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FILE NO. 861/3.

FLYING BOAT BASE - TASMAN EMPIRE AIRWAYS LTD.

- SITE, BUILDING, BRABY PONTOON ETC.

(See also GENERAL GROUP NO. 861/1.)

861/3
T.

H.

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FLYING BOAT BASE - TASMAN EMPIRE AIRWAYS LTD.

- SITE, BUILDING, BRABY PONTOON ETC.

(See also GENERAL GROUP NO. 861/1.)

Auckland Harbour Board

Nº 21871

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To THE CONSTRUCTION ENGINEER.

Date 24th June, 1954.

Subject CONTRACT 1398 - ROADING, STORMWATER
DRAINAGE AND WATER SUPPLY EASTERN
RECLAMATION.

I enclose herewith Variation Order No. 1.

Please hand one copy to Contractor and
instruct him accordingly.

Enc.

Two Copies Variation Order No. 1.

PSH.

N. L. Vickerman

Engineer to the Board.

3
COPY SENT TO CONSTRUCTION ENGINEER.

22nd April, 1954.

Mr. Andrew Murray,
P.O. Box 821,
AUCKLAND. C.I.

Dear Sir,

CONTRACT NO. 1398 - ROADING, DRAINAGE AND WATER
SUPPLY - EASTERN RECLAMATION.

Further to my letter of 1st December, 1953, and your reply of 3rd idem, in view of the fact that no "variation in prices" will apply to this Contract after 3rd December 1953, except wages increases already authorised, as prescribed in Clause 42 (4) will you please as soon as possible submit for consideration details of all claims and for allowances you will be making under the clause in question.

Yours faithfully,

CHIEF ENGINEER TO THE BOARD.

ANT:PM.

AUCKLAND HARBOUR BOARD

CONTRACT NO. 1398 FOR ROADING, STORMWATER, DRAINAGE AND WATER SUPPLY, EASTERN RECLAMATION NO.2.

ORDER FOR VARIATION UNDER CLAUSE NO. OF THE GENERAL CONDITIONS OF CONTRACT.

Variation Order No. 1

To: Messrs.

ANDREW MURRAY.

I hereby order the following variation in the Works comprised in the above Contract:—

Description:—

2 Concrete dishes at cesspits @ £6 each	£12. 0. 0d.
Break out and lift top of sewer manhole	8. 0. 0d.
Excavation (hand) for kerb and channel extension plus battering back high level scoria roadway 17 cu. yds @ 30/-	25.10. 0d.
Bitumen - 152 gals @ 4/-	30. 8. 0d.
Excavation, hand, for footpath extension at Eastern End of TEAL Building 22 cu. yds @ 20/-	22. 0. 0d.

Date 24th June, 1954.

N. L. Vickerman

Chief Engineer to the Board.

Construction
Instruction to ~~Resident~~ Engineer:

The work entailed by this variation order will be paid for by:—

(a) ~~Measurement under Item No.~~ of the Bill of Quantities.

~~Rate to be fixed.~~ Rates agreed as shown above.

CORRESPONDENCE MUST BE
ADDRESSED TO AN OFFICER
BY HIS OFFICIAL TITLE, NOT
BY HIS NAME.

TELEPHONE No. 32-300



IN REPLYING
THE NUMBER HL

E.AK.12/1/6

Regional Engineer's Office,
Chief Post Office, AUCKLAND, C.1.
1st March, 1954.

The Chief Engineer,
Auckland Harbour Board,
P.O. Box 1259,
AUCKLAND, C.1.

Dear Sir,

In reply to your letter of the 4th February, 1954,
regarding the removal of a telegraph pole on the eastern footpath
of Chaytor Street; I have to inform you that the estimated cost
of carrying out the removal is £28.

If you desire the work to proceed will you kindly sign the
attached form Tel.Ex.7 and return it to this office.

Yours faithfully,

G.L. AGAR.
Regional Engineer.

Encl.

Noted.

This was arranged by Construction Engineer

CP 3.3.54

*Application form
completed - signed
on 5.3.54*

-5. MAR. 1954

Auckland Harbour Board

Nº 21498

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To THE CONSTRUCTION ENGINEER.

Date 18th February, 1954.

Subject CONTRACT 1398 - ROADING EASTERN RECLAMATION -
TASMAN AIRWAYS AREA.

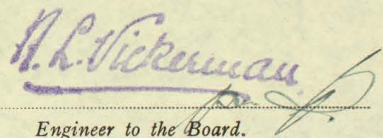
Please arrange with the Contractor to construct additional footpath and kerb to provide pedestrian access to Tasman Airways entrance gate as shown on enclosed plan and discussed on site with Mr. Simons.

Footpath construction to be in accordance with Contract Specification.

The Kerb to be in accordance with Contract Specification including field tile and scoria fill but the concrete channel is to be omitted.

Encl.

Sketch Plan.


.....
Engineer to the Board.

18th February, 1954.

The Assistant General Manager,
Tasman Empire Airways Ltd.,
P.O. Box 2201,
AUCKLAND. C.1.

Dear Sir,

ROAD ACCESS - E.R.S. BUILDING.

In reply to your letter dated February 2nd, I have to advise that it is intended to provide a sealed footpath with kerbing from the south east corner of your E.R.S. building to serve the access gate some 111 ft. to the north. This work will be done under the current roading Contract.

Yours faithfully,

CHIEF ENGINEER TO THE BOARD.

RAJS:PM.

861
3

5th February, 1954.

The Assistant General Manager,
Messrs Tasman Empire Airways Ltd.,
P.O. Box 2201,
AUCKLAND. C.1.

Dear Sir,

ROAD ACCESS - E.R.S. BUILDING - MECHANICS BAY.

Receipt is acknowledged of your letter dated 4th instant advising that the Contractor for the above work has caused some damage to the plaster facing on the southern wall of your building.

The Board's Construction Engineer has been instructed to draw the Contractor's attention to the damage and to advise him that it will be necessary to make good after the sealing of the footpath has been completed.

Yours faithfully,

CHIEF ENGINEER TO THE BOARD.

WT:PM.

4th February, 1954.

The Regional Engineer,
P. & T. Department,
AUCKLAND. C.1.

Dear Sir,

ROADING - EASTERN RECLAMATION.

I would be grateful if you would remove, at your earliest convenience, one telegraph pole from present location on eastern footpath of Chaytor Street and re-erect as necessary as discussed on site by the Board's Construction Engineer and your Overseer.

Yours faithfully,

CHIEF ENGINEER TO THE BOARD.

RAJS:PM.

Copy sent to Electrical Engineer.



Member of I.T.I.

TEAL

TASMAN EMPIRE AIRWAYS LIMITED

HEAD OFFICE, AUCKLAND, C.I.
TELEGRAMS & CABLES: TASMANAIR
CODES: BENTLEY'S SECOND PHRASE
TELEPHONE: 30-204
P.O. BOX 2201

HM:5607

4th February, 1954.

Chief Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND, C.I.

Dear Sir,

ROAD ACCESS, E.R.S. BUILDING, MECHANICS' BAY

During the course of his work in constructing the road along the southern wall of our E.R.S. Building at Mechanics' Bay, the contractor has unfortunately done some damage to the plaster facing. His heavy plant has gouged out a number of deep scars.

It would be appreciated if you would draw the contractor's attention to the damage as he should be advised that it will be necessary for him to make good after the sealing of the new footpath and roadway has been completed.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED

(J.W. Veale)
ASSISTANT GENERAL MANAGER.

*Construction
and
Engineering*

*Please note & return to file.
This is within your province
to deal with.*

*Mr. Lott,
Please acknowledge.*

J. 5.2.54

TASMAN EMPIRE AIRWAYS LIMITED

Telegraphic Address:
TASMANAIR
Telephone: 30-203*



HEAD OFFICE:
C.P.O. Box 2201, AUCKLAND,
NEW ZEALAND

Codes:
Bentley's Second Phrase
Reference:
HM:5576

2nd February, 1954.

Chief Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND, C.I.

Dear Sir,

ROAD ACCESS, E.R.S. BUILDING, MECHANICS' BAY

With further reference to your letter dated 18th March, 1953 and our reply dated 31st March, 1953, now that the road construction work is in hand please advise if the request contained in the second paragraph of our letter can be favourably reconsidered.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED

Mr. Smith,

There is some justification for extending kerbing (but without pitched channel) together with sealed footpath northwards to entrance for pedestrian access.

We are not justified in providing a paved parking area for the benefit of TEAL employees. (J.W. Veale)
ASSISTANT GENERAL MANAGER.

There is little traffic to the eastern driveway & it appears that TEAL could so dispose staff cars as not to create a dust nuisance. Also, with a sealed roadway to SE corner of bldg. there will be less traffic on the rough N-S road. The most we should do is to straighten up with a skin of concrete & spray with diesel oil to kill weeds & lay dust. J. 3-2-54

PHONES-OFFICE 42-520
PRIVATE 22-217

A. G. LONGLEY, A.M.I.C.E.
REGISTERED CIVIL ENGINEER
PHONE 184 D.
BROWNS BAY

ANDREW MURRAY

O.B.E., A.M.I.C.E., M.N.Z.I.E., M.S.I.N.Z., F.R.I.C.S.

REGISTERED CIVIL ENGINEER & SURVEYOR
CHARTERED CIVIL ENGINEER & SURVEYOR

BUILDINGS
BRIDGES & WHARVES
DRAINAGE & RIVER WORKS
ROADS & STREETS
WATER SUPPLIES
LAND SURVEYOR
LOCAL BODY CONSULTANT

3rd December 1953

P.O. BOX 821
AUCKLAND, C.I.

The Chief Engineer,
Auckland Harbour Board,
P.O. Box 1259,
AUCKLAND C.I.

Dear Sir,

CONTRACT NO. 1398 ROADING, DRAINAGE AND
WATER SUPPLY - EASTERN RECLAMATION

I have to thank you for your letter of the 1st inst re the above and as your remarks are generally in terms of a previous conversation the suggested action is acceptable to me.

Arrangements are being made to start the formation work in Mid-January and work will be carried on continuously until the completion of the Contract on the understanding that Clause 9 "Liquidated damages" and Clause 42 "Variation in Prices" will not now apply to the Contract except in the case of wages.

Yours faithfully,

Andrew Murray
.....A.M.I.C.E.
Contractor

Mr. Grett,

*Please send a copy of this letter
to Construction Engineer.
Mr. Taylor is to note.*

J. I. Ault

Auckland Harbour Board.

Mr Goodwin

I see no reason why the contractor should be granted an extension of time on this contract. The work could have been completed by the due date (20.12.53) nevertheless if it were re-started now it would not be completed before the holidays, and if we are prepared to wait until the new year, it might be advisable to accede to his request



13.12.53

ANDREW MURRAY

O.B.E., A.M.I.C.E., M.N.Z.I.E., M.S.I.N.Z., F.R.I.C.S.

REGISTERED CIVIL ENGINEER & SURVEYOR
CHARTERED CIVIL ENGINEER & SURVEYOR

BUILDINGS
BRIDGES & WHARVES
DRAINAGE & RIVER WORKS
ROADS & STREETS
WATER SUPPLIES
LAND SURVEYOR
LOCAL BODY CONSULTANT

17th November 1953

P.O. BOX 821
AUCKLAND, C.I.

The Chief Engineer,
Auckland Harbour Board,
P.O. Box 1259,
AUCKLAND C.I.

Dear Sir,

CONTRACT NO. 1398 - ROADING, DRAINAGE AND
WATER SUPPLY - EASTERN RECLAMATION

Under the terms of the above mentioned Contract the completion of the Stormwater system was required by the end of May 1953, the water supply reticulation within two months from the date of delivery of materials, and the completion of the road and footpaths as soon as possible but not later than the 30th November 1953.

I have endeavoured to keep to the Contract Schedule, in spite of adverse conditions. Despite the difficulties encountered with obstructions and very bad weather, the initial work was completed and the services made available to TEAL early in the year. The Site conditions and the continued heavy rainfall indicated that it would be inadvisable to proceed with the earthworks during the winter, particularly as the area was heavily shaded by tall buildings.

Tentative arrangements have been made, on several occasions to start the formation, but heavy rain has caused postponement. It is suggested that it would be advisable to defer the commencement until more settled weather conditions can be expected, say the middle of January 1954. The work will then be carried out with the utmost expediency.

An extension of time is requested, as I am of the opinion that this will be in the interests of all concerned. If this is granted I will commence work as stated in the previous paragraph, thus avoiding interruption by the holiday period. The Contract will be completed not later than the 31st March 1954.

Yours faithfully,

Andrew Murray
Contractor

1st December, 1953.

Mr. Andrew Murray,
P.O. Box 821,
AUCKLAND, C.1.

Dear Sir,

CONTRACT No. 1398 - ROADING, DRAINAGE AND
WATER SUPPLY - EASTERN RECLAMATION:

I acknowledge receipt of your letter of 17th instant advising that adverse weather conditions had rendered it inadvisable to proceed with the earthworks during the winter and requesting extension of time to 31st March, 1954.

It is conceded that weather conditions were totally unsuitable to the carrying out of earthworks during the winter but this was surely the reason why the contract period was tendered and accepted as being 40 weeks for such a small job. Site conditions have now been favourable for the carrying out of earthworks for about a month yet the work has not been re-commenced. Had the work been resumed when weather conditions permitted, there seems to be no reason why the contract could not have been completed by the due date 21st December, being 40 weeks from the date you should have received notification of acceptance of tender.

As earthworks have not, in fact, been commenced to date, however, it is conceded that it would be better to delay commencement until after the holiday period but there is no reason why the Board should be involved in increases of prices of materials, prices which would not have been applicable had the contract completion date been adhered to.

I am not prepared at this stage, to extend the contract date to 31st March, but having regard to all the factors, I am prepared to waive Clause 9, Liquidated damages, provided the earthworks are commenced in Mid-January and the work expeditiously carried to completion thereafter to my satisfaction and on condition that Clause 42 Variation of Price shall not apply hereafter except in the case of wages.

Please confirm your acceptance of these arrangements.

Yours faithfully,

CHIEF ENGINEER TO THE BOARD.

JAG:SSK

COPY SENT TO CONSTRUCTION ENGINEER.

20th October, 1953.

The Regional Engineer,
Chief Post Office,
AUCKLAND, C.1.

Dear Sir,

TASMAN EMPIRE AIRWAYS BASE PROPOSED PUBLIC
CALL OFFICE:

In reply to your BAK.23/1/526 of the 15th instant,
I have to advise that no objection will be raised to the
installation of a public call office in the position shown
on your Drawing A.5395.

Yours faithfully,

CHIEF ENGINEER TO THE BOARD.

CORRESPONDENCE MUST BE
ADDRESSED TO AN OFFICER
BY HIS OFFICIAL TITLE, NOT
BY HIS NAME.

Telephone No. 32-300



IN REPLYING PLEASE QUOTE
THE NUMBER HEREUNDER.

E.AK.23/1/526.


Regional Engineer's Office,
Chief Post Office, AUCKLAND, C.1.
15th October, 1953.

The Chief Engineer,
Auckland Harbour Board,
P.O.Box 1259,
AUCKLAND, C.1.

Dear Sir,

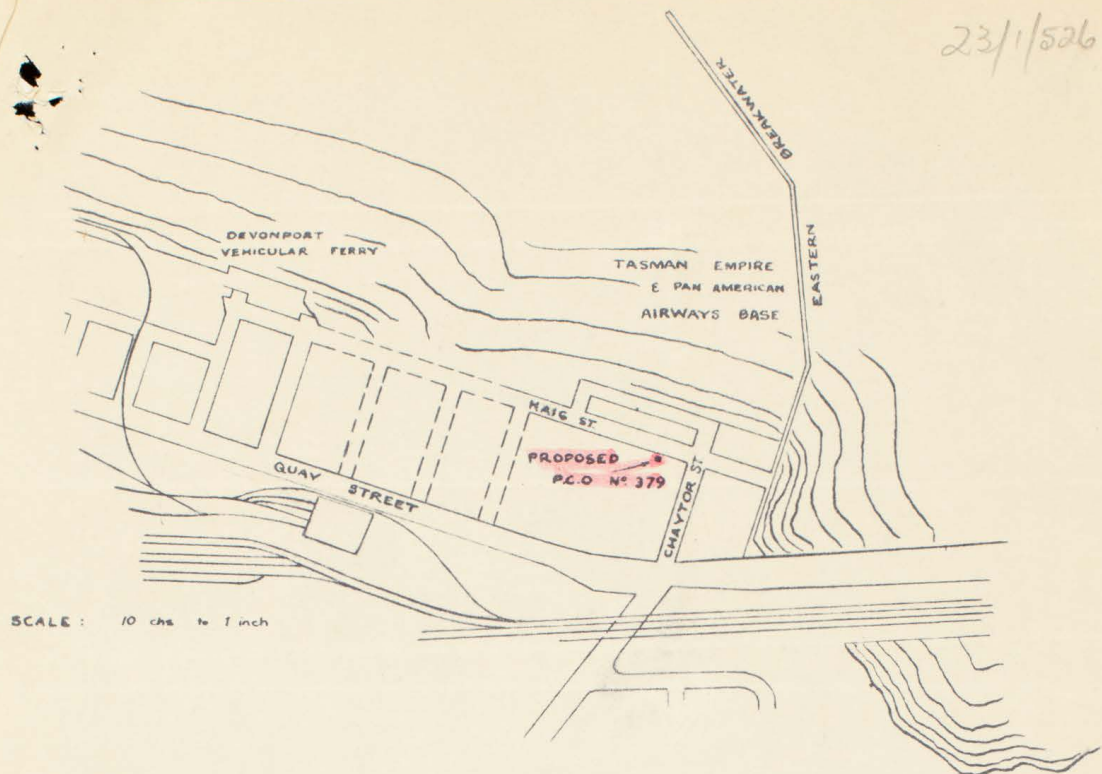
It is proposed to convert the pay-station within the premises of the Tasman Empire Airways Base to a public call office outside the building in Haig Street. A plan of the proposed site is forwarded herewith and if it meets with your approval, would you kindly advise this office.

Yours faithfully,

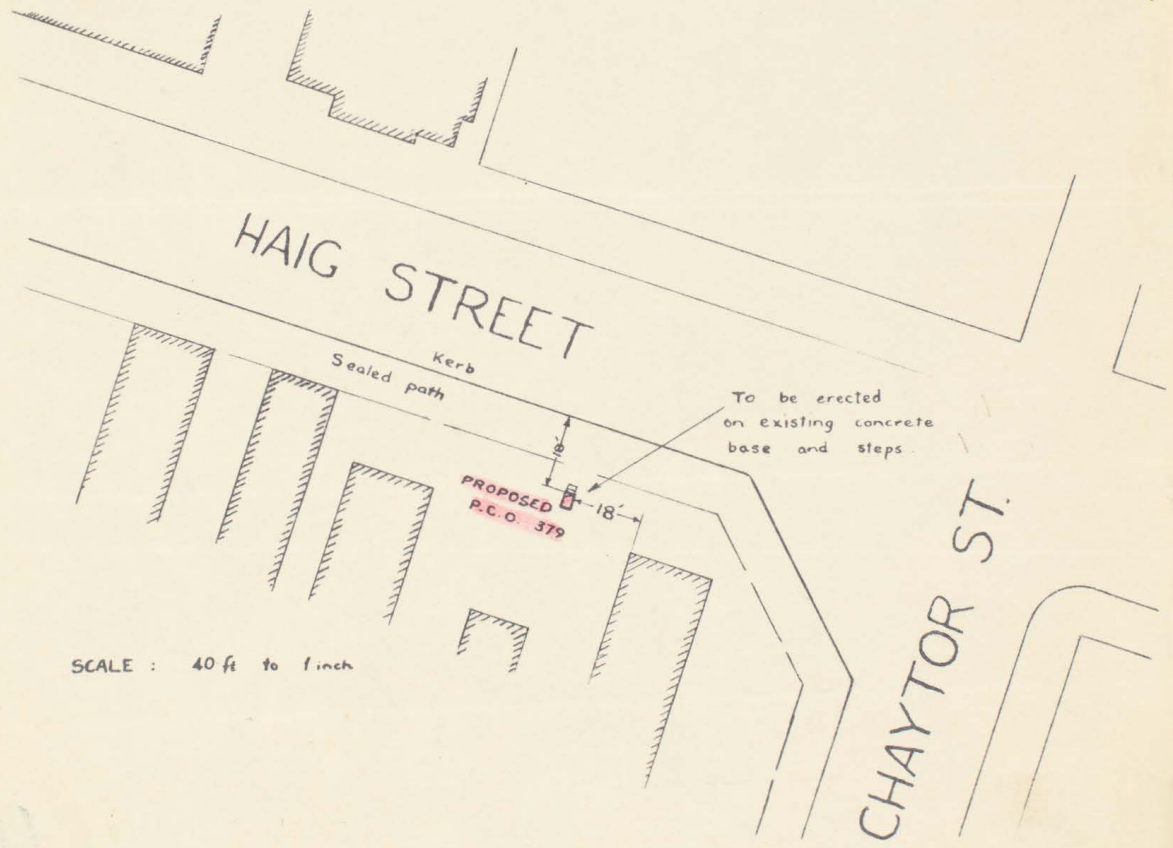

W.S. CONNAN
Regional Engineer.

Encl.

23/1/526



SCALE : 10 cms to 1 inch



SCALE : 40 ft to 1 inch

ISS	DATE	CHKD	APPD	DEL	ORDER	CHANGE	NEW ZEALAND POST OFFICE, REGIONAL ENGINEER, AUCKLAND
A	24-8-53	MFC	KSC	KSC	74724		PROPOSED CONVERSION OF PAY STATION TO P.C.O. 379 TASMAN EMPIRE AIRWAYS BASE MECHANICS BAY, AUCKLAND
							SIZE SHEET
							S
							ORIGIN ENGR. CITY
							OF
							A 5395
							A
							DRAWN KSC. TRACED KSC.

TELEPHONE
32-650

PRIVATE BAG,
C.P.O. AUCKLAND

CITY OF AUCKLAND

TOWN HALL, AUCKLAND, C.I

14th September, 1953.

The Chief Engineer,
Auckland Harbour Board,
Quay St.,
AUCKLAND.

Dear Sir,

FIRE HYDRANTS:

In reply to your letter of the 20th August concerning the Metropolitan Round Thread for fire hydrants, I wish to advise that our screw-down hydrants comply with B.S.750, and that I think the Metropolitan Round Thread, which was in existence before the Standard Specification was adopted, is in fact the thread defined by the Specification.

In any case, our own hydrants to B.S. 750, suit the equipment of the Fire Board, and the only trouble experienced has been that a few hydrants have had threads sufficiently oversize and off specification so that it has been impossible to ship a standpipe on them. These have been replaced, and all hydrants are now individually checked before being installed.

Yours faithfully,



A.D. MEAD, B.E.,
WATERWORKS ENGINEER



20th. August, 1953.

The Waterworks Engineer,
Auckland City Council,
AUCKLAND.

Dear Sir,

FIRE HYDRANTS

Thankyou for your letter dated the 13th. August enclosing an extract from B.S. 750.

The information requested by Mr. Smith was not details of the B.S. Round Thread since this is already available in B.S. 750 and addendum thereto P.D. 1160, but details of the Metropolitan Round Thread which, I am informed by the Auckland Metropolitan Fire Board is their requirement for screwed outlets. They state that the relevant particulars of Metropolitan Round Thread are available from you.

I would be pleased therefore if you would supply me with the following information covering screw-down hydrants:-

1. To what thread is the outlet to be screwed ?

If the thread required is other than that illustrated in B.S. 750 please supply me with the necessary particulars.

Yours faithfully,

CHIEF ENGINEER TO THE BOARD.

18th. August, 53.

18th. August, 1953.

The Chief Fire Officer,
Auckland Metropolitan Fire Board,
Pitt Street,
AUCKLAND C.2.

Dear Sir,

WATER SUPPLY FOR FIRE FIGHTING

Thank you for your letters of August 5th,
reference numbers 1/11/6 and 1/23/3.

It is agreed that the screwdown fire hydrants
at Import Wharf close when turned in an anti-clockwise direct-
ion. This direction of operation is the same as that for
hydrants on the other wharves although these other hydrants
are of the ball type.

The hydrant outlet is threaded in accordance
with B.S.750.

All hydrants at Import Wharf will be clearly
marked to indicate the direction of rotation.

The fire hydrants recently installed at
Eastern Reclamation have apparently been supplied with out-
lets screwed to Messrs. Blakeborough's normal pattern i.e.,
Old London Brigade Gauge, although my specification called
for B.S. 750. Your requirement of 'metropolitan round
thread' for this purpose is noted and the City Waterworks
Engineer has been asked for precise details. These hydrants,
in common with other hydrants being installed in reclamation
areas, are screwed to close when turned in a clockwise
direction.

Yours faithfully,

Mr. Goodsir,

- (1) Res. Engineer has been informed of the letters from
A.M.F.B. and of this reply.

CHIEF ENGINEER TO THE BOARD.

- (2) Res. Engineer has not been instructed to paint arrows
inside the hydrant covers.
Enamel discs can be made by Alex. Harvey. Negotiations
proceeding.

R.A.J.S.

NOTED J.A.G.

TELEPHONE
32-650

PRIVATE BAG,
C.P.O. AUCKLAND

CITY OF AUCKLAND

TOWN HALL, AUCKLAND, C.I

13th August, 1953.

The Chief Engineer,
Auckland Harbour Board,
Quay St.,
AUCKLAND.

Dear Sir,

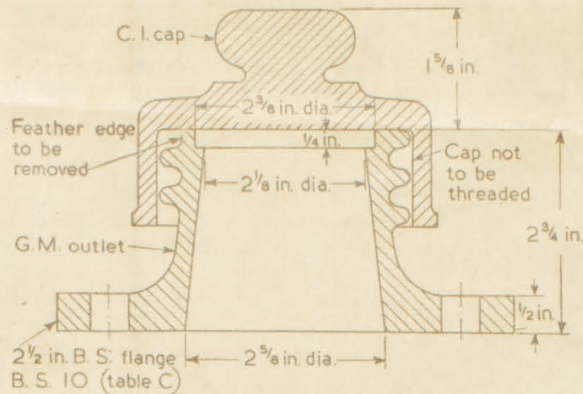
As requested by your Mr. Smith, I enclose herewith a copy of our extract from B.S.S. 750/1950 for screw-down hydrants. A copy of the original B.S.S. is available at our office if any of your staff wish to see it.

Yours faithfully,



A.D. MEAD, B.E.,
WATERWORKS ENGINEER

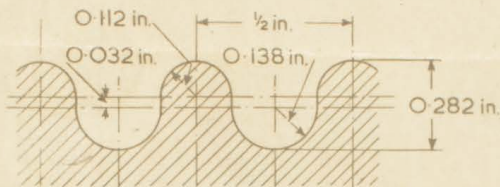
Encl.



Outlet to be screwed with round thread, two threads per inch.

Crest diameter 3.238 $+0.000$
 -0.015 in.

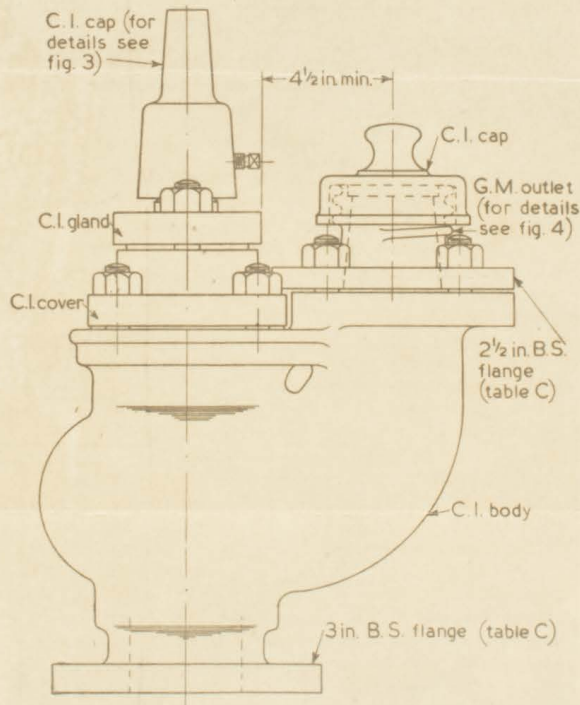
Root diameter 2.675 in. max.



British Standard round thread for fire hose couplings, B.S. 336.

NOTE. Tolerance on thickness of thread 0.224 $+0.000$
 -0.015 in.

SCREWED OUTLET & CAP (round thread)



NOTES 1 Drain boss not shown.

2 Drawing does not purport to show exact shape of body.

AUCKLAND CITY COUNCIL WATERWORKS DEPT.

SCALE
NOT TO SCALE

BRITISH STANDARD FIRE HYDRANT
SCREWDOWN TYPE.

WATERWORKS ENGINEER

S

DRAWN BY RSW
DATE 10.3.53
FILE N^o

Keith

— Please bring forward with
relevant file(s)

16/9/53.

Keith where is the subsequent correspondence
with ACE on this subject? 11/11/53

Auckland Metropolitan Fire Board

GAM.RP.
Ref. 1/23/3

SUPERINTENDENT'S OFFICE
FIRE HEADQUARTERS
PITT STREET, C.2

TELEPHONE 44-856

Auckland, 5th August, 1953.

The Chief Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND C.I.

Dear Sir,

WATER SUPPLY FOR FIRE FIGHTING.

The newly installed 6" water main on the east side of the Import Wharf was tested on 30th July. The flow reading was 700 gallons per minute. This is satisfactory.

It was noted the valves operated (on position) clock-wise, whereas hydrants in the Auckland City Council area work anti-clockwise.

Yours faithfully,



CHIEF FIRE OFFICER.

Mr. Goodwin

I suggest the following action:—

- ① Instruct the resident Engineer to mark on all hydrants the direction of rotation for opening *yes*
- ② Issue notices with small plate on underside of hydrant cover indicating direction of opening. *are there assemblies locally? price? 1/3 1/4*

Auckland Metropolitan Fire Board

TELEPHONE 44-856

GAM.RP.
Ref. 1/11/6

SUPERINTENDENT'S OFFICE
FIRE HEADQUARTERS
PITT STREET, C.2

Auckland, 5th August, 1953.

The Chief Engineer,
Auckland Harbour Board,
P.O. Box 1259
AUCKLAND C.I.

Dear Sir,

FIRE HYDRANTS - EASTERN RECLAMATION.

In reply to your letter of 3rd August re above,
the screw-down hydrants referred to should be fitted with
metropolitan round thread.

*Request mentioned in
R.S.*

I suggest you contact the Waterworks Engineer,
* Auckland City Council, who is responsible for city water supply
installations, for precise requirements.

*This was done some time ago
see note in office copy 4.8.50.*

Yours faithfully,

CHIEF FIRE OFFICER.

*Blackburn's catalogue refers
to the following threads: -
New London hexagon Gauge
Old London hexagon Gauge.*

** Cyril Firth will send us a copy of this drawing
10.8.53 Max Thompson reminded me
11.8.53 " " " "*

6.8.53

3rd. August, 1953.

The Superintendent,
Auckland Metropolitan Fire Board,
Pitt Street,
AUCKLAND.

Dear Sir,

FIRE HYDRANTS - EASTERN RECLAMATION.

One of your officers, Mr. Glenn, when inspecting the recent water supply installation at Eastern Reclamation (Tasman Airways area) stated that the fire hydrants there installed were not a type suitable for use with your equipment.

In order that this situation may be rectified at the earliest opportunity I would be pleased to learn your precise requirements in this regard.

Yours faithfully,

CHIEF ENGINEER TO THE BOARD.

COPY SENT TO THE RESIDENT ENGINEER FOR HIS INFORMATION.

Two Goodies

These Hydrants were supplied by Pathies
in response to our Specification 1335.

Apparently they do not comply with this
Spec in the matter of threading of outlet

This apparently was ^{not} noticed when the goods
were delivered, but Purchasing Officer has no
written record of any comment by the inspector
other than his (Withers) signature on the voucher.

(Noted. This note should be recorded.)

J.

Mr. Goodwin

re attached & current work from Mr. Eng.


This sets out the position re flanges to
five hydrants in Andrew Murray's contract.

It appears:—

1. The Spec as written is correct
2. The materials supplied were not to
Spec but Blakeborough's commercial product.

We have warned the water supply
subcontractor Abraham St of this situation

File in M/S.
Contract file.
C.


20.7.53.

Auckland Harbour Board

MEMORANDUM

FROM

Resident Engineer
 Import Wharf.

TO

THE ENGINEER

20th July

1953

8079

Eastern Reclamation: Roads, Drains & Waterservice.
o/c from ABB for alteration to water main.

This work was done by ABB. in connection with Contract 1398 because:

ABB. would not allow the contractor to lay the pipe and join up with their main in Clayton St. We could not expect the contractor to pay this o/c himself, because the fittings with which we supplied him in the first instance were unsuitable for the job. (The fittings ABB supplied were 4" tee + submer joints, and the main is 5") ABB. laid approximately 40 ft. of 6" pipe (supplied by ABB) and provided and laid valve, tee, submer joints, and, in addition, two bends to bring the main down to required depth below roadway.

The fittings thus liberated and returned to ABB by our contractor, cost us £26.10.0 and reduction in contract price on account of work done by ABB. will be £28 = £24.10.0 allowing for the further additional fittings supplied by ABB. (which would have had to be procured from ABB in any case) I consider the charge is reasonable. I have signed the voucher and covered it with a requisition herewith.

The following fittings have been replaced in Stores Dept. Annex of Cargo Store No 4 (from whence they were issued to the contractor) and Eastern Reclamation should be credited accordingly.

2/4" submer joints	£3.10.0
1/6" on 4" Tee	£7.11.0
2/6" flange socket pieces	£11.18.0
5'6" of 6" pipe	£3.11.0
	<u>£26.10.0</u>

J. Dutton
 Voucher passed for payment
 £40.9.4
 31.7.53.



Member of I.A.T.A.

TEAL

TASMAN EMPIRE AIRWAYS LIMITED

HEAD OFFICE, AUCKLAND, C.I.
TELEGRAMS & CABLES: TASMANAIR
CODES: BENTLEY'S SECOND PHRASE
TELEPHONE: 30-204
P.O. BOX 2201

AM:4163

20th July, 1953.

The Chief Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND, C.I.

Dear Sir,

ROADING--MECHANICS' BAY

Further to our letter AM:3286 dated 31st March and your reply dated 2nd April, it would appear that the contractor is not inclined to commence on the actual roading work and the forming of footpaths (more essential than roading in the meantime) while weather conditions are so bad.

All staff are now compelled, due to the extremely muddy conditions, to use a fire exit doorway adjacent to Chaytor Street, and therefore we are now inquiring if some footpath work could not be attempted to enable staff to use their proper entrance where time clocks are installed, and also permit the public to use the entrance provided for them.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED

(J.W. Veale)
ASSISTANT GENERAL MANAGER.

M. Goodwin

12.8.53. Temporary surfacing has been put down
& it has been confirmed by phone to Mr. Veale
that this is satisfactory as a temporary measure.

J.V.

The Design Engineer

20/7/53

Blakeborough Screwdown Hydrants

Duthie & Co. have been in touch with the Agents for above and state that the sizes of flanges for stock hydrants are as shown in Blakeborough's catalogue i.e. 8" flange dia. and 6 1/2" dia. to centres of bolts. Furthermore Blakeborough can supply hydrants with flanges according to B.S. 10 Part 1 Table C, i.e. 7 1/4" flange dia. and 5 3/4" dia. to centres of bolts, if we specify.

With reference to Con. 1355 - Pipes & Fittings - Clause 12 states that

"Hydrants shall be of screwdown type and shall comply with B.S.S. 750/1950 in every respect etc." and

Clause 13 states that

"All flanges shall be drilled in accordance with Table 'c' B.S.S. 78 (1938)."

Now referring to B.S.S. 750/1950, Clause 7 states
"(b) Flanges on spigot pieces and on socket pieces and flanges on outlet bends connecting up with sluice valve hydrants shall be 3 in. flanges in accordance

J.S.

4

with B.S. 10 Pipe Flanges Part 1, Table C.
(c) Inlet flanges for screw-down hydrants shall be 3 in. flanges in accordance with B.S. 10 Part 1 Table C. "

Therefore, by our specification 1335, the flanges on hydrants should be according to B.S. 10 Part 1 Table C, i.e. 7 $\frac{1}{4}$ " flange dia. and 5 $\frac{3}{4}$ " dia. to centres of bolts. Furthermore, with reference to B.S.S. 78/1938 Clause 23 states that "the flanges - shall conform to the dimensions given - in (B.S. 10 - Part 1) etc."

Our Specification 1391 with reference to Water Service at Pakenham St. Reclamation states in clause 28 (b) that "Hydrants - shall comply with B.S. 750/1950 in every respect."

I have been in touch with F. Dyson & Son Ltd., sub-contractors for the Water Service at Pakenham St. Reclamation, and informed him of above variance between Blakeborough's & B.S. As they are obtaining materials from Smith & Co. they inform me they would come to some arrangement so that flanges would fit.

Dyson

AUCKLAND HARBOUR BOARD

CONTRACT NO. 1398

FOR Roading, Stormwater Drainage and
Water Supply - Eastern Reclamation

ENGINEER'S CERTIFICATE

Certificate No. 1

Date 17th June, 1953.

I hereby certify that the sum of one thousand and thirty two pounds
..... (£ 1032: 0: 0)

is due to Messrs. Andrew Murray on Account
of Contract No. 1398

Value of Work done to date	(15.6.53)	£ 1376: 0: 0
Less Retention 25%	£ 344: 0: 0	
Less Previous Payments	£ ---	£ 344: 0: 0
Amount now certified		<u>£ 1032: 0: 0</u>



.....
Engineer to the Board.

8th May, 1953.

The Assistant General Manager,
Tasman Empire Airways Ltd.,
P.O. Box 2201,
AUCKLAND, C.I.

Dear Sir,

WATER SUPPLY - E.R.S. BUILDING.

In reply to your AM:3615 of 5th inst., the water mains for the Mechanics Bay area have been received and the laying of these is included in the current contract for roading and stormwater drainage now in progress.

Yours faithfully,

JAG.JS.

CHIEF ENGINEER TO THE BOARD.

8th May, 1953.

The City Engineer,
Auckland City Council,
Private Bag,
AUCKLAND, C.I.

Dear Sir,

STREET LIGHTING.

Tasman Empire Airways Ltd. have requested the provision of street lights in the positions marked A and B in green on the attached plan.

As Chaytor St. has been dedicated the provision of street lighting is a matter for your Council. A contract has been let for the formation of the portion of new road fronting the south boundary of the new E.R.S. building and this will in due course be dedicated. Meantime I do not propose to take any steps to provide the light marked B but you may find it convenient to make provision for this at the same time as the light is being provided in Chaytor St.

Please advise Tasman Empire Airways Ltd. of your decision in this matter.

Yours faithfully,

JAG.JS.

CHIEF ENGINEER TO THE BOARD.

Auckland Harbour Board

Nº 20716

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To Mr. J.R. Sutton,
Resident Engineer, Date 6th May, 19 53.

Subject CONTRACT 1398 - ROADING, DRAINAGE & WATER
SUPPLY EASTERN RECLAMATION - AIRBASE AREA.

Please arrange with the Contractor to provide and fix a City Council pattern Fire Plug Indicator immediately behind and flush with the top of the kerb alongside each hydrant. 5 No. Indicators are required and are obtainable from the Auckland City Council.

Please agree a rate for this work with the Contractor and inform this office in order that the necessary Variation Order may be issued.

*Not done
by Contractor
per I.R.S.
A.S.*

N.L. Vickerman
Engineer to the Board.



Member of I.A.T.A.

TEAL

TASMAN EMPIRE AIRWAYS LIMITED

HEAD OFFICE, AUCKLAND, C.I.
TELEGRAMS & CABLES: TASMANAIR
CODES: BENTLEY'S SECOND PHRASE
TELEPHONE: 30-204
P.O. BOX 2201

AM:3615

5th May, 1953.

The Chief Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND, C.I.

Dear Sir,

WATER SUPPLY--NEW E.R.S. BUILDING, MECHANICS' BAY

You will recall that in your letter of the 17th November last you advised that 6" mains for installation in the Mechanics' Bay area would arrive in this country about March/June 1953.

These mains are, as you know, an integral part of our sprinkler installation, the efficiency of which depends entirely on the adequate water supply that they will provide. We are therefore concerned that proper water supply should be available parallel with the completion of the sprinkler installation, to which end we are writing to enquire whether the mains have arrived.

Could you therefore please let us know, as our planning is conditioned almost entirely on the water supply.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED

Mr Goodwin

(J.W. Veale)
ASSISTANT GENERAL MANAGER.

2nd April, 1953.

Tasman Empire Airway Ltd.,
P.O. Box 2201,
AUCKLAND, C.I.

Dear Sir,

ROAD ACCESS AND SERVICES - E.R.S. BUILDING
MECHANICS BAY.

Referring to your letter of 31st March, it is intended to improve the remainder of the roadway on the eastern edge of the reclamation, but it has not yet been decided how much will be done as this will be affected by other considerations.

The matters set out in your letter will be taken into account in making this decision.

Yours faithfully,

NLV.JS.

CHIEF ENGINEER TO THE BOARD.



Member of I.A.T.A.

TEAL

TASMAN EMPIRE AIRWAYS LIMITED

HEAD OFFICE, AUCKLAND, C.I.
TELEGRAMS & CABLES: TASMANAIR
CODES: BENTLEY'S SECOND PHRASE
TELEPHONE: 30-204
P.O. BOX 2201

AM:3286

31st March, 1953.

The Chief Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND, C.I.

Dear Sir,

ROAD ACCESS AND SERVICES--E.R.S. BUILDING, MECHANICS' BAY

Thank you for your letter dated 18th March and for the advice that Mr A. Murray is the contractor for the roading work. He has, as you suggested would be the case, been in communication with us and he has shown us details of the proposals.

