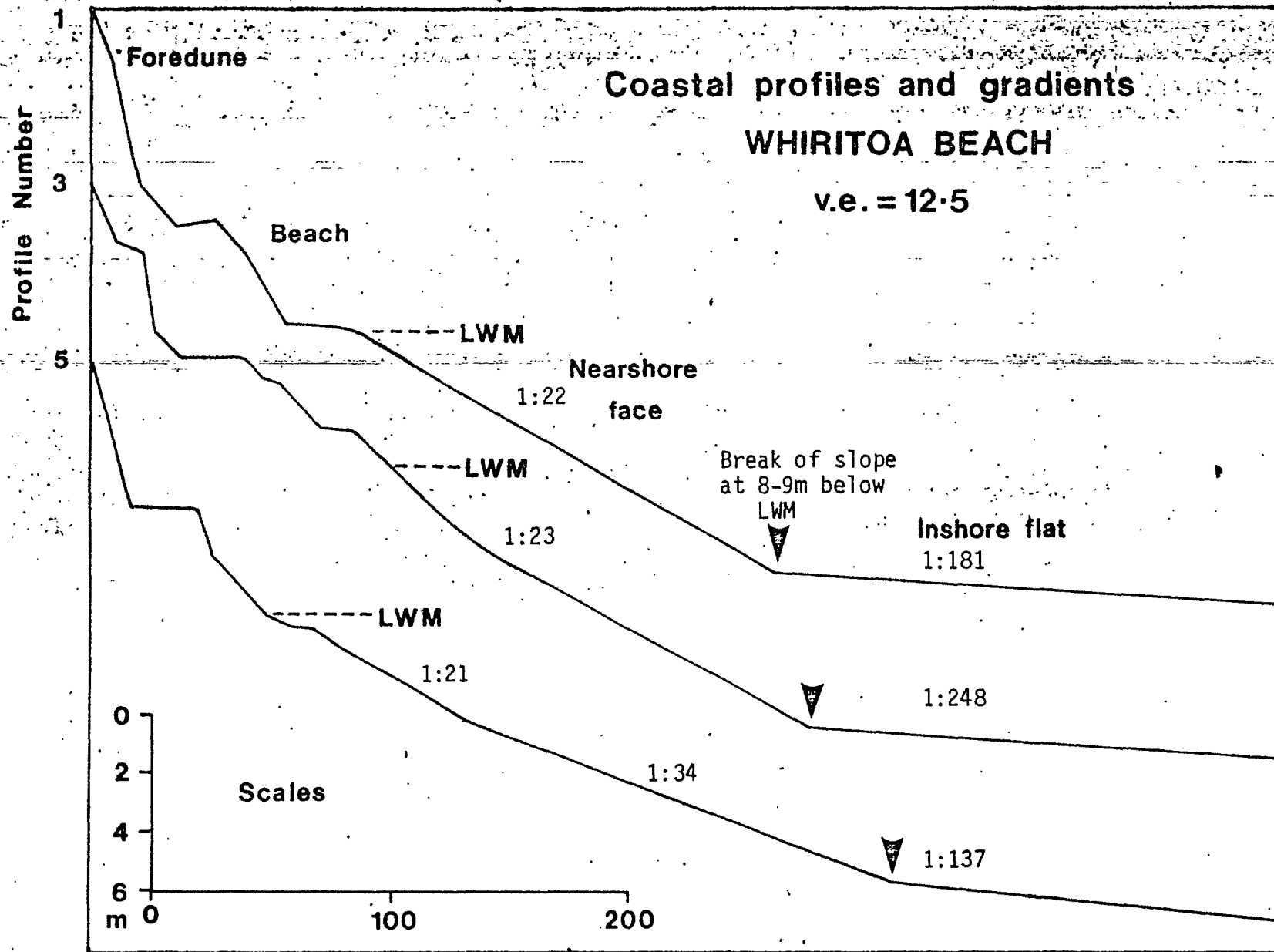


FIGURE 3

FIGURE 4
GRAIN SIZE FREQUENCY ENVELOPES

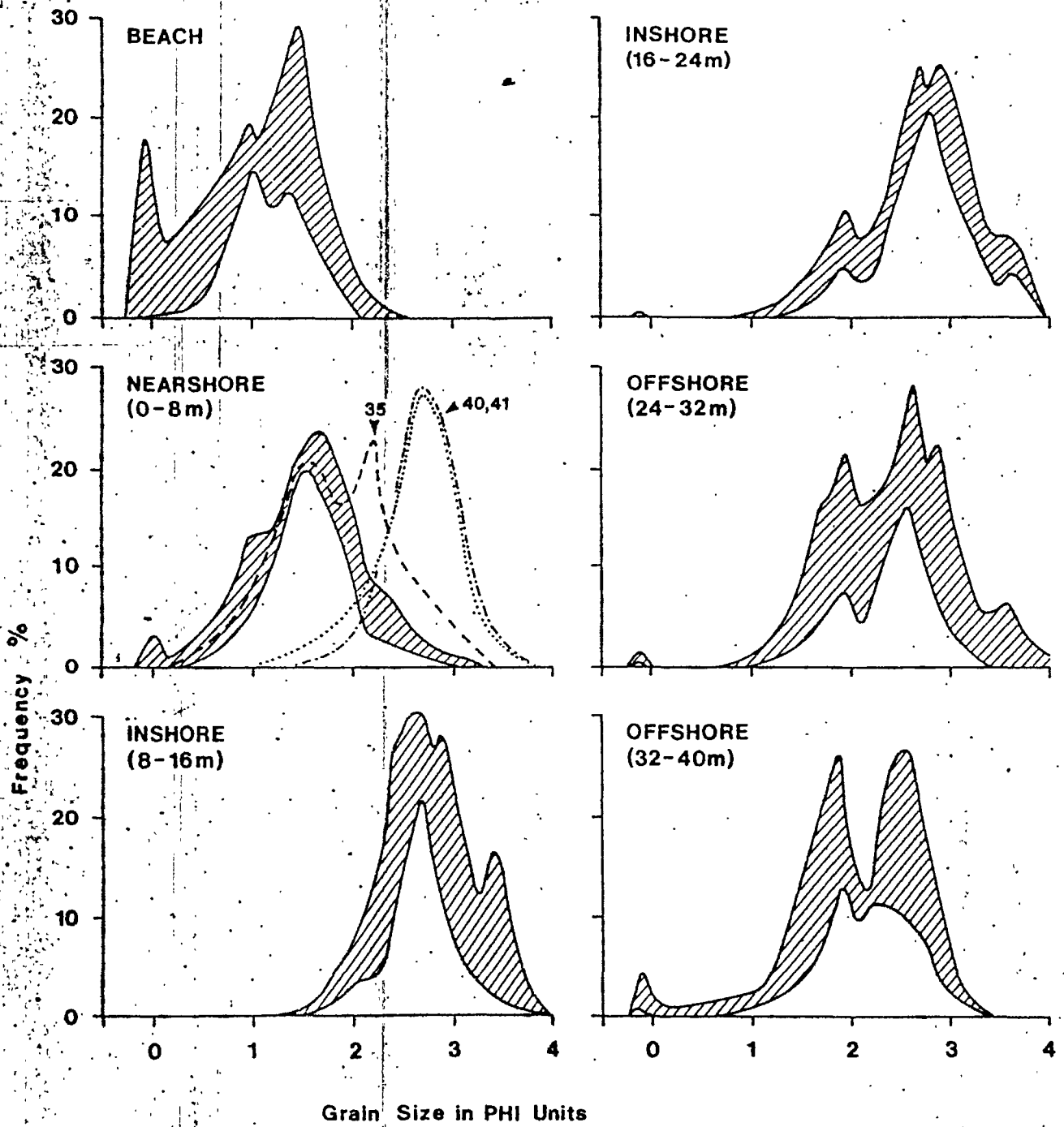
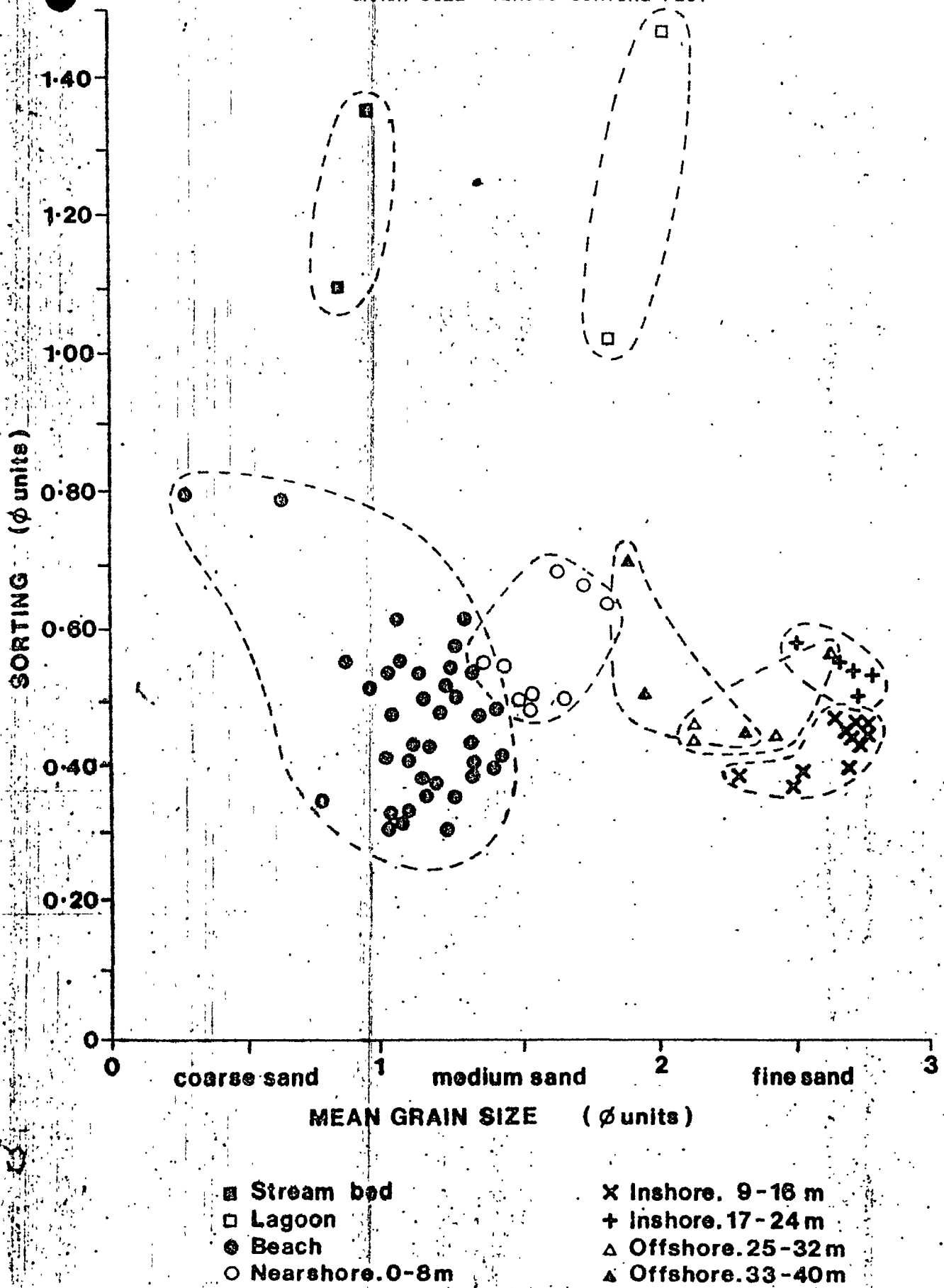