While we appreciate the expeditious manner in which the project has been handled, it nevertheless is regretted that the roading is limited only to that area bounding the south wall of our Engine Repair Shop. We had hoped, for a number of reasons which are quite vital, that the new road would extend to include at least the staff entrance to the Engine Repair Shop and to a point 50 ft. north of that again as shown in green on the attached plan. Some 400 employees, exclusive of office staff, pass through the staff entrance morning and evening, a fact which on its own is considered to merit the provision of a sealed surface together with kerbing. They use approximately 150 cars to and fro from their work which further emphasises the need for a properly sealed roadway. Further, a special entrance for an ambulance has been constructed north again of the staff entrance as indicated on our plan, but more important still is the fact that as long as the roadway in this area remains unsealed, delicate test instruments are subjected to a hazard from dust. May we therefore request that the matter of extending the roadway in this area be favourably reconsidered.

The dust hazard mentioned in the preceding paragraph as applying to the road area adjacent to the eastern end of the Engine Repair Shop, applies also to that area south of the proposed new road at the eastern corner of the Civil Aviation block, and as it is anticipated a considerable amount of traffic

Chief has replied.

AM:3286

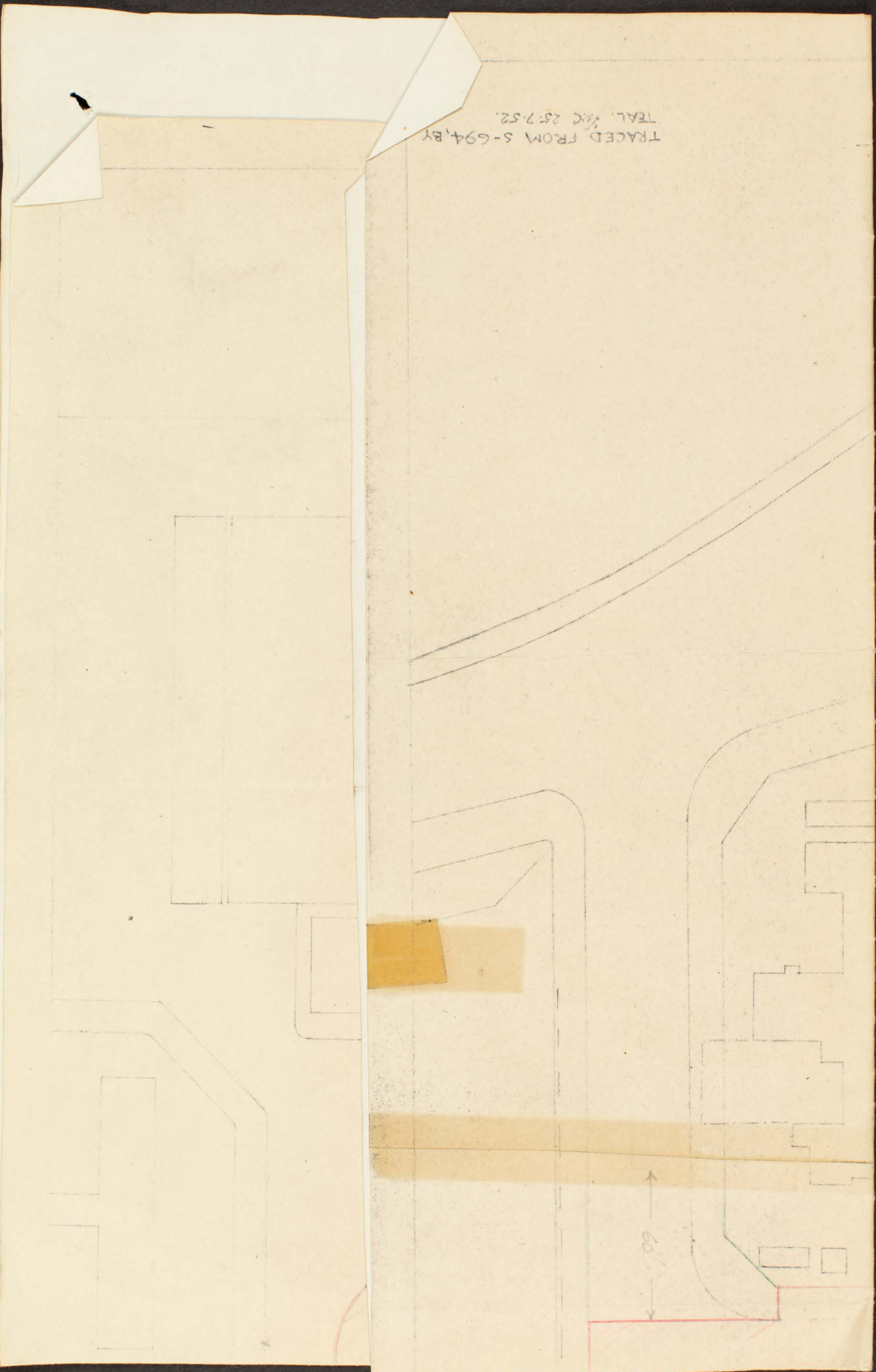
will pass over this road it is no exaggeration to say that the dust nuisance will become acute. It is further suggested therefore that the sealing, together with kerbing, be extended for a distance of not less than 60 ft. in a southerly direction shown in green on our plan attached.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED

A handwritten signature in blue ink, appearing to read 'J.W. Veale', written in a cursive style.

(J.W. Veale)
ASSISTANT GENERAL MANAGER.

TRACED FROM S-694 BY
TEAL. 1/10 25-7-52.



Auckland Harbour Board

Nº 20621

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To Mr. J.R. Sutton,
Resident Engineer. Date 24th March, 19 53.

Subject CONTRACT 1398 - ROADING AT EASTERN RECLAMATION.

I enclose herewith two copies of Drawing S.694/2 showing details of cesspits without kerb-plates. This is to apply to the four cesspits which are to be built outside that portion of road to be sealed - refer Drawing A.439/2.

Please hand one copy of Drawing S.694/2 to the Contractor and instruct him accordingly.

Encl: Two copies Drawing S.694/2.

N. R. Vickerman

Engineer to the Board.

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To Mr. J.R. Sutton,
Resident Engineer. Date 23rd March, 19 53.

Subject CONTRACT DOCUMENTS - CONTRACTS NO. 1391, 1398 & 1399.

I enclose herewith copies of the relevant Contract Documents for the Contracts referred to above.

Please arrange to supervise these Contracts.

CONTRACT 1391.

Roading, Drainage and Water Supply at Pakenham Street Subdivision.

Contractor. Messrs. Malcolm Bishop Ltd. Messrs. Bishop's Tender originally was for Roading and Drainage only at a price of £39,413.9.1 and a price for the Water Supply of £3,484.5.10 is being authorised as an extra to the Contract. The accepted rates for Water Supply have been written in to your copy of the Bill of Quantities but have not been included in the totals of that Bill.

For your information a copy of my letter to the City Waterworks Engineer dated 17.11.52 is attached.

CONTRACT 1398.

Roading, Drainage and Water Supply at Eastern Reclamation (Air base area).

Contractor. Messrs. Andrew Murray Ltd.

CONTRACT 1399.

Construction of Convenience Block at Import Wharf.

Contractor. Messrs. Anderson & Tofae.

Encl: Specification No. 1391. Specification No. 1399.
Drawings A.549/1 & 2. Drawings B.586/1, 2, 3 & 4.
Specification No. 1398. A.523/4 & 5.
Drawing No. A.439/2. S.776. *A. H. Wakeham*
Engineer to the Board

Copy on Files 448 & 889/11

18th March, 1953.

The Assistant General Manager,
Tasman Empire Airways Ltd.,
P.O. Box 2201,
AUCKLAND, C.I.

Dear Sir,

ROAD ACCESS AND SERVICES - E.R.S. BUILDING.

In reply to your AM:3181 of 17th inst., I have to advise that a contract for the above work has been let to A. Murray, Contractor, who will doubtless be communicating with you in the near future.

Yours faithfully,

JAG.JS.

CHIEF ENGINEER TO THE BOARD.



Member of T.S.A.

TEAL

TASMAN EMPIRE AIRWAYS LIMITED

HEAD OFFICE, AUCKLAND, C.I.
TELEGRAMS & CABLES: TASMANAIR
CODES: BENTLEY'S SECOND PHRASE
TELEPHONE: 30-203⁴
P.O. BOX 2201

AM:3189

17th March, 1953.

The Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND, C.I.

Dear Sir,

NEW STREET LIGHTING
MECHANICS' BAY

We are enclosing herewith plan of the area at Mechanics' Bay on which our new Engine Repair Shop is being built. This building is, as you know, rapidly nearing completion and our purpose in writing is to ask that consideration be given to the installation of two new street lights where marked "A" and "B" in green on the plan. Street lights already existing in the vicinity are marked for easy reference in blue.

These new street lights are essential for reasons of security, as well as to provide well-lit access to the building during the hours of darkness. As will be seen from the plan they are so situated as to light Chaytor Street and the new street to be built along the southern wall of the Engine Repair Shop, both streets being dedicated roadways.

It would be much appreciated if allowance could be made for the installation of these new lights at the same time as the planning for the new road is being done.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED

(J.W. Veale)
ASSISTANT GENERAL MANAGER.

Enc: Plan



Member of I.A.T.A.

TEAL

TASMAN EMPIRE AIRWAYS LIMITED

HEAD OFFICE, AUCKLAND, C.I.
TELEGRAMS & CABLES: TASMANAIR
CODES: BENTLEY'S SECOND PHRASE
TELEPHONE: 30-2034
P.O. BOX 2201

AM:3181

17th March, 1953.

The Chief Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND, C.I.

Dear Sir,

ROAD ACCESS AND SERVICES TO E.R.S. BUILDING
Your Ref. JAG. 861/3

With further reference to our letters dated 12th January and 24th February respectively, it would be appreciated if you could advise what progress is being made towards having the roading work put in hand as soon as possible.

The company's new Engine Repair Shop is rapidly nearing completion and it is a matter of some concern that the new road access should be available concurrently with our occupation of the new building.

Would you kindly advise at your early convenience when it is anticipated the work will commence, as naturally some liaison with our contractors will be essential to facilitate construction.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED

(J.W. Veale)
ASSISTANT GENERAL MANAGER.

Mr Gooden

13th March, 1955.

Mr. Andrew Murray,
P.O. Box 821,
AUCKLAND.

Dear Sir,

I have to inform you that the Board, at its meeting held on Tuesday last, accepted your tender for the Construction of Roading, Stormwater Drainage and Water Supply at Eastern Reclamation for the sum of £7,537 in terms of Schedule and Bill of Quantities for Contract No. 1398, subject however, to adjustment to the satisfaction of the Engineer.

Contract Agreement is accordingly enclosed and I shall be glad if you will have this signed and returned to me as soon as possible together with a further cheque for £75 for completion of deposit.

Yours faithfully,



SECRETARY

GP.JMM.
ENCL: Contract Agreement.

EXTRACT FROM MINUTES
WORKS & TRAFFIC COMMITTEE
.. 2 / 3 / 53

3. TENDERS - CONTRACT NO. 1398 - ROADING, DRAINAGE & WATER SUPPLY
EASTERN RECLAMATION.

Report of Acting Engineer, 24.2.1953, stating that three tenders, ranging in price from £7,537 to £8,449.4.0d. had been received for Contract No. 1398 - Roading, Drainage and Water Supply, Eastern Reclamation; that he recommended acceptance of the lowest tender, that of Messrs. Andrew Murray for the sum of £7,537, subject to adjustment to the satisfaction of the Engineer on matters of detail.

Recommended:-

That the report be adopted.

Financial provision made 4/3/53

ADOPTED BY BOARD .. 10 / 3 / 53 ..

Mr. Smith.

*Please take this matter up verbally with
A. Murray with a view to getting a better
price for the rate-only item*

Jr. 13.3.53.

24th February, 1953

The General Manager,
AUCKLAND HARBOUR BOARD.

CONTRACT NO. 1398 - ROADING, DRAINAGE AND WATER SUPPLY -
EASTERN RECLAMATION.

Three tenders were received as under :-

1. Andrew Murray	£7537. 0. 0	
2. Malcolm Bishop Ltd.	£7156. 17. 9	
	392. 16. 8	Add for Water Services (this portion received late).
	<hr/>	
	£7549. 14. 5	
3. T.K. Hay	£8449. 4. 0	

The prices quoted by Messrs. Andrew Murray are generally reasonable and the times for completion are satisfactory.

The work comprised under this contract is the formation of that portion of Tooley Street Extension fronting Tasman Empire Airways Lease between Chayto Street and the east wall of Eastern Reclamation. It includes the disposal of storm water from this general area and is part of the development of Eastern Reclamation No. 2 occasioned by the rearrangement of leases and recasting of development schemes for the whole of the Eastern Reclamation.

I recommend that the tender of Messrs. Andrew Murray be accepted subject to adjustment to the satisfaction of the Engineer on matters of detail.

J. Goodwin

ACTING ENGINEER TO THE BOARD.

The Chairman,
Works & Traffic Committee,
AUCKLAND HARBOUR BOARD.

Recommended.

W. L. Cooke

GENERAL MANAGER



Member of I.A.T.A.

TEAL

TASMAN EMPIRE AIRWAYS LIMITED

AM: 3010

24th February, 1953.

HEAD OFFICE, AUCKLAND, C.I.
TELEGRAMS & CABLES: TASMANAIR
CODES: BENTLEY'S SECOND PHRASE
TELEPHONE: ~~30-203~~ 30-204.
P.O. BOX 2201

The Chief Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND, C.I.

Dear Sir,

Road Access and Services to E.R.S. Building
Your Ref: JAG.861/3

Further to my letter of the 12th January, I wish to advise that a 1½" connection has now been made which caters for the domestic supply only to this building.

I understand tenders have recently closed for the roading, footpaths and storm water system adjacent to this building, and it is hoped that an immediate start can be made on this work. The position is that very shortly staff numbering 350 will be using the eastern entrance with no pedestrian facilities, and very inadequate vehicle access. During dry and windy weather dust drives into the newly painted interior, and when wet the area is muddy and a series of lakes. Linoleums cannot be laid in the corridors until the dirt nuisance is dealt with. It is sincerely hoped that something can be done as quickly as possible to improve the access to this building.

Regarding the main water supply, it is realised that this work cannot be undertaken until the pipes, etcetera, arrive in Auckland.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED

(J.W. Veale)
ASSISTANT GENERAL MANAGER

hated J.

9th February, 1953.

The General Manager,
Tasman Empire Airways Ltd.,
P.O. Box 2201,
AUCKLAND, C.I.

Dear Sir,

MECHANICS BAY FENCING.

(Your reference AM 2835 of 2.2.53)

You may erect a fence and gates at the northern end of Chaytor Street as shown on the plan accompanying your letter.

Yours faithfully,

NLV.JS.

CHIEF ENGINEER TO THE BOARD.



Member of I.S.T.S.I

TEAL

TASMAN EMPIRE AIRWAYS LIMITED

HEAD OFFICE, AUCKLAND, C.I.
TELEGRAMS & CABLES: TASMANAIR
CODES: BENTLEY'S SECOND PHRASE
TELEPHONE: 30-203
P.O. BOX 2201

AM: 2835

2nd February, 1953.

The Chief Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND, C.I.

Auckland Harbour Board.

ENGINEER'S OFFICE

3.2.53

Traffic Manager,

Have you any objection
to this proposed fence.

The Engineer,

I have no objection.

Bay Fencing

permission is sought to erect a 4'6" line to building line, where shown in

ed in the centre of the roadway, with th. No pedestrians would use the

Yours faithfully,
AN EMPIRE AIRWAYS LIMITED

(G.N. Roberts)
GENERAL MANAGER.



Member of I.A.T.A.

TEAL

TASMAN EMPIRE AIRWAYS LIMITED

HEAD OFFICE, AUCKLAND, C.I.
TELEGRAMS & CABLES: TASMANAIR
CODES: BENTLEY'S SECOND PHRASE
TELEPHONE: 30-203
P.O. BOX 2201

AM: 2835

2nd February, 1953.

The Chief Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND, C.I.

Dear Sir,

Mechanics' Bay Fencing

For security purposes your permission is sought to erect a 4'6" fence across Chaytor Street, building line to building line, where shown in red on attached plan.

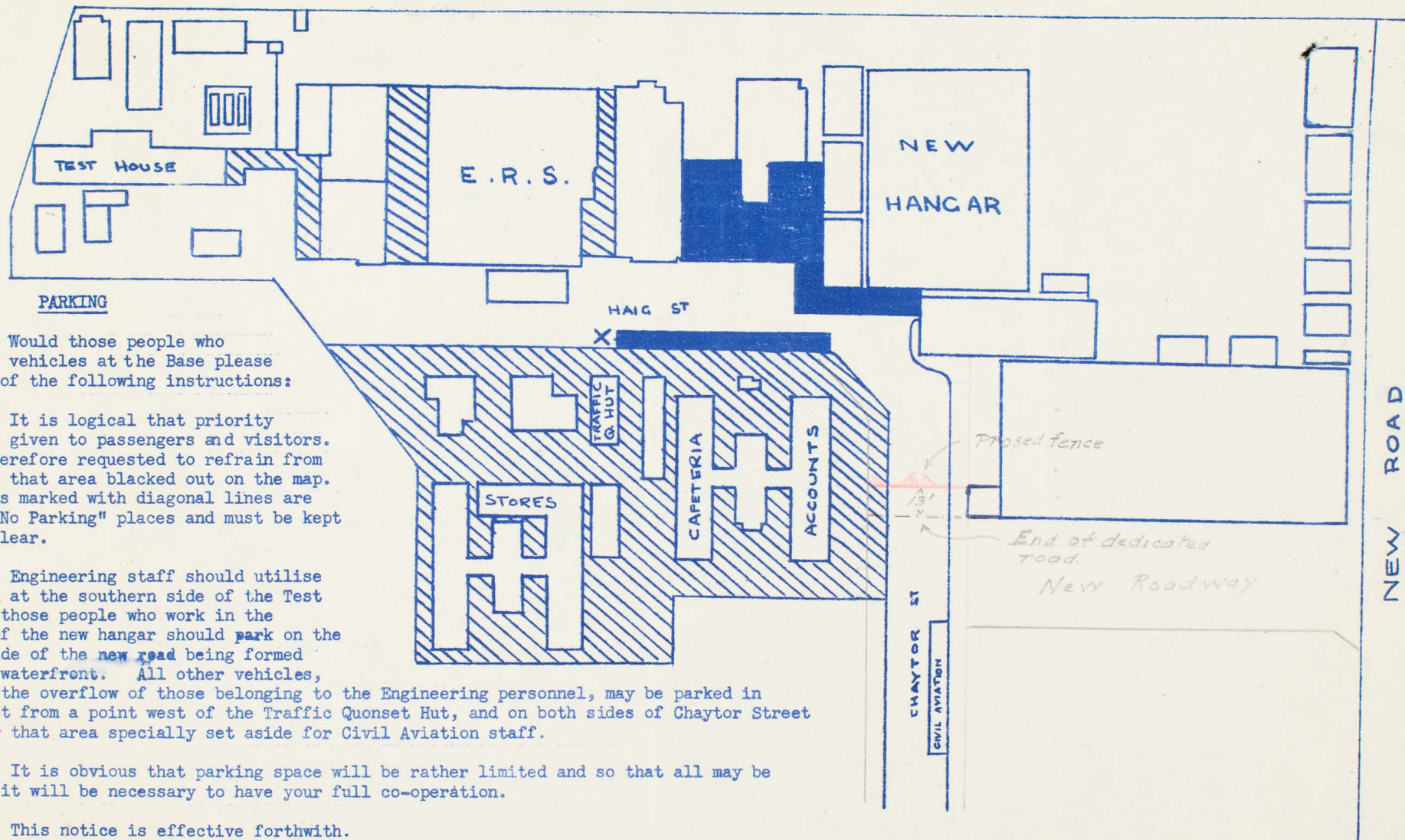
Twin 6' gates would be provided in the centre of the roadway, with a pedestrian gate on the western footpath. No pedestrians would use the existing eastern footpath.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED


(G.N. Roberts)
GENERAL MANAGER.

Enc: Plan

STAFF NOTICE



1. Would those people who park motor vehicles at the Base please take note of the following instructions:

2. It is logical that priority parking be given to passengers and visitors. You are therefore requested to refrain from parking in that area blacked out on the map. Those areas marked with diagonal lines are strictly "No Parking" places and must be kept entirely clear.

3. Engineering staff should utilise the ground at the southern side of the Test House and those people who work in the vicinity of the new hangar should park on the western side of the new road being formed along the waterfront. All other vehicles, including the overflow of those belonging to the Engineering personnel, may be parked in Haig Street from a point west of the Traffic Quonset Hut, and on both sides of Chaytor Street except for that area specially set aside for Civil Aviation staff.

4. It is obvious that parking space will be rather limited and so that all may be satisfied it will be necessary to have your full co-operation.

This notice is effective forthwith.

Assistant General Manager.

AUCKLAND HARBOUR BOARD

Engineer's Office.

CONTRACT NO. 1398

SPECIFICATION FOR

WORK TO BE DONE AND MATERIALS TO BE USED IN THE CONSTRUCTION

OF ROADING, STORMWATER DRAINAGE & WATER SUPPLY - AT EASTERN RECLAMATION.

1. TENDERS.

Tenders addressed to "The Chairman", Auckland Harbour Board, and endorsed on the envelope ROADING, DRAINAGE & WATER SUPPLY..... will be received up till 12 noon on TUESDAY, 17th FEBRUARY, 1953..... for the construction and completion of ROADING, STORMWATER DRAINAGE & WATER SUPPLY AT EASTERN RECLAMATION..... in accordance with this specification.

Tenders accompanied by the necessary deposit may be submitted by telegraph only provided proof is available that the completed tender has been posted in N.Z. not later than the sending of the telegraphic tender.

2. INTERPRETATION OF TERMS:

In this Specification wherever they may occur the terms:-

- "Board" shall mean "The Auckland Harbour Board".
- "Secretary" shall mean the person for the time being acting as Secretary to the Board.
- "Engineer" shall mean the person for the time being acting as Engineer to the Board or his authorised representative.
- "Contractor" shall mean the person or persons whose tender for construction of the works to which this Specification refers shall be accepted, and who shall sign the necessary Contract, and it shall include the executors, administrators and permitted assigns of such person or persons.
- "Works" shall mean all the works, materials, acts, matters and things mentioned and described in the Specification, and also such other works, materials, acts, matters and things as are contracted to be performed by the Contractor.
- "Approved" shall mean approved by the Engineer or his representative.

3. DEPOSIT WITH TENDER:

Each tender shall be accompanied by cash or cheque for ... Twenty - four pounds (£ 25.0.0) deposited against the due execution of the contract documents and performance of the Contract. Should any tenderer withdraw his tender after the

advertised time for the closing of tenders, or should he in the event of its acceptance by the Board refuse or neglect or fail to carry out the provisions of Clause 4 of this Specification, then the amount of the deposit accompanying such tender shall be forfeited absolutely to the Board as and for liquidated damages and the Board may call on any of the other Tenderers to sign and carry out the Contract.

The deposits lodged by unsuccessful Tenderers and which have not become forfeited to the Board will be returned as soon as the necessary contract has been signed.

4. FURTHER DEPOSIT AND EXECUTION OF CONTRACT.

The successful Tenderer shall, within three clear days of notification of acceptance of his tender, execute a legal contract embracing all the clauses of this Specification and shall make a further deposit of ~~SEVENTY-FIVE~~ ^{475.0.0} making a total of ~~ONE HUNDRED POUNDS~~ ^{475.0.0} deposited against the due performance and completion of Contract, which sum will be returned only after satisfactory performance and completion of the Contract as certified by the Engineer.

5. SCOPE OF CONTRACT.

This contract shall be for the provision of all labour, material, plant, and other things necessary for the carrying out and completion of the works shown on drawings No. ~~A. 4. 2.~~ ^{4. 2.} and more fully described or implied in this specification and enumerated in the schedule included herewith, and shall include all works incidental thereto and the maintenance of the said works for a period of ~~THIRTY~~ ³⁰ days from date of their completion, the whole to be done in accordance with the true intent and meaning of this specification and to the entire satisfaction of the Engineer.

6. DRAWINGS.

The drawings and specifications in connection with this contract are the property of the Auckland Harbour Board and two complete copies will be furnished for the use of the Contractor. One such copy shall be kept on the work in the charge of the Contractor or a competent foreman. Both copies shall be returned to the Engineer immediately upon receipt of the final certificate or upon termination of the contract. The drawings and the dimensions and descriptions written thereon shall be strictly adhered to, together with such further drawings or explanations as may be given from time to time by the Engineer for the more particular and detailed description of various portions of the work. The scale to which the drawings are made is to be made use of only where no figured dimensions are given either on the drawings or in the specification. Figured dimensions shall be considered as correct, although they may not in every instance agree with the scale.

7. INSPECTION OF SITE.

Tenderers shall make a careful inspection of the locality of the proposed work and satisfy themselves as to the nature of the work to be undertaken and of their ability to carry out the Contract in accordance with the true intent and meaning of this Specification.

The Contractor shall be held to have complied with this clause and no allowance will subsequently be made for any claim on account of insufficient information.

8. TENDER FORMS AND SCHEDULES.

Tenderers shall submit a lump sum price for completion of the Contract in accordance with this specification.

Tenderers shall also submit with their tenders the Schedule of Quantities and Prices duly completed showing how the lump sum price has been arrived at. The valuation of work done for assessing progress payments and for authorised variations shall be based on the Scheduled rates.

Tenders shall be submitted on the official Tender and Schedule Forms which may be had on application to the Engineer's Department, Auckland Harbour Board.

The quantities given in the Schedule are measured nett as shown on the drawings and are believed to closely approximate the quantities of the various classes of work to be done, or materials to be supplied, under this Contract.

Each Tenderer shall satisfy himself as to the accuracy of the quantities shown in the Schedule and should he not agree with the quantity of any item he shall amend such item in the Schedule accompanying his tender.

Should the Schedule accompanying the accepted tender not agree with the lump sum tender, the schedule prices shall be amended to the satisfaction of the Engineer so as to make the Schedule total agree with the tender price.

9. TIME OF COMPLETION AND DAMAGES FOR DELAY.

Tenderers shall state in the accompanying schedule the time within which they are prepared to guarantee completion of the whole of the works in accordance with this Specification. Should the works remain uncompleted at the expiry of the time within which the Contractor has guaranteed completion, then the Contractor shall pay to the Board, as and for liquidated damages, the sum of *TEN POUNDS* *10.0.0* per week for each and every week during which completion is delayed beyond the due date. Any such sums payable to the Board by the Contractor may be deducted from any moneys that may be payable or may become payable to the Contractor by the Board or may be sued for as a debt.

10. COMPLETION AND MAINTENANCE

The care and maintenance of all works under this Contract shall remain with the Contractor until the completion of the Contract.

When, in the opinion of the Engineer, the works shall have been substantially completed and have been taken over from the Contractor by him in clean condition and first class order he shall issue a certificate of completion in respect of the works and the Period of Maintenance shall commence from the date of such certificate.

The Period of Maintenance shall be ~~76.15%~~ (32) days and the Contractor shall maintain the whole of the works in thorough repair and first class order throughout this period.

If the Contractor does not so maintain the works to the satisfaction of the Engineer such maintenance as the Engineer considers necessary shall be carried out by the Board at the expense of the Contractor.

11. PAYMENT:

will be made to the Contractor by the Board once in every month up to £75 per centum of the value of the work done as certified by the Engineer. The Contractor shall, if required, supply to the Engineer any vouchers, dockets or other papers he may require in order to arrive at a fair estimate of the value of the work done. Payment up to £85 per centum of the Contract sum will be made by the Board on satisfactory completion of the works as certified by the Engineer.

The final payment of £15 per centum to complete payment will be paid by the Board after expiry of the period of maintenance against a certificate from the Engineer that the work has been maintained in a satisfactory manner and any defective material or workmanship has been made good.

12. VARIATIONS AND EXTRA WORKS:

The Engineer shall have power to vary, diminish or extend the quantities of work without invalidating the Contract provided always that such variation, increase, decrease or change shall be of a nature contemplated by the Contract and the Contract price shall be adjusted in accordance with the schedule rates. Where the schedule rates are not fairly applicable to such variations new rates shall be agreed. All variations shall be ordered in writing by the Engineer who will, at the time of issuing such order, decide the method of payment and the time to be added to or deducted from the contract completion time consequent on such variation.

13. MEASUREMENT OF WORK:

All measurements of the work shall be made nett as shown on the drawings or described in the specification. The methods of measurement, unless specified to the contrary, shall be those set out in N.Z.S.S.670.

14. PRIME COST AND PROVISIONAL SUM: PRIME COST means the nett cost to the Contractor ex Merchants store after deducting all trade discounts and any discount for cash in excess of 2½%.

PRIME COST (P.C.) ITEMS appearing in the schedule or specification shall be so priced as to include for the Prime Cost plus percentage profit plus carriage and installation.

PROVISIONAL SUM means any sum of money fixed by the Engineer and to be included in the Contract price to provide for work not otherwise included or unforeseen contingency.

It shall not be expended except as specifically directed by the Engineer at his discretion and any portion not so expended shall be deducted from the Contract Sum.

15. WATCHING AND LIGHTING. The Contractor shall in connection with the Works provide and maintain at his own cost all lights, guards, fencing and watching when and where necessary or required by the Engineer or by any competent statutory or other authority for the protection of the works or for the safety and convenience of the public or others.

16. DAMAGE TO PROPERTIES. The Contractor shall be liable for, and shall at all times keep the Board indemnified against, all actions, claims and demands in respect of any injury or damage caused by himself, any of his workmen or any other person in his employ or acting under his direction, to the land or buildings or person of any third person or persons as a result of the execution of the specified works including the conveyance of materials or persons to or from the site.

17. INSURANCES: The Contractor shall at his own cost, effect and maintain during the continuation of the Contract the following insurances in offices approved by the Board.

- (1) FIRE INSURANCE: All works comprised in the contract and all plant and materials brought into or onto the works shall be kept insured against fire for their full insurable value.
- (2) WORKERS' COMPENSATION: The Contractor shall effect and maintain an approved insurance such as will protect him and the Board from claims under any Act for the time being in force relating to worker or workers' compensation or employers liability or under any other statutory provision or at common law. Before employing any labour on the works the Contractor shall lodge with the Board a certificate that such insurance has been effected and the name of the office concerned.

18. CONTRACTOR TO OBSERVE ALL LAWS BY-LAWS AND REGULATIONS. In executing the contract the Contractor shall comply with the provisions of all Acts of Parliament and with all regulations and by-laws of state, local or other authorities that may be applicable to the works and shall pay all fees lawfully demanded by the public authorities for matters in connection with the Contract.

Where the express approval of the Building Controller is required for any aspect of the work or any material specified to be used such approval will be obtained by the Board.

19. STATUTORY CONDITIONS RELATING TO WAGES: The Contractor shall observe all the provisions of every award or order of the Court of Arbitration and of every Industrial agreement and of every other statute, order or requirement from time to time in force in respect of payment of wages, conditions of labour and other matters relating to the employment of labour.
20. SUBJECT TO LIENS ACT: This contract shall be subject to the provisions of "The Wages Protection and Contractors Liens Act, 1939" and its amendments.
21. SUB-LETTING AND FACILITIES FOR OTHER CONTRACTORS: The Contractor shall not sub-let the Contract or any part of the Contract without the written approval of the Engineer, such approval not to be unreasonably withheld. Any approval for such sub-letting shall not be deemed to be a waiver of any of these conditions of Contract and shall not discharge the Contractor from the responsibility of ensuring that any part of the Contract so sublet is executed and completed in terms of the Contract.
- The Contractor, if so requested by the Engineer, shall afford all reasonable facilities to any other contractor or his workmen or to workmen directly employed on or near the site on work ancillary to this Contract.
22. SERVICE OF NOTICES: Any notice to be given to the Contractor under the terms of this Contract shall be served by sending the same by post to or leaving the same at the Contractor's principal place of business (or in the event of the Contractor being a company to or at its registered office).
- Any notice to be given to the Board under the terms of the Contract shall be served by sending the same by post or leaving the same at the Board's Office at Quay Street, Auckland.
23. CONTRACTORS REPRESENTATIVE: The Contractor, when he is not personally present on the works shall be represented by a responsible agent approved by the Engineer to receive instructions and to represent the Contractor for all purposes of this Contract.
24. QUALITY OF WORK: All workmanship shall be in accordance with the best practice and all materials shall be the best of their respective kinds and shall be approved by the Engineer or his representative before being used in the work.
25. SANITATION AND CLEARING UP THE SITE. The Contractor shall maintain the works and the site of the works in a sanitary and hygienic condition and on completion of the Contract he shall clear the site of all temporary works, surplus plant and materials and debris and leave the works and the site of the works in a clean and tidy state to the satisfaction of the Engineer.

26. BENCH MARKS AND SURVEY STANDARDS: Before the commencement of the work the Board will establish any necessary "Bench Marks" and "Survey Standards" at suitable positions in the vicinity of the work and the Contractor shall preserve and use these marks for fixing all level and line pegs that he may require during the course of the work.
27. SETTING OUT THE WORK: The Contractor shall be responsible for the accurate setting out of the whole of the work true to the lines, levels and crossfalls shown on the drawings, and in accordance with such further instructions as may be given from time to time during the course of the work.
28. INSPECTION. The whole of the work will be subject to close inspection on behalf of the Board. Any material which is not approved by the Engineer shall be removed from the site immediately by the Contractor and replaced with approved material. Any work which is not approved by the Engineer shall be made good immediately by the Contractor to the satisfaction of the Engineer. Should the Contractor refuse or neglect or fail to remove from the site any material or to make good any work immediately when instructed by the Engineer to so do, then it shall be lawful for the Board to employ any other person or persons to remove such material or to make good such work and the Board may deduct the cost of doing so from any moneys that may be payable or may become payable to the Contractor by the Board.
29. RIGHT OF BOARD TO TERMINATE CONTRACT: Should the Contractor continue to refuse or neglect or fail to provide materials of a quality satisfactory to the Engineer or to carry out any works in connection with this contract in a manner to the satisfaction of the Engineer, or should the Contractor refuse or neglect to carry out the Works with such despatch as the Engineer shall consider necessary for the due completion of the Contract within the time specified, then it shall be lawful for the Board forthwith, without further notice to the Contractor, to terminate the contract so far as it relates to the Works remaining to be done and the Contractor shall have no claim whatsoever against the Board as compensation in respect of such termination of contract.
- In the event of such termination of contract by the Board, the Contractor shall be paid only the value of the work done as certified by the Engineer but the deposit lodged by the Contractor shall be forfeited absolutely to the Board as and for liquidated damages.
30. BANKRUPTCY ETC. OF CONTRACTOR. If the Contractor shall become bankrupt or shall make any assignment for the benefit of his creditors or if the Contractor being a company shall go into liquidation then unless the assignee, trustee or liquidator forthwith makes arrangements satisfactory to the Engineer for the due prosecution of the works then in any such cases the Board may on three days notice exercise all powers conferred as is provided

in the case of the right of the Board to terminate the Contract.

31. PLANT & MATERIALS TO BE THE PROPERTY OF THE BOARD: If the Contractor brings onto the Works plant and/or materials for which he desires an advance of payment to be made then such plant and/or materials shall become the absolute property of the Board.

Except for the purpose of carrying out the Contract the Contractor shall not, without the written permission of the Engineer, remove any of the said plant and/or materials until the Engineer has certified the completion of the Contract when the said plant and all unused materials shall re-vest in and become the property of the Contractor.

32. ARBITRATION: Should any dispute arise between the Contractor and the Board in the execution of this Contract it shall be referred to the Engineer for his decision and that decision shall be binding on both parties. Should either party be aggrieved by such decision he may serve a notice on the Engineer requiring the matter to be referred to an Arbitrator to be agreed upon between the parties or, failing agreement, to be nominated on the application of either party by the President for the time being of the N.Z. Institution of Engineers and such reference shall be deemed to be a submission to arbitration within the meaning of the Arbitration Act, 1908 or any statutory re-enactment or amendment thereof for the time being in force. The award of the Arbitrator shall be final and binding on the parties.

33. THE LOWEST OR ANY D R will not necessarily be accepted.

34. HEADINGS: The headings to the foregoing clauses shall not be deemed to be part of the Contract nor explanatory thereof.

35. GENERAL

This Contract shall be for the construction and completion of all works described in this Specification and shown in the Bill of Quantities and on the Drawings and includes the following:-

1. Water Supply - lay and fix the materials supplied by the Board.
2. Stormwater Drainage - provide and construct.
3. Roads and footpaths - provide and construct.

Availability of Site. The site is immediately available.

Time of Completion. Completion of the stormwater drainage system is required as soon as practicable and not later than by the end of May, 1953.

Completion of the water supply system is required as soon as practicable and not later than two months after delivery to the site of the materials to be supplied by the Board.

Completion of the roads and footpaths is required as soon as practicable after the completion of drainage and water supply and not later than November, 1953.

Tenderers may undertake to complete any or all of these works earlier than the required date if they so wish.

36. EXCAVATION:

Where excavations for roads, water mains, sewers or other works are made they shall be accurately set out to line and level in accordance with the Drawings. All excavations shall be kept clear of water and shall be properly timbered or sheeted as required to protect the new or existing works and adjoining properties and works. The rates quoted in the Bill of Quantities are to include for all temporary timbering, sheeting and pumping as required. Where timbering or sheeting is left in on instruction from the Engineer the value of the material shall be paid to the Contractor. When the excavation is completed and before any concrete or other material is placed it shall be inspected by the Engineer who may order such alterations to the foundations as he may think fit. The Contractor may use any method or any equipment he wishes for excavation subject to the prior approval of the Engineer. All measurements are taken net as shown on the Drawings and no allowance will be made for working space or bulking. On completion of the work all surplus spoil shall be removed and the ground surface made good as required by the Engineer. Where backfilling is required it shall be done in layers and thoroughly consolidated. Blasting

may be carried out if necessary. The blasting procedure to be adopted shall be such as to preclude the possibility of damage to neighbouring property or works and shall be to the prior approval of the Engineer. All timbering and sheeting shall conform to the Scaffolding and Excavation Act, 1922, and amendments thereto.

37. CONCRETE:

The materials and workmanship for all reinforced concrete shall conform to N.Z.S.S. 95, Part V Clauses 503 to 515 inclusive except where otherwise provided in this Specification.

- (a) The water used in mixing shall be clean fresh water free from inorganic or organic impurities.
- (b) Cement shall be Portland Cement in accordance with N.Z.S.S. 43 or B.S. 12/1947. The cement shall be stored in a weatherproof store and shall be so arranged and drawn on as to preclude the possibility of old and damaged cement being incorporated in the works. No cement which is damaged or in any way fails to comply with the specification shall be retained on the site or incorporated in the works.
- (c) Fine aggregate shall be clean, hard sand, wellwashed in fresh water. It shall be free from all vegetable or clay matter and shall comply with N.Z.S.S. 95, Part V.

Coarse aggregate shall be crushed basalt or other approved, hard, durable, clean stone free from impurities or excess of dust.

The grading of the fine and coarse aggregate shall be such that when proportioned as described below they shall form a dense, well graded aggregate, all of which shall pass a B.S. Sieve appropriate to the maximum size of aggregate specified and not more than 5% by weight shall pass a No. 100 B.S. Sieve.

Before starting work, the Contractor shall lodge with the Engineer samples of fine and coarse aggregate for approval. When approved these shall form the standard for the work and no aggregate of lower standard shall be used in the work.

- (d) Quality "A" concrete shall be proportioned to the approval of the Engineer and such that:
 - i Each cubic yard of set concrete shall contain not less than 630 lbs. of Portland Cement.
 - ii The concrete shall have a density of not less than 160 lbs per cubic foot.
 - iii The concrete shall be of such strength that Works Compression Test cylinders 6" dia. x 12" long taken from any batch of concrete during

placing, shall attain a strength of not less than 4,000 lbs. per sq. inch at 28 days.

- iv The maximum size of coarse aggregate shall be 1 inch.
 - v The exposed faces of the concrete shall be smooth, tough and impermeable
 - vi The concrete shall be suitably workable to the satisfaction of the Engineer having regard to the manner of placing adopted and the location of the concrete in the works.
- (e) Quality "C" concrete shall consist of one part by volume of cement to six parts by volume of mixed fine and coarse aggregate graded to the satisfaction of the Engineer and the maximum size of coarse aggregate shall be $1\frac{1}{2}$ ".
- (f) Mixing shall conform to N.Z.S.S. 95 and shall be done by a power driven batch mixer of approved type. The concrete shall be mixed for a period of not less than two minutes.
- (g) Placing. The transporting and placing of concrete shall be to the approval of the Engineer and such that:-
- i N.Z.S.S. 95 Part V Clause 512 paras. (a) to (j) are fully complied with.
 - ii The concrete shall be finally deposited in place within 15 minutes of delivery from the mixer.
- (h) Formwork shall be so designed and built that it properly supports the concrete without undue deflection during placing and curing and that it can be removed without undue damage to the concrete. It shall be fixed to the proper line, shape and level and shall be trued up, cleaned and washed out immediately before concrete is placed. No concrete shall be deposited until the formwork has been approved by the Engineer.
- (i) Steel reinforcement shall be mild steel of approved manufacture, and shall be free from mill-scale, dust, rust grease or other matter likely to reduce its bond with the concrete or to encourage corrosion. All reinforcing bars shall be accurately positioned and so fixed as not to be displaced during the placing and vibrating of the concrete.
- (j) Curing All concrete work shall be kept continuously damp and shall be protected from frost, strong sun or drying winds for seven days after placing or to the Engineer's approval.

38. WATER SERVICE:

The Contractor shall lay and fix the whole of the water service as shown on the Drawings or as otherwise directed by the Engineer, including all pipes, specials, valves, hydrants, meters surface boxes and other things necessary.

The Board will provide the following pipes and fittings for the water supply. It is expected that these materials will be available Mar. - June, 1953:-

<u>Item</u>	<u>Nominal Internal Dia.</u>	<u>Particulars</u>	<u>Unit</u>	<u>Quantity</u>
1	3"	Spigot and Socket pipe 3/7'	lin.ft.	21
2	4"	" " " "	lin.ft.	115
3	6"	" " " "	lin.ft.	460
4	3"	Flange and Socket 1/4 bend	No.	3
5	4"	Double Spigot tee with 90° 6" diam. flanged branch	No.	1
6	4"	Flange and socket piece 18"	No.	1
7	4"	Gibault joint	No.	2
8	4"	Blank flange	No.	1
9	4"	Socket and Spigot Tee with 90° 3" diam. spigot branch	No.	1
10	6" to 4"	Socket and Spigot Central Taper	No.	1
11	6"	Socket and Spigot Tee with 90° 6" diam. flanged branch	No.	1
12	6"	Socket and Spigot Tee with 90° 6" diam. socket branch	No.	1
13	6"	Socket and Spigot Tee with 90° 3" diam. flanged branch	No.	2
14	6"	Socket and Spigot Tee with 90° 3" diam. spigot branch	No.	2
15	5"	Flange and Spigot piece 18"	No.	2
16	4"	Double flanged Sluice Valve	No.	1
17	6"	" " " "	No.	2
18	3"	Hydrant - Screwdown type	No.	5
19		Valve surface box (type b)	No.	3
20		Hydrant surface box (type a)	No.	5

Jointing materials to be provided by the Contractor.

- (a) Pipes shall be spigot and socket jointed and laid on approved foundation with 2'-6" minimum cover.

All pipes shall be Class "C" cast iron to B.S. 78/1938 for spigot and socket or flanged joints as described, of approved manufacture and to the satisfaction of the Engineer. All pipes shall be tested, cleaned, coated inside and out marked with B.S. mark and class of pipe as required by B.S. 78/1938. No pipe shall be laid without having been inspected and passed by the

Engineer and any pipe rejected shall be immediately removed from the site and shall not be incorporated in the work. All spigot and socket pipes shall be jointed with yarn and run lead and properly caulked in accordance with the best trade practice.

All junctions, tees, tapers, bends, collars and other specials shall conform to B.S. 78/1938 and shall be to the Engineer's approval.

- (b) Hydrants, shall be of the screw-down type and shall comply with B.S. 750/1950 in every respect. The valve shall be of the captive type and the hydrant shall be provided with a drain boss and screwed plug on the outlet side. The spindle of the hydrant shall be screwed to close when turned in an anti-clockwise direction.
- (c) Sluice Valves, shall comply with B.S. 1218/1946 in every respect and shall be Class 1 for use with flanged pipe and for installation below ground level. Sluice valves shall be provided with caps and with a removable key for operation and all spindles shall be screwed to close when rotated in anti-clockwise direction. All valves shall be subjected to the closed end test specified and test certificates shall be supplied to the Engineer for all valves installed.
- (d) Surface Boxes, for hydrants and sluice valves shall be of two types as described below, and shall be in cast iron with appropriate raised descriptive lettering.

Type (a) for Hydrants shall be of strong construction suitable for heavy traffic and shall have a clear opening 15" x 9" with a 6" deep frame. The covers shall be double-hinged and shall bear raised $1\frac{1}{2}$ " letters "HYDRANT".

Type (b) for Sluice Valves shall be of strong construction suitable for heavy traffic and shall have a clear opening of $3\frac{1}{2}$ " diam. The covers shall be double-hinged and shall bear raised letters "S.V".

- (e) All water mains and fittings shall be tested after installation and shall comply with the following test:-

After filling with fresh water the pressure shall be increased to 200 lbs /sq.in. and the mains and fittings under test shall hold this pressure continuously and without boosting for a period of four hours or to the Engineer's approval.

On completion of the test the mains and fittings shall be flushed out and left standing full of fresh water. All water consumed shall be paid for by the Contractor.

- (f) Sluice Valve Pits, shall be constructed in Ordinary Building brick on a 3" thick concrete Quality "C" base as shown on the drawings.
- (g) Hydrant Pits, shall be constructed in Ordinary Building brick on a 3" thick concrete Quality "C" base as shown on the drawings.

39. STORMWATER DRAINAGE: The Contractor shall construct the drainage system as shown on the Drawings. All work shall be done in accordance with the best trade practice and shall comply with the By-laws of the Auckland City Council.

No drains except subsoil drains shall be laid other than by a registered Drainlayer in possession of a current annual license of the Auckland City Council.

- (a) Subsoil Drains, shall consist of approved field tiles 3" diameter laid with open joints on a bed of 1" all-in scoria 1" thick and the trench backfilled with 2" clean scoria.
- (b) Stormwater Drains, shall be in approved glazed earthenware or concrete pipes of the spigot and socket type and shall be jointed in cement mortar.

Glazed earthenware pipes and fittings shall comply with N.Z.S.S., 365 for Class "B" pipes.

Concrete pipes shall be centrifugally cast suitably reinforced and shall comply with N.Z.S.S. 594.

- (c) Cesspits, for stormwater drainage shall be constructed as shown on the Drawings in concrete Quality "C" and shall be provided with a hinged cast iron grating cover and frame to Auckland City Council pattern. Where the cesspit adjoins the kerb it shall be provided with a cast iron kerb plate to Auckland City Council pattern.
- (d) Manholes, for stormwater drains shall be constructed in concrete Quality "A" as shown. Channels and benchings shall be accurately built to line, level and grade or crossfall and shall be finished hard and smooth. Galvanised step irons shall be built in solid. Manholes shall be provided with a heavy pattern cast iron cover to Auckland City Council pattern set in concrete and flush with the surrounding finished surface level as shown.

(e) Concrete Foundation and Surround for Drains.

Stormwater Drains shall be laid on a reinforced concrete bed and haunched with concrete as shown on the drawings. Where the cover is less than 3'-0" or where directed by the Engineer stormwater drains shall be surrounded with concrete.

All concrete for foundation or surround of pipes shall be Quality "C".

40. ROADS AND PAVING: The Contractor shall construct roads, and paths of crushed stone penetrated with bitumen and surface-sealed as shown on the Drawings and specified below:-

(a) Subgrade, shall be evenly formed true to level and grade and thoroughly consolidated. Any portions that are weak or are in any way not to the Engineer's satisfaction, shall be dug out and made good with approved scoria filling consolidated in 6" layers.

(b) Kerbs and Channels, shall be constructed as shown on the Drawings.

Kerbs shall be pre-cast in concrete Quality "A". They shall be laid true to line, level and grade, close jointed and pointed with 2 to 1 sand-cement mortar neatly struck. The foundation channel and backing to kerbs shall be in concrete Quality "C". The channel shall be accurately formed true to line and grade and trowelled to a smooth finish.

(c) Base Course, shall consist of 12" consolidated thickness of 3" all in crushed bluestone of approved grading, spread evenly in layers of not more than 4" thickness, watered and thoroughly consolidated by a roller of not less than 10 tons weight. The surface of the basecourse shall be finished tight and even, true to level and grade and shall not vary more than $\frac{1}{2}$ " when tested with a 10 ft. straight-edge or camber board.

(d) Wearing Course, shall consist of 4" consolidated thickness of 2" clean crushed bluestone of approved grading, laid in two courses each 2" thick. Each course shall be evenly spread and rolled with a roller of 8 to 10 tons weight until the stones are well keyed together and the surface is of a uniform and open character true to level and grade.

Each course shall be fully penetrated with bitumen to B.S. of 80-100 penetration heated to 325° - 350°F. and uniformly sprayed over the surface longitudinally at the rate of 2/3 gallon per sq.yd. Each

penetration shall be covered with $\frac{3}{4}$ " clean bluestone chips applied longitudinally lightly on the first penetration and at the rate of 1 cu.yd. to 45 sq.yds. on the second penetration, and well rolled and broomed as directed to produce a tight surface, well bonded, and true to level and grade.

- (e) Sealing Coat, shall be applied as soon as possible after the wearing course is completed. The surface shall be broomed and rolled to approval and bitumen to B.S. of 180-200 penetration heated to 325° - 350°F. shall be uniformly sprayed longitudinally at the rate of 0.45 gallons per sq.yd. This shall be immediately covered with $\frac{1}{2}$ " clean bluestone chips and applied longitudinally and well rolled and broomed as directed to produce a tight surface, well bonded and true to grade and crossfall.

- (f) Application of Bitumen All bitumen shall be heated to between 325° and 350 degrees F. and sprayed at that temperature and at a pressure of between 25 and 75 lbs. per sq. inch.

No spraying shall be carried out unless the road surface is dry and the air temperature not less than 60 degrees F.

Care shall be taken to protect kerbs, channels, surface boxes, manhole-covers, etc., from being covered or splashed by bitumen, and these shall be left clean on completion.

- (g) Footpaths: The subgrade for footpaths shall be constructed as previously described for road. The basecourse shall consist of 3" compacted thickness of approved 2" all-in hard scoria, evenly spread and rolled with a 2-3 ton roller, true to grade and crossfall.

The surface shall be sprayed with an approved weed-killer and covered with a layer of $\frac{1}{2}$ " clean bluestone chips uniformly spread at the rate of 1 cu.yd. to 50 sq.yds. and broomed and rolled to a true and even surface. Hot bitumen of 180-200 penetration shall then be sprayed on at the rate of $\frac{1}{2}$ gallon per sq.yd. and immediately covered with $\frac{3}{16}$ inch clean bluestone chips uniformly spread at the rate of 1 cu.yd. to 120 sq.yds.

The surface shall then be well broomed and rolled with a 2-3 ton roller as directed to produce a tight surface, thoroughly bonded and true to grade and crossfall.

- (h) Scarify existing surface at intersection with Chaytor Street, and regrade wearing course as necessary ready for completion of wearing course.

41. WORK OR MATERIALS NOT DESCRIBED: Should any work or portion of any work to be carried out under this contract be not particularly described in this Specification it shall be carried out in accordance with the best trade practice.

Should any of the materials to be used in this contract be not particularly described in this Specification, they shall be the best of their respective kinds and wherever possible, to the appropriate British Standard.

42. VARIATION OF PRICE (LABOUR AND MATERIALS) CLAUSE:

- (1) If under decision of the Court of Arbitration in New Zealand or of any other body recognised as an appropriate body for regulating the rates of wages in any trade or industry or by reason of any Statute or Statutory Instrument there shall during the currency of the Contract be any increase or decrease in the wages or the rates of wages or in the allowances or rates of allowances (including allowances in respect of holidays) payable to or in respect of labour of any kind prevailing at the date of Tender as then fixed by the said Court of such other body as aforesaid or by Statute or Statutory Instrument or any increase in the amount payable by the Contractor by virtue or in respect of any Scheme or State Insurance which increase or increases decrease or decreases shall result in an increase or decrease of cost to the Contractor in carrying out the Works the net increase or decrease of cost shall form an addition or deduction as the case may be to or from the Contract Price and be paid to or allowed by the Contractor accordingly. Provided always that for the purposes of this sub-clause any payment to workmen of travelling or subsistence allowances if the subject of an award by the Arbitration Court in New Zealand shall be deemed to be an increase in allowances.
- (2) If after the date of Tender there shall be any increase or decrease in the cost prevailing at such date of any of the materials consumable stores fuel or power (and whether for permanent or temporary works) named and priced in the Schedule of Materials annexed to the Bill of Quantities (or added thereto by the Contractor when tendering) and purchased by the Contractor at ruling market prices after the date of Tender which increase or increases decrease or decreases shall result in an increase or decrease of cost to the Contractor in carrying out the Works the net increase or decrease of cost shall form an addition or deduction as the case may be to or from the Contract Price and be paid to or allowed by the Contractor accordingly.

- (3) If any Statute or Statutory Instrument shall after the date of Tender be formally applied to the Contractor or become compulsorily applicable thereto the Employer will reimburse to the Contractor the net extra cost of the Works occasioned by compliance with such Statute or Statutory Instrument.
- (4) The Contractor shall as soon as is practicable after any such increase or decrease as is mentioned in sub-clauses (1) and (2) hereof becomes effective give written notice thereof to the Engineer.

AUCKLAND HARBOUR BOARD

CONTRACT NO. 1398

FOR THE CONSTRUCTION OF ROADING STORMWATER DRAINAGE
AND WATER SUPPLY AT EASTERN RECLAMATION.

SCHEDULE

I/We guarantee to complete the work specified in Specification No. 1398 and shown on the Drawings at the rates shown in the accompanying Bill of Quantities, and within the times set out below:-

Drainage Work within *FIFTEEN*.....weeks of acceptance of
Tender.

Water Supply within *NINE*.....weeks of delivery of
materials to be supplied by
the Board.

The Whole Contract within *FORTY*.....weeks of accep-
tance of Tender.

Signature ... *ANDREW - MURRAY*.....

Address ... *P.O. Box. 821*.....

... *AUCKLAND*.....

Date ... *17. 2. 53*.....

AUCKLAND HARBOUR BOARD

CONTRACT NO. 1398

SCHEDULE OF MATERIALS.

(to be annexed to the Bill of Quantities)

For the purposes of Clause 42 (2) of the Specification, the Tenderer shall detail in this Schedule any materials and the ruling market price in Auckland (delivered on site) prevailing at the date of tendering of such materials, to which such clause shall apply.

The Tenderer shall add to or delete from the Schedule as necessary and any materials not specified and not priced in this schedule will not be subject to the said Clause 42 (2).

<u>Item No.</u>	<u>Material</u>	<u>Unit</u>	<u>Rate</u>
1.	Mild Steel Reinforcement: Rounds	cwt.	70/-
2.	Glazed Earthenware Pipes: 9" dia. Class B	lin.ft.	5/11 1/2
3.	Concrete Pipes: 9" internal diameter	lin.ft.	6/3
	12" " "	lin.ft.	8/4
	15" " "	lin.ft.	11/8
	18" " "	lin.ft.	15/-
4.	Concrete Pipe Specials: 9" on 15" - 45° junction	each	
	9" - 45° medium bend.	each	
5.	Cast Iron Manhole Covers & Frames	lb.	£3.17.0. plus 20%
6.	Bitumen: Country of Origin:	gal.	4 1/2 gal. as work
7.	Run of Quarry Scoria	cu.yd.	delivered
8.	Concrete: Cement	ton	
	Aggregate	cu.yd.	
	Premix Concrete	cu.yd.	

ANDREW - MURRAY
P.O. Box, 821.
AUCKLAND.

AUCKLAND HARBOUR BOARD

CONTRACT NO.1398 - ROADING STORMWATER DRAINAGE AND
WATER SUPPLY AT EASTERN RECLAMATION

BILL OF QUANTITIES.

PREAMBLE

Attention is drawn to the Conditions of Contract, the Specification and the Drawings which shall be read in conjunction with this Bill of Quantities.

The prices and rates entered in the Bill of Quantities are to be the full inclusive value of the work described under the several items including all costs and expenses which may be required in and for the construction of the work described or implied in the contract documents and drawings.

Unless specified to the contrary, all items are measured net as shown on the Drawings and no allowance has been made or will be made for bulking, shrinkage or waste.

The quantities of works and materials in this Bill of Quantities are not to be taken as limiting or extending the amount of work to be done or materials to be supplied by the Contractor.

A price or rate is to be entered against each item whether or not quantities are shown. Items against which no price or rate is entered shall be considered as being covered by other prices or rates in the Bill. The rates so entered shall be the rates at which the work will be valued for payments, additions and deductions.

Provisional Sums and P.C. Items are to be dealt with as described in the Conditions of Contract and the Specification.

Item No.	Description	Quantity	Unit	Rate	Amount
<u>PRELIMINARY ITEMS.</u>					
1.	Allow for visiting and inspecting the site; for verifying the Drawings and quantities; for ascertaining the nature of the work, the nature of the ground and the nature of the existing works; for the accurate setting out of the works, including supply all necessary instruments, templates, pegs, etc., for giving all notices and for paying all fees to persons or authorities so entitled in respect of this Contract.		Item		30 - -
2.	Allow for and make such arrangements as will be necessary from time to time to provide continuous access to adjoining property and to safeguarding the public as required by the Specification.		Item		20 - -
3.	Allow for making good, all surfaces of lands or roads in, from or through which the works are performed; for making good injury or damage to property or land occasioned by the execution of the works or by extraordinary traffic arising therefrom.		Item		25 - -
					75 - -

Item No.	Description	Quantity	Unit	Rate	Amount			
		<i>BT FORWARD</i>				75	-	-
4.	Allow for providing, maintaining in an approved sanitary condition and clearing away on completion, all necessary latrines, stores, sheds, offices and other temporary accommodation.		Item		18	-	-	
5.	Allow for maintaining in an approved sanitary condition the site and the works and for cleaning up on completion to the approval of the Engineer.		Item		15	-	-	
	<u>THE FOLLOWING IN WATER SERVICE IN RECLAIMED GROUND AS DESCRIBED IN THE SPECIFICATION AND SHOWN ON THE DRAWINGS.</u>							
	All rates are to include for lay joint and fix complete. All flanges drilled to P.S. except where otherwise stated.							
	UNLESS SPECIFIED OTHERWISE, ALL MATERIALS FOR THE WATER SERVICE, OTHER THAN JOINTING, WILL BE SUPPLIED BY THE BOARD IN ACCORDANCE WITH CLAUSE 38 OF THE SPECIFICATION. JOINTING MATERIALS SHALL BE SUPPLIED BY THE CONTRACTOR.							
6.	Lay in reclaimed ground, Class "C" cast iron spigot and socket water pipes including excavation to provide a minimum cover of 2'-6" below finished surface level, preparation of foundation, jointing and backfilling all as specified in straight pipe 4" internal diameter.	115	lin.ft.	6/-	34	10	-	
7.	Ditto 6" internal diameter.	460	lin.ft.	7/-	161	-	-	
8.	Ditto 3" internal diameter.	21	lin.ft.	6/-	6	6	-	
9.	Extra over Item 6 for 4" internal diameter double spigot tee with 90° - 6" dia. flanged branch.	1	No.	70/-	3	10	-	
10.	Ditto for flanged socket 18" long.	1	No.	70/-	3	10	-	
11.	Ditto for Gibanlt joint.	2	No.	35/-	3	10	-	
12.	Ditto for blank flange.	1	No.	50/-	2	10	-	
13.	Ditto for socket and spigot tee with 90° - 3" dia. spigot branch.	1	No.	60/-	3	-	-	
14.	Extra over Item 7 for 6" to 4" standard central taper.	1	No.	40/-	2	-	-	
15.	Ditto for socket and spigot tee with 90° - 6" dia. flanged branch	1	No.	70/-	3	10	-	
		<i>CD. FORWARD</i>				331	6	-

Item No.	Description	Quantity	Unit	Rate	Amount		
		<i>B.T. FORWARD</i>			381	6	-
16.	Ditto for socket and spigot tee with 90° - 6" dia. socket branch.	1	No.	60/-	3	-	-
17.	Ditto for socket and spigot tee with 90° - 3" dia. flanged branch.	2	No.	55/-	5	10	-
18.	Ditto for socket and spigot tee with 90° - 3" dia. spigot branch.	2	No.	60/-	6	-	-
19.	Ditto for flanged spigot 18" long.	2	No.	60/-	6	-	-
20.	Joint and fix Hydrants to B.S.750 screwdown type.	5	No.	50/-	12	10	-
21.	Joint and fix sluice valves to B.S.1218/46 Class 1 double-flanged, to 4" internal diameter.	1	No.	70/-	3	10	-
22.	Ditto to 6" internal diameter.	2	No.	40/-	8	-	-
23.	Extra over Item 8 for 3" dia. flanged socket ¼ bend.	3	No.	50/-	7	10	-
24.	Excavate for, provide and build in brickwork in cement mortar on concrete Quality "C" foundation, Pit for Hydrant 22½" x 18" x 3'-3" deep internal, including building in necessary cast iron pipes (cast iron surface box measured separately).	5	No.	₹ 8.	40	-	-
25.	Excavate for, provide and build in brickwork in cement mortar on concrete Quality "C" foundation, Pit for sluice valve, 1'-6" x 1'-11½" x 3'-3" deep internal, including building in necessary cast iron pipes (cast iron surface box measured separately).	3	No.	₹ 8.	24	-	-
26.	Fix on brick pit in paved area including making good surface, cast iron surface box for Hydrant, minimum clear opening 15" x 9" with frame 6" deep all as specified.	5	No.	60/-	15	-	-
27.	Ditto for sluice valves minimum clear opening 3½" dia. all as specified.	3	No.	50/-	7	10	-
28.	Allow for testing water service as specified.		Item		10	-	-
	<u>THE FOLLOWING IN ROADS AND FOOT-PATHS ON RECLAIMED GROUND</u>						
29.	Excavate over surface not exceeding 17" deep in reclaimed ground to form subgrade for roads.	700	cu.yds.	10/-	350	-	-
				<i>C.D. FORWARD</i>	829	16	-

Item No.	Description	Quantity	Unit	Rate	Amount		
				BT. FORWARD.	829	16	-
30.	Form subgrade to receive base-course for roads and paths including necessary grading and trimming to levels, falls and camber and consolidating with 8 - 10 ton roller, and including digging out local soil patches and making good with run of quarry scoria.	2252	sq.yds.	1/-	112	12	-
31.	Excavate for, provide, spread and consolidate in layers over surface, run of quarry scoria or other approved hard filling to form subgrade for roads and paths.		cu.yds.	46/-			
				(General)			
32.	Construct roadway complete in base course 12" consolidated thickness, two wearing courses each 2" consolidated thickness each bitumen penetrated and bitumen sealing coat including all necessary consolidation, screeding, forming to levels and camber, blinding and brooming and making good to channels, manhole covers and other surface boxes all as specified and shown on the Drawings.	1525	sq.yds.	32/-	2440	-	-
33.	Construct footpath complete in base course 3" consolidated thickness and bitumen sealing coat including all necessary consolidation, screeding, forming to levels, grade and crossfall, blinding, brooming and spraying with weed-killer, all as specified and shown on the Drawings.	727	sq.yds.	8/6	308	19	6
34.	Kerb and channel complete comprising precast concrete Quality "A" kerb 12" x 6" including form-work, chamfers, making, laying and jointing; concrete Quality "C" foundation and backing including necessary excavation; floating and forming channel to grade and crossfall, all as specified and shown on the Drawing. Reinforcement measured separately.	173	lin.yds.	55/-	475	15	-
35.	5/8" diam. mild steel reinforcing bars in place to kerb foundation, including all necessary cutting, bending, lapping and fixing.	9.7	cwt.	100/-	48	10	-
36.	3" dia. field-tile drain laid on and surrounded with scoria and including all necessary excavation all as specified and shown on the Drawings.	163	lin.yds.	11/-	89	13	-
36(a)	Feather out at Chaytor St. Intersection.		Item		40	-	-
					4345	56	

Item No.	Description	Quantity	Unit	Rate	Amount		
		BT. FORWARD			4345	5	6
	<u>THE FOLLOWING IN STORMWATER DRAINAGE SYSTEM IN ROADWAY CL. FOOTPATH, IN RECLAIMED GROUND.</u>						
	For payment purposes the depths of all stormwater drains shall be measured from existing ground level to the invert of the pipe, and the depths of manholes shall be measured from finished surface level to the invert of the outlet pipe. The rates quoted shall include such further excavation as may be necessary for bedding and jointing the pipes or constructing manhole foundations. All excavation rates quoted shall include for all necessary dewatering, timbering, backfilling, consolidation and removal of surplus spoil.						
37.	Excavate for provide lay and joint 9" diameter Class "B" glazed earthen ware pipe on concrete Quality "C" bed and haunch in reclaimed ground return fill and consolidate and remove surplus spoil, depth exceeding 3'-0" but not exceeding 4'-6" all above H.W.S.T.	122	lin.yds.	90/-	549	-	-
38.	Ditto but for 12" dia. pipe, depth exceeding 4'-6" but not exceeding 5'-0" all above H.W.S.T.	25	lin.yds.	120/-	150	-	-
39.	Ditto but for 15" dia. pipe, depth exceeding 5'-0" but not exceeding 6'-3". not more than 1'-0" below H.W.S.T.	69	lin.yds.	144/-	496	16	-
40.	Ditto but for 18" dia. pipe, depth exceeding 6'-6" but not exceeding 7'-3". not more than 2'-0" below H.W.S.T.	44	lin.yds.	201/-	442	4	-
41.	Extra over straight pipe for 9" on 15" 45° standard junction.	1	No.	70/-	3	10	-
42.	Extra over straight pipe for 9" - 45° standard bend.	1	No.	70/-	3	10	-
43.	9" dia. mild steel reinforcing bars in place to drain foundation including all necessary cutting bending and fixing.	21.7	cwts.	100/-	108	10	-
44.	Manhole in reinforced concrete Quality "A" including all necessary reinforcement, excavation, backfilling, formwork, channels, benching, step-irons, cast iron cover and frame, and building in inlet and outlet pipes - fixed complete as specified and shown on						
		BT. FORWARD			6098	15	6

Item No.	Description	Quantity	Units	Rate	Amount	
				<i>BT. FORWARDED</i>	<i>6098</i>	<i>15 6</i>
	the Drawings and including making good surrounding surface, manhole 3'-3" x 3'-3" internal with 6" thick walls and depth between 3'-9" and 4'-6". All above H.W.S.T.	2	No.	<i>£45-</i>	<i>90</i>	<i>- -</i>
45.	All as for last item but for depth between 5'-0" and 6'-6" not more than 1'-6" below H.W.S.T.	2	No.	<i>£60-</i>	<i>120</i>	<i>- -</i>
46.	Cesspit in concrete Quality "C" including all necessary excavation, backfilling, formwork and outlet syphon, kerb plate grating, and frame, and making good surrounding surface complete as specified and shown on the Drawing.	8	No.	<i>£32/10/-</i>	<i>260</i>	<i>- -</i>
47.	Breaking through reinforced concrete sheetpile, 15" thick, breastwork for outfall and construction of outfall including all necessary excavation, backfilling and making good surrounding surface.	1	No.	<i>£35-</i>	<i>35</i>	<i>- -</i>
48.	Breaking up of existing 6" thick concrete tennis court, remove resulting material and make good exposed surface.	323	sq.yds.	<i>12/-</i>	<i>193</i>	<i>16 -</i>
49.	Breaking out existing kerb and channel, remove resulting material.	22	lin.yds.	<i>8/-</i>	<i>8</i>	<i>16 -</i>
50.	<u>Provisional Sum</u> Provide the sum of £500.0.0 to be expended on additional work to sewer foundations as directed by the Engineer.		Item		<i>500</i>	<i>- -</i>
51.	Allow for and itemise work specified to be done but not itemised in this Bill of Quantities.					
	<i>Insurance</i>			<i>£ 100-0-0</i>		
	<i>Wol. Pay</i>			<i>£ 80-0-0</i>		
	<i>Transport etc.</i>			<i>£ 50-12-6</i>	<i>230</i>	<i>12 6</i>
				<i>TOTAL</i>	<i>£ 7537</i>	<i>- -</i>

27th January, 1953.

The Waterworks Engineer,
Auckland City Council,
Town Hall,
AUCKLAND.

Dear Sir,

WATER SUPPLY - CHAYTOR STREET AREA.

Some four or five weeks ago my Designing Engineer discussed with your Mr. Thompson the question of metering water supplied in the Chaytor Street area which is generally as shown on Drawing S.694 a copy of which is enclosed herewith.

The situation here appears to be as follows:-

1. Chaytor Street:

This is a dedicated road, the existing meters are the property of your Council and the charges are collected by your Council.

2. Unnamed Road to East of Chaytor St. and Unnamed Road to South of TEAL'S new Workshops Building:

These two roads, for the construction of which tenders are now being called, are not intended for immediate dedication but they will be serviced with water supply and stormwater drainage. The installation of the proposed water main will provide a ring main which will feed house connections, fire hydrants and TEAL'S Sprinkler System. Metering of the bulk supply will be impracticable on the grounds that the maximum draw off will be for fire fighting.

It is suggested therefore that your Council should supply and instal the necessary meters and collect all charges due from private users.

I suggest also that if and when this road is dedicated your Council should take over this water main at an agreed valuation.

Yours faithfully,

RAJS.JS.

CHIEF ENGINEER TO THE BOARD.

Encl: 1 Copy Drawing S.694.

The Goodwin

Water Supply TEAM

A decision is required re provision of water meters on the new water mains.

Factors effecting are:—

- ① A.C.C. (Thompson) says that bulk metering is impracticable
- ② Meters in Clayton St are A.C.C.'s A.C.C. collect the water charges in this area.
- ③ The normal consumption of the new mains will be very low but the peak draw-off at time of fire would be very high.

It is suggested that:

- ① no bulk metering be attempted.
- ② that A.C.C. supply & fix meter to house connections as required, the Council to collect the water charges. Council collects a fee for Sprinkler System.

A.C.C. would like us to write to them on this subject so that policy may be established.

Mr Smith



Individual metering to be provided. Please draft appropriate letter to A.C.C. 11.12.52. J. 20.1.53.

The following C.I. pipe
has been removed from
Dubois as an
early delivery on Contract
1335 following the receipt
of an order from another
client -

4" - 115 length

6" - 460 " "

The only items outstanding
on this Contract now
are: -

3" pipe 21 length.

Surface boxes

Various specials

I have asked Purch. Officer
to examine local resources
to complete this order

File please

Phone 2-406m

Lamar 737 - Phoebe song



Member of I.A.T.A.

TEAL

TASMAN EMPIRE AIRWAYS LIMITED

HEAD OFFICE, AUCKLAND, C.1.
TELEGRAMS & CABLES: TASMANAIR
CODES: BENTLEY'S SECOND PHRASE
TELEPHONE: 30-203
P.O. BOX 2201

AM:2676

12th January, 1953.

The Chief Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND, C.1.

Dear Sir,

Road Access and Services to E.R.S. Building
Your Reference JAG.861/3

Referring to your letter of the 9th December, I wish to advise as follows:-

- (1) Arrangements have been made to obtain a temporary water supply from a 1½" main on the eastern side of Chaytor Street.
- (2) The successful tenderer for the road work and storm-water on the southern and eastern side of the new E.R.S. Building, need not anticipate any delay in having the area cleared, as what is now left in the way of material and sheds can be removed immediately. As soon as you have accepted a contract for this work, will you please advise so that arrangements can be made to have the site totally cleared.

Noted J.S. 14.1.53

Mr Smith

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED

(J.W. Veale)
ASSISTANT GENERAL MANAGER

Copy sent to The Secretary.

JAG. 861/3

9th December, 1952.

The Assistant General Manager,
Tasman Empire Airways,
P.O. Box 2201,
AUCKLAND, C.I.

Dear Sir,

ROAD ACCESS AND SERVICES TO E.R.S. BUILDING.

In reply to your AM:2336 of 21st ult., the connection of toilet facilities to the sewerage system is entirely a matter for your own architect and contractors. I understand however that this work is now well in hand.

As explained in my letter of 17th ult., there has been considerable delay in the supply of water piping. The Board has insufficient 6" pipe in stock to cross Chaytor St. let alone install 160 ft. and have not been able to borrow from other Local Authorities. It may however be possible to give you a temporary 1" supply which may suffice for domestic usage if this would assist you meantime.

Tenders are now being called for a contract comprising roading work along the South face of the E.R.S. building and stormwater drainage. It is noted however that your builder is not yet clear of the site of the roading work and I shall be pleased if you will arrange with him to clear the remainder of his gear from the site as soon as possible to enable this work to be proceeded with.

Yours faithfully,

JAG.JS.

CHIEF ENGINEER TO THE BOARD.



POSTAL ADDRESS: P.O. BOX 2201
TELEPHONE: 30-203 (6 LINES)
CODES: BENTLEY'S SECOND PHRASE
TELEGRAPHIC ADDRESS: TASMANAIR

IN ASSOCIATION WITH:
BRITISH OVERSEAS AIRWAYS
CORPORATION AND
QANTAS EMPIRE AIRWAYS
AGENTS FOR PRINCIPAL
AIRLINES THROUGHOUT THE WORLD
MEMBER OF I.A.T.A.

TASMAN EMPIRE AIRWAYS LIMITED

HEAD OFFICE: AUCKLAND, C.I., NEW ZEALAND

AM:2336

21st November, 1952.

Chief Engineer to the Board,
Auckland Harbour Board Office,
Quay Street,
AUCKLAND, C.I.

Dear Sir,

WATER SUPPLY - MECHANICS' BAY

Thank you for your letter JAG.861/3 of the 17th November. My letter, reference AM:2031 of the 8th October, makes mention of the fact that portions of the new Engine Repair Shop Building are now occupied but have no toilet facilities, and it was intended that a full staff transfer to this new building be made early in the new year.

Under these circumstances would you kindly advise if sufficient 6" pipe and valves are available to lay a length of 160 ft from the 4" main on the western side of Chaytor Street to the Sprinkler System pump room. Your plan S.694 refers. It is intended to tap this main for domestic supply to this building, and may be you are in a position to advise if it is possible to make a temporary connection from the Chaytor Street main whilst awaiting the laying of this short length of 6" main. Your earliest advice would be appreciated.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED

(G.N. Roberts)
GENERAL MANAGER.

*Replied 9.12.52
Mr. Gordon, C.I.*

*Water Supply
Stormwater Drainage
Roading*

Sir. Goodwin

Re Services at T.F.A.L.

The present position is:—

Water Supply Pipes etc are on order & expected by June '53.

Roading & Drainage ① Layout has been approved by Council.

② Draft Spec & Schedule prepared (In file 861/3) for Drainage Works.

③ Quantities have been taken off for roading etc. (being searched for in Rowe's books)

④ Chief has asked for estimate of cost of services

Comment ① other than the estimate (A above) the delay on our part is not as bad as it looks. I have been in touch with Carter re (a) Contractor to do the drainage work on contract (b) Contractor for ditto on daywork. In neither case has Carter found the Contractor.

②. The estimate at A above could be done this week (or way) prior to preparing Spec & bill for dog 5.694 less water supply

24.11.52

COPY: Engineering Dept

JOHN DUTHIE & COMPANY LTD.
CUSTOMS STREET EAST
AUCKLAND C.1.

13th November, 1952.

The Auckland Harbour Board,
Quay Street,
AUCKLAND C. 1.

Tasman Airways

Dear Sir,

REF. CONTRACT NO 1335

With reference to the Stanton Spun cast iron pipes in sizes 3", 4" and 6" we confirm our telephonic advice that overseas exchange has been allotted us for this order.

Our Principals have been instructed to ship as soon as possible in 1953 and subject to causes beyond their control, delivery should be made before June 1953.

Yours faithfully,

JOHN DUTHIE & CO (AUCKLAND) LIMITED,

(Signed) W. Foote.
Manager.

WF/JHS

Noted J.F.
[Signature]



POSTAL ADDRESS: P.O. BOX 2201
TELEPHONE: 30-203 (6 LINES)
CODES: BENTLEY'S SECOND PHRASE
TELEGRAPHIC ADDRESS: TASMANAIR

IN ASSOCIATION WITH:
BRITISH OVERSEAS AIRWAYS
CORPORATION AND
QANTAS EMPIRE AIRWAYS
AGENTS FOR PRINCIPAL
AIRLINES THROUGHOUT THE WORLD
MEMBER OF I.A.T.A.

TASMAN EMPIRE AIRWAYS LIMITED
HEAD OFFICE: AUCKLAND, C. I., NEW ZEALAND

AM:2304

17th November, 1952.

Chief Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND, C.I.

Dear Sir,

WATER SUPPLY AND ROADING, MECHANICS' BAY

It will be appreciated if you will please let me
have a reply to my letters dated the 8th and 24th
October.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED

*Refer reply
of date
17.11.52
D.*


(G.N. Roberts)
GENERAL MANAGER.

JAG.861/3.

17th November, 1952.

Messrs. Tasman Airways Ltd.,
P.O. Box 2201,
AUCKLAND, C.I.

Dear Sirs,

WATER SUPPLY MECHANICS BAY.

I have to acknowledge receipt of your letter of October 24th, concerning the proposed improvements to water supply at the Air Base.

The material for this work was placed on order in July of last year. Some of the materials chiefly valves have been received. Although delivery of the piping itself was originally expected to commence this month, it is not now expected before March - June, 1953.

As soon as the materials are available the work will be carried out.

Yours faithfully,

CHIEF ENGINEER TO THE BOARD.



Member of I.A.T.A

TEAL

TASMAN EMPIRE AIRWAYS LIMITED

HEAD OFFICE, AUCKLAND, C.I.
TELEGRAMS & CABLES: TASMANAIR
CODES: BENTLEY'S SECOND PHRASE
TELEPHONE: 30-203
P.O. BOX 2201

AM:2166

24th October, 1952.

Chief Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND, C.I.

Dear Sir,

WATER SUPPLY MECHANICS' BAY

Further to my letter of the 8th October and yours dated 31st July last, I now wish to advise that the Auckland Metropolitan Fire Brigade recently carried out an early morning test at the B.P. Depot, Mechanics' Bay with the result that the water supply at our Base was practically nil.

The Deputy Superintendent of the Brigade advised that six leads of hose were in use with an output of approximately 930 gallons per minute. As you are aware we are relying solely on a 4" main to supply this area for not only domestic but also fire-fighting purposes, and it is now very evident that the laying of additional mains, as agreed to in your letter dated 15th December, 1950, is one of urgency.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED

(G.N. Roberts)
GENERAL MANAGER.

Auckland Harbour Board

Nº 20012

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To Foreman of Works.

Date 7th. August, 19 52.

Subject LIFTING OF BRABY PONTOON AT AIR BASE.

Repayable A/c. Ministry of Works. (Works Order No. 50885)

Please arrange to clear and prepare a site and to lift ashore the Braby pontoon at the Civil Air Passenger Base at Mechanic's Bay as previously discussed with you.

This work is to be carried out to the requirements of the Ministry of Works in order that the pontoon may be overhauled and surveyed.

Report cost for charging on completion of work.

N. L. Vickerman

Engineer to the Board.

1st August, 1952.

The District Commissioner of Works,
Ministry of Works,
P.O. Box 46,
AUCKLAND. C.1.

Dear Sir,

CIVIL AIR PASSENGER LANDING FACILITIES
MECHANICS BAY.

In reply to your PW.8/86/5 of 9th May further to subsequent discussions with members of your staff, I have to advise that the estimated costs of preparing an area to receive the Braby pontoon and lifting it out are as follows:-

Clearing piles to provide a landing area (portion).	£30. 0. 0
Preparing area and building crib.	£40. 0. 0
Crane Hire Charges.	£75. 0. 0
	<hr/>
	£145. 0. 0

Crane hire charges must in any case be charged in accordance with the Bylaws and will be governed by the time during which the crane is employed. The above figure is expected to cover the lift from a position clear of the landing and landing on the reclamation but does not allow for return of the pontoon to landing site.

No provision is made in the estimate for stiffening up the pontoon for lifting or provision of lifting lugs which will require to be carried out by you.

Yours faithfully,

JAG.JS.

CHIEF ENGINEER TO THE BOARD.

Copy sent to Secretary.

31st July, 1952.

The Assistant General Manager,
Tasman Empire Airways Ltd.,
P.O. Box 2201,
AUCKLAND. C.I.

Dear Sir,

NEW E.R.S. BUILDING, MECHANICS BAY
WATER SUPPLY MAIN.

In reply to your letter of 28th May, addressed to the Secretary, I have to advise that the City Council Waterworks Dept. expect to be able to commence laying their portion of the Main in Quay St. during next week and complete within a fortnight thereafter.

The Board's portion along the new roads cannot be undertaken until the arrival of pipes which are due for delivery shortly. When these come to hand however, the remainder will be put in hand without delay.

Yours faithfully,

JAG.JS.

CHIEF ENGINEER TO THE BOARD.

AUCKLAND HARBOUR BOARD No 16677
MEMORANDUM

From
FOREMAN OF WORKS
SIR,

21st May 1952.
To The Engineer.

I beg to report that

Clearing Site for Graby Pontoon.
Ministry of Works.

The estimated cost of clearing away piles for the overhaul of Graby Pontoon at Air Base Mechanic's Bay is as follows:-

Transport Luggage & incidentals £ 35. 5. 0. ✓
Establishment Charge. ✓ 3. 11. 0.

1 1/2 days transport & lunches. 38. 16. 0.
Add Head Office Charges. Say £. 40.
Add for preparing site & blocking up to remove.

Preparing area & building crit.
3 for 3 or 4 days. Say £ 30. 0. 0

	A.I.P.	7. 1. 0.
% of labour + 10% + 3 1/2% A.I.P.	Holiday pay.	3. 0. 0
	Establishment.	3. 0. 0
		£ 37. 1. 0

Cranes Hire	1 hour	22. 0. 0.
	3 1/2 hrs. @ £1.	38. 10. 0
		6. 0. 0.
	4 @ 10/-	2. 0. 0.
	Extra for lunch hours. say	5. 0. 0
		73. 0. 0.

F. H. Gaskatong
FOREMAN OF WORKS

Telegraphic Address,
"WORKS."

Telephone No. 49-830



IN REPLYING
P.W. 8/86/5
PLEASE QUOTE THESE NUMBERS.

MINISTRY OF WORKS,

P.O. BOX 46,

AUCKLAND, C.1.

9th May, 1952.

The Chief Engineer,
Auckland Harbour Board,
P.O. Box 1259,
AUCKLAND.

Dear Sir,

CIVIL AIR PASSENGER LANDING FACILITIES
MECHANICS BAY

With reference to your letter dated 1st May, 1952, it is noted that floating crane will be made available to lift the Braby Pontoon and that a suitable landing area in the vicinity of T.E.A.L. new ERS building has been allotted.

To enable an official Works Order covering the service to be prepared, would you please advise, *the estimated cost of*

- (1) Crane Hire Charges: including use of slings etc. and
- (2) Fair proportion of Cost: removal of timber piles at present stacked on proposed landing area.

--- A print of Drawing S.D. 674 which shows main dimensions of Pontoon is enclosed for your information and an additional copy is held by Board's Foreman of Works.

Yours faithfully,

W.L. Bell

District Commissioner of Works
(W.L. Bell)

1st May, 1952.

The District Commissioner of Works,
Ministry of Works,
P.O. Box 46,
AUCKLAND. C.1.

Dear Sir,

CIVIL AIR PASSENGER LANDING FACILITIES
MECHANICS BAY.

In reply to your 8/86/5 dated 15th inst., I have to advise that the Board's floating crane can be made available for hire in accordance with the Bylaws to lift the Braby Pontoon.

Unfortunately the choice of areas which can be made available for landing the pontoon and storing it for the required period during overhaul is definitely restricted. The only suitable area is adjacent to the East wall of Eastern Reclamation in the vicinity of the new Tasman Airways BRS building. In order to make this available it will be necessary to move a stack of piles and I am of the opinion that the major portion of this cost should be charged against the cost of the overhaul of the pontoon. Conditional on this the area could be made available for the stated period.