FIGURE 5

GRAIN SIZE VERSUS SORTING PLOT



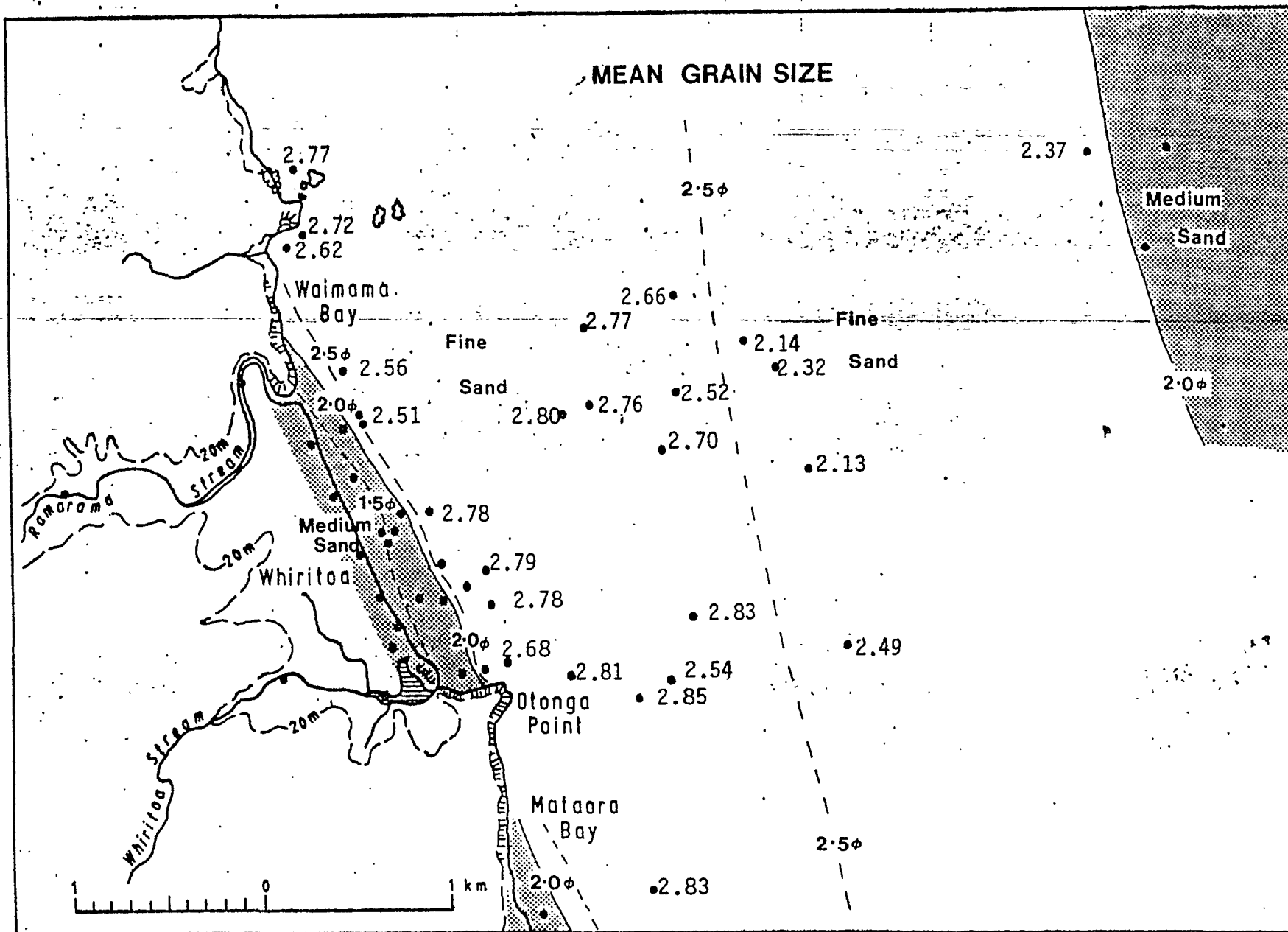


FIGURE 6 : DISTRIBUTION OF MEAN GRAIN SIZE (φ)

FIGURE 7
PHOTOMICROGRAPHS OF WHIRITOA SANDS



WHIRITOA STREAM

Sample no. 64

Size grade:

0.25 to 1 mm (0-2 ϕ)

x20



BEACH

Sample no. 50

Size grade:

0.25 to 1 mm (0-2 ϕ)

x20



NEARSHORE

(0-8 m below LWM)

Sample no. 30

Size grade:

0.25 to 1 mm (0-2 ϕ)

x20



INSHORE

(9-16 m below LWM)

Sample no. 32

Size grade:

0.06 to 0.25 m (2-4 ϕ)

x20



INSHORE

(17-24 m below LWM)

Sample no. 21

Size grade:

0.06 to 0.25 mm (2-4 ϕ)

x20



OFFSHORE

(33-40 m below LWN)

Sample no. 24

Size grade:

0.25 to 1 mm (0-2 ϕ)

x20

APPENDIX: SAMPLE NUMBER, MEAN SIZE AND SORTING

FOREDUNE SAMPLES

Sample Number	Mean size (mm)	Mean size (ϕ)	Sorting (ϕ)	Verbal Description
WA 11	0.39	1.35	0.59	Moderately well sorted medium sand
WA 21	0.39	1.34	0.52	Moderately well sorted medium sand
WA 31	0.55	0.87	0.37	Well sorted coarse sand
WA 41	0.41	1.27	0.42	Well sorted medium sand
WA 51	0.36	1.48	0.41	Well sorted medium sand
WB 11	0.39	1.34	0.46	Well sorted medium sand
WB 21	0.30	1.74	0.71	Moderately sorted medium sand
WB 31	0.47	1.09	0.32	Very well sorted medium sand
WB 41	0.46	1.11	0.34	Very well sorted medium sand
WB 51	0.56	0.83	0.99	Moderately sorted coarse sand
CCS 59	0.33	1.61	0.63	Moderately well sorted medium sand
CCS 60	0.44	1.18	0.43	Well sorted medium sand

BEACH SAMPLES

50	0.41	1.29	0.35	Well sorted medium sand
51	0.65	0.61	0.79	Moderately sorted coarse sand
52	0.49	1.04	0.47	Well sorted medium sand
53	0.49	1.03	0.53	Moderately well sorted medium sand
54	0.41	1.27	0.50	Well sorted medium sand
WA 12	0.39	1.35	0.53	Moderately well sorted medium sand
WA 13	0.47	1.10	0.40	Well sorted medium sand
WA 14	0.44	1.18	0.42	Well sorted medium sand
WA 22	0.40	1.31	0.61	Moderately well sorted medium sand
WA 23	0.42	1.24	0.54	Moderately well sorted medium sand
WA 24	0.45	1.16	0.49	Well sorted medium sand
WA 32	0.47	1.09	0.31	Very well sorted medium sand
WA 33	0.45	1.16	0.38	Well sorted medium sand
WA 34	0.58	0.78	0.34	Very well sorted coarse sand
WA 42	0.38	1.41	0.39	Well sorted medium sand
WA 43	0.39	1.36	0.39	Well sorted medium sand
WA 44	0.45	1.15	0.53	Moderately well sorted medium sand
WA 52	0.39	1.37	0.47	Well sorted medium sand
WA 53	0.40	1.31	0.43	Well sorted medium sand
WA 54	0.37	1.42	0.40	Well sorted medium sand

(Beach Samples (contd))

Sample Number	Mean size (mm)	Mean size (φ)	Sorting (φ)	Verbal Description
WB 12	0.37	1.42	0.48	Well sorted medium sand
WB 13	0.48	1.05	0.32	Very well sorted medium sand
WB 14	0.42	1.24	0.51	Moderately well sorted medium sand
WB 22	0.40	1.32	0.40	Well sorted medium sand
WB 23	0.41	1.29	0.57	Moderately well sorted medium sand
WB 24	0.43	1.21	0.47	Well sorted medium sand
WB 32	0.49	1.02	0.41	Well sorted medium sand
WB 33	0.39	1.34	0.38	Well sorted medium sand
WB 34	0.46	1.11	0.42	Well sorted medium sand
WB 42	0.42	1.25	0.30	Very well sorted medium sand
WB 43	0.47	1.09	0.32	Very well sorted medium sand
WB 44	0.49	1.03	0.31	Very well sorted medium sand
WB 52	0.51	0.97	0.52	Moderately well sorted coarse sand
WB 53	0.55	0.87	0.55	Moderately well sorted coarse sand
WB 54	0.82	0.29	0.80	Moderately sorted coarse sand
CCS 59B	0.45	1.16	0.35	Well sorted medium sand
CCS 59W	0.47	1.09	0.55	Moderately well sorted medium sand
CCS 60B	0.44	1.18	0.37	Well sorted medium sand
CCS 60W	0.48	1.06	0.64	Moderately well sorted medium sand

NEARSHORE SAMPLES (0-8 m below LWL)

01	0.31	1.69	0.50	Well sorted medium sand
02	0.30	1.74	0.66	Moderately well sorted medium sand
20	0.35	1.53	0.49	Well sorted medium sand
25	0.32	1.63	0.68	Moderately well sorted medium sand
26	0.40	1.33	0.54	Moderately well sorted medium sand
27	0.35	1.52	0.48	Well sorted medium sand
30	0.36	1.46	0.54	Moderately well sorted medium sand
31	0.35	1.53	0.49	Well sorted medium sand
35	0.28	1.81	0.63	Moderately well sorted medium sand
19+	0.35	1.53	0.52	Moderately well sorted medium sand
40*	0.15	2.72	0.38	Well sorted fine sand
41*	0.16	2.62	0.44	Well sorted fine sand

INSHORE SAMPLES (9-16 m below LWL)

Sample Number	Mean size (mm)	Mean size (φ)	Sorting (φ)	Verbal Description
03	0.14	2.79	0.42	Well sorted fine sand
04	0.15	2.76	0.45	Well sorted fine sand
05	0.15	2.77	0.43	Well sorted fine sand
06	0.15	2.73	0.39	Well sorted fine sand
22	0.14	2.80	0.46	Well sorted fine sand
28	0.20	2.32	0.37	Well sorted fine sand
29	0.17	2.51	0.36	Well sorted fine sand
32	0.14	2.78	0.43	Well sorted fine sand
33	0.15	2.72	0.44	Well sorted fine sand
34	0.16	2.68	0.46	Well sorted fine sand
39	0.17	2.56	0.38	Moderately sorted fine sand
13°	0.14	2.81	0.45	Moderately sorted fine sand
14°	0.14	2.82	0.40	Moderately sorted fine sand
15°	0.14	2.85	0.48	Moderately sorted fine sand
18+	0.14	2.83	0.46	Moderately sorted fine sand
42*	0.15	2.77	0.41	Moderately sorted fine sand
43'	0.16	2.65	0.41	Moderately sorted fine sand
44'	0.13	2.88	0.36	Moderately sorted fine sand
49'	0.14	2.85	0.77	Moderately sorted fine sand

INSHORE SAMPLES (17-24 m below LWL)

07	0.15	2.70	0.54	Moderately well sorted fine sand
10	0.17	2.52	0.57	Moderately well sorted fine sand
12	0.14	2.83	0.52	Moderately well sorted fine sand
21	0.15	2.76	0.53	Moderately well sorted fine sand
38	0.15	2.77	0.49	Well sorted fine sand
17°	0.17	2.54	0.60	Moderately well sorted fine sand
45'	0.14	2.7	0.44	Well sorted fine sand
48'	0.15	2.75	0.50	Well sorted fine sand

OFFSHORE SAMPLES (25-32 m below LWL)

	0.23	2.14	0.56	Moderately well sorted fine sand
11	0.23	2.13	0.47	Well sorted fine sand
23	0.18	2.48	0.44	Well sorted fine sand
37	0.16	2.66	0.56	Moderately well sorted fine sand
16°	0.18	2.49	0.55	Moderately well sorted fine sand
47'	0.24	2.05	0.42	Well sorted fine sand

OFFSHORE SAMPLES (33-40 m below LWL)

08	0.26	1.96	0.50	Moderately well sorted medium sand
24	0.27	1.90	0.68	Moderately well sorted medium sand
36	0.19	2.37	0.44	Well sorted fine sand
46'	0.59	0.77	0.72	Moderately sorted coarse sand

STREAM SAMPLES

64	0.57	0.81	1.09	Poorly sorted coarse sand
65	0.53	0.91	1.35	Poorly sorted coarse sand

LAGOON SAMPLES

57	0.25	2.01	1.47	Poorly sorted fine sand
66	0.28	1.81	1.02	Poorly sorted medium sand

NOTE: Sample numbers prefixed WA and WB are from Christopherson (1977) and those prefixed CCS are from the Coromandel Coastal Survey. All other samples were collected for this investigation from the locations shown on Figure 1. Symbols following numbers refer to the following: + Mataora * Waimama Bay ° off Otonga Point ' off Whatipu and Whangamata.



MINES DIVISION

MINISTRY OF ENERGY P.O. Box 34, Huntly.

INQUIRIES TO:

Mr Brdanovic
Telephone 87 257 Huntly.

ANVIL HOUSE WAKEFIELD ST.
P.O. BOX 6342 TE ARO
WELLINGTON NEW ZEALAND

TELEPHONE: 735 755
TELEX: MINES NZ 31341

DATE: 22.7.80

OUR REF: 12/8.

YOUR REF: 54/14/7..

Regional Secretary for Transport,
Ministry of Transport,
Marine Division,
Private Bag,
AUCKLAND.

Attention : D.W. Le Marquand.

Dear Sir,

Re : Whiritoa Sand Pit.



The land on which the sand pit is situated is held
in fee simple by a Maori Trust in C.T.22A/16.

Although there is no restriction on minerals, there was
a mining licence (M.L. 20973) issued to the Trust. The
licence expired on 31.3.1978.

The sand pit is operated by Provincial Transport Ltd,
Pāroa, under an agreement with the Trust which is
represented by Messrs McCaw, Smith & Arcus, P.O. Box 471,
Hamilton.

Yours faithfully,

.....*Mr Brdanovic*.....

(M. Brdanovic)
Inspector of Mines & Quarries.

Published at Auckland, on [date] 19 April 1980

SUBJECT: Sand Removal at Whiritoa

SAND RIDDLE UNSOLVED

Herald Corres Waihi placed some responsibility on that body.
A meeting with the Hau-raki Catchment Board has brought the Ohinemuri County Council no closer to a solution of the Whiritoa sand problem.

The county chairman, Mr B. W. Fisher, asked whether the board was considering action to stop sand mining at Whiritoa.

But the board chairman, Mr M. W. Madill, said the council was the body to take action on the matter.

The question of whether the Town and Country Planning Act should be used to stop sand mining was raised.