Please advise whether you wish me to proceed with the clearance of the above area to receive the pontoon. Please also forward copy of the drawing mentioned in para. 5 of your letter but which did not accompany.

Yours faithfully,

JAG.JS.

CHIEF ENGINEER TO THE BOARD.

Telegraphic Address,
"WORKS."

Telephone No. _____



IN REPLYING P.W. 8/86/5 PLEASE QUOTE THESE NUMBERS.

MINISTRY OF WORKS,

P.O. BOX 46

AUCKLAND, C.1.

15th April, 1952.

The Engineer,
Auckland Harbour Board,
AUCKLAND.

CIVIL AIR PASSENGER LANDING FACILITIESMechanics Bay.

Dear Sir,

A recent inspection of the "Braby Pontoon" moored at the western end of the Breastwork shows that a general overhaul is now necessary.

To enable a survey of the underwater section to be made, Pontoon will require to be either slipped or lifted and landed on a convenient site.

From enquiries already made it is evident that there is little possibility of getting the use of a suitable slipway and the alternative method will have to be adopted.

Would you please therefore advise if arrangements can be made for the use of the Board's floating crane to lift the Pontoon and land it on a suitable Wharf or Breastwork so that the structure may be cleaned down, surveyed and repaired. Repairs will take at least 3 months.

? A drawing showing general design and dimensions of Pontoon is enclosed for your information.

not with Eng. Office

Estimated Weight: 15 - 20 tons with ballast tanks empty and decking and fittings removed.

Would you please advise if the floating crane can be made available for the lift and if you can allot space on a wharf or a breastwork for the whole period required to repairs.

 W. L. Bell
 DISTRICT COMMISSIONER OF WORKS

23rd August, 1951.

The District Architect,
Ministry of Works,
P.O. Box 46,
AUCKLAND.

Dear Sir,

In reply to your letter P.W.S/135/3 of 31st July 1951, (addressed to the Engineer) I have to advise that the Board will raise no objection to the erection of the proposed Aluminium Marine Workshop Building, provided it is clearly understood that the building is to be removed without cost to the Board when the area ceases to be used as a base for flying boats or when the land is required for railways for future port development.

With regard to the small timber building on skids, the Engineer reports that the new position shown for this is on land held by the British Petroleum Co. under license from the Board. It will therefore be necessary for you to arrange direct with the Company for permission to occupy any of its land.

Yours faithfully,



SECRETARY.

GP.BFG

EXTRACT FROM BOARD'S RESOLUTIONS OF TUESDAY, 22ND AUGUST, 1951.

6. ALUMINIUM MARINE WORKSHOP BUILDING - AIR DEPARTMENT.

Your Report 3.8.51, recommending that the Board raise no objection to the erection by the Air Department at Mechanics Bay of an Aluminium Marine Workshop Building, provided it was clearly understood that the building would have to be removed without cost to the Board when the area ceased to be used as a base for Flying Boats, or when the Board required the land for railway for future development of the Port.

Recommended:

That the Engineer's report be adopted.

3rd August, 51.

THE SECRETARY.

MECHANICS BAY RECLAMATION - PROPOSED
MARINE WORKSHOP FOR AIR DEPARTMENT.

The District Architect, Ministry of Works requests urgent advice as whether the proposed building shown on the accompanying plan conflicts in any way with Auckland Harbour Board interests in the area.

The proposed building is a prefabricated Aluminium hut similar to those erected by Tasman Airways adjacent to the slipway and will be of reasonable appearance. Where shown adjacent to and immediately to the south of the Test House the building would be on land which will be required for railway purposes when the Mechanics Bay Reclamation No.3 has been completed and is sufficiently consolidated. As however the area generally is becoming congested there does not appear to be any other site available for this building.

I recommend that the Board raise no objection to the erection of the Aluminium Marine Workshop Building provided it is clearly understood that the building will be removed without cost to the Board when the area ceases to be used as a base for flying boats or when the Board require the land for railways for the further development of the Port.

There is also a small timber building set on skids. The new position shown for this is on land held by the British Petroleum Co. under license. It will be necessary for the Applicant to arrange direct with the Company for permission to occupy any of their area.

JAG.JS.

ENGINEER TO THE BOARD.

Telegraphic Address,
"WORKS."Telephone No. 49-830

IN REPLYING P.W. <u>6/135/3</u> PLEASE QUOTE THESE NUMBERS.

MINISTRY OF WORKS,

P.O. BOX 46,AUCKLAND. C.1.

31st July, 1951.

The Chief Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND.

Dear Sir,

PROPOSED MARINE WORKSHOP, MECHANICS BAY.

Enclosed herewith please find sketch and site plan of proposed new Marine Workshop at Mechanics Bay for the Civil Aviation Branch, Air Department.

The structure (an "Alframe" M.K.7 hut) is similar to other recent additions in the area, lending itself to easy and economical removal if necessary.

As shown on the site layout, to erect the building next to the Engine Test House, will necessitate moving to one side an existing wooden store, set on skids, and a disused lavatory block indicated by broken lines will be demolished, and the services extended to new lavatory facilities in the new building.

The site proposed is clear of all roads, and I shall be glad to receive your urgent advice as to whether the building conflicts in any way with Auckland Harbour Board interests in the area.

Yours faithfully,

C. E. Price
District Architect.

(C.E. Price)

19th July, 51.

THE SECRETARY.

CONTRACT NO. 1335 FOR THE SUPPLY OF
CAST IRON PIPES AND FITTINGS.

Two tenders only were received for the above contract. Both tenders are subject to fluctuation in manufacturing costs and shipment charges. As the two tenders have been prepared on different bases it has been necessary to estimate certain adjustments necessary to allow for the inclusion of the 50% shipping surcharge and the influence of other factors.

The adjusted tenders are:-

John Duthie & Co. Ltd.	£658. 7. 5
A. & T. Burt Ltd.	£724. 2. - (minimum)

Delivery times are comparable.

Generally Duthies is the better tender although the price quoted for one item, hydrants, suggests that an earlier pattern for these fittings, not now considered satisfactory and not complying with the specification may have been adopted as the basis for pricing. The extra cost for the improved pattern of hydrants which are required for this item is not likely to exceed £40 in which case Duthies is still the lowest tender.

Both tenderers mis-interpreted the requirements for item 1 of the schedule in that a specific number of pieces is required whereas an equivalent length in a lesser number of pieces was tendered for. This item will require to be adjusted.

I recommend acceptance of the tender of John Duthie & Co. Ltd. subject to satisfactory negotiation on the above matters up to an amount of £705 inclusive of the 50% shipping surcharge. I further recommend the inclusion in the contract of the additional materials tendered for jointing at an extra cost of approximately £25.

Tenders returned herewith.

*Requisition No #185. W.
2nd August 1951.*

JAG.JS.

ENGINEER TO THE BOARD.

Slaborough Hydrant
Laid down Steam line
2686. p. 150. £ 10. 15. 0
£ 53. 15. 0.

Telephoned quote from
Butcher for hydrants to
comply with Cl. 12. of spec.
Received 19. 7. 51.

To be confirmed by letter.
J.T.

Contract N^o 1335

Two Tenders received as below.

Item.	Dathis	Burt.
Quotation	£675-13-9	
50% Freight Charge.	Add 57. 12. 0.	Included
Contours & Sales		do.
Jointing materials	Deduct. 23 18. 4.	N/A.
Gihault Joint.	Included	Add. 1. 10. 0.
Short lengths	Adjust	Adjust.
Specials	As spec.	Adjust.
Arithmetical Errors	Deduct 1. 0. 0.	Monitors @ Item (21)
Rounded Quote	£658. 7. 5.	£724. 2. 0 OR £744. 0. 9
<u>Suppliers</u>		
Pipes	Stanton	Welsh
Valves	Blakenborough	Ham Baker ^{NOT TO} B.S.D. 18.
Hydrants	" ?	Ham Baker.
Fittings	Slaw	Ham Baker / Guesly & Co.
Delivery.	18-24 wks	14-15 wks possibly 18-24 wks

Comment. The quotation from Dathis appears to be the better.

The maker of 3 short lengths of pipe at Item (1) will require adjustment.

I suggest we accept Dathis quote or later adjust Item (1) for 3 x 4 in. lengths.

AUCKLAND HARBOUR BOARD

Engineer's Office,

6th June, 1951.

CONTRACT NO. 1335

SPECIFICATION FOR

THE SUPPLY AND DELIVERY OF CAST IRON PIPES, SPECIALS, VALVES
AND HYDRANTS.

1. TENDERS:

Tenders addressed to "The Chairman", Auckland Harbour Board, and endorsed on the envelope Tender for Cast Iron Pipes will be received up till 12 noon on Tuesday, 10th July, 1951, for the supply and delivery of Cast Iron Pipes, Specials, Valves and Hydrants in accordance with this specification.

Tenders received through the post will be recorded by the Secretary or his representative in the Tender book and placed in the Tender box to be opened in the presence of the Board. Tenders delivered by hand shall be signed for by the Secretary or his representative and be placed in the Tender box in the presence of the person delivering the tender. Tenders may be submitted by telegraph only provided proof is available that a written tender accompanied by the specified deposit has been posted not later than the time of closing of tenders.

2. INTERPRETATION OF TERMS:

In this Specification wherever they may occur the terms:-

"Board" shall mean "The Auckland Harbour Board".

"Secretary" shall mean the person for the time being acting as Secretary to the Board.

"Engineer" shall mean the person for the time being acting as Engineer to the Board or his authorised representative.

"Contractor" shall mean the person or persons whose tender for construction of the works to which this Specification refers shall be accepted, and who shall sign the necessary Contract, and it shall include the executors, administrators and permitted assigns of such person or persons.

"Works" shall mean all the works, materials, acts, matters and things mentioned and described in the Specification, and also such other works, materials, acts, matters and things as are contracted to be performed by the Contractor.

"Approved" shall mean approved by the Engineer or his representative.

(Please turn over)

3. DEPOSIT WITH TENDER:

Each tender shall be accompanied by cash or cheque for Ten pounds (£10.0.0) deposited against the due execution of the contract documents and performance of the Contract. Should any tenderer withdraw his tender after the advertised time for the closing of tenders, or should he in the event of its acceptance by the Board refuse or neglect or fail to carry out the provisions of Clause 4 of this Specification, then the amount of the deposit accompanying such tender shall be forfeited absolutely to the Board as and for liquidated damages and the Board may call on any of the other Tenderers to sign and carry out the Contract.

The deposits lodged by unsuccessful Tenderers and which have not become forfeited to the Board will be returned as soon as the necessary contract has been signed.

4. FURTHER DEPOSIT AND EXECUTION OF CONTRACT:

The successful Tenderer shall, within three clear days of notification of acceptance of his tender, execute a legal contract embracing all the clauses of this Specification and shall make a further deposit of Fifteen Pounds (£15.0.0) making a total of Twenty five pounds (£25.0.0) deposited against the due performance and completion of Contract, which sum will be returned only after satisfactory performance and completion of the Contract as certified by the Engineer.

5. SCOPE OF CONTRACT:

This contract shall be for the supply and delivery to the Board of the Cast Iron Pipes, Valves, Hydrants and Specials described in this Specification and detailed in the attached schedule, the whole to be delivered in good order and condition and to the satisfaction of the Board's Engineer.

All charges including sales tax (if payable) shall be paid by the Contractor.

All material shall be delivered to the Board's Store, Lower Hobson Street.

6. TIME OF DELIVERY:

Delivery is desired within six months. Tenderers shall state the time within which they will guarantee to deliver to the Board the whole of the material to be supplied under this Contract.

7. NON DELIVERY OR DELAY:

Should the Contractor refuse or neglect or fail to deliver to the Board the whole of the materials

described in this Specification within the time guaranteed, the Board may terminate the Contract forthwith without further notice to the Contractor and the Contractor shall have no claim whatsoever against the Board on account of such termination and the total amount of deposit lodged by the Contractor shall be forfeited absolutely to the Board as and for liquidated damages. The liability of the Board towards the Contractor shall be limited to that part of the Contract duly fulfilled and payment will be made for the materials delivered in terms of the rates shown in the Schedule.

8. RISE OR FALL IN COSTS:

A firm tender price is desired but Tenderers may qualify their tenders by a rise and fall clause which shall set out, in the Rise and Fall Schedule provided, the exact basis on which price shall be adjusted by reason of any rise or fall in cost of materials, labour etc. Any tender not so qualified shall be taken as offering a firm price.

9. PIPES:

All pipes shall be cast iron manufactured and tested either to B.S.S.1211 (1945) for centrifugally cast pipes or to B.S.S.78 (1938) for vertically cast pipes and as described in the schedule. All pipes shall be hydraulically tested Class "C".

10. SPECIALS:

All specials shall be cast iron and shall be in accordance with B.S.S.78 (1938) and as described in the schedule. All specials shall be hydraulically tested Class "C".

11. SLUICE VALVES:

shall be to the sizes shown on the Schedule, shall comply with B.S.1218/1946 in every respect and shall be Class 1, double flanged, for installation below ground for use with water supply mains. Sluice valves shall be provided with caps and with removable keys for operation and all spindles shall be screwed to close when rotated in a clockwise direction. All valves shall be subjected to the closed end test and test certificates shall be provided for all valves supplied.

12. HYDRANTS:

shall be of the screw-down type and shall comply with B.S.S.750 (1950) in every respect. The valve shall be of the captive type and the hydrant shall be provided with a drain boss and screwed plug on the outlet side. The spindle of the hydrant shall be screwed to close when turned in a clockwise direction.

13. FLANGES:

All flanges shall be drilled in accordance with Table "C" B.S.S.78 (1938).

(Please turn over)

14. SURFACE BOXES: Type "a" for hydrants shall be in cast iron and of strong construction, suitable for ordinary traffic and shall have a clear opening 15" x 9" with 6" deep frame. The cover shall be double hinged and shall bear raised $1\frac{1}{2}$ " letters "HYDRANT".
- Type "b" shall be of strong construction suitable for ordinary traffic and shall have a clear opening $3\frac{1}{2}$ " diameter. Cover shall be hinged and shall bear raised letters S.V.
15. COATING: All cast iron piping, specials and fittings shall be coated inside and out by hot dipping in tar as described in B.S. 1211, 1218, 750 and 78 for water supply fittings which have to be transported through the tropics.
16. PAYMENTS: Payment will be made monthly up to the amount of 90% of the contract price for all material delivered to and accepted by the Board.
- The remaining 10% to complete payment will be paid when the whole of the material has been delivered to and accepted by the Board.
17. TENDER AND SCHEDULE FORMS: Tenders shall be submitted on the official Tender and Schedule Forms which may be had on application to the Auckland Harbour Board, Engineer's Department.
18. THE LOWEST OR ANY TENDER will not necessarily be accepted.

(Sgd) N.L. VICKERMAN

M.I.C.E.

ENGINEER TO THE BOARD.

AUCKLAND HARBOUR BOARD

CONTRACT NO. 1335

RISE OR FALL SCHEDULE.

(Refer to Clause 8)

Item	Description	Variations
1	Cast iron Pipes	<i>See</i> <i>Schedule.</i>
2	Cast iron. Specials	
3	Sluice Valves	
4	Fire Hydrants	

AUCKLAND HARBOUR BOARD

CONTRACT NO. 1335

SCHEDULE.

Item	Nominal Internal Diameter	Particulars	Unit	Quantity	Rate	£	s.	d.	
1	3"	Spigot and Socket pipe 3/7'	Lin.ft.	21	See Schedule.	465.	8.	10	
2	4"	" " " "	"	115					
3	6"	" " " "	"	560					
✓ 4	3"	Flange and Socket 1/4 bend	No.	3	65/-	9.	15.	0	
5	4"	Double Spigot Tee with 90° 6" diam. flanged branch	"	1	151/-	7.	11.	0	
6	4"	Flange and Socket piece 18"	"	1	72/-	3.	12.	0	
✓ 7	4"	Gibault joint	"	2	35/-	3.	10.	0	
8	4"	Blank flange	"	1	21/4	1.	1.	7	
9	4"	Socket & Spigot Tee with 90° 3" diam. spigot branch	"	1	81/-	4.	1.	0	
10	6" to 4"	Socket to Spigot Control Taper	"	1	53/4	2.	13.	4	
✓ 11	6"	Socket & Spigot 1/8 bend	"	1	135/5	6.	15.	5	
12	6"	Socket & Spigot Tee with 90° 6" diam. flanged branch	"	1	190/-	9.	10.	0	
13	6"	Socket & Spigot Tee with 90° 6" diam. socket branch	"	1	173/-	8.	13.	0	
14	6"	Socket & Spigot Tee with 90° 3" diam. flanged branch	"	2	151/-	15.	2.	0	
15	6"	Socket & Spigot Tee with 90° 3" diam. spigot branch	"	2	135/5	13.	10.	10	
16	6"	Flange & Spigot piece 18"	"	2	119/-	11.	18.	0	
✓ 17	4"	Double flanged Sluice Valve	"	1	105/-	5.	5.	0	
✓ 18	6"	" " " "	"	2	170/6	14.	1.	0	
✓ 19	3"	Hydrant - screwdown type	"	5	60/-	15.	0.	0	
20		Valve surface box (Type b)	"	3	67/9	10.	3.	3	
21		Hydrant surface box (Type a)	"	5	56/6	14.	2.	6	
TOTAL						£	624.	13.	9

I/We offer to supply and deliver the materials stated in the above Schedule for the prices set out therein and in accordance with Specification No. 1335 and I/We guarantee to deliver the whole of the materials within 12 to 24 months weeks from receipt of order.

The materials offered will be supplied by the following manufacturers:-

~~Pipes~~..... Manley Ironworks Co. Ltd. Nottingham England.
~~Fittings~~..... J. Shaw Ltd. Auckland. N.Z.
~~Valves~~..... J. Blakelough & Sons Ltd. England.

Signature John Guthrie & Co. (Auckland) Ltd.

Address P.O. Box 1619.

Date 10.4.51. Auckland. N.Z.

See attached schedule or letter of even date.

1st June, 1951.

Messrs. Massey Beatson Rixtrott & Carter,
South British Insurance Building,
Shortland Street,
AUCKLAND. C.I.

Dear Sirs,

TASMAN AIRWAYS - SERVICES.

Further to your letter of October 11th, 1950, concerning stormwater and foulwater drainage at the new E.R.S. building I wish now to review the position and to consider all the required services at the same time in order that the work may be suitably planned and carried out.

The services to be provided are as follows:-

1. Foulwater drainage as shown on your plan dated 15.9.50 and described in your letter of the same date. This service is to be installed by yourselves.
2. Stormwater drainage
 - (a) as shown on your plan and letter described above and as amended and confirmed by my letters of October 9th and December 8th, 1950.
 - (b) as required to provide drainage to the proposed roads and shown on my drawing S.694.
3. Roading to the south and east of the E.R.S. building as shown on my drawing S.694.
4. Water Supply as shown on my drawing S.694 and described in Tasman Airways letters dated December 8th 1950 and March 28th 1951. The materials for the water service are now on order and delivery is expected in 12 months.

Items 2,3, and 4 are to be provided by the Board on the terms already agreed.

The sites of these proposed services in the locality of the E.R.S. building are at present occupied by your Contractors works and offices and I understand from Tasman Airways that it is estimated that the stormwater connection will now be required by about March '52 and the water supply as soon after as practicable.

As I have already pointed out, the Board will require the sites of the proposed roads to be cleared of the Building Contractors plant and works before the water supply can be

installed. Also, the stormwater drainage outfall cannot be provided until the Contractor removes his scaffolding clear of the line of the drain. I would therefore prefer to carry out the whole of the works shown on my Drawing S.694 under one contract and to such a timetable that bitumen penetration and sealing of roads and paths could be completed in the same season.

I would be grateful if you would let me have your opinion in this matter and inform me of the dates by when you estimate your Contractor's plant and works will be clear of the sites concerned.

Yours faithfully,

ENGINEER TO THE BOARD.

Encl: Drg. S.694.

TELEPHONE
32-650

PRIVATE BAG,
C.P.O. AUCKLAND

CITY OF AUCKLAND

CITY ENGINEER'S OFFICE
TOWN HALL, AUCKLAND, C.I

IN REPLY
PLEASE QUOTE:

LBB.MEC.
19/103

1st February 1951.

The Engineer,
Auckland Harbour Board,
P.O.Box 1259,
AUCKLAND C.I.

Dear Sir,

EASTERN RECLAMATION : STORMWATER DRAINAGE

Your letter of the 3rd January 1951, concerning the proposed storm-water drain and road adjacent to the Tasman Empire Airways' building on the Eastern Reclamation, is to hand, and after an inspection of the accompanying plan, I would advise you on the various points as follows :

In checking the size of the drain it has been assumed that the whole of the area will eventually be built on and that the drain will have to be capable of taking the run-off from the area when totally impervious. On this basis the drain from manhole No.2. to the outfall would need to be 18" diameter instead of the 15" as shown.

The widths of the roadway and footpaths are considered satisfactory but I would suggest that the kerb line of the western footpath be returned to the building line and the footpath eliminated, and that the eastern footpath be cut back to a width of 3 ft. near the end of the road so as to provide extra width of roadway for vehicles in which to turn. The caretaker's shed shown should either be removed or else a small strip left undedicated at the end of the road for its accommodation.

It has been the practice in the past when laying drains on reclaimed areas to totally enclose the pipe in concrete and to support the bed on short piles, and I think this procedure should be followed.

No.

(Add clause to spec.
'Pile if necessary' note only.)

Smith.
Mr Goddard.
6.2.51

Yours faithfully,

(A.J. DICKSON)
B.E., M.I.C.E.
City Engineer

3rd January, 1951.

The Acting City Engineer,
Auckland City Council,
Town Hall,
AUCKLAND.

Dear Sir,

EASTERN RECLAMATION - STORMWATER DRAINAGE.

I submit herewith print of drawing A.439/2 showing layout of roads and stormwater drains which it is proposed to construct in stages at the Eastern Reclamation.

The first stage will comprise only the stormwater sewer between the outfall and manholes 1, 2 and 3, which will pick up a branch from Tasman Empire Airways' E.R.S. Building.

At this stage may I have your approval of the scheme generally, and in particular your approval of pipe sizes and gradients and road and footpath widths. Detailed plans of the various sections of work will be submitted from time to time prior to the work being carried out.

Yours faithfully,

JAG.JS.

ENGINEER TO THE BOARD.

8th December, 1950.

Messrs. Massey, Beatson, Rix-Trott & Carter,
205 South British Insurance Building,
Shortland Street,
AUCKLAND. C.I.

Dear Sirs,

re: DRAINAGE - TASMAN EMPIRE AIRWAYS LTD.

Receipt of your letter dated 11th October,
is acknowledged and your clients agreement to contribute
£50 towards the cost of deepening to proposed stormwater
outfall is noted.

Yours faithfully,

JAG.JS.

ENGINEER TO THE BOARD.

E.R.S. Stomacher Outlet

East Bdy.

Invent 5'-9" below floor level

Floor level 1 1/2" above Terrace

7" " found beams

20.30 above H.A.B. Station

(11/12/50 D.B.)

Invent is. at 14.55

Design for 14.50

Confirmed by Architect (Carter) 12/12/50

D.C.

Mr. Goodwin

Loading & S.W. Drains Eastern Reclamation
Dr. A 439/2

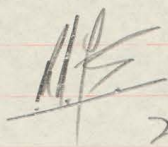
Concerning the proposal to construct S.W. Drains as shown on A 439/2 & to construct roadway on the South side of E.B.S. Building the site of works was inspected this morning with the following result:—

1. The site for roadway is very largely occupied by Contractor's works & office area. (No trace can be found of any agreement with A.H.B. about this).
2. A storm water drain 9" diam under the E.B.S. building discharging to the east is in position but will carry no water till the building is roofed.
3. From an examination of the plan of the E.B.S. Bldg it appears that road road to S.E. corner will ~~not~~ be sufficient for the earlier stages as the public entrance to the bldg is at that corner. All other heavy equipment will approach from the north.

4 I suggest that the following plan of drains & roads be considered instead of that now proposed:—

S.W. Drains Contract Outfall - lot 1-2-3
-4.

roads Contract roadway from Keys Drive
to 30' north of southern abutment of
ERS Bldg + 20' west of eastern alignment.



29. 11. 50.

① Contract for outfall - 1-2-3 only.

③ Subsequent contract for roadway along
S frontage of ERS building and
drainage to sewer etc.

② ACC. approval of size of sewers has not
yet been obtained. Please have limit of
Lassman drawings outfall checked + amend longitudinal
section. Then have a print taken off the whole
scheme for ACC. approval of paper sizes to accompany
attached draft letter.

her Chilly Please arrange ① + ② above.

SCHEDULE OF QUANTITIES FOR -

EASTERN RECLAMATION - STORMWATER SEWER.
 TOOLEY STREET EXTENSION TO EASTERN BREAKWATER.
 DRWG. No. A 439/2 - CONTRACT No. ---

Item	Description.	Quantity	Unit	Rate	L.S.D.
1	Inspection of site & preparation of work.			Ant.	
2	Excavation ^{1/2 ft} not exceeding 5'0" deep.	50	lin ft.		
3	" " " 6'0" "	175	" "		
4	" ^{1/2 ft} " " 7'0" "	186	" "		
5	Provide and lay with reinforced concrete bedding, first quality ¹⁵ apirot and socket pipes as detailed - 12" diam.	75	lin ft.		
6	Doitto 15 diam.	336	"		
7	Construct 15" cut fall through existing reinforced concrete benchwork 15" thick.			Ant.	
8	Connect existing 9" branch from T.E.A.L. Building, including 9" x 15" Y junction and 9" diam. ¹⁰ head head.			Ant.	
9	^{Backfill} Reinstatement of trench & consolidated in 6" layers.	411	lin ft.		
10	Construct new manhole as detailed, including frame and cover to A.C.C. bottom - not exceeding 4'6" deep.	No.	1.		

Item	Description	Quantity	Unit	Rate	T.s.d.
<u>11</u>	Ditto - not exceeding 5'-3" deep	No.	1.		
<u>12</u>	Ditto - not exceeding 6'-3" deep	No.	1.		
<u>13</u>	Clear up on completion.	sqft.			
Total.					

I/we offer to perform the whole of the work as laid down in the Specification No. and as shown on the Drawing No. & for the price set out in the schedule and I/we undertake to complete the said work within weeks from the date of signing of Contract.

SIGNATURE

ADDRESS

DATE

glazed earthenware or

PIPES: - All pipes shall be first quality reinforced concrete centrifugally cast spigot & socket pipes circular in section, straight, smooth and true in bore, and free from cracks and flaws of any description. Samples of pipes for use shall be lodged with the Engineer and thereafter all pipes shall conform in every respect with the approved samples.

LAYING & JOINTING OF PIPES: All pipes shall be laid true to line, level and grade on a bed of concrete haunched and reinforced and to the dimensions shown on Drawing. All pipes shall be carefully butted and jointed in 1:1 cement and sand mortar and all surplus jointing material shall be removed from the inside of the pipe.

Prior to the placing of any backfill or the withdrawal of any timber all pipes, manholes and risers shall be inspected and approved by the Engineer.

All pipe laying and jointing shall be done by a skilled pipe layer licensed and approved by the Auckland City Council.

All pipe laying and jointing shall be to the best standards of workmanship as required by the Auckland City Council.

BACK FILLING TO TRENCHES: - When the laying of pipes has been approved the trench shall be backfilled in layers not exceeding 6" thick and of such material and so consolidated as to be true, steady and firmly around the pipes.

OUTFALL

An outfall shall be constructed through the existing reinforced concrete steel pipe structure. The 15" dia. pipe being carried through and projected 12 inches and the concrete made good by guniting around the pipe.

EXTRACT FROM BOARD'S RESOLUTIONS OF TUESDAY, 17TH OCTOBER, 1950.

12. FOULWATER & STORMWATER SEWERS.

Your report, 10.10.1950, stating that Messrs. Massey, Beatson, Rix-Trott and Carter, had submitted on behalf of Tasman Empire Airways Ltd., plans of foulwater and stormwater sewers proposed to be constructed through property owned by the Board adjacent to the Company's E.R.S. building at Mechanics Bay; that you recommended, as the proposals would not conflict with the Board's proposals, they be approved, subject to (a) the line of the 6" foulwater sewer being amended to being it within 4 feet of Tasman Empire Airways boundary, and (b) the work being carried out to the satisfaction of the Board's Engineer and the City Council

That the Engineer's report be adopted.

MASSEY · BEATSON · RIX-TROTT AND CARTER

REGISTERED ARCHITECTS

H. L. MASSEY, F.R.I.B.A., F.N.Z.I.A.
R. G. S. BEATSON, B.Arch., A.N.Z.I.A.
G. A. RIX-TROTT, A.N.Z.I.A.
G. N. CARTER, B.Arch., A.R.I.B.A., A.N.Z.I.A.
A. H. CURTIS, B.Arch., A.N.Z.I.A.

205 SOUTH BRITISH INSURANCE BUILDING
SHORTLAND ST. AUCKLAND, C.I.
TELEPHONES 44-099
48-864

GNC/LS.

11th October, 1950.

The Engineer,
Auckland Harbour Board,
P.O. Box 1259,
AUCKLAND, C.I.

Dear Sir,

re Drainage - Tasman Empire Airways Ltd.

We acknowledge your letter dated 9th October and will see that the necessary information is passed to those concerned.

We can, on behalf of our clients, approve of a contribution of fifty pounds (£50:0:0) towards the cost of the stormwater outfall. The stormwater drain from the building at the East end is at present being terminated just outside the building line. We estimate that it will be at least nine months before this drain would be put to use and understand that you propose installing the stormwater sewer within this period. 15. June '51

Yours faithfully,

Mr. Pratt,

Can you arrange to bring this up for reference on 7.5.51.

Account should be rendered when our stormwater outfall is completed. It is not yet commenced & will have to be done on contract.

MASSEY, BEATSON, RIX-TROTT AND CARTER.

G. N. Carter

G.N. 8.12.50.

10th October, 50.

THE CHIEF EXECUTIVE OFFICER
& SECRETARY.

TASMAN EMPIRE AIRWAYS - DRAINAGE.

Messrs. Massey, Beatson, Rix-Trott & Carter have submitted on behalf of Tasman Empire Airways Ltd., plans of foulwater and stormwater sewers which they propose to construct through property owned by the Board adjacent to their new E.R.S. building.

These proposals would not conflict with the Boards proposals which provide for roading to be carried out over the land affected by their drainage, provided the 6" foulwater sewer is kept within say 4 feet of their boundary. I understand that the City Council has intimated that it is prepared to take over the foulwater sewer as a public sewer following its completion.

I recommend that the proposals be approved subject to:-

- (a) the line of the 6" foulwater sewer being amended to bring it within 4 feet of Tasman Empire Airways boundary.
- (b) the work being carried out to the satisfaction of the Boards Engineer and the Auckland City Council.

JAG/JS.

ENGINEER TO THE BOARD.

9th October, 1950.

Messrs. Massey Beaton Rix-Trott & Carter,
205 South British Insurance Buildings,
Shortland Street,
AUCKLAND. C.I.

Dear Sirs,

DRAINAGE - TASMAN EMPIRE AIRWAYS LTD.

In reply to your request on behalf of Tasman Empire Airways Ltd. for approval to the proposal to lay sewers through the Boards property as shown on Drainage Plan for new B.R.S. building dated 15.9.50, I have to advise that I am recommending the Board to give its formal approval to the proposal.

The manhole covers should be set so as to provide a cross fall of $\frac{3}{8}$ inch to the foot away from the property boundary, along which levels fixed for future street construction are :-

- (a) opposite manhole at end of 6" foulwater sewer 20.06
- (b) opposite manhole in line of 9" stormwater sewer 20.12

Levels are to Auckland Harbour Board datum.

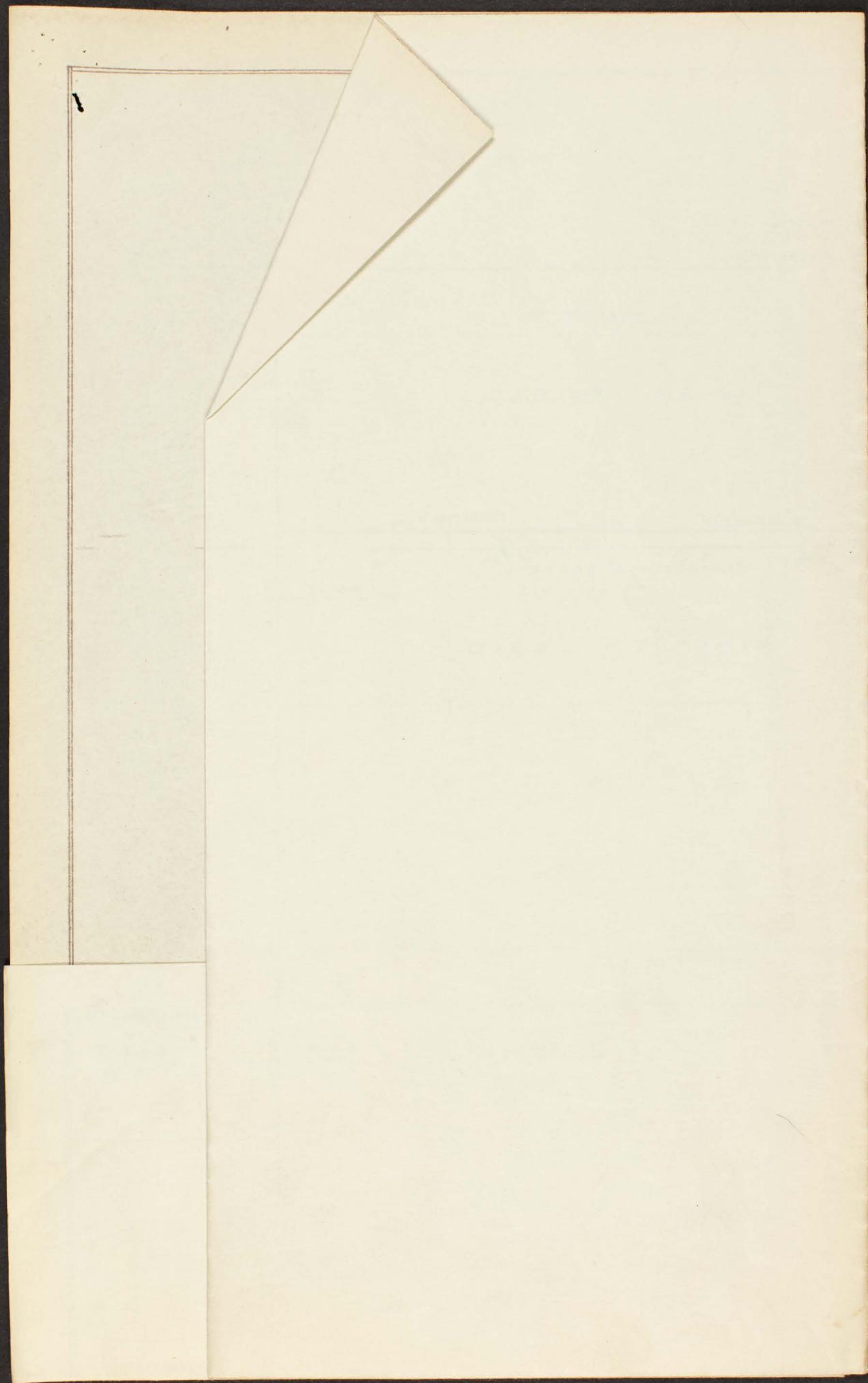
I understand that you are already familiar with the Boards proposals for future roading and stormwater drainage in this area and confirm that I am prepared to amend the level of the stormwater outfall slightly to intercept your stormwater drain provided its level is kept as high as possible. This would avoid the necessity of breaking into the existing A.C.C. stormwater drain, which I understand is constructed in concrete, unreinforced and is in poor condition, and also avoid the construction of a deep manhole. It is considered that in view of the extra cost to the Board of deepening its proposed outfall, and the fact that this latter course would result in a considerable saving to your client it would be reasonable to suggest that Tasman Airways should contribute towards this extra cost to the extend of £50.

Yours faithfully,

*Details of manhole levels
See File 834/1*

JAG/JS.

ENGINEER TO THE BOARD.



MASSEY BEATSON RIX-TROTT AND CARTER

205 South British Insurance Building,
Shortland Street,
AUCKLAND. C.I.

15th September, 1950.

The Chief Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND. C.I.

Dear Sirs,

We enclose a plan showing the proposed storm-water and sewer drain connections to the new E.R.S. Building for Pasman Empire Airways Ltd.

The whole layout including work within the building has been discussed with and approved by the City Council Inspector and arrangements have been made for them to take over the 6" branch sewer as their usual practice.

We therefore on behalf of T.E.A.L. request your approval to the proposal and would also ask you to establish the levels of the two M.H. covers at the Eastern end.

Yours faithfully,

(Sgd.) G. Carter

MASSEY, BEATSON, RIX-TROTT AND CARTER.

21st June, 1950.

The Assistant General Manager,
Tasman Empire Airways Ltd.,
P.O. Box 2201,
AUCKLAND. C.I.

Dear Sir,

INWARDS TRAFFIC TERMINAL

In reply to your letter of 14th June, the
proposed shelter may be constructed in the position
shown.

Yours faithfully,

ENGINEER TO THE BOARD.



POSTAL ADDRESS: P.O. BOX 2201
TELEPHONE: 30-203 (6 LINES)
CODES: BENTLEY'S SECOND PHRASE
TELEGRAPHIC ADDRESS: TASMANAIR

IN ASSOCIATION WITH:
BRITISH OVERSEAS AIRWAYS
CORPORATION, QANTAS EMPIRE
AIRWAYS AND BRITISH COMMON-
WEALTH PACIFIC AIRLINES
AGENTS FOR PRINCIPAL AIRLINES
THROUGHOUT THE WORLD
MEMBER OF I.A.T.A.

TASMAN EMPIRE AIRWAYS LIMITED
HEAD OFFICE: MECHANICS' BAY, AUCKLAND, C.I., NEW ZEALAND.

AM:5650

14th June, 1950.

Chief Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND, C.I.

Dear Sir,

INWARDS TRAFFIC TERMINAL - MECHANICS' BAY

Owing to the congestion that now exists in the traffic departure building, permission is sought to erect additional shelter as shown on the attached plan.

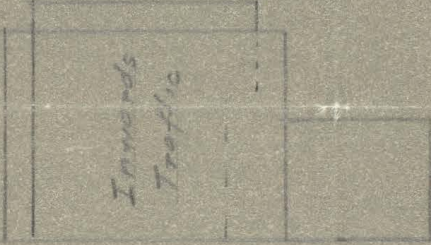
The dimensions of this shelter are 25' x 21', and the front of the shelter would be in line with the hangar frontage, that is 37 ft. from the sea wall.

I might mention that the Company has already spent quite a considerable sum of money converting the old N.A.C. building into an inwards traffic terminal, and in altering the departure building the two will compare more favourably with overseas standards.

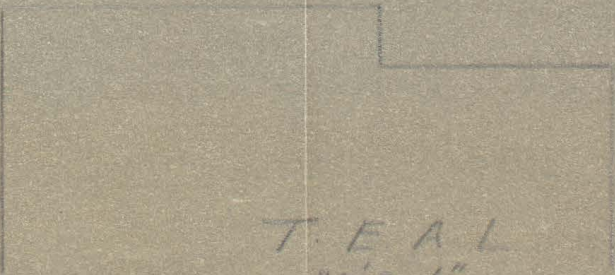
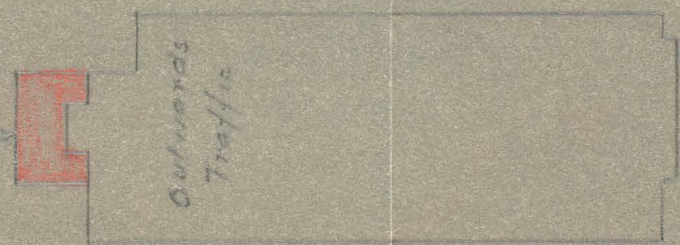
An early reply would be appreciated.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED

(J.W. Veale)
ASSISTANT GENERAL MANAGER.



50'



T. E. A. L.
30' = 1"

Auckland Harbour Board

MEMORANDUM

FROM

SA Construction Office
French St. Depot

TO

THE ENGINEER

22nd June

1950

Repay. 1/2 Terman showys to Bell, James + Bell
(Steamer Drain Outfall Ino 18414)

Labour 31st May to 2nd June 1950

22 hrs @ 7/9 ^{3/4}	4.3.10
22 - @ 7/10 ^{3/4}	4.5.8
7 - @ 4/-	1.8.0
1 1/2 - 5/6	8.6
1 1/2 - 7/6	8.9
1/2 - 6/-	3.0
4 - 3/- (boat slong)	8.0

98.50

gear + tools

8.7.3

13.0.5
1/10 1.6.1
14.6.6

Ch Chapman

Supervision 1.14.8
£ 13-0.5

Auckland Harbour Board

Nº 18414

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To RESIDENT ENGINEER


Date 2nd June, 1950.

Subject STORMWATER DRAINAGE OUTFALL -

Repayable: Tasman Airways, C/- Bell, James & Bell.

Please arrange to provide outfall through breastwork for 6" pipe from Test House in the position already described to you.

JAG/LR.

H. L. Vickerman
per. 

Engineer to the Board.

30th May, 1950.

The Assistant General Manager,
Messrs. Tasman Empire Airways Ltd.,
P. O. Box 2201,
AUCKLAND C.1.

Dear Sir,

SLIPWAY - MECHANICS BAY.

I have to acknowledge receipt of your letter dated 26th instant, asking for permission to erect a 25 ft. pole to carry a 400-watt floodlight as shown on accompanying plan.

This Board has no objection to the pole and light being erected in the position indicated, providing there is no interference with navigation.

Yours faithfully,

ENGINEER TO THE BOARD.

WJT/LR.

Auckland Harbour Board.