Four Acts

Mr D. R. Jordan said while a report indicated that sand removal could aggravate dune erosion, he doubted if there were sufficient grounds for a successful move to stop the mining.

The town planner, Mr I. G. McIntyre, said four acts had some bearing on the matter. He doubted whether the Town and Country Planning Act was the appropriate act to use.

Complicated

The catchment board had the power to make bylaws under the Water and Soil Conservation Act and this

Mr McIntyre was told the board would have difficulty in finding provision in the act which would be effective in stopping sand mining at Whiritoa.

He conceded the legal situation was complicated and said it was unwise to take any action before expert advice had been obtained from a solicitor familiar with this area of the law.

The Ohinemuri County Council adopted a recommendation from its town and country planning committee that the council solicitor be consulted.

DWleM:AC

**Private Bag
AUCKLAND
TELEPHONE: 773-400**

**Customhouse
Quay Street
AUCKLAND**

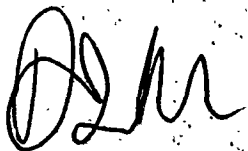
54/14/7

23 June 1980

**Inspector of Mines & Quarries,
P. O. Box 34,
HUNTLY**

WHIRITOA.

**Could you please advise this office of your Department's involvement at
Whiritoa, in regards to sand removals from above the High Water Mark.**



**D. M. le Marquand
for Regional Secretary for Transport**

MINUTE SHEET

Subject:

Department:

Whiritoa Sand Removal

File No.:

Date:

To -

Head Office
Secy (Hhrs)
Atts Sandy
Ewing

Please find photocopy of what we have on our file.

There is a report by Dr R.F. Mclean on the area. He wrote this for the Manawaki Catchment Board. The report gives evidence to suggest that the beach is a closed system. Any removals likely to lead to erosion.

I think Keith Whitehouse had a copy of this report on his files.

I have written to mines asking of their involvement in the area and am awaiting their reply. Shall forward reply onto you.

D.W. Le Marquand

GRV:KD

54/15/48

20 February 1980

The President
Whiritoa Ratepayers Association
P.O. Box 3266
AUCKLAND

Dear Sir

I have received your letters of 24 and 25 January 1980 concerning the extraction of sand at Whiritoa Beach.

You mention that you had sent an earlier letter to the ministry to which you had not yet received a reply. That letter went to our Auckland office and they were advised by this office of this ministry's involvement in this matter and advised to reply to you on 2 August. Our Auckland office may however have been under the impression that this office had replied direct to you; be that as it may we apologise for not replying.

As far as this ministry is aware the situation at Whiritoa Beach is that the sand mining operation takes place above High Water Spring Tides and is not subject to a licence issued by the Ministry of Transport. Therefore we are not in a position to answer the queries raised in your letter of 24 January. It is unfortunate that the letter of 14 June 1979 from the Commission for the Environment gave you the impression that it was this ministry which issued the licences for the extraction at Whiritoa. In fact the licence to extract sand at Whiritoa Beach is issued by the Maori Trustee, pursuant to the provisions of the Maori Affairs Act 1953, as the land concerned is Maori land.

The ministry does however have certain limited powers to control sand extraction on land adjacent to the coast where such extraction could lead to erosion. We are not in a position to exercise these powers without strong scientific evidence to show that extraction may be leading to erosion.

The report prepared by Dr McLean for the Hauraki Catchment Board may provide such evidence and at the present time this ministry and the catchment board are discussing what action could be taken.

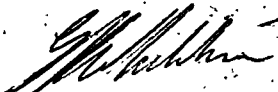
As you are aware this is a difficult and contentious matter and it is not desirable to indicate the exact nature of any action this ministry may take until we have finalised our discussions with other bodies.

Yours faithfully


G.K. Whitehouse
for Secretary for Transport

The Regional Secretary
Private Bag
AUCKLAND

Attention: P. Spackman


G.K. Whitehouse

P.S. I have not included a copy of Dr McLeans report; it is too bulky to photocopy. However report makes it clear that sand extraction at Whareroa beach is likely to lead to erosion


#20/8441

OKW:KD

54/15/48

20 February 1980

The Secretary
Hauraki Catchment Board
P.O. Box 7
TE AROHA

Dear Mr Morrison

REMOVAL OF SAND AT WHIRITOA

Thank you for the copy of the report on Whiritoa Beach, prepared by Dr McLean, which you sent to the ministry. For some time now the ministry has been concerned that sand extraction at Whiritoa may be having an undesirable effect on the beach however, we have been reluctant to act until such time as good technical evidence existed to show that this was so.

Under section 244 of the Harbours Act 1950 it is an offence to remove sand from a beach or adjacent land without the consent of the Minister of Transport if there is a likelihood that such extraction will lead or is likely to lead to erosion. The present extraction operation at Whiritoa is a case in point and has not been consented to by the minister. In view of the sizable investment, the Whiritoa subdivision, at risk due to erosion it is unlikely that the minister would consent to long continued extraction of sand in this area.

I would be pleased to know whether your board would support this ministry in any moves we may make to have the extraction operations at Whiritoa stopped.

Yours sincerely



G.K. Whitehouse
for Secretary for Transport

54/15/48

20 February 1980

The County Clerk
Ohinemuri County Council
P.O. Box 17
PAEROA

Dear Sir

SAND EXTRACTION : WHIRITOA BEACH

The Ministry recently received a copy of the report on sand extraction at Whiritoa beach prepared by Dr R.E. McLean for the Hauraki Catchment Board. The report makes it clear that the present sand extraction operation at Whiritoa could lead to erosion of the beach, thus putting a large investment, the Whiritoa subdivision, at risk.

The Ministry of Transport represents the Crown as owner of the foreshore and seabed round New Zealand and administers this area through the Harbours Act 1950. As a land owner we are concerned to see that nothing is done which could cause erosion of the foreshore and there are powers in the Harbours Act to ensure that this does not happen. The section of the act which is relevant to Whiritoa is section 244 which makes it an offence to remove any material from an area adjacent to a beach without the consent of the Minister of Transport if removals are likely to lead to erosion.

Clearly in view of the data in the McLean report, if the minister did not give his consent to the extraction operation at Whiritoa it would have to cease.

Before we take any action in this matter this ministry would like the views of your council on whether the extraction operations at Whiritoa should be controlled.

Yours faithfully



G.K. Whitehouse
for Secretary for Transport



Whiritoa Ratepayers Assn
P.O. Box 3266
AUCKLAND

25 January 1980

Mr Keith Whitehouse,
Harbours & Foreshore section,
Ministry of Transport,
Private Bag,
WELLINGTON.

Dear Sir,

✓ Enclosed please find a copy sent to us by the Commission for the Environment re the sandmining at Whiritoa Beach.

Please can you indicate what action the Ministry of Transport will be taking now the McLean report is completed (Dec 1979). Our Association is vitally concerned and we would appreciate your co-operation on this matter.

Yours faithfully,

pp. S. MacAroy

M.J. MacAroy
PRESIDENT

Enc.

COMMISSION FOR THE ENVIRONMENT

Department of the Environment
P.O. Box 111, Auckland

P.O. Box 111

Auckland

New Zealand

Telephone: 819 900

Control: NRS 5/5C

19 June 1979

Mr M P Cooke
32 Browns Avenue
Paparanga
AUCKLAND

Dear Mr Cooke

I am sorry that it has taken so long to follow up your letter of 30 October concerning:

- (a) the effects of sand extraction on Whiritoa Beach;
- (b) the role of the Commission for the Environment; and
- (c) how local residents may help in investigations that may be warranted.

The present position is that the Trustees of the land have recently executed a deed, granting rights to Provincial Transport Limited to remove up to 4,317 cubic metres of sand per year for a period of 3 years from 1 April 1979. This sand has such specialised uses as sand blasting.

A number of local residents wrote to the Minister for the Environment about the removal of sand at Whiritoa Beach. I enclose a copy of the Minister's reply for your information. Following these enquiries the Commission for the Environment contacted the trustees for the owners of the land, the Ministry of Transport, the Hauraki Catchment Board and the Ohinemuri County Council. I shall review the information gathered through these enquiries.

(a) Effects of Sand Extraction at Whiritoa Beach

At the heart of the issue is the question whether Whiritoa Beach sand system is open or closed. A beach, which receives little or no "new" sand from offshore, rivers, cliffs or other beaches, is described as a closed sand system. In a closed system the quantity of sand within the beach and off-shore remains constant, although the quantity present in the major parts of sand system, the frontal dune, the beach, and off-shore, is highly variable, depending on the type and severity of wave action. However, if sand is removed from the beach or foredune which is part of the active sand system by stormy conditions or sand extraction, the

forodune and beach are likely to erode. On a beach which receives the sand from other areas, an open sand system, the likelihood of erosion is lessened if the amount of sand removed by sand extraction and leaving the system is less than the amount of sand entering the system.