ENGINEER'S OFFICE

29. 5. 50

Harbourmaster,

Have you any objection
to a light in this position. *W.G.M.*

Have no objection, providing
there is no interference with
navigation. *W.G.M.*



POSTAL ADDRESS: P.O. BOX 2201
TELEPHONE: 30-203 (6 LINES)
CODES: BENTLEY'S SECOND PHRASE
TELEGRAPHIC ADDRESS: TASMANAIR

IN ASSOCIATION WITH:
BRITISH OVERSEAS AIRWAYS
CORPORATION; QANTAS EMPIRE
AIRWAYS AND BRITISH COMMON-
WEALTH PACIFIC AIRLINES
AGENTS FOR PRINCIPAL AIRLINES
THROUGHOUT THE WORLD
MEMBER OF I.A.T.A.

TASMAN EMPIRE AIRWAYS LIMITED
HEAD OFFICE: MECHANICS' BAY, AUCKLAND, C.I., NEW ZEALAND.

AM:5481

26th May, 1950.

Chief Engineer,
Auckland Harbour Board,
Quay St.,
AUCKLAND.

Dear Sir,

SLIPWAY - MECHANICS' BAY

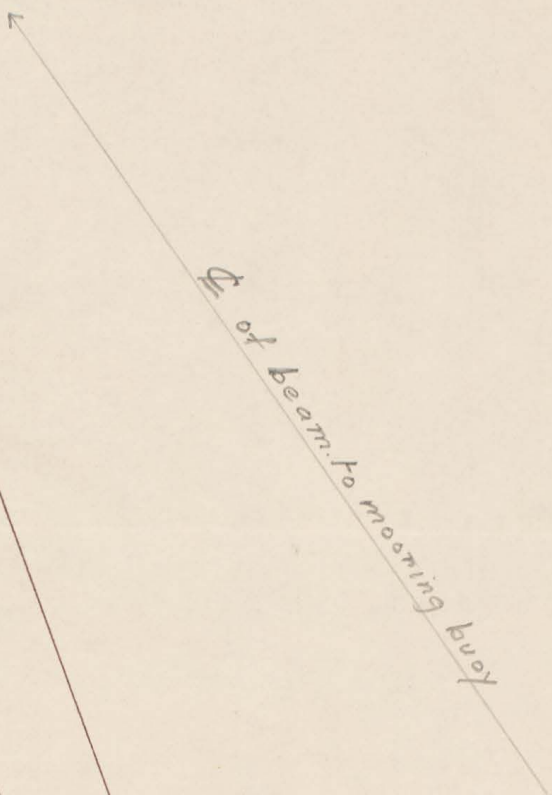
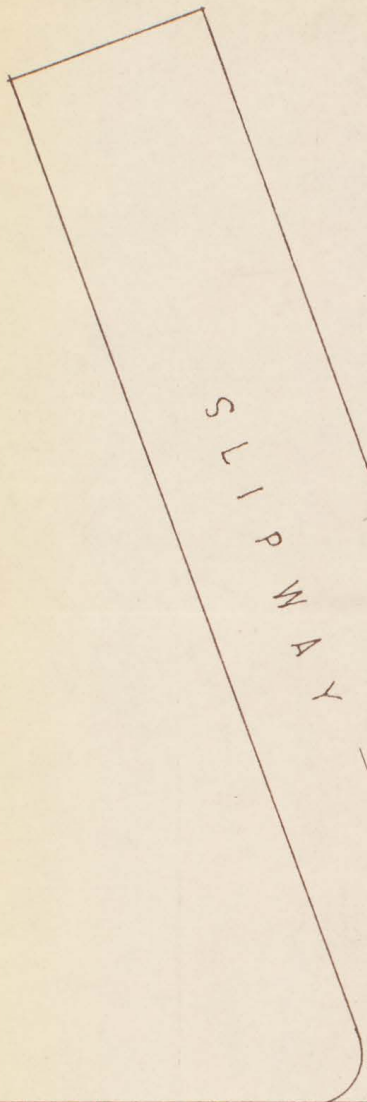
Permission is sought to erect a 25 ft. pole, where shown on plan, to carry a 400 watt flood light. It is not possible to erect this pole any closer to the slipway as it might ultimately foul the wing of a S.R.45 Princess Flying Boat.

The flood light will have a vertical cut-off of about 5° below a horizontal plane and will illuminate an area of approximately 200 yds. from the sea wall.

The reason this flood light is required is to enable aircraft to be beached, specially in an emergency, at night time.

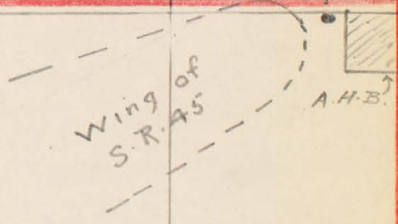
Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED

(J.W. Veale)
ASSISTANT GENERAL MANAGER.



Tide Deflector

Pole



T A R M A C

T.E.A.L. Bdy

Road Reserve

CARP'R

FIRE

Auckland Harbour Board

No 18247

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To THE FOREMAN OF WORKS Date 2nd March, 19 50.

Subject EASTERN RECLAMATION NO. 2 -
WATER SERVICE.

Referring to your memorandum No. 13393 dated 28th February, 1950, Rope Construction Co. Ltd. may be permitted to draw water from our service at Eastern Reclamation No. 2 during pilemaking operations at T.E.A.L. Base.

Please arrange for meter to be read and report on water used for charging.

WJT/LB.

N. L. Vickerman
per *J.*
Engineer to the Board.

AUCKLAND HARBOUR BOARD N^o 13393
MEMORANDUM

From
FOREMAN OF WORKS
SIR,

28th July 1950

To

The Engineer

I beg to report that

Rope Construction Co.
Water Supply, T.E.A.L. Base.

The water supply laid on at the Berlin Band Saw and which is now discontinued is still left at Akarana and is metered.

Rope Construction Co have asked that they be allowed to use this supply during pilemaking operations for T. E. A. L.

Present reading of the meter is 6,000 gals and provided they are allowed to use this service we can charge them with water used. Mr. Rope Jnr has asked for this.

Approved
file

Donnelly

A/ FOREMAN OF WORKS

BELL, JAMES, BELL & MAXTED

GRAHAM BELL
B.E., B.Sc., Assoc. M.Inst. C.E., A.F.R.Ae.S.
REGISTERED ENGINEER

CHAS. A. JAMES
A.N.Z.I.A., M.N.Z.Inst. Refrig.E.
REGISTERED ARCHITECT

EDGAR BELL
B.E., B.Sc., M.N.Z.I.E.
REGISTERED ENGINEER

R. MAXTED
B.E., M.I.E.E., F.Inst.P., F.I.E.S.
REGISTERED ENGINEER

Consulting Engineers and Architects

Alliance Assurance Building, 5 O'Connell Street,
Auckland, C.I.

TELEPHONE . . . 45-442

Private Nos:

G. B. BELL 60-507
C. A. JAMES 64-923
R. MAXTED 68-000-2588M

21st Dec., 1949

The General Manager,
Tasman Empire Airways Ltd.,
C.P.O. Box 2207,
AUCKLAND, C. I.

Draft Application to Auckland Harbour Board -
Cooling Coil for Engine Test House.

"The Chairman,
Auckland Harbour Board,
Quay Street, C.I.

Dear Sir,

Further to Mr. Graham Bell's interview with your Acting-Chief Engineer on 28th November 1949, we beg permission to mount a copper cooling coil on the face of the breastwork near the new engine test house.

The coil will be made up with two vertical tubes of 2" dia., spaced approximately 13 ft. apart, and placed between two of the vertical wooden fenders on the face of the wall at 50 ft. from its Western end. The two vertical tubes are to be cranked inwards into a recess approximately 18" deep behind the face at a depth of 13 ft. below the top of the wall. The sea bottom at this point is 20 ft. below the top of the wall. The vertical tubes are to be joined by three horizontal tubes of 1½" dia., located within the 3ft. of available depth below Low Water Spring Tide.

The coil so mounted should not present any obstruction to boats which may be moored alongside, and we are satisfied that the tubes themselves can be placed quite safely in the recess behind the face of the wall.

Yours faithfully,"

Seen ABH-23.12.49

*Copy for information to
Chief Engineer,
Auckland Harbour Board,
Quay St., C.I.*

*application by T.E.A.L. for
permission to mount coil on breastwork
in Secty's file 228
67*

J.B. Bell

8th December, 49.

CHIEF EXECUTIVE OFFICER
& SECRETARY.

TASMAN EMPIRE AIRWAYS - RAMP.

The hauling out ramp was first used on 27th October, 1949. The ramp had been completed some weeks before that date. I suggest that licence for ramp be charged as from 1st October, 1949.

ACTING ENGINEER TO THE BOARD.

NPA/LB.

Auckland Harbour Board

Nº 18072

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To THE RESIDENT ENGINEER.

Date 23rd November, 19 49.

Subject PETROLEUM INSTALLATION, TASMAN
EMPIRE AIRWAYS.

Please arrange to form outlet through sheet pile breast-work for 4" stormwater drain as already described to you.

Charge: Repayable H. Liddle,
44 Valley Rd., Mt. Eden.

N. P. Angus

ACTING ENGINEER PER the Board.

Copy to Foreman of Works.

Auckland Harbour Board

No 18058

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To MR. J.R. SUTTON

Date 16th November, 19 49.

Subject TEMPORARY ROADWAY TO EASTERN
BREAKWATER.

Please construct a temporary road to give access to Eastern Breakwater, as discussed on site yesterday.

The Foreman of Works will co-operate in moving piles necessary. Rope Construction Co. Ltd. (phone 43-788) have undertaken to remove their piles off the area to outside of Akarana Clubhouse, to be removed to Motuihe within three weeks.

Charge to:-

Leases Expenses - (T.E.A.L. site)

NPA/LB.

N. P. Angus

ACTING ENGINEER PER the Board

EXTRACT FROM BOARD'S RESOLUTIONS OF TUESDAY, 25TH OCTOBER, 1949.

6. SUBDIVISION - MECHANICS BAY.

Letter from Harrison & Grierson, 18.10.1949, forwarding for the Board's approval and for lodging at the Deeds Office, Land Transfer Plan of Subdivision into 9 lots of the area for Tasman Empire Airways Ltd. and adjacent land being portion of Lot 89, Section 1, Suburbs of Auckland and portion of land reclaimed from the Waitemata Harbour.

Recommended:

That the plan be approved and the Seal of the Board affixed thereto in the presence of the Chairman and Mr. Freeland.

Please address reply -
"Electrical Engineer"

21st October, 1949.

The Regional Engineer,
Post & Telegraph Dept.,
P.O. Box 1034,
AUCKLAND.

Dear Sir,

EASTERN TIDE DEFLECTOR

This letter will confirm conversations with your representatives wherein they were advised that Tasman Empire Airways urgently require the telephone lines from Chaytor Street to the old Akarana Yacht Club's building and the Board's switchroom at the south end of the Tide Deflector to be removed.

I should be glad if you would arrange for the ^{Board's} circuits concerned to be transferred to the underground cable recently laid along the breastwork.

Yours faithfully,

TGP/AWJ

Electrical Engineer

hided HPA - 25.10.49.

Please address reply -
"Electrical Engineer"

21st October, 1949.

The General Manager,
Auckland Electric-power Board,
Private Bag,
AUCKLAND.

Dear Sir,

EASTERN RECLAMATION

In order to enable development of the Tasman Empire Airways Base on the Eastern Reclamation, a number of changes have been made which necessitate modification of the electrical service arrangements. The modifications, which are detailed below, are of an interim nature pending final development of the area. I have to request that the work required may be undertaken, and the cost debited to the Board. A certain amount of material, such as poles, etc., becomes redundant. I understand that this material was paid for by the Board, and a credit will be necessary on removal.

The work comprises :-

A.C. SERVICE TO EASTERN VEHICULAR LANDING.

The distributor feeding this Landing is routed via Quay Street and the eastern side of the coal dump area. A direct connection down French Street is now required.

460 VOLT D.C. SERVICE - EASTERN RECLAMATION.

This is at present along the eastern side of the coal dump area, Quay Street, to the breastwork at the eastern end of the area. All the Board's plant has been removed from this area and is being temporarily re-instated in the area adjacent to the Eastern Vehicular Landing. The D.C. service is now required at a point which will be shown to your representative, and the redundant poles on the Board's property will be required to be removed.

A.C. SERVICE TO EASTERN TIDE DEFLECTOR.

The A.C. service to the Eastern Tide Deflector is via an overhead line from Chaytor Street past the Akarana Yacht Club's building. The overhead lines from Chaytor Street are required to be removed. Arrangements have been made with the P. & T. Dept. for the telephone lines on these poles to be taken down. The Board will lay an underground cable from the Tide Deflector alongside the breastwork to Quay Street, and it is proposed to take this cable up a convenient pole to service cut outs. (Details ~~is~~ being arranged with your representative) It is proposed that this arrangement be regarded as temporary only, as a road will be constructed and dedicated along the breastwork in due course, and a request forwarded that a permanent underground service be provided to the same place as the present overhead service.

All the above work is urgent, and I should be glad if it could receive early attention.

Yours faithfully,


Electrical Engineer

TGP/AWJ


25th August, 1949.

Messrs. The Shell Co. of
N.Z. Ltd.,
A.M.P. Building,
Customhouse Quay,
WELLINGTON, C.I.

Dear Sirs,

T.E.A.L. REFUELLING FACILITIES,
MECHANICS BAY.

In reply to your SWL/MSD. of 9th instant requesting approval to an above-ground installation comprising three tanks each 5,500 gallons capacity, I have to advise that the Board at its meeting on 21st December, 1948, agreed in principle to the increasing of the capacity of the petrol storage at the Air Base, Mechanics Bay, subject to the installation being approved by the Dangerous Goods Inspector and to the approval of the Board's Engineer. I am prepared to approve of the layout as now shown on your drawings Z.3149 and Z.3027, subject of course to the above-mentioned condition as laid down by the Board.

In particular, I would stress that all care must be taken to ensure that there can be no possibility of leakage of oil fuel into the harbour and that the proposed siting will require to have the approval also of the Air Department and Tasman Empire Airways.

Yours faithfully,

ACTING ENGINEER TO THE BOARD.

TELEGRAPHIC ADDRESS:
"SHELL"

ALL COMMUNICATIONS TO BE ADDRESSED TO THE COMPANY

C.P.O. Box 1663
TELEPHONE:
ALL DEPARTMENTS 45-060

THE SHELL COMPANY OF NEW ZEALAND LIMITED

(INCORPORATED IN ENGLAND)

BRANCHES AT:
WELLINGTON
AUCKLAND
CHRISTCHURCH
DUNEDIN

HEAD OFFICE FOR NEW ZEALAND

IN REPLY
PLEASE REFER TO

SWL/MSD



A.M.P. BUILDING,
CUSTOMHOUSE QUAY,
WELLINGTON, C.I.

9th August, 1949.

The Engineer,
Auckland Harbour Board,
Quay Street,
AUCKLAND.

Dear Sir,

T.E.A.L. REFUELLING FACILITIES
MECHANICS' BAY, AUCKLAND

During December, 1948 our Auckland Branch had discussions with you regarding the proposed installation of refuelling facilities at Mechanics' Bay for Tasman Empire Airways Limited. You will recall that at this stage it was intended that we would install three additional tanks of 5,500 gallon capacity in an underground pit.

In view of the difficulty of installing these tanks underground we have since approached the Auckland City Council and the Chief Inspector of Explosives and obtained their approval for the installation of these tanks above ground in a concrete raft. We now attach a copy of our Drawings Nos. Z-3149 General Layout and Z-3027 Tank Compound and Foundations.

We understand that you require these drawings for submission to a Board Meeting for formal approval of these above ground structures. We would be glad, therefore, to have your approval of this proposed installation as soon as possible so that we may proceed with this work.

Yours faithfully,
For THE SHELL COMPANY OF NEW ZEALAND LIMITED,

A handwritten signature in cursive script, appearing to read "B. Hood", written over a horizontal line.

001-000

2500 gals per day
up to 120 litres / week



35000

The Shell Company of New Zealand Limited
Auckland Harbour Board
Dear Sir,

Reference is made to the Auckland Harbour Board's letter of the 14th inst. regarding the proposed installation of a new water supply system for the Auckland City Council. The Board has been advised that the proposed system is a most desirable one and that the Board should be prepared to accept the same.

In view of the difficulty of installing these tanks underground we have since approached the Auckland City Council and the latter has agreed to install the tanks above ground in a concrete vault. The new system is a most desirable one and the Board is prepared to accept the same.

We understand that you require a further explanation as to the Board's position for the purpose of your report. We would be glad to have your approval of this proposal. Installation of such a system is most desirable and we are at your service with this view.

Yours faithfully,
The Shell Company of New Zealand Limited

[Handwritten signature]

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To Foreman of Works.

Date 8th August, 1949.

Subject CLEARING ALLOTMENTS FOR LEASING
EASTERN RECLAMATION (TASMAN AIRWAYS).

Please carry out demolition of Rowing Club buildings on North West corner of Eastern Reclamation, near Eastern Breakwater, charging cost as above.

The Western Building is owned by the University Rowing Club and is to be demolished carefully to save all material, which is to be transported to and stored in northern bay of east end of Kings Drive Government Store. Keep carefully together.

The Blind Institute Building has been purchased by the Board and timber and roofing iron may be taken into our store.

The St. Georges Building is to be carefully demolished in sections and marked so as to permit of re-erection on a new site, as discussed with Foreman Carpenter Johnson. It is to be transported to same storage as University Rowing Club Building, but kept separate. Mr. Sutton has plan of building and will arrange for recording marked sections.

Work may be commenced next week.

N. P. Angus

ACTING ENGINEER to the Board.

COPY SENT TO MR. SUTTON.

1st. July, 49.

The Chief Executive Officer
& Secretary.

TASMAN EMPIRE AIRWAYS SITE

Messrs. Harrison & Grierson have requested a fresh instruction re the pegging of Tasman Airways site in view of the radical change in the portions to be leased and licensed when compared with their original instruction.

Attached please find two copies of drawing No. B.1047/16, one copy of which should be forwarded to Harrison & Grierson with an instruction to prepare a Land Transfer plan defining the boundaries of all the plots shown coloured and numbered 1 to 8. The portion of Chaytor Street shown coloured green is to be dedicated.

It is desired that at the same time the eastern boundary of the proposed railway reserve as indicated by the orange line should be pegged on the ground as far as site conditions will permit and in view of the fact that piles are being driven for the R.C. test house it is desirable that this portion be checked as soon as possible. Details of the location of this line as pegged should be furnished on the tracing normally supplied for our records.

ACTING ENGINEER TO THE BOARD

4. BOARD IN COMMITTEE

Report of Board in Committee, dated 24.5.1949,
re (8a) Lease and License - Mechanics Bay.

That the report be adopted.

-----/-
8a. LEASE AND LICENSE - MECHANICS BAY

Joint report of Chief Executive Officer & Secretary and Acting Engineer, 10.5.1949, re Lease and License - Tasman Empire Airways Ltd. - areas at Mechanics Bay stating that, subject to the Board agreeing in principle to let Tasman Empire Airways Ltd. have the tenancy of the two areas requested they recommended:-

- (a) That the City Council be asked to accept dedication of Chaytor Street to the extent shown green on the attached plan.
- (b) That the areas be valued by the Board's Valuers to enable public applications to be called for the lease with right of renewal of the area coloured pink and a license fee to be fixed for the area edged pink.
- (c) That the lay-out of buildings on the two areas as shown on the Company's plan (Drawing Sheet No. 1 (Revised) dated 24.2.1949 edged yellow) be approved, subject to all buildings complying with the requirements of the City Council and the Board.

Recommended:-

- (a) That the Board agree in principle to letting Tasman Empire Airways Ltd. have the tenancy of the two areas mentioned in the report.
 - (b) That the City Council be asked to accept dedication of Chaytor Street to the extent shown green on Harrison & Grierson's plan of the areas.
 - (c) That the public applications be called for the lease with right of renewal in perpetuity of the area coloured pink at a rental of £800 per annum for the first 21 year term and Tasman Empire Airways Ltd., be granted a year to year license to occupy the area edged pink at a fee of £1150 per annum.
 - (d) That the lay-out of buildings on the two areas as shown on the Company's plan (T.E.A.L. in red) be approved subject to all buildings complying with the requirements of the City Council and the Board and subject to semi-permanent buildings being kept approximately 40 feet back from the line of the northern breastwork.
 - (e) That a license fee of £50 per annum be charged for the site of the hauling-out slipway.
 - (f) That the matter of removal of the Akarana Yacht Club building and the three Rowing Club buildings be left in the hands of the Chairman and the Executive Officers to arrange.
-

File

10th May, 1949.

The Chairman,
A. H. B.

Tasman Empire Airways Ltd.

Messrs. Tasman Empire Airways Ltd. have advised that after protracted negotiations between their overseas connections, Air Department etc., they are now in a position to approach the Board for the tenancy of the areas at Mechanics Bay shown on the attached plan. The area completely coloured pink could be leased to the Company with the right of renewal without interference with the Board's development plans in this locality but the area shown edged pink would be required by the Board in the event of the adjacent part of the harbour ceasing to be used as a flying boat base as it could readily be developed to accommodate small shipping. Such being the case this latter area, if the Board decides to make it available to the Company, should only be licensed on a year to year basis; the Company to have the right to remove the buildings on the expiry of their tenancy.

Before a registered lease could be given of the area coloured pink it would be necessary to dedicate Chaytor Street to provide access.

It should also be a condition of the licensing of the northern area which extends to the cope of the breastwork that no permanent buildings are to be erected within 50 feet of the breastwork except for the length of the hangar where 40 feet will be accepted, and although the Company could be given the full use of the 50 feet or 40 feet width back from the breastwork they would not necessarily have the exclusive use of it.

Subject to the Board agreeing in principle to let Tasman Empire Airways Ltd. have the tenancy of the two areas mentioned above we recommend as follows:-

- (a) That the City Council be asked to accept dedication of Chaytor Street to the extent shown green on the attached plan.
- (b) That the areas be valued by the Board's Valuers to enable public applications to be called for the lease with right of renewal of the area coloured pink and a license fee to be fixed for the area edged pink.
- (c) That the lay-out of buildings on the two areas as shown on the Company's plan (Drawing Sheet No. 1 (Revised) dated 24.2.1949 edged yellow) be approved, subject to all buildings complying with the requirements of the City Council and the Board.

AHB 12
B. 1047/14

Ant Taylor

Chief Executive Officer
& Secretary

Neil P. Angus

Acting Engineer to the Board.

ABe.

ANT. JMM.

TASMAN



EMPIRE AIRWAYS LIMITED

HEAD OFFICE MECHANICS' BAY, AUCKLAND C.I., NEW ZEALAND

POSTAL ADDRESS: P.O. BOX 2201
TELEPHONE 30-203 (6 LINES)
CODES: BENTLEY'S SECOND PHRASE
TELEGRAPHIC ADDRESS: TASMANAIR

IN ASSOCIATION WITH:
BRITISH OVERSEAS AIRWAYS
CORPORATION AND QANTAS
EMPIRE AIRWAYS LIMITED
AGENTS FOR PRINCIPAL AIRLINES
THROUGHOUT THE WORLD
MEMBER OF I.A.T.A.

TGM: 1144

22nd April 1949

The Chief Engineer,
Auckland Harbour Board,
AUCKLAND.

Dear Sir,

MECHANICS' BAY FACILITIES -
REPAIR DEPOT ETC.

In our letter of 5rd March (Ref. TGM:626) we sought your advice as to when removal from Mechanics' Bay of the Rowing Sheds, landing stage, pile depot and yacht club was likely to be attended to. You will recall that these items are so situated as to impede construction of the tarmac area and engine repair shop presently being built by this Company in readiness for the Solent Flying Boats now on order.

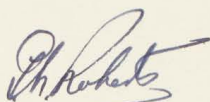
Work on the engine repair shop has not yet been commenced, but preliminary work on the tarmac area is well under way and the Public Works, whose responsibility this is, are pressing for the removal of the rowing sheds and yacht club buildings.

You will have seen in the daily papers, that the first Solent has undergone its initial test flight. This indicates that delivery to New Zealand is not likely to be delayed beyond a couple of months and the need for the tarmac in particular is therefore very great.

We have asked the Public Works to refer to you their enquiry regarding the removal of those buildings now holding up the work and as usual we know we can count on your giving the matter the most urgent attention. From your earlier

assurances we understand the yacht and rowing clubs are aware that they must move and that arrangements for their shift are well under way. Thus it would be appreciated if pressure could be put upon them to have their removal plans implemented.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED.



(G.N. Roberts)
GENERAL MANAGER.

Mr Roberts Saw Chairman
6/7/49

Chairman instructed CEO. Weeks
to give leaving clubs concerned
one weeks notice to remove buildings - (not necessary)

giving action Bd. would determine risks
& State thinker.

TASMAN EMPIRE AIRWAYS LIMITED

Telegraphic Address:
TASMANAIR
Telephone: 30-203



HEAD OFFICE:
C.P.O. Box 2201, AUCKLAND,
NEW ZEALAND

Codes:
Bentley's Second Phrase
Reference:

TGM:944

4th April 1949.

The Harbour Board Engineer,
Auckland Harbour Board,
P.O. Box 1259,
AUCKLAND.

Dear Sir,

Temporary Buildings at Mechanics' Bay.
Quonset Huts.

We desire to thank you for your letter of the 31st ultimo and for the permission therein contained to erect a temporary Quonset hut on an amended location.

We are happy to say that the proviso that this hut will be required only until such time as our permanent E.R.S. building becomes available, is quite acceptable to us.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED.

(G.N. Roberts)
General Manager.

Handwritten initials: H.R.

1st. April,

49.

The Chief Executive Officer
& Secretary.

TASMAN EMPIRE AIRWAYS

Tasman Airways have requested approval of a minor amendment to the position of one of the temporary buildings shown on the plan recently submitted for approval of the Board.

The original position is shown blue and the new position shown red on the accompanying sketch.

There appears to be no objection to this change.

ENGINEER TO THE BOARD

T.E.A.L. Has Big Plans For Base *Star. 25-3-49.* At Mechanics' Bay

Big development projects for the flying-boat base at Mechanics' Bay are planned by Tasman Empire Airways, Ltd. Within two years the base will become the company's permanent repair headquarters in spite of any future decision that may be made to change from flying-boats to land-planes.

Solent flying-boats entering the Tasman service this year will ensure the continued use of the base as a terminal for five to seven years, but there is nothing definite that flying-boats will be used after that. If a change to land-planes is made the Auckland Harbour Board will require the company to vacate the immediate foreshore.

"For this reason the company's main installations will be set back from the waterfront," said the general manager, Mr. G. N. Roberts. The main building will be a two-storey engineering repair shop 280ft long and 100ft wide, with office and instrument repair facilities in the upper storey. Closer to the foreshore will be a hangar 152ft long and 130ft wide, built of steel framework with metal sheathing.

"With these forward buildings we will be able to make economies not possible while we are operating at Hobsonville," said Mr. Roberts. "The present facilities were designed to handle only two or three services a week. The company has outgrown these facilities to the extent that if no change were made uneconomic operation would result, as the number of services operated depends almost entirely on the output of overhauled engines from the workshops."

31st. March, 1949.

The General Manager,
Tasman Empire Airways Ltd.,
P.O. Box 2201,
AUCKLAND.

Dear Sir,

QUANSET HUTS

In reply to your TGM.893 of 29th. instant, I have to advise that I would offer no objection to the proposed amended location of the temporary quanset hut for storage of engines on the understanding that this building will be required only until such time as your permanent E.R.S. building becomes available.

Yours faithfully,

ENGINEER TO THE BOARD

JAG:JWT

TASMAN EMPIRE AIRWAYS LIMITED

Telegraphic Address:
TASMANAIR
Telephone: 30-203



HEAD OFFICE:
C.P.O. Box 2201, AUCKLAND,
NEW ZEALAND

Codes:
Bentley's Second Phrase

Reference:
TGM. 893.

29th March, 1949.

The Chief Engineer,
Auckland Harbour Board,
AUCKLAND. C.I.

Dear Sir,

QUONSET HUTS.

Now that the boundary of the B.P.Coy. is known, permission is sought to temporary erect the quonset hut for the storage of engines as shown in red on plan attached. It was originally thought that the site outlined in blue would have been suitable but the erection on this site would block access to the waterfront for vehicles and the delivery of benzine to the storage tanks. The contractor employed by this Company is in a position to make an immediate start with this work and therefore early approval would be appreciated.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED.

G. C. Roberts
GENERAL MANAGER.

GCR

Plan attach.

*Amended position enclosed
on B 1074/114.*

Sketch sent to Secretary.

McForsyth

Auckland Harbour Board

Nº 17608

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To Foreman of Works, Date 28th. March, 1949.

Subject MECHANICS BAY BREASTWORK

Please remove old Northcote Vehicular Ferry Bridge and two turntables ex Calliope Dock to clear area which is being taken over by T.E.A.L.

All the above may be dismantled and steel salvaged. This could best be done near to new depot at E.V.L; possibly on a site at breastwork just to West of E.V.L. bridge.

H. L. Vickerman

.....
Engineer to the Board.

TASMAN EMPIRE AIRWAYS LIMITED

Telegraphic Address :
TASMANAIR
Telephone : 30-203



HEAD OFFICE :
C.P.O. Box 2201, AUCKLAND,
NEW ZEALAND

Codes :
Bentley's Second Phrase

Reference:

TGM. 858.

22nd March, 1949.

The Chief Engineer,
Auckland Harbour Board,
AUCKLAND. C.1.

Dear Sir,

SLIPWAY - MECHANICS' BAY.

I wish to advise that the construction of the Slipway was commenced by the Ministry of Works Department on the 18th instant and rapid progress has been made. It will be appreciated if you could arrange for the removal of the bridge and other material which may be the property of the Harbour Board, as soon as convenient as this material is hindering the construction of the Slipway.

Yours faithfully,

TASMAN EMPIRE AIRWAYS LIMITED.

G.H. Roberts

GENERAL MANAGER.

Mr. Roberts
11/3/49

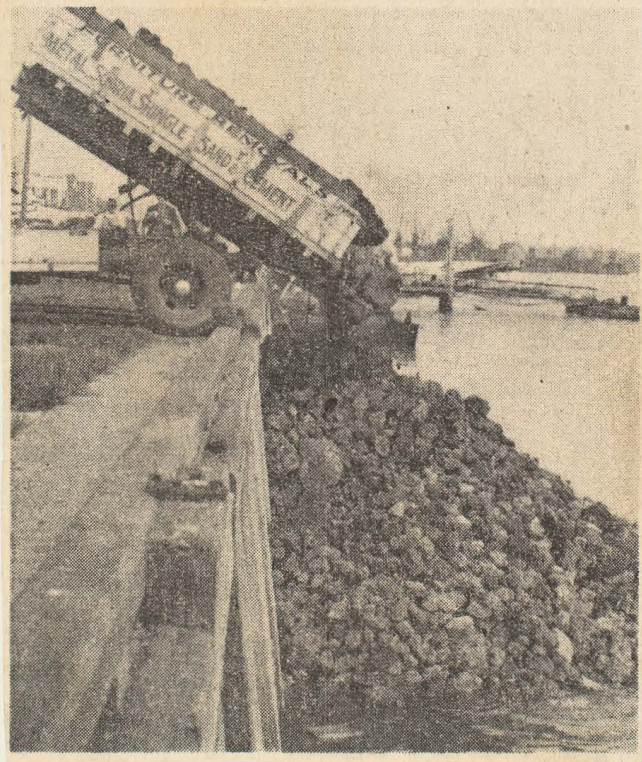
SLIPWAY BEING BUILT FOR TASMAN PLANES

Star Herald. — 18.3.49.

Spoil is being tipped into the sea at Mechanics' Bay to form the base for a slipway for Tasman Empire Airways, Ltd. It will be completed in four to six months.

When the seabed has been built up the spoil will be capped with concrete and a plane hangar will be built on it. At present, T.E.A.L. flying-boats are serviced at Hobsonville, but the company is working to consolidate all its equipment at Mechanics' Bay.

The general-manager, Mr. G. P. Roberts, said today that the slipway would be big enough to take any flying-boat envisaged.



Extensions at Air Base

Star Herald. — 18.3.49.
Building Applications
Granted

Applications from Tasman Empire Airways to carry out extensions to its base and to erect temporary buildings in Mechanics' Bay were received by the City Council last night. Permission for the extensions was granted, and the temporary buildings will be allowed provided the city engineer makes satisfactory arrangements with the company for their subsequent removal. An application by the company to erect timber frame buildings at the base was declined by the council last October.

The city engineer, Mr A. J. Dickson, said the extensions involved the erection of a two-storeyed engineering repair shop of reinforced concrete and a hangar 152ft by 130ft. The repair shop building would be 280ft long by 100ft wide and would be fitted with an automatic sprinkler fire alarm system. Its upper storey would be used for office accommodation and instrument repairs.

Construction of Hangar

The hangar would be constructed entirely of steel frame sheathed with metal sheathing, he continued. Along its western side would be an annexe 20ft by 150ft, and certain other buildings, which would be imported from England. A similar row of buildings would be on the eastern side. The annexe and the buildings would all be of prefabricated aluminium.

Between the repair shop and the hangar would be a store 120ft by 37ft and made of prefabricated aluminium, and further to the east would be another prefabricated building, also 120ft long.

Temporary Additions

The other application was for an extension to the existing engine repair shop and for the erection of four Quonset huts, each 50ft by 20ft. Those temporary additions were required to enable the company to operate the new Solent flying-boats on at least seven return services a week until the permanent buildings were erected. The proposed timber frame addition to the repair shop was 20ft wide, extending for 120ft, the width of the building.

The company expected that the new repair shop would be finished in about 18 months, and Mr Dickson recommended that the temporary buildings be allowed subject to the company entering into a bond of £1000 for their removal within two years.

Auckland Harbour Board

Nº 17602

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To Mr. J.R. Sutton,

Date 24th. March, 19 49.

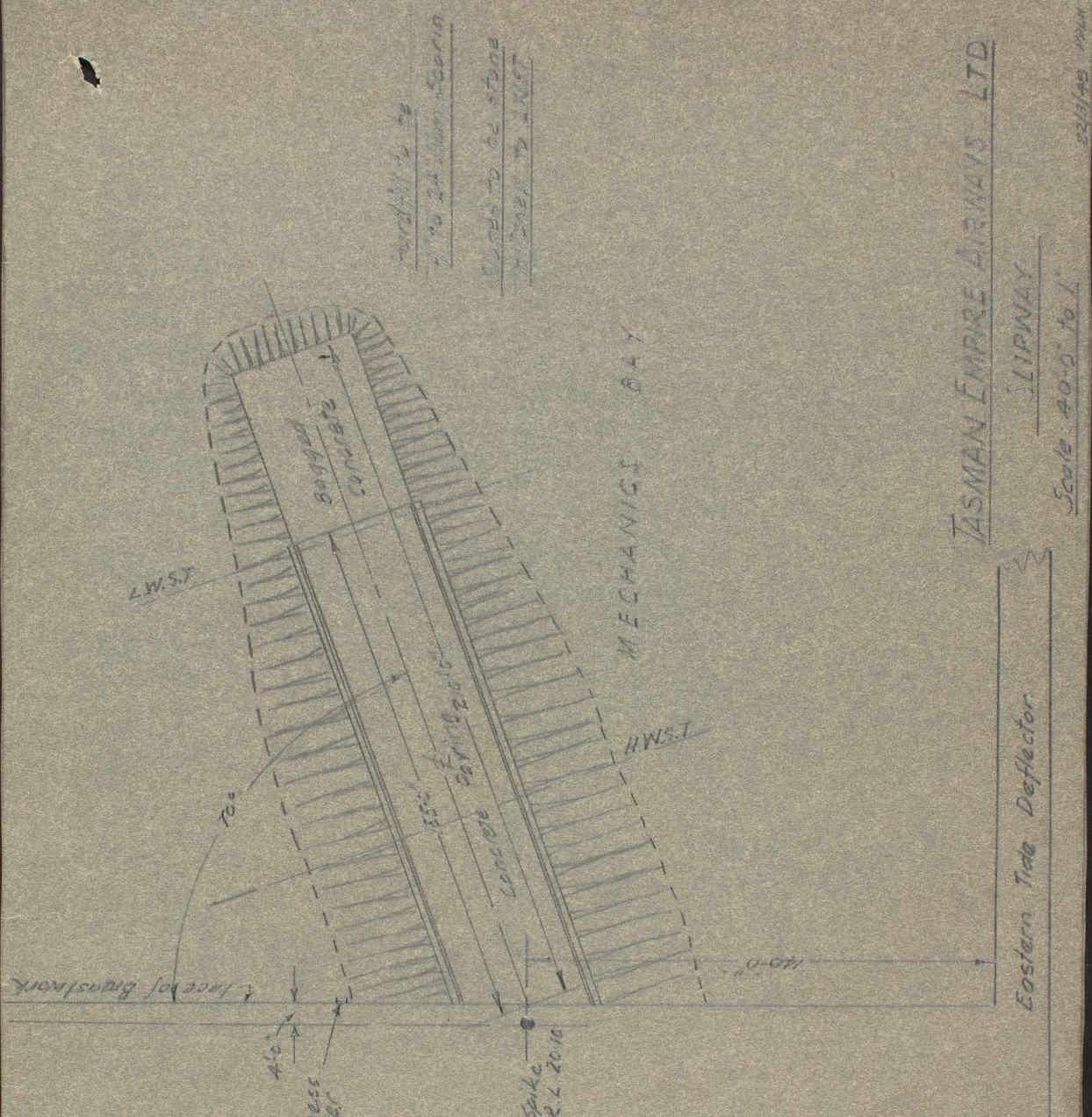
Subject TASMAN EMPIRE AIRWAYS LTD. SLIPWAY

Herewith print showing site of scoria bank slipway being constructed by Public Works Dept. for Tasman Empire Airways Ltd.

Please give general supervision to see that work is carried out on site shown.

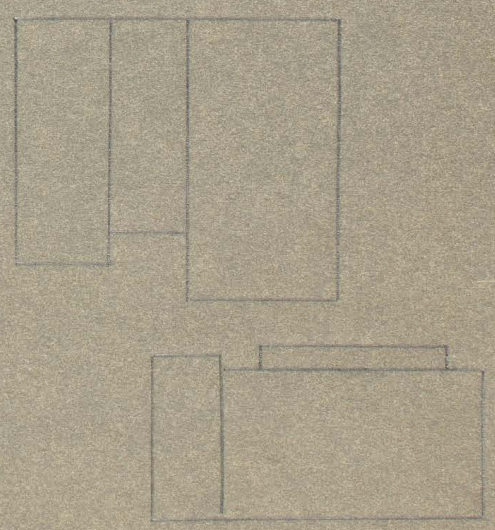
N. L. Vickerman

Engineer to the Board.



modified to be
 2 to 24 hours steam
 cases to be stored
 2 cases to be stored

TASMAN EMPIRE AIRWAYS LTD
 LIPWAY
 Scale: 40'0" to 1"



810

22/1/49

TASMAN



EMPIRE AIRWAYS LIMITED

HEAD OFFICE MECHANICS' BAY, AUCKLAND C.I., NEW ZEALAND

POSTAL ADDRESS: P.O. BOX 2201
TELEPHONE 30-203 (6 LINES)
CODES: BENTLEY'S SECOND PHRASE
TELEGRAPHIC ADDRESS: TASMANAIR

IN ASSOCIATION WITH
BRITISH OVERSEAS AIRWAYS
CORPORATION AND QANTAS
EMPIRE AIRWAYS LIMITED
AGENTS FOR PRINCIPAL AIRLINES
THROUGHOUT THE WORLD
MEMBER OF I.A.T.A

TGM:626

3rd March 1949

Chief Executive Officer,
Auckland Harbour Board,
AUCKLAND.

Dear Sir,

Mechanics' Bay Facilities - Repair Depot,
Slipway, etc.

You will recall from earlier correspondence and discussions that for some time now the Company has been planning the erection of extended facilities at Mechanics' Bay in preparation for the arrival of the new Solent flying boats towards the middle of the year. Negotiations have indeed been protracted, but it is with considerable gratification that we now can advise that finality has been reached on all points.

Before proceeding to detail these, I would like to record my thanks for the continuous support and interest displayed by your staff and your Board in the developments which mean so much to this company. The expenditure of such a large sum as is involved in this project was expected to create opposition in certain quarters and we feel quite certain that it was the cooperation and assistance displayed by the Harbour Board that materially helped the negotiations to their successful conclusion.

Yesterday at a full Board Meeting of Directors of this company approval was given to the following:-

- (a) The immediate erection of a Test House for Hercules 733 Aero engines.
- (b) The immediate construction of a slipway for the hauling out of the Solent flying boats.

- (c) The immediate construction in steel and Robertsons Protective Metal Sheeting of a full hangar 26' high, 100' deep and 123' wide.
- (d) The immediate construction of a 120' x 37' store in aluminium alloy.
- (e) The laying down of a certain hardstanding area.
- (f) The ultimate construction of a double storied engineering repair shop and miscellaneous facilities connected therewith.

The Board's decision to approve the construction of the above mentioned facilities followed a direction from the Air Secretary in Wellington to the effect that the Government of New Zealand had authorised the company to proceed with the work.

Dealing briefly with the items above enumerated we have -

- (a) Test House. Reference to the attached plan will indicate that we propose to erect the test house on ground for which we know your Board is prepared to grant only a limited tenancy. This matter has we believe, already been discussed between our Consulting Engineer and your own Chief Engineer, and has the concurrence of the latter. The erection of the test house is at the expense of this company and we are prepared to accept whatever risk there may be of your requiring the land on which it is built at the end of a given number of years.
- (b) Slip Way. By your letter dated 24th January, you intimated that His Excellency the Governor General, had on the 12th instant, approved the plan of the slipway that we proposed to construct and had authorised such construction in accordance with plan M.D. 8808. The cost of the slipway is, according to advice received from the Air Secretary in his letter 36/7/22 of the 17th February to be borne by the New Zealand Government.

Plan dated
24.2.49.

Recorded.

B. 1047/14.

> old test house

- (c) Hangar. The hangar also is to be constructed on ground for which the Harbour Board is not prepared to grant a lengthy tenancy but as it can be removed there is no special problem in this. Reference to the attached plan will show its position relative to the other buildings proposed to be erected. As it will be entirely of steel and R.P.M. sheeting, no difficulty is anticipated with the Auckland City Council. The cost of this building is to be borne entirely by this company.
- (d) Store. The store will, as shown on the attached plan, be erected on ground for which your Board is prepared to grant a 21 year lease, i.e. it will be constructed on a frontage 160' back from the northern breastwork. Again, this structure will be a prefabricated one of aluminium alloy with no fire hazard. The cost of the store is to be borne entirely by this company.
- (e) Hardstanding. Hardstanding stretching from the top of the slipway to the entrance of the hangar and through to the northern wall of the engine repair shop will be laid down at the expense of the Government. This is in accordance with advice from the Air Secretary, his memo Ref. 36/7/22 of the 17th February referring.
- (f) Engine Repair Shop and other Miscellaneous Tarmac Buildings. Government approval has been given the company to proceed with the erection of these buildings subject only to the final approval of Group Captain Watt who will be acting for and on behalf of the New Zealand Treasury. This officer is expected to arrive in Auckland early next week to view the site, and to enter into discussions with us but our Board of Directors have intimated that there is no likelihood of the project being held up and that we can proceed in the interim on the assumption that approval will be given.

shall be
170'

7160'
Plan shown 197

Thus with complete approval of our project in hand, the way is now clear for the company to again approach the Harbour Board concerning certain matters that have yet to be finalised between it and the company. These principally concern the lease which your Board requires and on which depends our right to enter on to the area involved. Already our Consulting Engineer has discussed with you the planning, lay out and type of structure that we wish to build

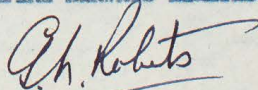
and we understand from him that our ideas coincide with yours in that, in the case of us ever vacating those buildings which will be built in permanent materials, they would be entirely suitable to your requirements should the Harbour Board wish to take them over.

May we therefore ask you to kindly -

- (a) Approve the attached plans (which are laid out to a formula already agreed between us) and grant us final permission to build as we propose.
- (b) Let us have full particulars of the agreement which is to be negotiated between us or some written assurance that our tenure is secure. You will recall that in your letter to us of the 24th November, you mentioned that until the registered lease could be given to this company your Board would be prepared to grant us a one year license to occupy the area at a fee to be fixed.
- (c) Grant us permission to enter upon the area allocated to us so that survey work may proceed. In regard to "right of entry" we are informed that the Department of Civil Aviation (who are given the responsibility of constructing the slipway in accordance with the plans you have already approved) will be starting work on the slipway at a very early date and to avoid hold-ups of a serious nature will require to move laden lorries through to the breastwork for the purposes of dumping filling. Naturally we are most keen that nothing should prevent an immediate start on this particular work.
- (d) Advise us when we may expect the removal of the rowing sheds, landing stage, pile depot, yacht club and other equipment at present obstructing the area.

As was stated earlier in this letter the whole project is one of extreme urgency to the Company and we know that we may count on your continued assistance.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LIMITED.



General Manager.

11th. February, 49.

The Chief Executive Officer
& Secretary.

EASTERN RECLAMATION - SITE FOR TASMAN
EMPIRE AIRWAYS LIMITED.

Will you please arrange for Harrison & Grierson to define areas as outlined in red on B.1047/13 to be occupied by Tasman Empire Airways Ltd., situated to the East and North-east of the area which was recently surveyed for the British Petroleum Coy.

The northern boundary of the British Petroleum Coy. site as pegged, is to be produced eastwards on the same bearing and is to form the southern boundary of a 66ft. road linking with a 66ft. road along the eastern limit of the reclamation as shown generally on the accompanying drawing B.1047/13.

At the same time the present eastern boundary of the site available to the British Petroleum Coy. being the line of the western face of the temporary buildings comprising Public Service Hostel etc., should be defined.

A request has been received from Tasman Empire Airways Ltd. for additional pegs to be provided to assist in laying out their projected buildings as shown on the accompanying drawing (Sheet No. 1) any work additional to that required for definition of boundaries to be a charge against Tasman Airways. As this work could conveniently be carried out in conjunction with the definition of boundaries will you please instruct Messrs. Harrison & Grierson to provide the additional pegs required by Tasman Airways and render a separate account for this work.

ENGINEER TO THE BOARD.

8th. February, 1949.

The Manager,
Tasman Empire Airways Ltd.,
C.P.O. Box 2201,
AUCKLAND.

Dear Sir,

PROPOSED NEW BUILDING

I have to acknowledge receipt of your TGM.193 of 21st. January, submitting for comment proposed layout of the E.R.S. and Store building and requesting advice as to what floor loadings should be provided for, and in reply I have to advise that if the building is to be subsequently useful for warehousing or temporary storage of goods it is essential that there should be a minimum of interference by way of columns, particularly on the ground floor where it may be desirable to employ mobile stacking hoists or similar material handling equipment. For internal columns a spacing of the order of 30ft. x 24 ft. is desirable. Access doors would require to be approximately 15ft. wide x 12ft. high probably one to each 30ft. bay.

As regards floor loadings the 10 cwt. per sq. ft. which you have allowed on the ground floor would be ample to cover any loads likely to be imposed from subsequent storage of goods.

For the upper floor a loading of not less than $2\frac{1}{2}$ cwt. per sq. ft. should be allowed if it is intended to make provision for storage on this floor also.

Yours faithfully,

ENGINEER TO THE BOARD.

JG:JT.

TASMAN EMPIRE AIRWAYS LIMITED

Telegraphic Address:
TASMANAIR
Telephone: 30-203



HEAD OFFICE:
C.P.O. Box 2201, AUCKLAND,
NEW ZEALAND

Codes:
Bentley's Second Phrase

Reference:
TGM. 193.

21st January, 1949.

M.L. Vickerman Esq.,
Chief Engineer,
Auckland Harbour Board,
AUCKLAND. C.1.

Dear Sir,

Proposed New Buildings - Tasman Airways.

As arranged at the recent meeting with yourself and Mr. Packwood I now submit for your comments the proposed layout of the E.R.S. and Store buildings. All office accommodation outlined in red in the E.R.S. building will have a 10 foot stud for both floors. For both the E.R.S. and Store the height from the ground floor level to the under side of the upper floor joists will be 15 feet and a 10 foot clearance for the top floors of both buildings. As far as this Company is concerned it will not be necessary to provide for heavy loading per square foot on the top floors of either buildings but on the ground floor of E.R.S. provision will have to be made for a loading of approximately 10 cwt per square foot, that is, a trolley carrying a 2 ton engine with a 5 foot gauge and wheel base of 10, feet. The materials to be stored on the ground floor of the Store building will not be of a heavy nature. If the E.R.S. building was ever to be used for the storage of wool, hamp etc, then the existing light wells could be used as lift wells.

Will you please advise what floor loadings per square foot for both ground and first floor of both buildings you consider provision should be made for now.

Yours faithfully,

TASMAN EMPIRE AIRWAYS LIMITED.

B.1047/12.

*memorial system suspended
from 1st floor. has leads at outgoing
Encl. end: will be 2T.*

E.H. Roberts
GENERAL MANAGER

*Ground floor is to be done. (thickness not yet fixed) laid direct
on ground after compaction with sheepfoot rollers.*

Marine Dept.,
Box 3014,
WELLINGTON.

19th. January, 1949.

The Chief Executive Officer & Secretary,
Auckland Harbour Board,
P.O. Box 1259,
AUCKLAND, C.I.

Dear Sir,

TASMAN EMPIRE AIRWAYS LIMITED

With reference to your letter of the 4th. November last regarding the erection of a flying boat slipway at Mechanics Bay, Auckland Harbour, I have to inform you that His Excellency the Govern^{or}-General on the 12th. instant has approved the construction of a slipway by the Tasman Empire Airways Limited which it proposes to erect at Mechanics Bay, Auckland Harbour, and has authorised the company to carry out the work in accordance with the said plan (M.D.8808).

Under separate cover I am forwarding a copy of the approved plan (m.d. 8808, 2 sheets).

Yours faithfully,

W.C. Smith,

Secretary for Marine.

U.S.C.

TASMAN EMPIRE AIRWAYS LIMITED

Telegraphic Address:
TASMANAIR
Telephone: 30-203



HEAD OFFICE:
C.P.O. Box 2201, AUCKLAND,
NEW ZEALAND

Codes:
Bentley's Second Phrase

Reference:
TGM. 99.

12th January, 1949.

N.L. Vickerman Esq.,
Chief Engineer,
Auckland Harbour Board,
AUCKLAND. C.1.

Dear Sir,

Land Plan Survey.

I am attaching a plan showing the approximate locations of survey and line pegs required so as to enable lease proposals to be finalised and also that the building sites can be definitely located. As numerous bores will have to be put down to determine the type of foundations required, it would be appreciated if you could arrange that the survey be put in hand as speedily as possible. On the plan you will see I have suggested that certain pegs and also line pegs be placed for building purposes only and therefore Tasman Airways are prepared to pay for any additional survey work required over and above that required by your Board for land survey purposes.

Yours faithfully,

TASMAN EMPIRE AIRWAYS LIMITED.

GENERAL MANAGER.

*The information given on this plan has
been transposed on to B. 1047/11.
Plan being prepared for submission to H&Gr.
with instructions for survey. See B. 1047/13.*

TGM:1114

29th December, 1946.

T. A. Harrow Esq.,
Air Secretary,
Air Department,
WELLINGTON

Dear Sir,

MECHANICS' BAY FACILITIES

Enclosed herewith are plans and estimates for the hangar workshop and other facilities this company hopes to have erected for its use when the Solent flying boats arrive early next year. Whether or not the company will be required to meet the total cost is a matter for negotiation and it is for this purpose as well as with a view to giving the matter impetus, that the enclosed plans and estimates are forwarded to you.

It will be noticed that capital expenditure has been estimated at £319,936. Such an expenditure be it shared by the Government or not, can be justified when the following points are taken into account:-

- (a) Whether the company continues with flying boats after the Solents, or changes to landplanes, it will be essential to have our Engine Repair Shop so placed that:-
 - (i) Labour will be easily procurable. Highly technical personnel will not accept work at long distances from the city.
 - (ii) Costs of transport of E.R.S. staff inherent in any scheme of building some distance out of the city, will be eliminated.
 - (iii) Duplication of certain facilities such as stores and cafeteria will be avoided during the five year period when the Solents are operating. The point here is that were such facilities to be erected elsewhere, we would for the next five years, still be compelled to have similar facilities at Mechanics' Bay during the Solent era.

B. 1047/11

Copy received from T.E.A.L. 6149

Seen by *[Signature]*

- (b) In the erection of such facilities at Mechanics' Bay provision is made for the servicing of R.N.Z.A.F. flying boats for the next five years at least.
- (c) It would be penny wise and pound foolish to embark on such a project without allowing for reasonable expansion. Due to the overhaul and maintenance requirements laid down by the manufacturers of modern aeronautical equipment, the company has been obliged to re-equip the workshops with the latest plant and processing equipment. While this will save the company heavy annual commitments to local and overseas repair organisations, it will not be fully employed by us. We can therefore accept remunerative work from the aircraft industry in general in New Zealand.
- (d) With the advent of Solents we must aim at maximum utilisation of our aircraft if the public is to be served and the airline made to pay. Other factors being constant, utilisation depends on shop output, and shop output in its turn depends on floor space.

For too long now the operations of this company have been governed by output from the workshops. This is the first time we have embarked on a plan of operational and technical expansion costing approximately one and a half million pounds. The economic basis of all airline operation is utilisation and a paying load factor. Therefore it behoves us to so plan that never at any stage, as has been the case in the past, is the engine repair shop found dictating the number of services operated. Indeed we find that the few financially successful airlines in the world today have based their economy on extravagantly equipped workshops with output well above the maximum utilisation possible or projected. We are confident that the authorities responsible for the authorization of this expenditure will see the economic wisdom in having adequate workshop facilities.

In our case we aim at a utilization of 2,750 hours per aircraft which is 44,000 engine hours per annum, which will mean an output from the shop of three engines per week. In the limited space we now have available we can turn out only $1\frac{1}{2}$ engines per week and this only by working overtime to the value of £14,000 per annum.

To achieve our aim we must provide for a maximum of 140 men in the E.R.S. and attached store, each man needing for efficient work approximately 400 sq. ft. of space average. This may seem excessive, but in our industry an area 20' x 20' is needed by any engineer working on engines or parts of engines. Bench room and Hercules engines mounted on engine stands occupy a phenomenal amount of room which, for this calculation, has been included in the figure of 400 sq. ft. abovementioned.

Therefore, floor area required in E.R.S. and attached store if Solents are to operate successfully is:-

$$140 \times 400 = 56,000 \text{ sq. ft.}$$

The present E.R.S. provides an area of only 17,500 sq. ft. and, as stated earlier, permits of production of only $1\frac{1}{2}$ engines per week, and this only by working overtime which, as stated earlier, adds to our expenses by

£14,000 per annum. Overtime expense of such magnitude must be eliminated if costs are to be kept down and in an endeavour to achieve this the possibilities of shift work have been very thoroughly investigated.

Unfortunately, however, our present shop is just not efficient because of space limitations and any hopes we had of increasing engine production by shift work have had to be abandoned for this and other reasons, industrial and economic.

Further, the present shops cannot possibly accommodate the new plant and testing equipment which the company has been fortunate in securing in the United Kingdom. This equipment is some of the most modern in the world and with the Hercules engine, will be revolutionary in New Zealand aviation. If this equipment cannot be housed in the existing shops two things naturally result:-

- (i) A new engine repair shop must be built.
- (ii) It must be large enough to accommodate not only staff, engines, work-benches, etc., but the plant, equipment and test rigs herein referred to, and also permit limited and reasonable expansion.

Accordingly, in planning the new E.R.S. and store, due allowance has been made for the space that will be taken up by these items. Further, with such modern equipment installed for our own use, we will be in a position to contract work from outside organisations, thus ensuring the proper utilisation and financial success of expensive equipment. Furthermore, a great deal of work at present done for us by outside firms will now be done in our own shops, thus effecting a considerable saving.

It will be noted from the enclosed plan that the proposed E.R.S. and store (280' x 100' and 120' x 37' respectively) produce altogether on two floors 64,880 sq.ft.

The difference of 8,880 sq. ft. (64,880- 56,000) will be taken up by stairways, shelving and passage ways. (In the case of the E.R.S., passages are required 8 feet wide, to permit of the passing of engine stands). Also under the provisions of the Factories Act and Industrial Awards, provision has had to be made for staff-rooms, lavatories, etc. while office space, necessary always, has claimed its share of the proposed 64,880 sq. ft.

- (e) Our existing workshops and stores are scattered and so cramped as to make the efficient handling and the economic utilisation of Solents an absolute impossibility. Remote sections must be centralized and considerably more floor space must be made available if the million odd pounds spent in buying the Solents is to be converted into profit.

Though some emphasis has been put upon the provision of an adequate Engine Repair Shop sight must not be lost of the need for :-

- (i) A servicing and/or maintenance hangar.
- (ii) Stores
- (iii) Auxiliary equipment

The R.N.Z.A.F. hangar at Hobsonville at present used by the company for airframe maintenance will house the Solents if re-erected at Mechanics' Bay and raised 9 feet.

Cost of dismantling, removal
and re-erection at Mechanics' Bay = £24,000

Cost to build new hangar at
Mechanics' Bay = £90,000

Therefore capital expenditure saved
by transferring RNZAF hangar to
Mechanics' Bay = £66,000

Present loss to company in operating
hangar and hauling out facilities at
Hobsonville, viz:

Launch running
Wages paid for travelling time
Time lost, etc. etc. = £15,000 per annum

An annual loss such as this cannot be perpetuated. A
hangar at Mechanics' Bay is therefore an economic necessity.

Having explained why an E.R.S. and hangar are essential at
Mechanics' Bay, the erection of stores, radio shacks, offices, etc. require
no separate justification, as where the E.R.S. and hangar are the others
must also be. We do not enlarge as we assume this to be admitted.

(f) The Auckland Harbour Board can give us no security of tenure
for the ground to the west of our present workshop (see plan)
if and when we cease to operate flying boats, but they can
and will grant us a 21 year lease (with the right of renewal)
for that area shown on the plan 170 feet back from the northern
breastwork and 66 feet from the eastern wall on which we have
drawn the E.R.S. store and test house.

They intend charging us rental at approximately £800 per annum
per acre for all land we occupy. It therefore behoves us to
consolidate and move gradually out of the western part of our
area into the smaller and more compact space in the east for
which the Harbour Board will grant us a permanent tenancy.

The plans we here submit make provision for this and by plann-
ing as we are for the E.R.S. and Stores to be double storied
we are effecting a real economy.

Future expansion, whether we continue with flying boats or
operate landplanes, has been allowed for and the two areas
shown on the attached plan and enclosed by a green line
indicate where future buildings may be built with tenure
secured. The hangar shown on the plan would, of course, be
moved altogether once we ceased operating flying boats.

(g) Test house, slipway and hard standing are also important
adjuncts. The Hercules engine, the power unit of the Solents,

is too heavy to permit of engine changes being undertaken with the aircraft at the pontoon on the water. The aircraft must be beached and for this a slipway and hard-standing are essential.

The slipway at Hobsonville will, it is admitted, carry the Solent, but if we continue to use Hobsonville we continue to lose £15,000 per annum.

If the best use is to be made of Solents, the moment they arrive we must be able to test engines. But we know that as soon as a Hercules engine is put on test in our present test house (even if such were possible) this base will be untenable.

A silent test house must be provided. Engine testing is a healthy sound because by it we know that the cause of utilisation is being served. However, if the efficiency of the rest of the organisation is impaired it is a serious matter. These points are mentioned to emphasise the dire necessity of a sound proof test house being available at the earliest possible date.

FINANCE:

To demonstrate how the estimated expenditure of £319,936 may be borne, the following facts are submitted.

- (a) The following would be located on land for which the Harbour Board is prepared to grant a 21 year lease:-

Test House	£17,500
E.R.S. Buildings	156,163
Store, offices	25,618
Sprinkler systems	5,000
Miscellaneous	6,000
Some of tarmac buildings (say)	3,000
	<u>£213,281</u>
Architects Fee and Supervision	
80% of £27,700 (say)	22,160
	<u>£235,441</u>
Contingencies -	
5% on £213,281 (say)	10,664
	<u><u>£246,105</u></u>

In other words, approximately £246,000 of the total expenditure of £319,936 would go into buildings which would have a permanent life and which, in the event of any unknown contingency, could readily be sold. (An idea of their realizable value is shown on the bottom of the schedule of estimates and for the items referred to above equals £177,104 at the end of five years.)

- (b) The balance of £73,831 would be paid for by the elimination of the loss of £15,000 a year at present expended on Hobsonville, vi

Total estimated capital cost	
of whole scheme	£319,936
Less amount expended on Permanent Bldgs. as per (a) above	<u>246,105</u>
Balance	<u><u>£73,831</u></u>

Saving on Hobsonville 5 years
 @ £15,000 per annum £75,000

Thus all facilities built other than on the "Permanent" area,

viz: slipway, lean-to buildings, certain of the tarmac buildings and the hangar, will pay for themselves in five years.

- (c) And further - even these have a substantial realizable value when, at the end of say five years, they require to be moved (see estimates)

Slipway	£2,000	
Lean-to Buildings	3,000	
Part of Tarmac Buildings	3,900	
Existing Temporary buildings	<u>7,000</u>	£15,900

- (d) Provisions for depreciation and rent are estimated to cost £16,305 per annum:-

Depreciation 5% x £246,105	=	£12,305
Rent (say 5 acres @ £300 ea.)	=	<u>4,000</u>
		<u>£16,305</u>

- (e) Stressing again the fact that it is only utilisation of the Solents that will convert £1,000,000 capital expenditure into a profit and realizing that it is only with adequate facilities that maximum utilisation can be achieved, we have no hesitation in pressing for an immediate start on the erection of stores, slipway, hangar, test house and engine repair shop. The question of priority for the whole plan is of the highest order but the particular point we desire to make here concerns the provision of funds for progress payments.

Our Consulting Engineer estimates:-

- (i) that for the period ending 31/3/49 the sum needed will be £30,000
- (ii) that for the year ending 31/3/50 the sum needed will be £200,000

Because of the fact that our slipway and repair facilities will be used jointly by this company, the R.N.Z.A.F. and maybe other operators, the sharing of the capital costs is reasonable.

But a decision must immediately be made as to what the split will be as the provision of funds for progress payments to contractors very largely hinges on it.

Finally, the provision of facilities such as shown on the attached plan have been agreed in principle by the S.P.A.T.C. at its recent meetings in Wellington. These Aviation experts, from their own experiences overseas, are fully alive to the necessity of having facilities which will not only provide for the maximum and efficient utilization of existing fleets but which at the same time will provide for expansion.

In submitting this matter to you we are hopeful that conversations with the appropriate authorities will ensue and that resulting therefrom will come decisions that will enable impetus to be given to this important project.

Plans and estimates of such a major undertaking are difficult to discuss per medium of a letter and we desire to record here our willingness to meet any Treasury, Public Works or Local Body official whom you may nominate to inspect the area on which we hope to build.

Yours faithfully,

TASMAN EMPIRE AIRWAYS LIMITED.



General Manager.

MECHANICS BAY FACILITIES

Revised Estimate 21/12/48.

(1)	Slipway and Hauling facilities	18,750
(2)	Tarmac Area and Drainage	7,000
(3)	Test House	17,500
(4)	Hangar complete from Hobsonville Note: New steel hangar is estimated to cost £90,000, time of completion <u>not</u> less than 1½ years.	24,000
(5)	Lean-to buildings west end of Hangar	5,320
(6)	Buildings on Tarmac	9,450
(7)	E.R.S. buildings and offices	158,183
(8)	Store and offices to serve E.R.S. and hangar	25,618
(9)	Bulk storage: Fittings, etc. to existing E.R.S. buildings. Note: This building to be ultimately shifted to new site (Tennis Court)	750
(10)	Power line alterations	200
(11)	Alterations to roadway	250
(12)	Fire prevention (Sprinkler system)	5,000
(13)	Preparation of sites	1,000
(14)	Miscellaneous: Standby plant, air conditioner, electrical and compressed air installations, phone and call system, fuel oil extensions, mobile crane, etc.	6,000
(15)	Supervision, architectural fees	27,700
(16)	Contingencies 5%	15,235
	Total:	<u>£319,936</u> =====

Recoveries in 5 years.

(1)	Slipway	2,000
(3)	Test House	4,500
(5)	Lean-to buildings, West end of Hangar	5,000
(6)	Buildings on Tarmac	5,400
(7)	E.R.S. buildings and offices	140,547
(8)	Store and offices	23,657
(9)	Fire appliances, etc.	5,000
(14)	Miscellaneous	4,500
	Existing temporary buildings	7,000
		<u>183,004</u>

EXTRACT FROM BOARD'S RESOLUTIONS OF TUESDAY, 21st. DECEMBER, 1948.

2. UNDERGROUND PETROL STORAGE

Your report, 16.12.1948, stating that an application had been lodged on behalf of Tasman Empire Airways Ltd. for an additional to their underground petrol storage of three extra tanks of 5500 gallons each, for the purpose of servicing new "Solent" Flying Boats; that he recommended consent be given, subject to the installation being approved by the Dangerous Goods Inspector and to all work being carried out to the approval of the Board's Engineer.

That the Engineer's report be adopted.

16th. December, 48.

The Chief Executive Officer
& Secretary.

AIR BASE MECHANICS BAY

PETROL STORAGE.

An application has been lodged on behalf of Tasman Empire Airways Ltd. for an addition to their underground petrol storage of three extra tanks of 5,500 gallons capacity each.

This is required in connection with the servicing of the new "Solent" flying boats.

I recommend that consent be given subject to the installation being approved by the Dangerous Goods Inspector and all work being carried out to the approval of the Board 's Engineer.

ENGINEER TO THE BOARD.

16th. December, 1948.

The Manager,
The Shell Company of N.Z. Ltd.,
C.P.O. Box 1084,
AUCKLAND.

Dear Sir,

In reply to your letter of 16th. instant asking for permission to install three additional underground storage tanks for Tasman Empire Airways Ltd. adjacent to the Mechanics Bay Breastwork and situated approximately 20 ft. to the westward of the existing underground storage tanks, I have to advise that the matter will be referred to the Board for formal consent and that if approved the conditions on which the installation will be allowed are:-

- (a) The tank pits are to be located a distance of not less than 15 ft. clear behind the cope line of the breastwork.
- (b) Not more than 10 ft. length of pit, measured parallel with the breastwork shall be opened up at any one time and the tank is to be installed and ballasted before opening up any adjoining pit.
- (c) The 15 ft. strip between the breastwork and the site of the storage tank pits shall be kept free of any superimposed load during the entire currency of the work, i.e. no stores or spoil to be dumped or vehicles to stand on the area.
- (d) No portion of the tank pit shall come within three inches of any tie rods and all precautions are taken to ensure that it is impossible for any vertical load to be transmitted directly from the tank pit to any tie rod.
- (e) The work shall be carried out in accordance with the dangerous goods regulations and to the satisfaction of the Dangerous Goods Inspector and in particular that all provisions are made to ensure that there can be no possibility of the leakage of oil fuel in to the harbour.

Yours faithfully,

ENGINEER TO THE BOARD.

The Shell Company of N.Z. Ltd.,
T. & G. Building,
Wellesley Street, W.,
AUCKLAND, C.I.

16th. December, 1948.

The Engineer,
Auckland Harbour Board,
AUCKLAND.

Dear Sir,

Following our recent discussion with Mr. Goodsir concerning the installation of additional underground tankage for Messrs. Tasman Empire Airways Ltd., Mechanics Bay, we would ask your formal agreement to the proposals.

To meet the conditions which will arise when the Solent flying boats are delivered, we estimate that 3 additional tanks each of 5500 gals. capacity will be required. The dimensions of each tank will be 7ft. diameter and 24 ft. long and for their accommodation in three adjacent pits, an excavation 26 ft. x 26 ft. x 10 ft. deep will be necessary.

The location of the excavation for the pits in Mechanics Bay as discussed with Mr. Goodsir on the site will commence approx. 20 ft. to the west of our existing tanks.

It is appreciated by us that the excavation must commence 15ft. landward from the inside edge of the breastwork and that only a width of 10 ft. to full depth can be worked at one time.

The tanks will be placed in individual pits and for ease of working we would prefer to construct the centre pit first, which will then give a solid concrete wall each side to work off when constructing the remaining two.

We would be glad to have a decision in this matter at your earliest convenience, as we are anxious to put the work in hand early in the New Year.

Yours faithfully,

For: THE SHELL COMPANY OF NEW ZEALAND LIMITED.

G.R. Gane, Branch Engineer.

EXTRACT FROM BOARD'S RESOLUTIONS OF TUESDAY, 2nd. NOVEMBER, 1948.

2. FLYING BOAT SLIPWAY - MECHANICS BAY.

Your report, 27/10/48, stating that the Tasman Empire Airways Ltd. had submitted for the Board's approval, plans of a flying-boat slipway proposed to be constructed at Mechanic's Bay and recommending that consent be given for the construction of the slipway, subject to (a) Approval of the Marine Department; (b) Satisfactory agreement as to lease of the Site; (c) The slipway to be maintained in good order to the satisfaction of the Board and (d) The slipway to be demolished and removed, if so required by the Board, when the adjacent water area ceases to be reserved for use as an air base for flying boats.

That the report be adopted.

27th. October, 48.

The Chief Executive Officer
& Secretary.

AIR BASE, MECHANICS BAY - SLIPWAY

Tasman Empire Airways Ltd. have submitted for approval plans of a flying-boat slipway they propose to construct at Mechanics Bay.

The type of construction is satisfactory and its location is suitable as long as this area remains in use as an air-base. No arrangements have yet been finalised as to tenancy of the adjacent area.

I recommend that consent be given for the construction of the slipway subject to

- (a) approval of the Marine Department.
- (b) satisfactory agreement as to lease of the site.
- (c) the slipway to be maintained in good order to the satisfaction of the Board.
- (d) the slipway to be demolished and removed, if so required by the Board, when the adjacent water area ceases to be reserved for use as an air base for flying boats.

*Plan approved by Marine Dept.
F. 196*

ENGINEER TO THE BOARD

14th. October, 48.

The Chief Executive Officer
& Secretary.

AIR BASE MECHANICS BAY.

(Letter from T.E.A.L. 1.10.48)

The Board has not yet allocated any defined area at Mechanics Bay for the Air Base.

The area coloured red on Drawing No. B.1047/8 can probably be made available and it is likely that the area cross-hatched in red can also be included, though some adjustment may be necessary in the southern boundary of this latter.

The period for which a lease could be given will vary for different parts of the area because of the necessity to provide for future railways and roadways through the area. Until it is necessary to construct these latter, the areas they will occupy can be made available. Any lease would probably specify a minimum term which could be guaranteed, with the right to continue in occupation at the agreed rental if the Board does not then require the area in connection with harbour works.

The building of the Royal Akarana Yacht Club is in process of transfer to Okahu Bay but no steps have been taken to remove the buildings of the St. Georges, Blind Institute and Auckland University Rowing Clubs.

Some satisfactory agreement should be reached regarding the lease of any area required before removal of further buildings or granting permission for any further construction on this site.

ENGINEER TO THE BOARD.

TASMAN EMPIRE AIRWAYS LIMITED.

Head Office,

Mechanics Bay,

Auckland, C.1.

1st. October, 1948.

The Secretary,
Auckland Harbour Board,
Quay Street,
AUCKLAND.

Dear Sir,

TASMAN EMPIRE AIRWAYS LIMITED MECHANICS' BAY
FACILITIES.

On the 29th. instant the writer waited upon your Board Engineer, Mr. Vickerman, to discuss with him the preliminary negotiations concerning the building of certain hangarage and storage facilities that this company intends to erect at Mechanics' Bay. You will remember that we have been corresponding with you on this particular matter on behalf of the Air Department, Wellington, it being thought that that Department would be undertaking the negotiations with your Board. Since our last letter of August 4th. however, the construction of hangarage and workshop facilities at Mechanics' Bay has become even more urgent and it now seems apparent that greater impetus can be given to the work by placing the responsibility for it in the hands of this company. Accordingly on the evening of the 29th. ultimo the writer communicated by telephone with the Air Secretary in Christchurch and put this proposition to him. He signified his willingness to permit of the direct approach by this company to the Auckland Harbour Board. A proposal embodying this suggestion is at present before our Board of Directors and though at the time of writing we have not had formal approval from them we nevertheless anticipate that they will welcome the opportunity of direct negotiation with you instead of through the Air Department.

Accordingly we write now requesting your permission to enter upon the area at Mechanics' Bay allocated by your Board and we seek your assistance in having removed therefrom the various buildings and equipment which at present are in the area. Similarly, we would appreciate from you your views on the type of lease, if any, which your Board may consider should be negotiated between us.

We have engaged the services of a Consulting Engineer, one Mr. R.H.P. Ronayne, and this gentleman is at present arranging for the drawing up of architect's plans and specifications. He will shortly be collaborating with your engineer on detailed matters of construction which are of some importance to us both and we know that we can count on your co-operation.

The building of a slipway, the removal of certain buildings and equipment and a survey of the area which we hope to occupy are some items requiring our joint consideration.

Would you therefore kindly put this matter before your Board forwarding us your reply at your earliest convenience. With the question cleared away as to whose responsibility the undertaking is we are hopeful that we can proceed without delay to the detail of construction.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LTD.

Flying-Boat Base to Remain In Mechanics' Bay

Harald.

8-9-48.

Harbour Board Adopts Alternative Site For New Import Wharf

Important changes in plans for port development, involving the retention of the air base at Mechanics' Bay and the transfer of the proposed bulk import wharf from the bay to a site between Export Wharf and the vehicular ferry terminal, were approved by the Auckland Harbour Board yesterday. The original proposals for the construction of the wharf to the east of the terminal would have involved the transfer of the air base to the east of the breakwater, off the waterfront road.

It was estimated that the total expenditure on the new import wharf would be £1,337,000. This was a saving on the original scheme of £789,000, £507,000 of which was the minimum estimate of the cost of the new air base.

The board's decision was based on a report from its engineer, Mr N. L. Vickerman, who stated that when Mechanics' Bay was made available as a temporary air base in 1937 the site had been developed for the construction of future wharves. However, it was then expected it would be available long enough to demonstrate how the air services would develop, and wharf provision would be required for a permanent air base. The Pacific service was now being operated by land-based planes and, although Solents would be used on the Tasman route for from five to seven years, there was no definite assurance that the service would be operated by flying-boats after that period.

Tasman Airways' Needs

Writing on behalf of the Air Department, Tasman Empire Airways, Ltd., had informed the board that for economic reasons it was necessary to have a slipway, hangar and repair facilities close to the landing and administrative buildings. The present site would cease to be workable as an air base if the bulk import wharf was constructed in the intended position. The cost of an alternative air base to the east of the breakwater would be £507,000, exclusive of any buildings or shore facilities.

"Whether or not the air services could pay a reasonable return on this expenditure it is obviously desirable, if possible, to delay spending so large a sum until the future of the flying-boat is much clearer than it is at present," continued Mr Vickerman. For this reason, and taking into account other changed circumstances, it was now proposed to modify the plan of harbour works between Export Wharf and the eastern breakwater.

Modified Scheme

Mr Vickerman said it was originally planned to build a bulk cargo wharf and reclamation to the east of the vehicular ferry landing and later to construct a further wharf to the west of the landing. Under the new scheme the more western of the two wharves would be constructed first and the design would be altered to make it suitable for a bulk cargo wharf.

Less work and material would be involved in the scheme and the berthage would be built in the least possible time. It would allow the air base

to remain in its present position for a considerable time. It would involve much less immediate expenditure. It would not require the construction of a new rail connection or an over-bridge on King's Drive, nor would any alterations be needed to the ferry landing.

Mr Vickerman said that the storage capacity at the new wharf would be about 10,000 tons at each berth. This should be sufficient to allow cargo to be discharged continuously at a maximum rate without being dependent on a continuous supply of rail or road wagons.

The new wharf would not have a large area available for leasing as permanent storage. Probably a site with much greater storage would be available later, either by construction of the projected reclamation further east or by development in the upper harbour. It might then be desirable to transfer the handling of bulk cargo to such a site. In this event the wharf could be re-equipped for handling general cargo or any other purpose.

EXTRACT FROM BOARD'S RESOLUTIONS OF TUESDAY, 7th. SEPTEMBER, 1948

3. SPECIAL MEETING - BOARD IN COMMITTEE.

Report of Special Meeting of Board in Committee, 31.8.1948,
re Works C ommittee.

Report of Works Committee dated 30.8.1948, submitting report of the Sub-committee - re Air Base for Flying Boats and its effect on development of the Eastern Waterfront recommending the adoption of the Engineer's Report of 23.8.1948 on the proposed scheme for the construction of the bulk-cargo wharf on a site to the westward of the Eastern Vehicular Ferry Landing to allow for the retention of the Air Base in its present position, and recommending that the report be adopted and the Engineer instructed to proceed with the development of the scheme outlined.

Recommended:-

That the report be adopted.

THE CHAIRMAN.
A.H.B.

23rd. August, 1948.

AIR BASE FOR FLYING BOATS AND ITS EFFECT
ON DEVELOPMENT OF EASTERN WATERFRONT.

When overseas Air services to New Zealand were inaugurated in 1937 the Board was able to make available for a temporary air-base an area of approximately 40 acres of sheltered water at Mechanics Bay with sufficient land for the necessary buildings and shore facilities.

The site was a very suitable one and, though it had been developed for the construction of future wharves, it was at that time expected to be available for sufficient time to demonstrate how the air services would develop and what provision would be required for a permanent air base.

The trans-Pacific Air service is now being operated by land-based planes and the present position of the Trans-Tasman service is set out in the letter from the General Manager of Tasman Empire Airways Ltd. on behalf of the Air Department dated 24/10/47.

Briefly the position of that service is as follows:-

1. Larger flying-boats of the "Solent" Class will be put into operation in 1949 and it is certain these will be used for a period of from five to seven years.
2. No definite assurance can be given that the service will be operated by flying-boats after that period.
3. For economic reasons it is necessary to have a slipway, hangar, and repair facilities close to the landing and administrative buildings.
4. The present site will cease to be workable as an air base if the projected bulk-import wharf is constructed in the intended position.

The letter outlines alternative proposals which have since been discussed with the General Manager and his technical officers, and a tentative scheme has been prepared for the construction of a new air base to the east of the present breakwater as shown generally on Drawing No. B1047/3. The cost of this is estimated at approximately £507,000 exclusive of any buildings or shore facilities which would cost a further considerable sum.

Whether or not the air services could pay a reasonable return on this expenditure, it is obviously desirable, if possible, to delay spending so large a sum until the future of the flying-boat is much clearer than it is at present.

For this reason and taking into account other changed circumstances it is now proposed to modify the plan of harbour works between Export Wharf and Eastern Breakwater as shown generally on Drawing No. B 1065/1.

In the original scheme it was proposed to construct a bulk-cargo wharf and reclamation to the east of the vehicular ferry landing and later to construct a further wharf to

the west of the vehicular ferry landing.

In the scheme as now proposed the more western of these two wharves will be constructed first and its design will be altered to make it suitable for a bulk-cargo wharf.

The principal advantages of this scheme are:-

1. It will involve less work, use less material, and allow of additional berthage being constructed in the least possible time.
2. It will allow the air-base to remain in its present position for a considerable time.
3. It will not require the laying of rail tracks across the approach to the vehicular ferry landing, or alternatively removal of the landing to a new site.
4. It will not require the immediate construction of the overbridge and railway crossing on King's Drive near Campbells Point.
5. It will involve much less immediate expenditure.

The accompanying schedule shows an approximate estimate of the total expenditure involved under the original scheme and under the scheme now proposed, for construction of a bulk-cargo wharf together with necessary contingent works. It will be seen that the immediate expenditure will be much less if the proposed scheme is adopted, although ultimately all the works mentioned will probably be constructed.

The difference of £789,000 in immediate expenditure represents a big saving in the demand on labour and material and is also some indication of the probable reduction in the time required to complete the work.

The proposed new wharf will be designed and equipped for the handling and storage of bulk cargo. The storage capacity available at the berths will amount to approximately 10,000 tons per berth, which should be sufficient to allow cargo to be discharged continuously at maximum rate without being dependent on a continuous supply of rail or road wagons.

At this wharf there will not be a large area available for leasing as permanent storage. Probably a site with much greater storage area will be available later, either by construction of the projected reclamation further east or by development in the upper harbour and it may then be desirable to transfer the handling of bulk cargo to such site. In this event any or all of the bulk-handling equipment can be moved to the new site and this wharf can be re-equipped for handling general cargo or for any other purpose required.

Taking into consideration the importance of constructing additional berthage as quickly as possible, the necessity under present circumstances of conserving material, and the desirability of postponing expenditure on a new base for flying boats, the scheme now submitted has very many advantages, and I recommend it be adopted.

W. W. Wickerman.

ENGINEER TO THE BOARD.

SCHEDULE

COMPARATIVE ESTIMATES OF TOTAL EXPENDITURE INVOLVED IN THE CONSTRUCTION
OF A BULK IMPORT WHARF.

- (a) East of present Vehicular Ferry Landing as previously proposed.
 (b) West of present Vehicular Ferry Landing as now proposed.

TOGETHER WITH THE NECESSARY CONTINGENT WORKS.

	A Eastern Site	B Western Site
Dredging & Reclamation	£165,000	£120,000
Construction of Quays	£568,000	£573,000
Railways, Roading etc.	£142,000	£147,000
Cargo Sheds & Buildings	£ 86,000	£ 77,000
Power & Light Services	£ 40,000	£ 40,000
Cranes and Equipment	£351,000	£380,000
	£1,352,000	£1,337,000
<u>CONTINGENT WORKS:</u>		
Breastwork west of Vehicular Landing	£140,000	Nil
Overbridge on Kings Drive and new connection to Railway Yard.	£107,000	Nil
Alterations to Vehicular Ferry Landing	£ 20,000	Nil
Provision of new Air Base	£507,000	Nil
	£ 774,000	Nil.
Total Expenditure	£2,126,000	£1,337,000

- COPY -

TASMAN EMPIRE AIRWAYS LIMITED.

Mechanics Bay,

AUCKLAND.

4th. August, 1948.

The Secretary,
Auckland Harbour Board,
Quay Street,
AUCKLAND.

Dear Sir,

TASMAN EMPIRE AIRWAYS LIMITED
MECHANICS' BAY FACILITIES

You will remember that in our letter of the 25th. ^{June} ~~ultimo~~ (ref. T.G.M. 203) we advised that it was our intention to draw up suggested plans of the additional facilities which, in our opinion, are necessary for Solent flying boat operation out of Mechanics' Bay and we intimated that these drawings would be submitted direct to the Department of Civil Aviation, Wellington.

The purpose of this letter is to advise you that on the 2nd. instant our draft was completed and was forwarded that day to the Air Secretary. In submitting these proposals we kept in sight the fact that your Board had allocated to us an area of $5\frac{1}{2}$ acres outside the limits of which we could not go. Accordingly any development work which we are proposing will be kept within these limits which, as far as we can say now, should be ample for our purpose.

We appreciate that the authority to extend our operations on the present site must come from your Board and no doubt liaison will be established between your good selves and the Air Secretary, concerning this aspect of the case. As intimated earlier, we feel that negotiations will be on a Government Harbour Board level.

We are deeply conscious of the assistance rendered by your Board in general and by Mr. Vickerman in particular. We would like to take this opportunity of recording our appreciation. Without the sketches provided by Mr. Vickerman it would not have been possible for us to proceed with a pre-determined knowledge of what your Board's requirements were and what space would be available to us for the fulfilment of our plans. We have already pointed out how urgent is the matter of expansion at Mechanics' Bay and we hope that in again mentioning the matter we are not unduly labouring our point.

Yours faithfully,
TASMAN EMPIRE AIRWAYS LTD.
C. Dean.

27th March, 1947.

The District Engineer,
Public Works Department,
AUCKLAND, C. I.

Dear Sir,

AIR BASE - MECHANICS BAY.
BRABY PONTOON BERTH DREDGING.

I have had further prickings taken on the site of the Braby Pontoon berth. These are plotted on our Plan Z7/64 sent herewith.

Your Mr. Struthers informed Mr. Angus by telephone that you desired an estimate for dredging the berth to give 12 feet of water at L.W.S.T. for a width of 75 feet.

Provided that suitable tides can be worked it is estimated that this would cost £800. It may be necessary to remove temporarily the hauling off buoy directly to north of Braby Pontoon. The cost of any removal or replacement of aircraft moorings would be extra.