If the Whiritoa Beach system is a closed system or has only small quantities of sand entering it, in insufficient quantities to replace the sand which is being removed by sand mining, as suggested by Mr Max Christopherson of the University of Waikato in his unpublished 1977 M.Sc thesis in Earth Sciences entitled

"The Effect of Sand Mining on the Erosion Potential of Whiritoa Beach",

it is possible that sand mining could be causing or enhancing erosion of the frontal dune. Consequently the Hauraki Catchment Board asked Dr Roger McLean, of the Geography Department, University of Auckland, to prepare a report to examine Christopherson's contention that the Whiritoa Beach sand system is partially or possibly a completely closed system. Dr McLean's study is almost complete. There are several further sand samples to be analysed which were obtained from the beach and off-shore from Whiritoa which require a mineralogical examination to determine their source.

(b) The Role of the Commission for the Environment

I enclose copies of our annual reports since our inception in 1972. These reports show the scope of the work the Commission is involved in. It must be understood that the Commission for the Environment has no executive authority (namely, an Act of Parliament) but works through other local authorities and government agencies. In this case the executive agency involved is the Ministry of Transport, who issue licences to extract sand from Whiritoa Beach. Hence the Commission cannot authorise any study or investigation although through other government departments and local bodies it may initiate and complete studies itself or encourage other bodies or individuals to carry out the study.

(c) How could Local Residents help in investigations that may be warranted?

Local residents could be of assistance in a variety of ways, especially if a long-term monitoring programme is adopted by the Hauraki Catchment Board and Ohinemuri County Council. If local residents are willing to offer such assistance they should contact the Hauraki Catchment Board or the Ohinemuri County Council who are likely to coördinate these studies, in consultation with Dr McLean of the University of Auckland or a student of either Dr McLean's or Dr Terry Healy of Earth Sciences, University of Waikato.

Possible Future Action

Once the type of sand system is determined, the effects of sand extraction on Whiritoa Beach can be re-evaluated by the Ministry of Transport. If sand mining is found to be detrimental to Whiritoa Beach, the Ministry of Transport can stop the removal of sand under the Harbours Act 1950.

Another possible course of action is that the Ohinemuri County Council could take legal action against the Trust under the Town and Country Planning Act 1977, if sand mining was found to be detrimental to

"the preservation of the natural character of the coastal environment and the margins of lakes and rivers and the protection of them from unnecessary subdivision and development".

I have sent a copy of this letter to the Ministry of Transport and have asked them to advise you of their action taken when they have received Dr McLean's report.

I hope this information furthers your understanding of the situation at Whiritoa.

Yours sincerely

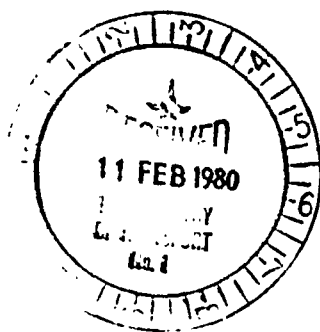
Ken Murray

Ken Murray
for Commissioner for the Environment

Enc.

Mr K. Whitehouse - 11 x 5

5/1/15/48



Whiritoa Ratepayers Assn,
P.O. Box 3266,
AUCKLAND.

24 January 1980

Mr Keith Whitehouse,
Harbours & Foreshore Section,
Ministry of Transport,
Private Bag,
WELLINGTON.

Dear Sir,

✓ Enclosed is a copy of a letter sent by us dated 8 July 1979. Please can we have a reply, as one has not been received yet.

Further to this letter, please can you answer these queries:-

- a) The expiry date for the current licence to mine Whangamata Block 6B3B2.
- b) Is this renewed on an annual basis?
- c) To whom is it issued?
- d) How long (approx) has sand been mined from the present site at the south end of Whiritoa Beach?
- e) What quantities were permitted to be extracted over the 1970-79 period?
- f) Has sand mining taken place at the north end of Whiritoa Beach? If so, when and by whom?
- g) What responsibility does the Ministry of Transport have in monitoring the quantities extracted?
- h) Is the Ministry of Transport responsible for either the erection of the concrete posts denoting the 2 chain seaward limit of the sandmine at Whiritoa since most posts have disappeared?

We would appreciate an early clarification of these points.

Yours faithfully,

M.J. MacAroy

M.J. MacAroy,
PRESIDENT

Enc.

54/14/79
Flat 3, 6 Evelyn Rd,
Howick,
Auckland.
8th July 1979.

The Chief Officer,
Marine Division.

Dear Sir,

I am writing on behalf of the Whiritoa Beach
Ratepayers Association.

I read with much interest an article in the "Auckland Star"
(Wednesday July 4th.) describing the curbing of sandmining
on beaches and offshore, by your Ministry, due to erosion problems.

You may or maynot be aware that ratepayers at Whiritoa Beach
(16 km north of Waihi), have for many years been very concerned
about continuing large scale sand mining at their beach, by
Provincial Transport Ltd. The sand mining is carried out within
100 metres of housing at the beach.

In the last year very severe erosion of the foredunes occurred
and we believe the continued sand mining is not allowing a
natural recovery of the beach system.

Mr Christopherson of Waikato University, under the supervision
of Dr Healy, did a study on Whiritoa Beach, and concluded
that the beach was a "closed system" and that continued sand
mining would lead to beach erosion and loss of property.
Dr Healy described the sand mining here as a "serious case".
("Bay of Plenty Times" 30/7/77).

Ratepayers of Whiritoa are so concerned about the continued
sand mining, they have engaged a solicitor at considerable
expense to try to stop this activity. Many ratepayers have in fact
threatened to withhold rates from the Ohinemuri County Council
until the activity is stopped. As ratepayers we have received
no assistance from the Ohinemuri County Council.

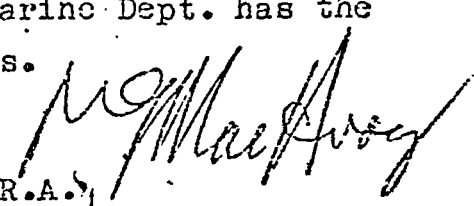
At present Dr McLean of Auckland University is doing a study
on the erosion problem at Whiritoa for the Hauraki Catchment Board.
The Ratepayers Association is very concerned to learn that a
licence to remove sand from the beach has just been extended
for a further 3 years even though the study of the beach by
the Hauraki Catchment Board has not been completed yet.

We have pleaded with politicians, the Catchment Board, the
Ohinemuri County Council, and Ministries of Environment and Works,
for at least 7 years, to stop the sand mining, without any
success to date.

We would be very grateful if your department could help to
solve this problem, as it appears that the Marine Dept. has the
power to issue and revoke sandmining licenses.

Yours faithfully,
M.J. Mac Avoy,

President W.R.A.





MINISTRY OF TRANSPORT

MOT 5

FILE : RET-221

INTERNAL MEMORANDUM

Our Ref.: 54/15/48

Your Ref.: 54/14/7

To: The Regional Secretary
Private Bag
AUCKLAND

From: Head Office

Date: 2 August 1979

Subject: Attention: P. Spackman

SAND REMOVALS : WHIRITOA

Your memorandum of 23 July attached a letter from the Whiritoa Ratepayers Association. The sand removal operation which is the cause of the ratepayers concern is conducted above mean high water under a licence under the Maori Affairs Act 1953. The extractors work the licence by digging a large hole which is then filled up by sand pushed into it during storms.

At the present time the Hauraki Catchment Board are using Dr R.L. McLean of Auckland University to prepare a report on the extraction operation. In particular Dr McLean is investigating whether or not the Whiritoa Beach is a closed sand system. If the beach is a closed system then sand extraction could well decrease the sediment supply, leading to erosion. You might like to contact Dr McLean to see when his report is to be presented to the Board.

It would be possible, if the area is part of a "closed sand system" to use section 244 of the Harbours Act to stop or limit the extraction. However, it is probably wise to keep the possibility fairly quiet as, I believe, this whole problem could very easily get into the political area.

It would probably be best for you to write to the Ratepayers Association and say that; (1) we do not issue this licence and that the Auckland Star article was only referring to those licences issued by this Ministry; (2) we are however awaiting the results from investigation into the problems at Whiritoa and when we receive these we will see what action, if any, the Ministry can take.

If you have any queries on this problem please do not hesitate to contact me.

G.K. Whitehouse
for Secretary for Transport

2
So (HKT)



MINISTRY OF TRANSPORT



MOT 5

Our Ref.: 54/15/48

Your Ref.:

INTERNAL MEMORANDUM

To: The Regional Secretary
Private Bag
AUCKLAND

From: Head Office

Date: 21 December 1978

Subject: Attention: Mr D.J. Greig

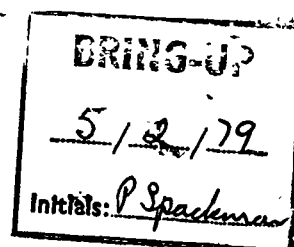
SAND REMOVALS : COROMANDEL COAST

Thank you for your memorandum of 12 December 1978 and the enclosed reports. I would be pleased if you would maintain contact through the Ministry of Works and Development with the Hauraki Catchment Board. It looks as though they are prepared to do a resource survey in the area and we would be very interested in obtaining a copy of this.