Yours faithfully,

NLV:EERB.

CHIEF ENGINEER TO THE BOARD.

Auckland Harbour Board.

MEMORANDUM

From

Drawing Office

To

THE ENGINEER

20/3 1947.

DREDGING TASMAN EMPIRE AIRWAYS



$$\text{Approximate } \frac{105' \times 80' \times 1'}{27} = 300 \text{ yds}^3$$

$$\frac{80 \times 90 \times 2}{27} = 540 \text{ yds}^3$$

$$\underline{900 \text{ yds}^3}$$

To dredge Braby Pontoon Berth to 12' L.W.S.T.

Quant. of spoil = 475 yds³ mostly -
Japan.

Dec. 1940.
Hapai removed
1500 yds
in 4 days

R. S. Hutchman

Estimate.

Hapai. 1 day lay moorings.		
2 long days dredging	4 days @ £170.	£680.
1 day complete & lifts moorings.		
Crew overtime	2 days @ 20/-	40.
Towage - launches.	20 hours @ 25/-	25
Transport - on moorings.	2-1/2 days 1 day @ 20/-	20
		<u>£765</u>
	5%.	<u>38</u> £800.

See Angus Est. Book 6: p. 19.

R.S.

Re. Prater Parkers Berth.

18.3.47

Mrs Skulhas Pang - (PND).

They think that berth 75' wide
x 12' deep is needed -

Parkers is tenons on west side
and will be about a month
before work on it is completed -

Would like an estimate of cost
of dredging to form berth 75' x 12'.

and an indication of Board's
contributions if any -

ATB.

18th aprie =

fee

11th February, 1947.

The District Engineer,
Public Works Department,
P. O. Box 46.
AUCKLAND.

Dear Sir,

BRABY PONTOON BERTH MECHANIC'S BAY
AIR TERMINAL.

In reply to your 8/86/5 of 11th December, 1946, I have had a series of soundings taken in the vicinity of the pontoon and these indicate that very little, if any, shoaling has occurred since the area was dredged in 1940. It would therefore appear unnecessary to remove the very small quantity of soft mud which appears to be indicated by the soundings.

I will, however, shortly be putting the Suction Dredge into commission in this area, and consideration could then be given to providing deeper water if necessary at a later date.

I enclose for your information a print of part of Z7/41 showing the soundings taken in January, this year, the depths shown being at extreme low water spring tides.

Yours faithfully,

NLV:EERB.
Encl.

ENGINEER TO THE BOARD.

INSTRUCTIONS TO FOREMEN & INSPECTORS

COPY

SEE ALSO SECRETARY'S FILE

27th December, 1945.

The Acting District Engineer,
Public Works Department,
P.O. Box 46,
AUCKLAND, C.1.

Dear Sir,

Mechanics Bay Air Base
Your file 8/86.

Your letter of 18th instant, with plans enclosed, asking, on behalf of the Air Department, for permission to erect a small building 12'x6' on the Eastern Breakwater to house a distant recording anemometer and a radio receiver for radio telephone communication with aircraft, has been received.

It is noted that a connecting cable from the proposed building to the control room will be required and that it is desired to replace the existing windsock by one which can be illuminated for use by night flying aircraft.

It is gathered from the plan submitted that the proposed building would be a concrete structure. In this connection I would call your attention to the temporary nature of the Air Base at Mechanics Bay which, before long will have to be removed from its present site to enable essential harbour development works to proceed. Before consenting to the work proceeding I shall be glad if you will supply drawings of the proposed building so that the Board may be able to judge of its appearance in relation to the Breakwater design.

Cables would require to be laid in trench under the paving and surface made good.

Yours faithfully,

Superintendent and Engineer.

DH.MLJ

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To The Foreman of Works

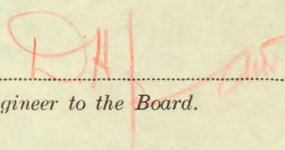
Date 7th November, 1945.

Subject AIR RAID TRENCHES NEAR TASMAN EMPIRE AIRWAYS WORKSHOP.

The covered trenches near the Tasman Empire Airways Ltd. Workshops at Mechanic's Bay will shortly be filled in by that company.

When work is in progress please see that the material backfilled into the trenches is properly consolidated and the site left level and tidy.

The timbering in the trenches does not belong to the Board and will be removed by Tasman Empire Airways Ltd.


.....
Engineer to the Board.

AUCKLAND HARBOUR BOARD
MEMORANDUM

Nº 8283

From

FOREMAN OF WORKS

To

20th Jan. 1944.
The Engineer.

1944.

SIR,

I beg to report that

Repar. Public Works Dept.
Additional Hanging Tenders, Air Base, Mechanics Bay.
Instruction 13268.

The above work was carried out on 24th & 25th Nov. 1943
charges as follows:-

2 1/4 hrs. @ 5/1 1/2	12	8	42	5/1	197
3 " @ 4/2 3/4	12	8	43		
4 1/2 " @ 2/9 3/4	5	18	44		3/11
Charge	3	11 1/2			
1 1/2 hrs @ 6/	1	6		1/2	12 5/2
	7	8	51 1/2		5/4
5/.		7			4 1/2
2 nd 5/.		5			14 9 1/2
		3			14 16 1/2
Materials	8	1			
Cartage	6	4			
(P & B.)		0			
Launch Te Hauwaki 1 1/2 hr @ 1/1		0			
" Arahi 1 1/2 hr @ 1/1 1/2		9			
" Te Waka 3/4 hr @ 1/5		3			
Ches. No. 2 3/4 hr @ 1/2 1/2		5			
	17	1			
Sum totals		11			
		13			

Q 1370

C. M. Batey

FOREMAN OF WORKS

Auckland Harbour Board

Nº 13268

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To Foreman of Works.

Date 28th October, 19 43.

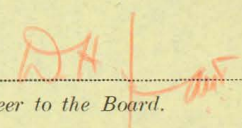
Subject ADDITIONAL HANGING FENDERS AIR BASE MECHANIC'S BAY -
REPAYABLE A/C. PUBLIC WORKS DEPT.
Works Order 138209

The Public Works Department have asked for the supplying and fixing of extra long hanging fenders to the concrete wall at the Air Base Mechanic's Bay where the pontoon at which their serviced boats berth is located.

In choppy weather the pontoon gets underneath the existing fenders and causes trouble.

I understand that this matter has been explained to Mr. Loch, who understands what is required.

Please put the work in hand and report cost for charging.


.....
Engineer to the Board.

[P.W.—150c.

In replying

P.W.	8
	7

please quote these numbers.



ADDRESS REPLY TO

"THE.....ENGINEER.
PUBLIC WORKS DEPARTMENT.
....."

PUBLIC WORKS DEPARTMENT,

.....AUCKLAND, C. 1.....N.Z., 27th October, 1943.....

AUCKLAND HARBOUR BOARD SECRETARYS OFFICE
RECD 28 OCT 1943
ACKCD
ANSD

Mechanic's Bay Base.

The Superintendent,
Auckland Harbour Board,
AUCKLAND.

Dear Sir,

With reference to your telephone communication, I enclose herewith Works Order No.138209 for work required at R.N.Z.A.F. Base, Mechanic's Bay.

Yours faithfully,

D. J. Thomson

District Engineer.

Encl.

*Instruction to
Fawks.
28/10/43.*

PUBLIC WORKS DEPARTMENT, NEW ZEALAND.

[ORIGINAL.]

[P.W.—314.

WORKS ORDER.

ORDER

Nº 138209

To

Auckland Harbour Board.

P.W. District:

Auckland

22-10-1943

PLEASE carry out the work as set out hereunder, and on completion forward your account to the DISTRICT ENGINEER, P.W. Department, at the above address.

To be charged to

Mechanics Bay Base.

ITEM.	DESCRIPTION.	AMOUNT.	
	Please supply & fit long hanging pendens to concrete wall in way of plane barge.		

9/5 1370

A. J. Shortton

District Engineer.

S.

COPY

SEE ALSO SECRETARY'S FILE

The Chief Engineer,
Tasman Empire Airways Ltd.,
P.O. Box 1524,
AUCKLAND. C.1.

23rd November, 1942.

Dear Sir,

Your letter dated 18th instant asking permission to erect a temporary building approximately 37' by 12' adjacent to garage on south side of Haig Street to house your Company's Providore equipment, has been received.

The necessity for this building is understood to be urgent and, on the clear understanding that tenure of the site is temporary, its construction may be proceeded with.

It is assumed that the building will be occupied and employed in exactly the same manner as the other buildings, the property of the Air Department, now used by your Company and that being the case the land will, in the meantime, be rent free.

The Board may, at any time, review this question as it is not equitable that valuable land and harbour facilities which have involved

P.T.O.

heavy expenditure on the part of the Board, should be exempt from their proper and legitimate charges.

This however is a matter for subsequent discussion with the Air Department and, as stated above, the occupation of the area required will in the meantime be rent free.

Yours faithfully,

DH. IMB.

Superintendent.

Auckland Harbour Board

Nº 11524

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To Foreman of Works.....

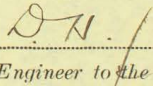
Date 20th May, 19 42.

Subject PLACING MOORINGS - T.E.A.I. BASE
MECHANIC'S BAY -
REPAYABLE PUBLIC WORKS DEPT.

Please place two moorings ~~as required~~ at
Tasman Empire Airways Base, Mechanic's Bay, as required by
Public Works Department.

Report cost for charging.

(COVERING INSTRUCTION)


.....
Engineer to the Board.

Mr. Haskell, who is
 Engineer for P.W.D on ~~the~~ Sea
 Plane Bases, wants an estimate
 of cost to dredge for a new pos-
 ition for Brady Pontoon. This
 to be brought in to within 4 feet
 of the Pinnis Pontoon.

It will also be necessary to
 ascertain if there is enough
 water at dead low tide to
 ballast the Pinnis Pontoon so
 that her draught would
 be 2'-9" *just enough*

W. H. Prince
 Mech. O'ceer.

Public Works Auckland

~~Transp.~~ clearing away Pontoon, Barge,

Quays & mooring & replacing

Dredge 3 days @ 11/7- 33

Launch 3 - @ 7/7- 21

Dredger 4 days @ 100 400

456

Estimate verbal to Mr Prince Say \$500

Board's available plant is not suitable
 for a small job such as this.

3
 W.H.P.
 5.2.47

AUCKLAND HARBOUR BOARD
MEMORANDUM

Nº 5579

From

FOREMAN OF WORKS

Repay. Public Works Dept.

To

The Engineer

A.H.B.

23.25 Jan'y 1942.

SIR,

I beg to report that

Salvaging "Baby" Pontoon.

On Jan'y 1st. the charges being as follows:-

Labour:	33 hrs @ 4/02	8 0 16
	Charge.	9 11 4
	6 hrs @ 5/6	1 13
	1 day @ 1/0	1 10
7 part Crew	42 hrs @ 3/5	5 3 7 1/2
	8 - @ 1/5	1 3
		£ 18 0 5
	5% p	18
		£ 18 18 5
Taxi-hire	1 1/2 hrs @ 1/6	2 16 0 ✓
Meals.		12 6 ✓
Transport 101 1 day @ 1/1		11 0 0 ✓
Labourer. Sh. @ 1/6		7 0 0 ✓
		<u>£ 40 6 11</u>

11. 13. 40
6 6 7
10 6
6 18 7

add
Hire of gear 1. 0. 0 ✓
Pump 3. 0. 5/6 16. 6 ✓

9 7393

C. M. Batty

FOREMAN OF WORKS

Auckland Harbour Board

Nº 11168

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To Foreman of Works.....

Date 6th January, 1942.

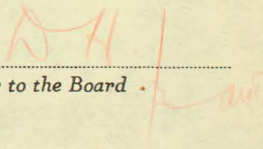
Subject SALVAGING "BRABY" PONTOON ..

REPAYABLE PUBLIC WORKS DEPARTMENT.

Please supply diving and other equipment
for raising sunken "Braby" Pontoon at the Air Base,
Mechanic's Bay, on 1st instant.

Report cost for charging as usual.

(COVERING INSTRUCTION)


.....
Engineer to the Board .

(COPY - Original and
Estimate on File No.
861/1.)

17th. October, 1941.

F. Maurice Clarke Esq.,
General Manager,
Messrs. Tasman Empire Airways Ltd.,
Mechanic's Bay,
AUCKLAND.

Dear Sir,

SLIPWAY FOR SEAPLANES.

Referring to discussions regarding the provision of a slipway for seaplanes at Mechanic's Bay, herewith print of A.489 showing details of the proposed work.

The estimated cost of forming the slipway and paving the whole area is £5,900

To provide a fence 12 ft. high around three sides of the area 940

To provide an electric winch of approximately 20 H.P. for the slipway 630

Estimated Total Cost.. £7,470.

No provision has been made in the estimate for any buoys or moorings that might be required.

As you are aware, the site of the Air Base is temporary and in addition to the cost of the slipway and contingent works, the Air Department or whoever is to bear the cost of these works will be required to bear the cost of removal and making good when the time comes to utilise the area for its original purpose.

Yours faithfully,

SUPERINTENDENT & ENGINEER.

DH.OM.

Repair of P.W.D.

Cost of unmooring "Baby" Pontoon, towing to Slipway, slipping, cleaning off marine growth, painting with 1 Coat Anti-Corrosion & 1 Coat Anti-Fouling Paint, unslipping & re-mooring at Air Base.

15 to 22 Sept 1961.

Labour

Unmooring	1.8.10		
Re-mooring	3.16.11		
Cleaning & Painting	170.4.2		
Foremen	11.17.0		
	187.6.11		
+ $\frac{1}{13}$	11.8.0	201	14 11 ✓

Cartage

Material	A.C. Paint	2 Cwt.	4	5	0	✓
	A.F. "	2 "	10	7	8	✓
			23	1	6	✓

Marine Launches

Use of gear & tools (Anchors, Suspenders)					9	19	8	✓
" " Works Car					1	4	0	✓
Plant Launch "Faro"					1	5	0	✓
T'port No 2	1 1/2 days @ 9 1/2/h				15	19	5	✓
Ta Waka	3/4 hrs @ 12/h					9	4	✓
Ta Hauraki	7 1/2 " @ 17/h				6	11	3	✓
Overse	1 1/2 " "				10	14	5	

107 Est. Ch.
A.S.P.

240	2	3	
24	0	3	
6	1	1	270 3 7
			<u>316 6 8</u>

Extras (to P.W.D. Engineer's Instructions)

Annealing Chains & Shifting Fairleads

Labour	4.8.7		
+ $\frac{1}{13}$	6.10	4	15 5

Material Tar 2 gals @ 9
Firewood

			3	0
			10	0
			5	8 5
			10	10
			2	10
			<u>6</u>	<u>2 1</u>

Summary

Painting re	316.6.8	
Slipway Charge	35.17.1	re
	<u>352.3.9</u>	

Extras

	6.2.1
<u>£</u>	<u>358.5.10</u>

9. 7069

Estimate was £ 290

P.W.D. Praby Pontoon

for extras incurred on Coon Rapids

Overtime Working up, Launching 5.10.7:
+ 8.0 5 18 7

^{200 Ton}
Use of Shipway Machinery

Grindstone 3 1/2 hrs @ 2/- 7 0
Bandsaw 1/2 " @ 4/6 2 3

Taxi hire & use of Hogan's car for bringing in motor.

107 Est. Co
A.I.P.

. 12 0
6 12 7
13 3
3 6

7 9 4
7 18 7

Shipway Charges (Harbour Dept)

1 day @ 1/9

3 days @ 7/5/10/-

9 0 0
16 10 0

25 10 0

Harbour Dept. of Tonic

2 3 3

Water

1 5 3
27 18 6

Chgt by Harbour Dept

Cs. 7069

AUCKLAND HARBOUR BOARD
MEMORANDUM

No 5266

From

FOREMAN OF WORKS

Repayable Public Works Dept.

To

The Engineer

A.H.B.

8th October 1941.

SIR,

I beg to report that

*Grady Pontoon - Slipping & Painting
Instructions 10/22.*

The costs in connection with this work are as follows:-

	£	S	D	£	S	D
<u>Labour: Chip, Clean & Paint</u>	17	0	4 1/2 ✓			
Unrigger Pontoon	1	8	10 ✓			
Remoast " "	3	16	11 ✓			
Supervision.	11	17	0 1/2 ✓	18	7	0 1/2 ✓
<u>Lunches: A.H.B.</u>	14	15	0 ✓			
Mixed.		13	2 ✓	14	18	2 ✓
<u>Plant. Transport No II.</u>	15	19	5 ✓	15	19	5 ✓
<u>Gears Tools</u>	9	19	8 ✓	9	19	8 ✓
<u>Cher. Car No 2, Taxi hire etc.</u>	1	18	0 ✓	1	18	0 ✓
<u>Cartage</u>	4	5	0 ✓	4	5	0 ✓
<u>200 Ton Slipway machinery</u>		9	3 ✓		9	3 ✓
<u>Materials: 2 cwt's Anti-corrosive</u>	10	7	8 ✓			
2 " Anti-fouling	23	1	6 ✓	33	9	2 ✓
				£	271	58 1/2
<u>Engineer's instructions: Shift Fairleads</u>					12	1 ✓
4 gals Tar @ 9/-					3	16 5/4 ✓
Firewood @ 10/-					4	13 ✓
Use of force						
				£	276	7 3/4

N.B. In addition to the above the following work was carried out to the P.W.A.

Engineer's instructions: Shift Fairleads

4 gals Tar @ 9/- . 3 . Remove, Ammend & Replace
Firewood @ 10/- 10 ✓ Chains

add Fero 1/15/-

92 769 COMBATY

FOREMAN OF WORKS

Bosely Pontoon

Labour: yd. office 191.156 ✓

Boatage 4.50 ✓

Plant:

Gravel 12 1/2 hrs 10.165 ✓

T. Stone 7 1/2 hrs 6.11.3 ✓

T. Wicks 3/4 hrs 9.4 ✓

T. P's 1 3/4 days 15.19.5 ✓

Motor car 3 hrs 1.40 ✓

34-18-5

Mending motor pit 9.3 ✓

gas + tools 9.19.8 ✓

Taxi 40 ✓

a L + T B & Selt 13.2 ✓

Hogan use of car 10.0 ✓

Paint

10.7.8

231.6

33-9-2 ✓

9. 7069

Stores X Stock pit 31- 10-
76 + 100
? ~~hand of gas for~~

276.12.7

13.0

277.5.7

Only Ponton - Labor Days

unmoor	1-8-10	✓
Remove to sth	3-16-11	✓
Repairs	170-4-2	✓
annual chain	3-16-6	✓
more fairleads	12-1	✓
supervision	11-17-0	✓
	<hr/>	
	191-25-6	
Shipping Charge	5-10-7	✓
	<hr/>	
	197-6-1	

Auckland Harbour Board.

MEMORANDUM

From

*Shipwrights Shed,
Beaumont St.*

To

THE ENGINEER

Oct. 6th — 1941.

Repayable by Public Works Dept.

For Removing - Annealing and Replacing Chain on Baby Pentoon ¹⁸⁻⁹⁻⁴¹ 19-9-41

<i>Labour 18-9-41</i>	<i>Commick. E. 1 1/2 hrs @ 2/5 per hr.</i>	<i>3-7 1/2</i>
	<i>Lyons. B. 4 hrs @ 2/5 "</i>	<i>9-8</i>
	<i>Matthews. W. J. 1 1/2 hrs @ 2/5 "</i>	<i>3-7 1/2</i>
	<i>Matthews. T. 4 hrs @ 2/5 "</i>	<i>9-8</i>
<i>19-9-41</i>	<i>M^{rs} Masfers. J. 8 hrs @ 2/5 "</i>	<i>1-3-0</i>
	<i>" Dit. Money "</i>	<i>1-6</i>
	<i>Commick. E. 3 1/2 hrs @ 2/5 "</i>	<i>8-5 1/2</i>
	<i>Lyons. B. 2 hrs @ 2/5 "</i>	<i>4-10</i>
	<i>Matthews. W. J. 1 1/2 hrs @ 2/5 "</i>	<i>3-7 1/2</i>
	<i>Matthews. T. 2 hrs @ 2/5 "</i>	<i>4-10</i>
<i>Materials Used</i>	<i>4 gals. Tar @ 9/ gal.</i>	<i>3-0</i>
	<i>Fire wood: 1 load @ 10/-</i>	<i>10-0.</i>
		<i>4-5-10</i>
	<i>Plus 5%</i>	<i>3-8</i>
		<i>to 14-9-6</i>

C. 7069

Geo. Corbitt

Auckland Harbour Board

MEMORANDUM

FROM

*Shipwrights Shed
Beaumont St.*

To

THE ENGINEER.

Oct 6th 193*1*

*Repayable by Public Works Dept.
To Shifting Fairleads on Braby Pontoon, 19-9-41.*

<i>Labour, 19-9-41</i>	<i>Mendoza H.</i>	<i>4 hrs @ 2/10³ per hr.</i>	<i>11-6</i>
		<i>Plus 5/0</i>	<i>7</i>
			<i>12-1.</i>

9.7069

Geo. Carlson

11

Auckland Harbour Board.

MEMORANDUM

From

Shipwrights Shed,
Beaumont St

To

THE ENGINEER

Oct. 6th

1941.

Repayable by Public Works Dept.

For BRABY PONTOON on 600 Ton Slipway 16-9-41 to 19-9-41.

Un-Mooring Pontoon. 15-9-41.	Hogan. E.	4 hrs. @ 2/10 ¹ / ₂ per hr.	11-6
	Lyzons. B.	4 hrs. @ 2/5	9-8
	Matthew. J.	4 hrs. @ 2/5	9-8
	Parsons. F.	4 hrs. @ 2/5 ¹ / ₂	9-9
Hauling Pontoon. 16-9-41.	Hogan. E.	3 hrs. @ 4/3 ¹ / ₂	12-11 ¹ / ₄
	Carter. C.	3 hrs. @ 4/3 ¹ / ₂	
	"	1/2 hr. @ 5/7	
	Parsons. F.	3 hrs. @ 3/7 ³ / ₄	
	Gammick. E.	3 hrs. @ 3/7 ¹ / ₂	
	Lyzons. B.	3 hrs. @ 3/7 ¹ / ₂	
	Matthew. H. J.	3 hrs. @ 3/7 ¹ / ₂	
	Matthew. J.	3 hrs. @ 3/7 ¹ / ₂	
Labour: Cleaning-Painting. 16-9-41.	Carter. C.	8 hrs. @ 2/10 ¹ / ₂	1-3-0
	Hogan. E.	8 hrs. @ 2/10 ¹ / ₂	1-3-0
	Mendage. H.	8 hrs. @ 2/10 ¹ / ₂	1-3-0
	"	Dirt money.	1-6
	Reid. J. G.	4 hrs. @ 2/10 ¹ / ₂	11-6
	Carter. C.	3 hrs. @ 2/10 ¹ / ₂	8-7 ¹ / ₂
	M ^{rs} Masters. J.	8 hrs. @ 2/10 ¹ / ₂	1-3-0
	"	Dirt money.	1-6
	Belare. J. M.	4 hrs. @ 2/10 ¹ / ₂	11-6
		Carried Forward.	12-10-5 ¹ / ₈

9, 7069-70

(2)

Auckland Harbour Board.

MEMORANDUM

From

Shipwrights Shed,
Beaumont St.

To

Oct 6th — 1941.

THE ENGINEER

Graby Pontoon Repair

		Brought Forward.	12-10-5 ⁸ / ₈
Labour. 16-9-41.	Parsons, F. 7 hrs. @ 2/11 per hr.		1-0-5.
	" 1/2 hr. @ 4/4 ¹ / ₂		2-2 ¹ / ₂
	Matthews E. 4 hrs. @ 2/11		11-8
	Lammick E. 8 hrs. @ 2/11		1-3-4.
	" 1/2 hr. @ 4/4 ¹ / ₂		2-2 ¹ / ₂
	Lyons, B. 8 hrs. @ 2/11		1-3-4
	Murphy, H. 4 hrs. @ 2/11		11-8.
	Matthews, W. J. 8 hrs. @ 2/11		1-3-4.
	Matthews J. 8 hrs. @ 2/11		1-3-4
	" 1/2 hr. @ 4/4 ¹ / ₂		2-2 ¹ / ₂
	Clare, W. J. 8 hrs. @ 4/1		1-12-0
	" 1/2 hr. @ 4/1		3-0
	Barron. 8 hrs. @ 2/11		1-3-4
	Houghton		1-3-4
	Cox		1-3-4
	Kallcott.		1-3-4
Labour. 17-9-41.	Hogan, E. 8 hrs. @ 2/10 ¹ / ₂		1-3-0
	Mendoza, H. 8 hrs. @ 2/10 ¹ / ₂		1-3-0
	M ^{rs} Maston, J. 8 hrs. @ 2/10 ¹ / ₂		1-3-0
	" Dirt Money		1-6
	Matthews E. 8 hrs. @ 2/11		1-3-4
	Lammick E. 6 hrs. @ 2/11		17-6
	" 1/2 hr. @ 4/4 ¹ / ₂		2-2 ¹ / ₂
	Lyons, B. 8 hrs. @ 2/11		1-3-4
	" 1/2 hr. @ 4/4 ¹ / ₂		2-2 ¹ / ₂
	Matthews, W. J. 6 hrs. @ 2/11		17-6
	" 1/2 hr. @ 4/4 ¹ / ₂		2-2 ¹ / ₂
	Matthews J. 8 hrs. @ 2/11		1-3-4.
	Carried Forward.		<u>35-4-5⁵/₈</u>

9. 7069

3.

Auckland Harbour Board.

MEMORANDUM

From

Shipwrights Shed
Beumont St.

To

Oct. 6th — 1941.

THE ENGINEER

Graby Pentagon Repair.

		Brought Forward:	35-4-5 ⁵ / ₈
Labour 17-9-41.	Matthews, J. 1/2 hr. @ 4/6 1/2 per hr.		2-2 ¹ / ₄
	Clare, W. Ins. 8 hrs. @ 4/.		1-12-0
	1/2 hr. @ 6/.		3-0
	Pyle 8 hrs. @ 2/11		1-3-4
	Whitty " "		1-3-4
	White " "		1-3-4
	Dunbar " "		1-3-4
	Barron " "		1-3-4
	Houghton " "		1-3-4
	Cox " "		1-3-4
	Halleott " "		1-3-4
	Dickson 7 hrs. @ 2/11 per hr.		1-0-5
	Church " "		1-0-5
	Mac Cormack " "		1-0-5
Labour 18-9-41.	Mendoza, H. 8 hrs. @ 2/10 1/2 per hr.		1-3-0
	Mr. Masters of. 8 hrs. @ 2/10 1/2		1-3-0
	" Dirt Money.		1-6
	Dunn, H. W. 8 hrs. @ 2/5		19-4
	Matthews, E. 8 hrs. @ 2/9		1-2-0
	Clare, W. Ins. 8 hrs. @ 4/.		1-12-0
	" 1/2 hr. @ 6/.		3-0
	Barron 7 1/2 hrs. @ 2/11		1-1-10 1/2
	Houghton " "		1-1-10 1/2
	Cox " "		1-1-10 1/2
	Halleott " "		1-1-10 1/2
	Pyle " "		1-1-10 1/2
	Whitty " "		1-1-10 1/2
	White " "		1-1-10 1/2
	Carried Forward.		63-6-6 3/8

9. 7069

Auckland Harbour Board.

MEMORANDUM

From

Shipwrights Shed,
Beaumont St.

To

THE ENGINEER

Oct. 6th 1941

Graby Pontoon Repry.

Brought Forward: 63-6-6³/₈.

Labour. 18-9-41	Drake. 7 ¹ / ₂ hrs. @ 2/11 per. hr.	1-1-10 ¹ / ₂
	Rickson "	1-1-10 ¹ / ₂
	M ^{rs} Cornmark "	1-1-10 ¹ / ₂
	Church 8 hrs. @ 2/11 "	1-3-14
Slipping and hauling Pontoon. 18-9-41	Cartor. C. 1 ¹ / ₂ hrs. @ 2/10 ¹ / ₂ "	4-3 ³ / ₄
	Cammick C. 1 ¹ / ₂ hrs. @ 2/5 "	3-17 ¹ / ₂
	Matthews. H. J. 1 ¹ / ₂ hrs. @ 2/5 "	3-17 ¹ / ₂
Labour. 19-9-41	Mendoza. H. 4 hrs. @ 2/10 ¹ / ₂ "	11-6
	Dunn. H. 8 hrs. @ 2/9 "	1-2-0
	Matthews. C. 4 hrs. @ 2/9 "	11-0
	Clare. W. D. 8 hrs. @ 4/- "	1-12-0
	" 1/2 hr. @ 6/- "	3-0
	Church. H. 8 hrs. @ 2/9 "	1-2-0
Launching Pontoon. 600 Slip 19-9-41	Cartor. C. 3 hrs. @ 4/3 ¹ / ₂ "	2-15 ² / ₄
	Cammick. C. 2 hrs. @ 3/7 ¹ / ₂ "	1-9 ³ / ₄
	Matthews. H. J. 2 hrs. @ 3/7 ¹ / ₂ "	1-9 ³ / ₄
Re-mooring Pontoon. 22-9-41.	Hogan. C. 6 hrs. @ 2/10 ¹ / ₂ "	17-3
	Dunn. H. 6 hrs. @ 2/5 "	14-6
	Matthews. J. 6 hrs. @ 2/5 "	14-6
	Church. H. J. 8 hrs. @ 2/9 "	1-2-0
	Clare. W. D. 12 hrs. @ 4/- "	16-0
	" 1/2 hr. @ 6/- "	3-0
Clerk at Slipway.	Carlson. G. 5 hrs @ 3/1 ¹ / ₂ "	1-5-0.
Stores Used. by Requisition.		33-9-2
Machinery Used.	Grindstone 3 ¹ / ₂ hrs. @ 2/- hr. } Sawsaw. 2 hrs. @ 4/0 }	9-3
Portable grindstone: used at Slipway. 12 hrs. @ 1/- per. hour.		12-0.
To hire of Taxi. 16-9-41.	Cardogan St. to Slipway.	4-0
To Refund of Fares. 16-9-41	E. Hogan.	10-0.
	Carried forward.	114-11-0

9,7069-70

Auckland Harbour Board

MEMORANDUM

FROM

*Shipwrights Shed,
Beaumont St.*

Oct 6th

1931

To

THE ENGINEER.

Graby Pontoon Repair.

Brought Forward 114-11-0

Plus 5% on wages 3-19-4

£ 118-10-4.

97069

P. Carlson

Richmond Harbour Board

MEMORANDUM

FROM

THE ENGINEER

Shipping all day.
30 Sept.

10/9
30 Sept.

9 0 0
16 10 0

off	75	10	0
	2	3	3
	77	13	3
		5	3
	27	18	6

Water

75
102
104
115

AUCKLAND HARBOUR BOARD
MEMORANDUM

No 5154

From

FOREMAN OF WORKS

Repaired. P.W.D. No. 1000.

To

9th Sept. 1941.

The Engineer

A.H.P.O.

SIR,

I beg to report that

Ring-belt. P.W.D. Order No 87316 20th/41.

The cost of making & fitting the above ring belt is as follows

Making. 22.25 x 25th Aug. Bsmith 2 hrs @ 7/0	5 8
" " " 24 - @ 2/6	5 .
Bsmith 1 - @ 2/9.	2 9
Gas 2 1/2	2 1/2
" mate 1 @ 2/4 1/2	2 4 1/2
	15 11 3/4
5%	9 1/2
	16 9 1/4

Fitting 20th Aug + 1st Sept. Labour. 3 @ 3/4 1/2	1 10
" 9 1/2 @ 2/5 1/2	1 3 2
Charge.	1 4 1/2
Concreting.	2
	1 8 4 1/2
5%	1 5
	1 9 10

Materials. Tonly Electrodes 1/3. 30lbs R. Iron 5 1/2	9 7
Gear & Tool. (Aug) 10 Sept. 7.	5 10
Launch. Te Waka. 5 hrs @ 12/6	6 3
Cher. Car No 2. (Aug) 3/4 - @ 8/.	6
	1 9 8
	3 14 3

Combaty
FOREMAN OF WORKS

9/646

AUCKLAND HARBOUR BOARD
MEMORANDUM

Nº 5155

From

FOREMAN OF WORKS

Repair Public Works Dept.

To

The Engineer

A.H.B.

9th Sept. 1944.

SIR,

I beg to report that

Air Base Mechanics Bay.
Instructions 10/34 & 10/89.

This work was completed on 5th Aug and charges are as follows:

Materials. 65 lbs Bolt. 17.5. }
7. J. J. 3.11 }
54' Office Timber 1.5.11 } 4.8.1
12"x6" 1/15" J. bolts 2.1.10 }

Gear & Tools.

Te waka. 1 lb @ 7/6 15/6 } Launches.
Te kauri. 1/2 @ 7/6 13/6 }

Cartage. 1 lb @ 7/6 13/6

Chem Car No. 2. 1 lb @ 8/.

	8	14	2 1/2
		3	11 1/2
	9	1	1 1/2
5%	9	5	
	9	10	7. ✓
	4	8	1 ✓
	2	5	9 ✓
	1	8	10 ✓
	19		✓
	8		✓
L		19	19/10

add of lock

10/3
1/6
1/6
1/6

9. 6947

Embating

FOREMAN OF WORKS

Auckland Harbour Board

Nº 10789

86 1/2
INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To Foreman of Works.

Date 1st August, 1941.

Subject AIR BASE MECHANIC'S BAY - REPAY, PUBLIC WORKS DEPT.

Further to Instruction No.10737, dated 9th ultimo, fit a 12" X 6" hardwood on timber landing to take gangway-davit as shown on E.487/4 herewith, also extend decking and alter handrail and kerb to suit gangway.

Report cost for charging.

The Public Works Dept. will supply gangway and fittings.

241
p. 05
.....
Engineer to the Board

ADDRESS ONLY TO

THEENGINEER,
PUBLIC WORKS DEPARTMENT.



FPB/MN.

P.W.	8
	86

please quote these numbers.

PUBLIC WORKS DEPARTMENT,

.....AUCKLAND. C.1.N.Z., 30th July 1941.

OVERSEAS AIR BASE - MECHANICS BAY.

The Superintendent and Engineer,
Harbour Board Office,
P.O. Box 1259,
AUCKLAND. C.1.

Dear Sir,

With reference to your recent interview with our Mr. Dickson, relative to the above, I forward herewith Plan A.D.O.18174 of the proposed attachment fitting for the gangway leading from the landing to the P.W. Department's pontoon on the East side.

It would be appreciated if you would kindly carry out the necessary structural alteration to the existing landing.

Yours faithfully,

District Engineer.

Encl. Plan A.D.O.18174.

*Inst. to P.W.
1.8.41*

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

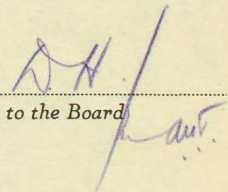
To Foreman of Works.Date 9th July, 19 41.Subject AIR BASE - MECHANIC'S BAY -
REPAYABLE PUBLIC WORKS DEPT.

Make provision, as discussed with you personally, for an extension on the eastern side of the T.R.A.L. landing from which the gangway to the "Braby" pontoon is hinged, to enable the Public Works Dept. to hinge another gangway leading down to their service punt.

Discuss this with Mr. Manson on the site and make the extension to suit his requirements.

Supply detailed sketch of the work as executed, from which the office plans can be corrected.

Report cost for charging.


.....
Engineer to the Board

1
861
3

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To Foreman of Works.

Date 3rd July, 1941.

Subject "BRABY" PONTOON - SLIPPING & PAINTING -
REPAYABLE A/C. PUBLIC WORKS DEPT.

Referring to your Memo No.4713 of 1st April, the slipping and painting of the "Braby" Pontoon has now been authorised and is to be put in hand at a time mutually suitable to the Controller of the Air Base, (Flight Lieutenant Canavan) and the Harbourmaster, who will require to see that the Slipway is available.

Get in touch with the Controller and make the necessary arrangements.

As suggested by you, make arrangements to slip and overhaul the wooden pontoon at the same time. This latter will be done at the Board's cost.

Report cost of "Braby" Pontoon for charging to Public Works Department.

D. H. J.
.....
Engineer to the Board
K. Ant.

861
/D

COPY

SEE ALSO SECRETARY'S FILE

10th June, 1941.

The District Engineer,
Public Works Department,
AUCKLAND, C.1.

Dear Sir,

AIR BASE MECHANIC'S BAY -
ADMINISTRATION BUILDING.

Receipt of your P.W.8/86 of 6th instant, enclosing copy of plan A.D.O.17774 of Administration Building shewing additions now under construction, is acknowledged with thanks.

Yours faithfully,

SUPERINTENDENT & ENGINEER.

DH.OM

861
/3

3rd July, 1941.

The District Engineer,
Public Works Department,
AUCKLAND, C.I.

Dear Sir,

"BRABY" PONTOON - SLIPPING AND PAINTING.

Your letter PW.8/86 of 26th ult., stating that the slipping and painting of the "Braby" Pontoon is to proceed, has been received.

Close co-operation will be maintained between the Air Base and the Board to ensure that the work is undertaken with the least inconvenience to the Air Services and at a time when the Slipway is otherwise disengaged.

It has not been possible to fix a definite date up to the present, but if the Pan American Service is able to get back to its normal schedule it may be possible to arrange a date for commencement about Monday, 21st instant. However, the work will be put in hand at the first suitable opportunity.

Yours faithfully,

SUPERINTENDENT & ENGINEER.

DH. OM

Address reply to—

The _____ Engineer,
Public Works Department,



PUBLIC WORKS DEPARTMENT.

AUCKLAND, C.1. N.Z., 26th June, 1941.

[P.W.—99A.

In replying

P.W. 8/86

please quote these numbers.

Air Base, Mechanics Bay - Braby Pontoon.

Memorandum for

The Superintendent and Engineer,
Harbour Board Office,
P.O. Box 1259,
AUCKLAND, C.1.

Dear Sir,

Further to my letter of the 16th April last, I have to advise that instructions have now been received to proceed with the slipping and painting of the Braby Pontoon.

I would be pleased if you would undertake the work on the basis of your estimate of £290 for normal working hours, but, before taking action, it will be necessary to fix a suitable date for the release of the Pontoon from the Base. Therefore, please advise the date that would be suitable for you to put the work in hand, so that the necessary arrangements can be made with the Control Officer at the Base.

Yours faithfully,

District Engineer.

Handwritten in red ink:
MB
3.7.41



P.W.	7
8	86

please quote these numbers.

ADDRESS REPLY TO

THE.....ENGINEER,

PUBLIC WORKS DEPARTMENT,

PUBLIC WORKS DEPARTMENT,

AUCKLAND, C.1.N.Z., 16th April, 1941.

Air Base, Mechanics Bay - Braby Pontoon,

The Superintendent & Engineer,
Harbour Board Office,
P.O. Box 1259,
AUCKLAND, C.1.

Dear Sir,

I have to thank you for your letter of 2nd instant,
with estimated cost of painting the Braby Pontoon.

I have to advise that this matter has been re-
ferred to my Head Office, and immediately a decision is reached
I will advise you.

Yours faithfully,

H. Byrom
District Engineer.

W. H. Hill
17.4.41

2nd April, 1941.

District Engineer,
Public Works Department,
AUCKLAND, C.I.

Dear Sir,

TASMAN EMPIRE AIR BASE -
"BRABY" PONTOON.

Your letter P.W.8/86 of the 25th ult., asking for an estimate of the cost of removing the "Braby" pontoon, placing on Slipway, cleaning and painting, has been received.

I have looked into this matter and estimate that the total cost, including the supply of anti-corrosive and anti-fouling paint, returning to position and relaying moorings, would be approximately £290.*

This estimate is based on the work being carried out during the normal working hours and involves the pontoon being on the Slipway for six working days.

Should it be necessary to reduce the time that the pontoon is out of commission, overtime rates for cleaning and painting while on the Slipway would increase the total cost of the work to an extent depending upon the amount of overtime worked.

Please let me know whether you wish this work to be put in hand and a suitable date for its commencement, which latter would have to be decided with reference to the availability of the Slipway.

* £290

Mr. Hollenbeck rang Mr. Pinner, P.W.D. and stated that if pontoon was available for shipping & painting from Sat. 16/4/41 to Sat. 23/4/41 only. This would involve overtime rates for labour being paid on the two Saturdays & perhaps two hours overtime each work day. Total cost would be £290.00 to £325.00.

Yours faithfully,

DH.OM

SUPERINTENDENT & ENGINEER.

AUCKLAND HARBOUR BOARD
MEMORANDUM

Nº 4713

From

FOREMAN OF WORKS

Slipping & painting 'Braby' Pontoon

To

The Engineer.
SUB.

1st April 1944

SIR,

I beg to report that

Instruction 10th 93.

Estimate for Slipping 'Braby' Pontoon

Lifting moorings necessary; gangway; and replacing same.

Transport 2 days. £19. 0. 0.

Towage of Transport + 'Braby' to & from 12. 0. 0.

Labour. Bleaming; & painting; 1 coat of Anti-corrosive + 1 coat of Anti-fouling. <sup>12. 0. 0. }
Hire of Gear say. 5. 0. 0. }
Material.</sup>

2 kegs Anti-corrosive 16 0 0

2 kegs Anti-fouling 24 0 0

Cartage + Transport of men. say. 5. 0. 0.

10% Cont. Charge on £180 a J.P.

£19. 0. 0.	
12. 0. 0.	
5. 0. 0.	
16. 0. 0.	
24. 0. 0.	
5. 0. 0.	
<u>£205. 0. 0.</u>	
18. 0. 0.	
223. 0. 0.	

Allow for 6 working days on slipway. I recommend
and wooden punt should be slipped at the same time. ²⁴⁰
_{+ Slipway Charge 5.0}
245

[Handwritten signature/initials]

Combaty

FOREMAN OF WORKS

Auckland Harbour Board

Nº 10493

861
/3
2

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

To Foreman of Works.

Date 31st March, 19 41.

Subject SLIPPING & PAINTING "BRABY" PONTOON.

The Public Works Department have asked for an estimate of the cost of carrying out the following work on the "Braby" pontoon:-

Remove pontoon, place on Slip, scrape away weed, apply one coat of anti-corrosive and one coat anti-fouling paint.