I have noted the recommendations made by Ministry of Works and Development on the various proposed sand extraction sites and in general I agree with them. I would however suggest that the sand extraction sites which the ministry recommends should be policed by the Thames Coromandel District Council would be better policed by the Hauraki Catchment Board. You should sort this one out before the start of the 1979 licensing year.

G.K. Whitehouse
for Secretary for Transport

2





YOUR REF 54/14/7 P.T. 2
OUR REF 7/377

OFFICE OF THE MAORI TRUSTEE

CHARLES HEAPHY BUILDING
ANGLESEA STREET
TELEPHONE 84 579
PRIVATE BAG HAMILTON
TELEGRAMS MAORIFAIRS

13 October 1978

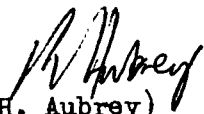
The Regional Secretary for Transport,
Ministry of Transport,
Private Bag,
AUCKLAND.

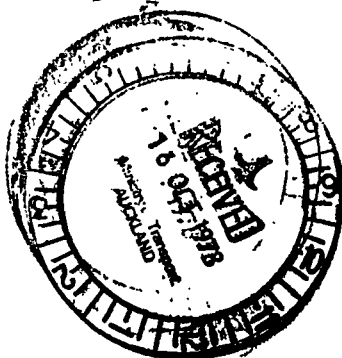
Attention Mr D. Greig

WHIRITOA BEACH

1. We acknowledge receipt of your memorandum dated 10 October 1978.
- ... 2. For your information we enclose a copy of a letter which was sent to Mr A. Campbell on 4 October 1978.

Yours faithfully,


(R.H. Aubrey)
for Maori Trustee



Encl.

7/377

4 October 1978

Mr A. Campbell,
Whiritoa Beach,
C/- Post Office,
WAIHI.

Dear Mr Campbell,

Thank you for your letter, received on 4 October 1978.

Whangamata 6B3B2 is Maori land but this does not mean that the Department has any control over it at all. The only time that the Department can exercise control over Maori land is by virtue of an empowering order from the Maori Land Court. Maori land is privately owned land and only the owners have a right to use it or instruct anyone in its use unless there is an Order of the Court giving some Organisation, such as the Department or a trustee, power to deal with the land.

What you indicate is happening is unfortunate, but there is nothing that I can do to stop what is going on. We recently had an approach from Mr P.A. Levett, Kon Tiki Road, Whiritoa, concerning the erosion and we told him that the land was vested in trustees by the Maori Land Court on 24 November 1976. Prior to this, Mr W.T. Castle had a grant to extract sand but this expired on 30 September 1976. The Trustees in whom the land is now vested are :-

William Thomas Castle

135 Lake Street East,
OTAHUHU.

Connie Greaves

P.O. Box 221,
WAIHI.

Paul Kotara

59 Kiwitea Street,
Sandringham,
AUCKLAND.

James Ian Howart

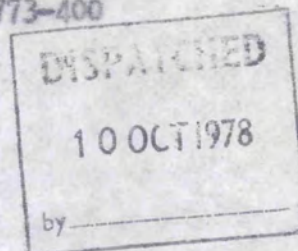
C/- McCaw, Smith and Arcus,
N.Z.I. Building,
Garden Place,
HAMILTON.

I feel that you have no option but to address your fears to the present trustees. If you don't get satisfaction from them, I am afraid then that you would have to consult your legal adviser.

Yours faithfully,

(M.G. McKellar)
District Officer

— 773-400



54/14/7 PT 2

10 October 1978

Mr A. Campbell
Whiritoa Beach
c/o Post Office
WAIHI

Dear Sir

WHIRITOA BEACH

In reply to your letter of 2.10.78 with a copy of a circular to Ratepayers, I would advise that the area of removal is from Maori land above Mean High Water Ordinary Spring Tides and is outside the control of this Ministry.

During earlier investigations it was found that the licence is issued by the Maori land owners to a part owner of the land and is administered by the Maori Trustees and this fact could cause difficulties in taking action to close the area to extraction.

However a copy of this letter will be referred to the Hauraki Catchment and Regional Water Board and the Maori Trustee Hamilton who may be able to assist in this matter.

Yours faithfully

D. Greig
for Regional Secretary for Transport

The Secretary
The Hauraki Catchment & Regional Water Board
P.O. Box 7
TE AROHA

Dear Sir

Copy for your information together with a photocopy of the correspondence under reply and circular to Ratepayers.

/Cont.

The extraction of sand from the private land behind the foredune has caused some complaint over past years but being above M.H.W.O.S.T is outside our jurisdiction. In investigating the matter previously in conversation with the County Clerk it was understood that the Council might declare the area a reserve, but it is likely that the problems of Maori ownership may have been insurmountable.

It is understood that the extractor is the Paeroa Transport and during a previous visit in the early part of this year extraction had taken the extraction area to the lowest observed for a considerable time.

This matter is referred to your Board for such action as you think fit in view of the danger of erosion to the adjacent sub-divided land.

Yours faithfully

D. Greig
for Regional Secretary for Transport
Encl.

The Maori Trustee
Department of Maori Affairs
Private Bag HAMILTON

Copy for your information together with a photocopy of correspondence and circular received.

The complaint is deferred for your action while it may not be possible to cease operations a limit on the amount removed might allow reinstatement of the extraction area, however, if as is inferred that the bay is a closed compartment there will be little or no replacement.

D. Greig
for Regional Secretary for Transport

Encl.

JH

Marine Department
Clayton House 109-111
Angela Street Hamilton

2 October 78,
A Campbell
Whiria Beach
% P.O. Waikato

Dear Sir

I am writing this letter on behalf of the Whiria Ratepayers. Re the taking of sand from the sand pit at the South end of the beach. (Block CB 3B2 Whangamata) which is Maori land. One of the four Trustees is Mr J. I. Howart, solicitor Hamilton. The reason for the letter is that after the last storm about 4 or 5 weeks ago, the erosion was frightful. The northern lagoon, sand dunes, Surf Club frontage, were all badly eroded.

Now we have a Scientific Report on the beach. (Christophersen Report from the Waikato University) which proves that the movement of sand on this beach is North to South. So the taking of sand from the southern end, must erode the whole beach. As this beach is a closed

This could mean a disaster if we have another storm. As the sand pit was empty prior to the storm, and completely filled to overflowing after the storm which lasted 24 hours.

According to Mr Christophersen the sand in the pit and surrounding would be app. 40,000 cubic metres.

Now we would like the removal of sand stopped. It is no good waiting for the damage to be done, and then fighting in court about who pays, or who is to blame. Let us leave the sand pit full as it is now for the peace of mind of the people of Wharitoa. There are enough laws to safeguard the beach. But the trouble is the local bodies will not use them. I am on the phone or I will come in to have a talk with your Dept. my Phone 513 Whangamata exchange. I am enclosing a notice from the W.E.G. Wharitoa Erosion Group.

This is the start of their direct action effort. This group has been given the go ahead by Ratepayers Ass.

I myself was appointed by Ratepayers to write to any Department Local Body members of Parliament etc. and appeal for help. 12 month or so ago a resident of Whiria was almost penalised for taking one tractor bucket load of sand from the beach.

But because the Block of Beaches owned by Maori people they can take 10000 of tonnes of sand and endanger ^{the Beach}.

Now Sir I hope your Department can give us advice on how to stop our beautiful beach from being spoiled and our sections going down to the sand pit.

Yours Faithfull
A. Campbell

Please give us an urgent reply.
ac

Whiritoa Erosion Group (W.E.G.)
P.O. Box 3266,
AUCKLAND, 1.

11th September 1978

Dear Whiritoa Ratepayer,

A large group of Whiritoa ratepayers have got together and have decided to send this letter to all Whiritoa ratepayers.

Recently storms have caused severe erosion to the beach, especially at the south end adjacent to the sand quarry site ("sandpit" - see diagram) and at the northern lagoon.

Whiritoa Beach is a "closed" beach (ie: there is little or no sand replacement from other areas of the coastline to Whiritoa beach which is bounded at both ends by rocky headlands.)

It is in our opinion, and in recent scientific opinion (Christophersen Report) that massive sand removal from the southern end of the beach is causing dangerous erosion to the entire beach, and if unchecked soon will result in the loss of many properties to the sea and/or severe flooding of lower lying back properties, in the near future.

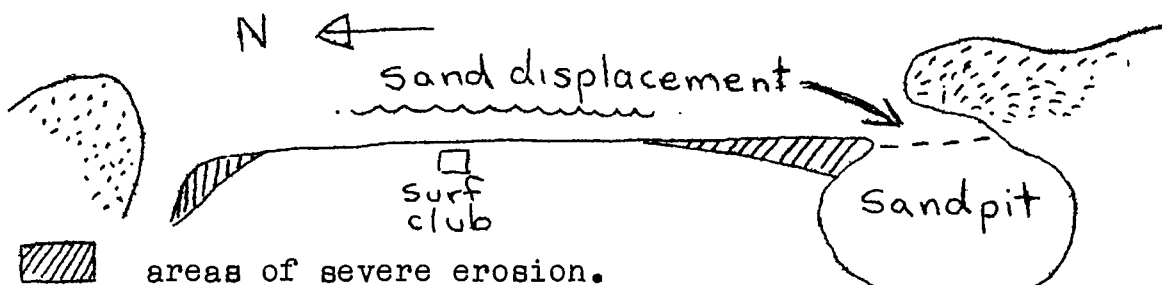
As you are aware, a Ratepayers "Sand Removal Committee" has been working very hard on this problem for some time. They have corresponded with the Ohinemuri County Council, Politicians, Catchment Boards, The Sandpit owners, etc. etc. However, no positive progress has been made due to the lack of action from the Ohinemuri County Council.

The following may be a radical decision but in our opinion is urgently necessary to safeguard our properties, as no other methods of approach have met with any success.

We suggest that all Whiritoa ratepayers withhold* their next rate payments until positive and decisive action is taken by the Ohinemuri County Council to stop all commercial sand extraction from Whiritoa Beach on a permanent basis.

When such decisive action is taken by the Ohinemuri County Council you will be advised of the County Council's decision and that payment of rates be made.

The following is a diagram of the beach, indicating the sand quarry site and the major areas of beach erosion.



There is natural dumping of large quantities of sand into the sandpit by the sea. The sand is then commercially extracted from the sandpit and the pit is allowed to fill again, thus causing more loss of sand from this "closed" beach and thus endangering the whole beach.

It is suggested that YOU as a ratepayer can make the Ohinemuri County Council take positive action to stop all further sand removal from this beach by withholding your rate payment and by signing the following form and sending it to: The County Clerk, Ohinemuri County Council, P.O. Box 17, Paeroa.

* It is suggested you deposit your rate payment into an interest earning account to cover the late payment penalty of 10%.

W.E.G.

As a concerned Whiritoa ratepayer I am withholding my rate payment until the Ohinemuri County Council takes immediate action stopping all further commercial sand removal from Whiritoa Beach; and makes a public statement setting out such action.

Name:
Address:

Signed: _____
Date: _____

P.O. Box 7
Te Aroha

R. W. Harris D.S.C. B.E.
Chief Engineer

J. M. Morison
Secretary.

Please Quote

2/3/126000-131000

In your reply

HAURAKI CATCHMENT BOARD and REGIONAL WATER BOARD

Telephone 48-099

Telegraphic Address "Catchment"

59 WHITAKER STREET,
TE AROHA

The Regional Secretary for Transport,
Ministry of Transport,
Private Bag,
AUCKLAND

Attention: Mr D. Greig

Dear Sir,

WHIRITOA BEACH

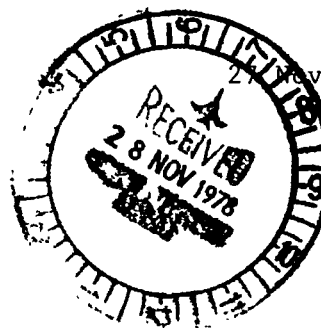
Receipt of copy of your letter 54/14/7 Pt. 2 dated 10 October 1978 to Mr A. Campbell is acknowledged. It was referred to the last meeting of Board's Executive Committee, together with other letters related to the extraction of sand from Whiritoa Beach.

As you may know, Dr R. McLean of Auckland University is preparing a report for Board on the subject and Board is currently waiting for this to come to hand before giving the matter further consideration.

Yours faithfully,
J.M. Morrison
SECRETARY

LSH:CJM

per.....
L.S. Hale



27 November 1978

DJG:ET

xxxx73-400

54/14/7 Part 2

10 October 1977

Mr P.A. Levett
Kon Tiki Road
Whiritoa
C/- WAIHI POST OFFICE

Dear Sir

SAND EXTRACTION : WHIRITOA

The extraction of sand from Whiritoa has been again investigated by this Ministry and advice has been taken from the Secretary for Transport, Wellington.

As you are possibly aware, the sand extraction area is sited above Mean High Water Mark and is therefore outside the control of this Ministry. It is understood that extractions are subject to a licence issued by the Maori Trustees in favour of a Mr Castle who is a part owner of the land from which the sand is extracted. While this matter was taken up some time ago by this Ministry, it is suggested that if you wish to pursue this matter, you should correspond with the Department of Maori Affairs, Hamilton.

Yours faithfully



D.J. Greig
for Regional Secretary for Transport



MINISTRY OF TRANSPORT

See reply file

54/14/7 w 8

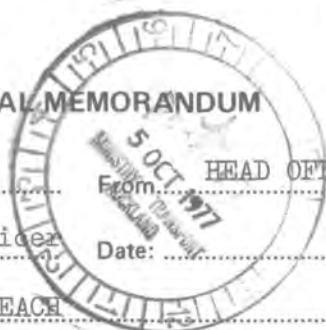
MOT 5

INTERNAL MEMORANDUM

Our Ref.: 54/15/48
GKW:MS
Your Ref.: 54/14/1ATo: The Regional Secretary
AUCKLAND

Attention: Regional Marine Officer

Subject: SAND REMOVAL: WHIRITOA BEACH




29 September 1977

Your memo of 9 September refers. We have looked into this matter before and would agree that section 242 of the Harbours Act provides some power to regulate this extraction. However, before invoking the powers of section 242 we would need to have the agreement of the Maori Trustee. However, there are problems with taking this course of action.

The licence under which sand is removed from Whiritoa Beach is in the form of a licence issued by the local Maori landowners and administered by the Maori Trustee. The problem is that the licence is made in favour of Mr Castle, who is a part-owner of the land, and therefore because of this relationship the local Maori Trustee does not wish to become involved in litigation over the matter.

Perhaps the best way to overcome the problem would be to approach the Maori Trustees drawing their attention to the complaint made by Mr Levett and asking them to enforce the provisions of the licence which has been issued. I hope this provides some directions.


G.K. Whitehouse
for Secretary for Transport*Wait Mt. ...**SDHAA*

xxx73-400

54/14/7 Part 2

9 September 1977



The Chief Engineer
Hauraki Catchment Board & Regional
Water Board

P.O. Box 50
NGATEA

Dear Sir

SAND REMOVAL : WHIRITOA BEACH

A copy of the letter of complaint dated 18 August 1977 from Mr P.A. Lovett was received by this office and as at that time a further investigation on a different matter was required of this Ministry, the opportunity was taken to examine the extraction area administered by the Department of Maori Affairs and it was found that sand had been extracted to a lower level than has been previously observed and it would appear that some minorursions outside the boundary of the approved area had taken place. It was also observed off the marker posts only two were standing. One situated towards cliff area and one at the apparent boundary in between the sub division and the beach. I have been unable to define the ownership of the land between mean high water and the boundary of the Maori Land Title although this was discussed with Mr Stewart, the Engineer for Ohinemuri County. It would appear that if extraction takes place at the present rate, there is a possibility of the sea encroaching and possibly causing erosion to the adjacent land.

Yours faithfully

D.J. Greig
for Regional Secretary for Transport

HEAD OFFICE
Attn: S.E.O. Harbours

Referring to your previous request 54/15/48 of 6 March 1974, a further examination of this area is undertaken and has shown that the extraction of sand from Maori Land could possibly allow the entry of the sea over the leased extraction area possibly cause erosion to the adjacent sub division. A check of Section 244 of the Harbours Act 1950 relating to Section (3) would appear to give this Ministry some authority to control such works and your comments are requested.

D.J. Greig
for Regional Secretary

MINUTE SHEET

Subject:

Department:

File No.

Date:

To—

30/8/77Whitewater Sand Investigation

A letter from Mr Lewis

Area of extraction where is Maori Land was checked, at that time 12:10pm two trucks were being loaded & it appeared that the extraction was confined to inside the posted area. Although it was evident some sand was being taken from corner of dune. Only two trucks are left in place.

The intrusion outside the Maori Land is no doubt into Gueshore Reserve being the dune area between m.u.w. & the boundary of the Maori Land. There is very little sand left available in the Maori Land extraction area.

Tracee Mr Dehouwer who was responsible for the extraction shown on the photograph. He is a part time employee of Whinemuri County, the wheels used is his own property. The sand removed is sold by the shire club for recreation.

Mr Dehouwer was warned that extraction must cease & the club should apply for a licence. While with Mr Dehouwer Mr Lewis viewed & the control of this Ministry explained & the authority regarding the extraction from the Maori Land. Please Gueshore could at times

MINUTE SHEET

Subject:

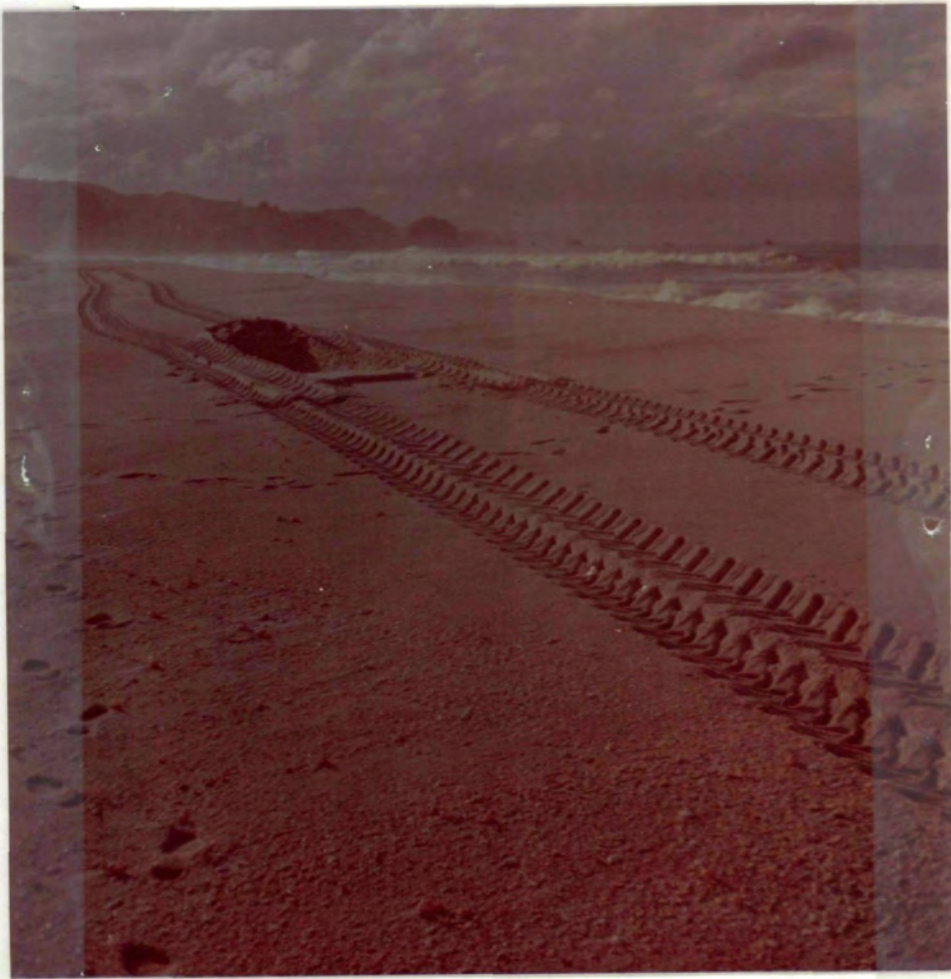
Department:

File No.

Date:

To—

See taking pens outside the m/h area
to quote W. Hewitt.
W. Hewitt is aware of the Surf Club
pens sales set up but had no objection
to that apparently



WHIRITOA BEACH

Whitōa Beach Sand

Dear Sir

I am writing to you re the removal of sand from off the beach, I am not referring to the sand at the Southern end of beach which there has been so much controversy over lately with contractors & Hoare Sand rills. This is private people or persons removing sand along the centre of beach with front scoops and large machines this person is getting it for residents, friends, & others I understand. We are very proud of our Beaches & I always understood it an offence to take sand off beaches to this extent. I feel there should be notices put up especially around the centre of the division

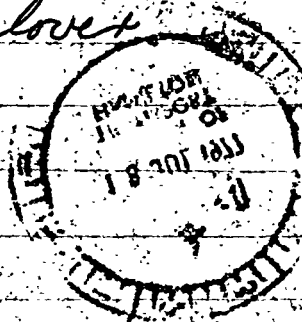
at the end of the first or second short streets past the Surf Club Building going South, on the left.

The main offender is a permanent resident who should know better & also works for the Council. (Oheremuri)

Enclosed is a photo to prove what is really going on at this beach.

Hoping you will do something about this matter as others will be doing likewise.

Thanking You. I am
A concerned
Beach lover



Y Ref:
126000-131000



F.A. Levett,
Kon Tiki Road,
Whiritoa,
c/o Waihi P.O.

Hauraki Catchment Board &
Regional Water Board,
59 Whitaker Street,
TE AROHA.

18 August 1977



Attention: R.W. Harris
Chief Engineer and Executive Officer

Dear Sir,

Thank you for your letter of 19th April 1977 and your promises therein, though no information has been forthcoming so far.

For your information as to what is happening in this area. The Provincial Transport Company, now despairing of the weather shifting the sand as usual into their section, because once more they are down to rock bottom, sent their employee to gather all his recent loads from the beach itself. In his honest endeavours to do a good job he has undermined the marker posts travelling deep into the beach. This situation I reported to the Ministry of Works Whangamata on 11 August 1977. The Ministry of Works representative came to Whiritoa on 16 August 1977, seeing me, he stated that his Ministry has no responsibility reference the beach situation.

If this mining of beach sand is to be condoned by the Catchment Board ad infinitum then within ten years there will be no Surf Club plus peoples private property will disappear.

It seems that the only way to conflict with arbitrary and arrogant companies is to AIR these problems for New Zealand to condemn.

It is no good Provincial Transport Company stating that it was a new driver because it is known who he was, the most experienced driver they have, a Mr. Sargeant.

Yours faithfully,

c.c. to:-

↓
The Marine Division, Hamilton
Mr. L.C. Schultz MP

HARBOURS & FORESHORES
AUCKLAND

F.A. Levett

The Senior Clerk, Ministry of Transport,
P.O. Box 166, TAURANGA.

Regional Office, AUCKLAND.

27 July 1976

PROVINCIAL TRANSPORT : SAND REMOVALS, WHIRITOA

Your memorandum of 26.7.76 refers.

Complaints re the removal of material from this area were investigated in 1974, the removal area being Maori land and the authority to remove being given by the Department of Maori Affairs, Hamilton and no removal licences are issued by this Ministry.

... If you will examine the enclosed sketch you will note there are a line of posts erected along the beach above M.H.W.O.S.T. and these indicate the outer boundary of the Maori land. It would appear that on the land being subdivided no foreshore reserve was taken in this area and it is only at exceptionally high tides assisted by wind and wave action that any tidal effect has been observed beyond the top of the beach. I have been given to understand that the method used is to wait until the extraction site builds up during storms and then begin removals and during many visits only this area has shown signs of extraction.

If the complaint can substantiate that removals are taking place below M.H.W.O.S.T. the report will be fully investigated.

D. Greig
for Regional Secretary

Enc.



MINISTRY OF TRANSPORT



MOT 5

Our Ref.:

Your Ref.:

INTERNAL MEMORANDUM

To: Mr. D. Gregg
Ministry of Transport
Harbour & Foreshores
AUCKLAND

From: Tauranga Sub-Office

Date: 26 July 1976

Subject: COMPLAINT REGARDING ILLEGAL REMOVAL OF SAND

Mr. Taylor of Taylor Brothers Carriers, P.O. Box 25, Katikati, has informed me that Provincial Transport, Paeroa, have been removing sand, from what is believed Crown Land, illegally for several years in excess of 150 cubic metres weekly, from a beach located close to the Whiritoa Lagoon, north of Otonga Point, on the east coast of the Coromandel Peninsula.

From what I can gather Maori land fronts onto the beach and Provincial Transport have to obtain authority from the owners to remove sand within the boundaries relying mainly on storms to wash sand up from the beach onto the land. Apparently due to the infrequency of storms, there has not been sufficient quantity of sand washed up, forcing the excavators onto the beach.

Mr. Taylor is inquiring whether or not Provincial Transport have a permit or authority to remove sand from the beach itself.

(J.R. Hubner)
Senior Clerk

ORIGINAL SIZE
A1
0
50
100
150
200
300
400
mm



SCHEDULE

—	M.L. 10985	JULY 1918
—	M.L. 3836	1896
- - -	D.P.S. 19123	SEPTEMBER 1963
- . - .	D.P.S. 17139	SEPTEMBER 1972
—	M.L. 20973	APRIL 1975



5383

				BY	CHECKED	DATE			Ministry of Works and Development	M.W.D.—WATER AND SOIL: FORESHORE INFORMATION WHIRITOA BEACH (N.Z.M.S. 260 T12) HISTORICAL EVIDENCE OF M.H.W.M.	ORIGINAL SCALES	1:2000	FILE
				Drawn	R.J.M.	J.H.A.	17/9/80						
				APPROVED			N.C. McLEOD Commissioner						
AMENDMENTS				BY	APPD.	DATE	Recomm.	17/9/80					