Please let me have this as soon as possible.

Do not include Slipway charges in your estimate as this will be worked out later when it is known how long the pontoon will require to be on the Slipway.

Please let me know this.

D.H.
.....
Engineer to the Board
F. 105

Auckland Harbour Board.

MEMORANDUM

From

86/13
The Foreman of Works
A.H.B.

To

26th March 1941.

(Rec^d 23/5/41)

THE ENGINEER

Repayable - P.W.D. Air Dept. Fenders & Landing.

Inst. 10111.

The cost of erecting fender piling, landing and handrailing, demolishing original landing, cutting berling and replacing berling at original position.

	£.	s.	d.
Labour. <i>Nov 61-17-11 Feb 15/11 407. 1/1/18 - 63/14/18</i>	63	5	8. ✓
Gear & Tools.	11	12	7. ✓
Cartage	6	2	6. ✓
Launches.	4	7	7. ✓
Motor Car.	1	0	0. ✓
Transports.	62	3	4. ✓
Material <i>Nov 7/1913 Dec 41-11-15 July 1/13/4</i> <i>Jan 33-7-3 = 84-4-1</i> <i>acct 45/11/2</i> <i>59-16-11</i>	37	3	2.
	<u>185</u>	<u>14</u>	<u>10</u>

Office Labour.

2 . 14 . 4. ✓

Saving over old capstan area

2 . 3 . 1.

86/13

Nov 9. 0 ✓
St. 13. 9 ✓
St. 4. 4 ✓
231

£190 . 12 . 3

A.H.B.
Foreman of Works

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of works
A.S.B.

To

THE ENGINEER

Repayable P.W.D. Air Dept. Jenders & Landung Inst. 10111.

26th March. 1941.

From 4th November/40 to 13th February, 1941.

Labour.

	£	s.	d.	£	s.	d.
Carpenters. 384 Hrs @ 79 ³ / ₄ .	54	0	0			
do charge money.	1	4	3.			
Fitters asst. 6 @ 25 ¹ / ₄ .	14	7.				
Blacksmiths 10 ¹ / ₂ @ 79.	1-8	11				
" asst. 10 ¹ / ₂ @ 25 ¹ / ₄ .	1-5	7				
+ 5%.	2	18	10			
Carpenters Cut Bolt. 2 Hrs @ 79 ³ / ₄ .	5	8				
+ 5%	3					
charge money	2.					
Electrical Dept 2 Hours @ 279	5	6				
+ 5%	3					
+ 40% Blacksmiths Time <i>included in labour</i>	1	1	8	63-5	8	✓
<u>Gear & Tools.</u> Oct 12 [✓] Nov. 29/3 [✓] Dec 7. 11. 4. ✓ <i>Jan 11.</i>	11	12	7	11	12	7. ✓ 4
<u>Cartage</u> Oct. 10 [✓] , Nov. 1. 7. 6 [✓] , Jan 4-5 0	6	2	6	6	2	6 ✓
<u>Launches.</u> Oct. Tawa. 2 Hours @ 17/6	1	15	0 ✓			
Nov Orewa 3/4 " " "	13	2	✓			
Feb. " 11/4 " " "	1	1	11 ✓			
Feb. Te Hauraki 1 Hr @ 17/6	17	6	✓	4-7	7	✓
<u>Motor Car. Chev. No 2. (Nov) 2 1/2 Hrs @ 8/-</u>	1	0	0 ✓	1	0	0 ✓

C/O G. B. Co

Carried forward.

£ 86-8-4

C. M. B. Bates
Foreman of works.

Auckland Harbour Board.

MEMORANDUM

From

26th March 1941.

The Foreman of works

To

A.H.P.

THE ENGINEER

Repayable. P.W.D. Air Dept.

Inst. 10/1/11.

Tenders + Landing

£. s. d.

Material.

Timber.

56 ft Brush Box 1 3 0
 8 ft. S. Red ^{mahogany} ~~redwood~~ 3 7
 8/30 ft Piles T.P. 41-0-0

{ 2/12', 2/15', 2/18', 1/22'
 2/9', 1/18', 5/12'
 12" x 6" T.P. Timber } 28-7-10

1 - 12' Tallon wood. 1 16 0 72 = 10-5

16 lb Hexagon Nuts. 7 10
 33 lb Carriage Bolts. 12 3
 5 lb. Galv. Nails. 2 9
 1 lb wire Nails 5
 1 file 1 7
 22 lb Dogs 1-4-9
 174 lbs Round Iron 2. 5 8
 2 lb Round spikes 2-0
 9 ft 1" Chain 14. 11
 9 lb Round washers 3. 8
 6 old Tyre 1 11
 12 ft malthoid. 5-3
 23 lb Deck spikes 9. 3
 7-6 ^{lb} Bolts. 3-8-0

Credit

714 S.H. Bark old 10.14.2
 330 S.H. T.P. old 4.19.0
 40 S.H. Brush Box (old) 8.0
 236 S.H. T.P. old Piles 29.10.0
45.11.2

J.M. Dalry
 Foreman of works.

£ 82. 14 4

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of works
A.H.B.

To

26 March, 1941.

THE ENGINEER

Repay P.W.D. air Dept. Tenders Landing Inst. 10111.

				£ s. d.	£ s. d.
Brought forward.					86 - 8 - 4
<u>Transports.</u>					
No 1.	Oct./40	2 day	@ 9 2.6 day	} 19 7. 10	
No 1.	Nov.	1/8 day	" " "		
No 2.	Oct.	2 1/16 day	" " "	} 42. 15 6	
No 2	Nov.	1 day	" " "		
No 2	Jan/41.	1 7/8 day	" " "		

Material.

less credit of Timber.
(Details attached)

82. 14. 4 ✓
45 " 2 ✓ 37 3 2

$$\begin{array}{r} 37. 16. 4 \\ 27. 3. 2 \\ \hline 1. 11. 9 \end{array}$$

£ 185 14. 10

Office Labour.

2 14 16. ✓

Saving over old Captain's area.

Labour. Labourers. 2 hrs @ 26
1/2 " @ 24 1/2
Plus 5%.

5 0.
3 6 1/2
5 1/2 9 0. ✓

Materials. Emulsion. 22 Gallons.
Metal Sheeps. 4". 1/2 yd.

1 6 3
4 6 1 13 9. ✓

Gears & Tools. February 1941.

14. ✓

O.M. Baty
Foreman of works.

£ 190 12 3

G. G. G.

Auckland Harbour Board.

MEMORANDUM

From

861/3

The Foreman of Works,
A. M. B.

To

8th May,

1941

Rec 73/1/41

THE ENGINEER

Repay. P.W.D. - Moorings at Air Base.

Instructions 10314, 23, 44.

Cost of lifting moorings of "Bealy" Pontoon, re-laying in new position, moving and masting wooden pontoon, and assembling gangways in new position.

Summary.

Labour Jan 6/10/0 4% = 13/-

Gear & Tools 2 14 10
 1 10 3
2 1/3 1/4 Mch 200 ton slip: 1/16
 gear boat x 2 = 1/10 1/3

Cartage July "

Launches

Motor bar

Transports

Machinery (200-ton slip)

Material. Jan 10/-

Total.

	£	s.	d.	
Labour	62	3	0	X
Gear & Tools	2	14	10	X
Cartage	1	10	0	X
Launches	27	10	7	X
Motor bar	2	2	0	X
Transports	47	18	2	X
Machinery (200-ton slip)		2	0	X
Material	X	2	0	X
Total.	£146	12	10	

Jan - Feb 1941

9/ 6639

Com Batley
Foreman of Works

Auckland Harbour Board.

MEMORANDUM

From

*The Foreman of Works,
D. H. B.*

To

8th May,

1941.

THE ENGINEER

Repay P.M.D. - Moorings at Air Base.

17th to 27th January, 1941.

Labour.

<i>Carpenters</i>	<i>158 hrs. @ 2/9³/₄.</i>	<i>22</i>	<i>4</i>	<i>5</i>		
"	<i>8 " @ 4/2⁵/₈</i>	<i>1</i>	<i>13</i>	<i>9</i>		
"	<i>Charge Money</i>		<i>7</i>	<i>4</i>		
<i>Fitters</i>	<i>1 hr. @ 2/9</i>		<i>2</i>	<i>9</i>		
"	<i>Asst. 2 " @ 2/5¹/₂</i>		<i>4</i>	<i>10</i>		
<i>Blacksmith</i>	<i>6 " @ 2/9</i>		<i>16</i>	<i>6</i>		
"	<i>Asst. 6 " @ 2/5¹/₄</i>		<i>14</i>	<i>8</i>		
<i>Shipwright</i>	<i>120 " @ 2/10¹/₂</i>	<i>17</i>	<i>5</i>	<i>0</i>		
"	<i>Asst. 64 " @ 2/5</i>	<i>7</i>	<i>14</i>	<i>8</i>		
"	<i>Super { 4 days @ 2/10/-</i>	<i>6</i>	<i>-</i>	<i>-</i>		
	<i>{ 2 hrs @ 5/7¹/₂</i>		<i>11</i>	<i>3</i>		
"	<i>Diet Money</i>		<i>6</i>	<i>-</i>		
<i>Boilermaker</i>	<i>1 hr. @ 2/9</i>		<i>2</i>	<i>9</i>		
"	<i>Gas.</i>			<i>2</i>		
"	<i>Asst. 1 hr. @ 2/4¹/₂</i>		<i>2</i>	<i>4</i>		
<i>Sawyer</i>	<i>1 " @ 2/7¹/₂</i>		<i>2</i>	<i>7</i>		
"	<i>Asst. 1 " @ 2/4¹/₂</i>		<i>2</i>	<i>5</i>		
		<i>58</i>	<i>11</i>	<i>5</i>		
	<i>+ 5%.</i>		<i>2</i>	<i>18</i>	<i>7</i>	
		<i>61</i>	<i>10</i>	<i>0</i>		
	<i>40% on Blacksmiths time = 12.5</i>					
	<i>Include this in labour } + 5% 7</i>		<i>13</i>	<i>0</i>	<i>62</i>	<i>3 0</i>
<i>Gear & Tools (January)</i>	<i>Jan 1/13/4 to x 20th Feb. Jan 1/1</i>		<i>2</i>	<i>14</i>	<i>10</i>	
<i>Gear exp Hunt Transport No. 2</i>	<i>6639</i>		<i>1</i>	<i>10</i>	<i>3</i>	
<i>Ornamentary Foreman of Works.</i>	<i>Carried Forward:-</i>	<i>66</i>	<i>8</i>	<i>1</i>		

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works,
A. H. B.

To

THE ENGINEER

8th May, 1941

Repay P.W.D. - Moorings at Air Base.

	L.	s.	d.	L.	s.	d.
Brought Forward:-				66	8	1
<u>Cartage (January)</u>				1	10	0 ^x
<u>Motor car "bikes" No. 2 Jan. 5 hrs. @ 17/-</u>				2	2	0 ^x
<u>Cart Transport No. 2 (Jan)</u>				45	12	6 ^x
5 days @ £9/2/6				2	5	8 ^x
1/4 " @ £9/2/6 (1/2 day)						
<u>Launches:-</u>						
Jan. "Le Naka" 2 3/4 hrs. @ 12/6.				1	14	4 ^x
Jan. "Oreere" 15 hrs. @ 17/6				13	2	6 ^x
Jan. "Le Hauraki" 6 hrs. @ 17/6.				5	5	0 ^x
"Alii & E. Gaby. (our own launches out of commission on Tuesday.)						
8 1/2 hrs. @ 17/6.				7	8	9 ^x
				27	10	7 [✓]
<u>200-Ton Slipway Machinery (January)</u>						2 ^x 0 ^x
<u>Material:-</u>						
3 doz. iron screws.				5		
3 black screw shackles				7	8	
7 lbs. round iron				1		
4 - 1/2" ring bolts (from slipway)				12	0	1 ¹⁰ 2 ⁰
				146	12	10 ⁰

95 6639

A. H. B.
Foreman of Works.

Auckland Harbour Board

MEMORANDUM

FROM

Shipwrights Shed,
Beaumont St.

To

THE ENGINEER.

Feb 7th 1941.

Repayable by TASMAN AIRWAYS.

Shifting and Fixing Moorings

Materials Used:

(Form B/Unit Ryn 93)

- ~~4 2 Ring-bolts with Shoulder @ 3/- 12-0-~~
- 3 dg. 2 1/2 x 12 gauge Iron Screws. 5-
- 3 3/4" black iron Screw Shackles with Shoulder. 7 5-

42636

? 7 lbs Rd Iron

(Costs not shown to be got from store. Cost not yet to hand.)

12-0-
5-
7 5-
1-0-1
1-11-
1-2-0

95.6639-

Auckland Harbour Board

MEMORANDUM

FROM

Shipwrights Shed,
Beaumont St

To

THE ENGINEER.

JAN 31ST 1941

Re-payable by ^{n.v.h} TASMAN AIRWAYS LTD

For Shifting pontoons and Re-mooring Same.

JAN. 20 th	Labour.	7-7-6 $\frac{1}{2}$
" 21 st	"	7-7-6 $\frac{1}{2}$
" 22 nd	"	5-13-1
" 23 rd	"	7-12-0 $\frac{1}{2}$
" 24 th	"	5-8-9.
		<u>£ 33-8-11$\frac{1}{2}$</u>

qs. 6639

(Cartage Costs to be included in this account.)

21st. Planer

2 @ 4/-

2-0.

26/2/41
J.S.M.

In replying



P.W. 8786

please quote these numbers.

ADDRESS REPLY TO

THE ENGINEER,
PUBLIC WORKS DEPARTMENT.

PUBLIC WORKS DEPARTMENT

AUCKLAND, C.1. N.Z. 25th March, 1941

Tasman Empire Air Base - Braby Pontoon

The Engineer,
Auckland Harbour Board,
AUCKLAND.

Dear Sir,

I should be glad if it would be possible for you to supply this Department with an estimate of the cost of the following work on the Braby Pontoon:-

Remove pontoon, place on slip, scrape away weed, apply 1 coat of anti corrosive and 1 coat anti fouling paint.

Yours faithfully,

M.H. H1

J. Byrom

District Engineer

*Inst. to Gov. & Supply Estimate
31.3.41*

861
/3

24th December, 1940.

The District Engineer,
Public Works Department,
AUCKLAND.

Dear Sir,

AIR BASE MECHANIC'S BAY - SEARCHLIGHT.

Referring to your letter of 12th instant, it is noted that the current used on the searchlight recently installed on the breakwater will be a charge against the Air Department, accounts to be rendered to the Control Officer, Air Department, Mechanic's Bay, and this procedure will be followed.

It is noted, however, that the searchlight has now been removed and I understand the location proved unsuitable.

Yours truly,

SUPERINTENDENT & ENGINEER.

DH.OM



NM/MN.

P.W.	8
	86

please quote these numbers.

ADDRESS REPLY TO

THE.....ENGINEER,
PUBLIC WORKS DEPARTMENT,
.....

PUBLIC WORKS DEPARTMENT,

AUCKLAND, C.1. N.Z., 12th December 1940.

AIR BASE MECHANICS BAY - SEARCHLIGHT.

The Superintending Engineer,
Harbour Board,
AUCKLAND.

Dear Sir,

With reference to my verbal discussion as to fixing of searchlight on Tide Reflector, I should be pleased to have your permission to connect electric circuit to your underground main.

It is understood from a discussion with your Electrical Engineer that a check meter would be fixed at your controls. The current used will be a charge against the Air Department, accounts to be rendered to the Control Officer, Air Department, Mechanics Bay.

Thanking you in anticipation.

Yours faithfully,

[Handwritten signature]
24.12.40

[Handwritten signature]
District Engineer.

COPY

SEE ALSO SECRETARY'S FILE

27th November, 1940.

The District Engineer,
Public Works Department,
AUCKLAND, C.I.

Dear Sir,

TRANS-TASMAN AIR BASE- MECHANIC'S BAY.

Referring to your letter P.W.8/86 of 12th. instant regarding proposed extension to the Administrative Building and the erection of a garage, both as indicated in red on plan A.D.O.17219, I have to say that the area of land allocated by the Board for the Administrative Building extends to the street line, so that the proposed extension will not occupy any more land than is now available.

There is no objection, as a purely temporary measure, in the proposed garage being erected where shown in the plan, but on account of the Board's future plans, tenancy of this site would require to be at the will of the Board.

I shall be glad to receive construction plans when these have been prepared.

Yours truly,

DH.OM

SUPERINTENDENT.

1
861
3

- C O P Y -

AUCKLAND HARBOUR BOARD.

No.10204.

INSTRUCTIONS TO FOREMEN & INSPECTORS.

26th November, 1940.

Mr. A.G. Brebner.

DREDGING AT AIR BASE MECHANIC'S BAY.

Dredge a channel 50 ft. wide to a depth of 10 ft. at L.W.S.T. at the new site for the Braby Pontoon as shown on Z.7/41 and E.477/6 herewith. Sights will be erected on the breastwork to show the eastern and western edges of the cut.

The dates tentatively fixed for this work are from Monday 2nd. to Wednesday 4th. December, but these are subject to the requirements of the Overseas Air Services.

Consult with Mr. Houchen at the Air Base re positions for moorings and times when work can be carried out in the area.

According to the predicted tides, flotation for the dredger should be available from 5 a.m. to 1 p.m. on 2nd. December and from 7 a.m. to 3 p.m. on 4th. December, 1940.

D. Holderness

ENGINEER TO THE BOARD.

Per: A.N.T.

Refer reports
Shows work done
Dec. 3rd to 10th / 1940.
1500 yds taken out -

13th November, 1940.

The District Engineer,
Public Works Department,
AUCKLAND, C.I.

*Copy (see
General file
No. 861)
1*

Dear Sir,

AIR BASE - MECHANIC'S BAY.

At a recent interview I undertook to provide Mr. Manssen of your Department with an estimate of the cost of constructing a covered landing in front of the breastwork at the Air Base so that passengers to or from the Braby pontoon in its proposed new position 125 feet west of its present location would leave or return to the paved quay at the present landing opposite the Administration Building instead of having to proceed in front of the Workshop building.

This proposal has now been investigated and the additional cost is estimated at approximately £650.

In the meantime the work is proceeding as originally planned and if any alteration is required, a decision should be made at once to avoid further cost in alterations.

Yours faithfully,

SUPERINTENDENT.

861
3

--C O P Y--

AUCKLAND HARBOUR BOARD.

No. 10111/3.

INSTRUCTIONS TO FOREMEN AND INSPECTORS.

8th. October, 1940.

Foreman of Works.

MECHANIC'S BAY AIR BASE.
REPAY. A/C. T.E.A.L. AND P.A.A.

Herewith copy of plan E.477/7, showing alterations to be made urgently at the Air Base, Mechanic's Bay.

Construct new landing and drive fender piles for the new position of gangway pontoon in the position shown for T.E.A.L., and construct new jetty for P.A.A. in the position shown.

Dredge flotation by grab for the Braby pontoon in new position.

The existing P.A.A. jetty is to be left in position, but the gangway and pontoon will be removed to the new site. When Braby pontoon is removed to its new site, the old landing and fender piles are to be removed.

Moorings for Braby pontoon are to be altered as required for the new position of the pontoons.

Remove the fence and gate across the quay between T.E.A.L. and P.A.A.

Continue the paving of the quay to the western end of the new site for the Braby pontoon and extend the fencing to enclose this area.

Keep all costs separate and in detail, and these will be borne as under:-

A.H.B.

Paving quay and fencing and dredging for Braby pontoon.

P.A.A.

New jetty (Estimate £500)

Air Department.

New landing and fender piles for gangway punt and alterations to moorings of Braby pontoon (estimate - Landing and fender piles £370, alterations to Moorings £60).

There will doubtless be other costs in moving winches, fairleads, etc., but no arrangement has yet been made about these, and they may possibly be carried out by the P.W.D..

Keep in touch with Mr. Angus on this work.

D. Holderness.

ENGINEER TO THE BOARD.

Per: A.N.T.

861
3

27th September, 1940.

The Air Secretary,
Air Department,
WELLINGTON, C.I.

Dear Sir,

NEW ZEALAND OVERSEAS AIR TERMINAL
MECHANICS BAY BASE.

The Board is still awaiting advice regarding the proposal to alter the position of the Pan-American and T.E.A.L. landings at Mechanics Bay, as set out in my letter to you of 23rd July.

The delay in arriving at a decision in this matter is giving serious concern to the American Airways, and I shall be glad to know just how the matter stands at present.

See
861
1

Pontoon:

Referring to previous correspondence regarding the replacement of the present pontoon, which is urgently required by the Harbour Board for its normal use, and particularly to your letter of 25th July in which you stated that the Public Works Department had been instructed to proceed urgently with the construction of a timber pontoon, inquiries from the local office of the Public Works Department indicate that nothing has yet been done, nor are the local officers impressed with any urgency in this matter.

I shall be glad if you can have this looked into and construction expedited.

Yours truly,

DH.OM

SUPERINTENDENT & ENGINEER.

1

- C O P Y -

PAN AMERICAN AIRWAYS COMPANY.

July 30th, 1940.

Mr. Holderness,
Superintendent & Engineer,
Auckland Harbour Board,
AUCKLAND, C.I.

Dear Sir,

In regard to your letter of July 23rd,
with enclosures.

This will confirm that Pan American Airways Company will assume the costs for the relocation and construction of our landing jetty, and we shall be very grateful if you will undertake the work as outlined.

Very truly yours,

(sgnd.) W.J. Mullahey.

Airport Manager.

WJM:CM

- C O P Y -

AIR DEPARTMENT.

WELLINGTON, C.1.

25th July, 1940.

Dear Sir,

NEW ZEALAND OVERSEAS AIR TERMINAL,
MECHANIC'S BAY BASE:
PONTOON.

I have to acknowledge receipt of your letter of the 3rd instant and to advise that the Public Works Department have been instructed this day to proceed urgently with the construction of a suitable pontoon to replace the Harbour Board pontoon which you have kindly made available as a landing stage in the past.

Yours faithfully,

(sgnd.) T.A. Barrow.

AIR SECRETARY.

The Superintendent,
Auckland Harbour Board,
P.O. Box 1259,
AUCKLAND. C.1.

Auckland Harbour Board

23rd July, 1940.

From THE CHAIRMAN To THE MEMBERS, A.H.B.

OVERSEAS AIR SERVICES - MECHANICS BAY BASE.

After the Board's luncheon on Friday, 19th instant, to celebrate the inauguration of both the Trans-Tasman and the Auckland - San Francisco ocean air services, Members will not require any explanation from me of the significance to Auckland of these developments.

What is important, however, is the necessity for the Port of Auckland to keep not only abreast, but if possible ahead, of requirements for the accommodation of these and such extensions and further services as may be expected to develop.

With so many important officials available in Auckland at that time, I seized the opportunity of arranging a conference with the object of discussing the lines upon which we, as the Harbour Board controlling the Auckland Harbour Aerodrome, should set out to develop and make provision for the growth of air transport.

Flight Lieutenant Buckeridge, Acting Controller of Civil Aviation, Mr. Barrow, Air Secretary and Flight Lieutenant Canavan, Traffic Control Officer at the Mechanics Bay Air Base, were present on behalf of the Air Department. Mr. Maurice Clarke, General Manager, Mr. Houchen, Engineer, and Captains Burgess and Garden, all of Tasman Empire Airways, and Colonel Clarence Young, Captain Tilton, Mr. Ramsey, Mr. Harold Gatty and Mr. Mulahey of Pan American Airways were also present.

The Board's future plans for the development of a commodious and permanent air port to the eastward of the present breastwork involving the reclamation of a large area of land on the seaward side of the Waterfront road off Judges Bay and the construction of a wave-screen and breakwater from Point Resolution, were explained and received universal approval.

The temporary nature of the present accommodation and certain pressing disabilities in regard to manoeuvring and mooring large air craft in the more or less confined area and under the present arrangement of landing stages, was discussed, and it was considered necessary to move the landing facilities further west - the Braby pontoon and landing about 125 feet and the Pan American jetty about 90 feet.

This will involve the Board in clearing, fencing and paving an additional area of quay immediately west of the already enclosed area and in additional dredging to provide the necessary depth of water for the Braby pontoon. It will also cause some inconvenience to the Board through its restricted use of the breastwork which is principally employed

70

23rd July, 1940.

for harbour construction purposes, but, in view of the importance of Auckland maintaining its pre-eminence as a harbour airport, I have instructed the Superintendent to co-operate to the full.

With the Trans Tasman and Pan American Services now in operation it seems to me probable that the major scheme of development is likely to come prominently before the Board in the near future and it was pleasing to have the Board's tentative proposals in this direction so heartily endorsed.

In the meantime, I feel that the Board will unanimously approve my endeavour to see that all interests are consulted and that the present temporary facilities are made as serviceable as possible and are used to the best advantage.

(Signed) R.T. REID

CHAIRMAN.

DH.MIJ

20
08

Costs of Equipment & Works constructed
& carried out by the Board for T.E.A.L.
Base at Mechanics Bay.

Two Timber gangways.	119. 17. 11
Steel gangway.	282. 17. 1
Timber Jetty & Fendering for Pontoon.	303. 3. 0 X
Assembling "Beaky" Pontoon	1232. 9. 9
Paving & Drainage around Office & Workshops.	748. 12. 6
Install Own Capstans & Fairleads.	32. 3. 1
Erecting Standard for Wind Socks.	3. 7. 6
Laying Moorings (Auckland)	187. 9. 1
" " (Hobsonville)	35. 13. 8
Constructing Concrete Mooring Blocks.	66. 13. 11
Preparing Pitch Paint for use as Temporary gangway Pontoon	174. 4. 9
Design of Steel Pontoon	112. 15. 1
Ring Bolts	4. 7. 3
Changing over gangway Pontoon	45. 12.
	3347. 6

1/2
1/2

861/3

3rd July, 1940.

The Air Secretary,
Air Department,
WELLINGTON. C.1.

Dear Sir,
New Zealand Overseas Air Terminal -
Mechanics Bay Base.

Your letter of 1st instant has been received and it is noted that you propose to replace the existing Harbour Board pontoon with a new timber pontoon and that the Engineer-in-Chief will be getting in touch with me in this connection.

I shall be glad if you will expedite this matter so that the Board may have the use of its pontoon at the earliest possible moment.

Yours faithfully,

Superintendent.

DH.MIJ

- C O P Y -

AIR DEPARTMENT.

WELLINGTON, C.I.

1st July, 1940.

Dear Sir,

NEW ZEALAND OVERSEAS AIR TERMINAL,
MECHANIC'S BAY BASE:
STEEL PONTOON

In reply to your letter of the 11th June and previous correspondence in connection with the above I have to thank you for the trouble you have been to in the preparation of this design, but after further consideration have decided not to proceed with the design of the pontoon in steel, and I am arranging to replace the existing pontoon with a new timber pontoon similar to the one at present in use.

The Engineer-in-Chief will be getting in touch with you in connection with this matter.

Yours faithfully,

(sgnd.) T.A. Barrow

AIR SECRETARY

The Superintendent & Engineer,
Auckland Harbour Board,
P.O. Box 1259,
AUCKLAND.

861
2

26th June, 1940.

Flight Lieutenant Canavan,
Control Officer,
Air Base,
Mechanic's Bay,
AUCKLAND.

Dear Sir,

Your letter, 57/7/40, of 14th instant referring to Harbour Board operations in the vicinity of the Air Base at Mechanics Bay, has been received.

The importance of completely safeguarding flying boats moored in the vicinity or berthed at the Braby pontoon is fully realised and, as an added precaution, instructions have been issued that, in future, no barge or pontoon is to be allowed into the area when a flying boat is moored at the base without the Foreman of Works' authority and then only under special supervision.

You do, I know, appreciate the difficulties under which the Harbour Board is working and these difficulties have largely been brought about by the Board's efforts to provide flying boats with the most suitable accommodation and shelter. The whole of the area now temporarily occupied rent free as an air base was constructed at very great cost for use as a Harbour Board workshop and depot and our operations have been very considerably hampered and restricted by diverting it to its present use. However, the particular circumstances which caused the congestion and difficulty about which you had to complain have now been removed and are not likely to recur. The recent and prolonged strikes in Australia resulted in a very large quantity of piles and other timbers from New South Wales arriving in one shipment and these had to be handled and disposed of quickly. In future, these piles will be re-handled only by the electric crane situated further to the west and it will not be necessary to bring the transport crane into the area.

Yours faithfully,

DH.MIJ

Superintendent.

26th June, 1940.

The Acting Controller of Civil Aviation,
Air Department,
WELLINGTON. C.1.

Dear Sir,

Your letter, 36/4/8, of 21st instant referring to letter (ref. 57/7/40) from the Control Officer and asking that the handling of piles be kept outside the gazetted fairway to the Air Base at Mechanic's Bay, has been received.

The matter has been discussed on the spot with the Control Officer and I enclose copy of my reply to Flight Lieutenant Canavan.

I do not anticipate that there will be any cause for complaint in the future.

Yours faithfully,

Superintendent.

DH.MIJ

A.-1A.1



IN REPLY REFER TO
REF. NO.

35/4/21

AIR DEPARTMENT,
WELLINGTON. C. 1.

18th June, 1940

Dear Sir,

In reply to your letter of the 11th June,
I have to advise that the plan is under consideration
and you will be communicated with further in the course
of the next few days.

Yours faithfully,

T. A. Brown
22
AIR SECRETARY

The Superintendent & Engineer,
Auckland Harbour Board,
P.O. Box 1259,
AUCKLAND

Mr Taylor
Keep this before used
& if nothing further is heard by 1st July
bring it under my notice again
17.6.40
See letter 17.6.40
aut.

1
861
/3

11th. June, 1940.

The Air Secretary,
Air Department,
WELLINGTON.

Dear Sir,

STEEL PONTOON FOR AIR BASE.

Referring to my letter of 15th. March last, I have not yet received your approval of the plan of the proposed steel pontoon, and nothing further has yet been done towards its construction.

I understand from Tasman Empire Airways Limited that this and a duplicate pontoon for exchange purposes are very necessary, and I shall be glad of an early reply.

Yours truly,

SUPERINTENDENT & ENGINEER.

1
861
3

10th. April, 1940.

The District Engineer,
Public Works Department,
AUCKLAND, C.I.

Dear Sir,

AIR BASE - MECHANIC'S BAY.

Referring to your letter of 15th. May 1939, I am returning herewith the following drawings in connection with the Braby Pontoon and moorings:-

Prints - S.D. 674, 676, 678, 679, 682, 789 (2 copies) and 790.

Prints - S.K. 1361, 1361A, 1362 and 1387.

Print - S.D. - Moorings - of 12.12.38.

Materials List. - (11 prints).

Also two prints (not numbered) and three pencil drawings No's. 33, 34 and 35 of moorings at Mechanic's Bay and Hobsonville.

Yours truly,

SUPERINTENDENT & ENGINEER.

AUCKLAND HARBOUR BOARD
MEMORANDUM

Nº 3865

From

FOREMAN OF WORKS

Repayable. Public Works Dept (Air Base)

Left moorings

To

April 10th 1940

The Engineer

A.H.B.

Inst 9582

SIR,

I beg to report that

on 5th 16th March cost of lifting moorings is:-

Labours

labourers	3/4 Hr @ 4/9-	3.7	
"	1 1/2 " " 3/6 ^{3/4}	5.3	
"	{ 24 " " 2/6 ^{3/4}	2.17-0	
"	{ 7 ^{1/2} " " "	17.10	
	Dist Money	5-6	
Boiler maker	1/4 Hr @ 2/9	11-0	
	"	11-0	
	Burning	2-0	
	Dist money	2-0	
Chadigan	1/4 Hr @ 8/11	2.0	
"	1/2 @ 6/0 ^{3/4}	3.0	
"	10 @ 4/0 ²	2-0-5	8-0-7
material	15 ft 1 1/8" old Manila Rope	2 10	2.10
Lunch	For ^{Over} Manila 5+6 Mch. 10 Hr @ 1/6	5-15-0	8 15 0
Transport No 2.	Lift Mooring 1 1/2 day @ 9/4	12 11 0	12 11 0
Cartage		5.0	5.0
			<u>29-14-5</u>

NOTE 5 floats Hired for above job,
& not returned to shipway.

9/ 5483

Amey
Combs

FOREMAN OF WORKS

861
/

- COPY -

AUCKLAND HARBOUR BOARD.

No. 9582.

INSTRUCTIONS TO FOREMEN AND INSPECTORS.

2nd. March, 1940.

Foreman of Works.

REPAYABLE - PUBLIC WORKS DEPT. (AIR BASE).

Lift the eastern and western end of the "Trot of 3 mooring" in front of the Braby Raft, add a 20ft. length of chain to each leg of the bridle connecting these to centre mooring and relay; chain to be the spare chain supplied with the original moorings.

Site will be clear from Tuesday morning, 5th. inst., for approximately one week, and work must be completed within this period.

While this is being done, place temporary floats on the three pendants to allow the Public Works Department to overhaul the rubber buoys.

D. Holderness,
ENGINEER TO THE BOARD.
per A.N.T.

861
2

15th. March, 1940.

The Air Secretary,
Air Department,
WELLINGTON.

Dear Sir,

STEEL PONTOON FOR AIR BASE.

Referring to your letter of 22nd. February 1939, I forward herewith print of E.487/5 showing details of the proposed steel pontoon to replace the present temporary timber pontoon in use at the landing.

I shall be glad if you will have this examined to see that it meets with the requirements of your Department, and on receipt of your approval the work will be put in hand.

Yours truly,

SUPERINTENDENT & ENGINEER.

Auckland Harbour Board.

MEMORANDUM

From

Drawing Office

5th Mar. 1940.

To

THE ENGINEER

Trans-Tasman Air Service

Steel for 40 ft x 22 ft. Pontoon for Landing

Note :- Material supplied must not be less than lengths specified plus 1" over.

DESCRIPTION.	NUMBER OF LENGTHS REQUIRED.	LENGTH IN FT.	WEIGHT IN lbs.
<u>M.S. Plates</u>			
48" x 1/4" THK.	20	15' 2"	12,370
" "	20	6' 10"	5,575
42" x 1/4" THK.	2	16' 0"	1,140
" "	2	15' 2"	1,080
" "	2	20' 0"	1,428
" "	2	12' 1"	860
36" x 1/4" THK.	4	11' 0"	1,346
24" x 1/4" THK.	1	7' 0"	143
<u>M.S. FLAT.</u>			
2 3/4" x 1/4"	1	20' 0"	47.

Auckland Harbour Board.

MEMORANDUM

From

Drawing Office

5th Mar. 1940

To

THE ENGINEER

DESCRIPTION.	NUMBER OF LENGTHS REQUIRED.	LENGTH IN lbs.	WEIGHT IN lbs.
<u>Angles L</u>			
6" x 4" x 5/8"	6	30'0"	3,590
5" x 3" x 3/8"	14	22'0"	3,000
4" x 4" x 3/8"	2	25'0"	486
4" x 3" x 3/8"	21	22'0"	3,900
3" x 3" x 3/8"	6	25'0"	1,076
" " "	1	20'0"	143
3" x 2 1/2" x 1/4"	1	20'0"	89
2 1/2" x 2 1/2" x 3/8"	4	20'0"	472
" " "	1	30'0"	177
" " "	6	25'0"	885
" " "	10	25'0"	1,475
" " "	4	25'0"	590
" " "	1	12'0"	71
<u>R. S. J's. I</u>			
5" x 2 1/2" x 9 lbs.	7	22'0"	1,387
7" x 3 1/2" x 15 lbs.	2	40'0"	1,200

Total weight = 41,055 lbs.

+ 2 1/2% = 42,080 lbs = 18 3/4 Tons

W. Nelson 5/3/40.

Auckland Harbour Board.

MEMORANDUM

From

Drawing Office

5th Mar. 1940.

To

THE ENGINEER

Trans-Tasman Air Service

Steel Pontoon for Landing

Summary of main features :-

Pontoon plating throughout $\frac{1}{4}$ " thick.

Over-all dimensions $40' 3\frac{1}{2}" \times 22' 0\frac{1}{2}" \times 3' 7\frac{1}{4}"$ deep.

Weight of pontoon 18 tons.

With about 6 tons of ballast, that is, 24 tons displacement the freeboards is $2' 6"$ (i.e. same as existing timber pontoon).

Deck stiffeners consist of $4" \times 3" \times \frac{3}{8}"$ angle at 2 ft. centres, and are capable of taking a safe load of about 100 lbs per sq. ft. or a concentrated load of $\frac{1}{2}$ ton at centre of widest span.

Bottom stiffeners are designed for pressure at $3' 6"$ draft, that is, when water-line is about deck level, and consist of $5" \times 3" \times \frac{3}{8}"$ angle and $5" \times 2\frac{1}{2}"$ R.S.J.'s alternately, at 2 ft. centres.

W. Nelson

5/3/40.

Date 11/3/40 19

Estimate for Steel Pontoon for Air Base at Mechanics Bay
40' x 22' x 3'-6"

Description	Quantity	Item	Rate	£	s.	d.
Roller Steel Sections	8	lin	19/4	152		
Steel Plates	11	lin	26/4	286		438
Setting out & assembling	19	lin	20/4	380		
Welding	19	ton	30/4	570		950
Moving Cleats	4	ea	5/4	20		
Manholes	4	ea	10/4	40		
Miscellaneous		Say		40		100
Painting inside & outside & covering decks		Say		200		
Launching & placing in position		Say		100		
						300
						1788
Contingencies		10%				178
						<u>1966</u>
						Say <u>£2000</u>

ADDRESS REPLY TO

THEENGINEER,
PUBLIC WORKS DEPARTMENT.

HS:JC

P.W. 7
8/86

please quote these numbers.

PUBLIC WORKS DEPARTMENT,

AUCKLAND, C. 1. N.Z., 6th March, 1940.

Trans Tasman Air Base.MEMORANDUM for:The Engineer,
Auckland Harbour Board,
AUCKLAND.

Confirming the arrangements made between Mr. Vickerman and Mr. Ross of this Department, I would be glad if you will arrange to have five rubber mooring buoys at the Trans Tasman Base lifted for cleaning purposes.

I enclose Works Order No. 37642 covering this work.

B. Byson
District Engineer.

*Order retained.
AET
7/3/40*

[Handwritten initials]

- C O P Y -

AUCKLAND HARBOUR BOARD.

No.9204.

INSTRUCTIONS TO FOREMEN AND INSPECTORS.

5th. November, 1939.

Foreman of Works.

REPAYABLE AIR DEPARTMENT.

TASMAN AIR BASE

Install additional eye-bolt in the wall to
Mr. Turnill's requirements.

"BRABY" PONTOON

Remove sufficient of the ballast in this pontoon
to raise the Oregon timber beams about half an inch clear
of water level in still water.

D. Holderness

ENGINEER TO THE BOARD.

per: A.N.T.

18th December, 1939.

The Air Secretary,
Air Department,
WELLINGTON. C.1.

Dear Sir,

At the request of Mr. Turnill who was at that time the Engineer in charge at the Tasman Empire Airways Base in Mechanic's Bay, certain works have been carried out on the assurance of Mr. Turnill that accounts should be rendered to and paid for by the Public Works Department.

I have received a letter, dated 15th instant, from the District Engineer, Public Works Department, Auckland, stating that, as no instructions have been issued by his Department to carry out these works, the vouchers should be forwarded to the person who actually ordered the work.

Mr. Turnill has now left New Zealand and his successor, Mr. Houchen, is unlikely to have any knowledge of the particular items.

I have therefore had fresh vouchers prepared which are enclosed herewith. I shall be glad if you will arrange payment.

Yours faithfully,

Superintendent.

DH.MIJ

AUCKLAND HARBOUR BOARD
MEMORANDUM

No 3666

From

FOREMAN OF WORKS

Repay. Air Dept. Exchange over Points.

To

17th. January 1940.

The Engineer,
A.H.B.

SIR,

I beg to report that

the cost of changing piers at Air Base on the 19th. to 22nd. December 1939, inclusive is as follows: -

Labour.

Shipwrights . 64 hrs. @ 2/10¹/₂ per Hr. = 9 - 4 - 0

Charge Money . = 0 - 8 - 0

Dirt " . = 0 - 3 - 0

Labourers . 14 1/2 hrs. @ 2/4 per hr. = 16 - 16 - 0

Supervision . W. Chase, Sen. = 3 - 2 - 10 £ 29-19-10

Launches.

To Manrakhi 2'4 @ 17/6. = 1 - 19 - 5

Anch. Lch. + Boat Co. 3 1/2 @ 17/6. = 3 - 1 - 3 £ 5-0-8

Cartage.

6 loads @ 5/- per load.

= 1 - 10 - 0 £ 1-10-0

£ 36-10-6

Q 5259

W. Baty

FOREMAN OF WORKS

24th. November, 1939.

The Air Secretary,
Air Department,
WELLINGTON, C.I.

Dear Sir,

Pending the construction of the permanent steel pontoon for the landing at the Air Base one of the Harbour Board's timber pontoons has been in use. This pontoon has developed a leak which is extending and which would, in the course of time, create unreasonable difficulty.

It is therefore proposed to substitute another somewhat smaller timber pontoon and to slip and repair the original.

I should be glad of your agreement to the costs involved being borne by your Department.

Yours faithfully,

Superintendent.

DH.MIJ.

Repairs Air Department

861
3

Oct to
31 June
1939.

Oct
1 July to
30 Oct 1939.

Total

2 Timber gangways. (Est. 250)

Labour	51 0 9	1 0 2	52 0 9
" office	2 6 1		2 6 1
Cartage	1 0 0	18 0	1 18 0
Zooton Sph Machinery	2 0		2 0
Timber Yard	8 1		8 1
Workshops	1 3 9	1 4 1	2 7 10
Gen + Tools	1 0 5		1 0 5
Launches - Over	8 9		8 9
Stores	42 4 9		42 4 9
Total	99 14 5	20 2 3	102 16 8

Steel gangway. (Est. 275)

Labour	100 17 4	7 19 11	108 17 3
" office	38 4 10		38 4 10
Machinery Workshops	4 18 5	1 15 3	6 13 8
Gen + Tools	4 6 7	1 0	4 2 7
Stores	75 19 10	11 6	76 11 4
Launches - Over	1 15 0	1 15 0	3 10 0
T'port N° 1	2 5 8		2 5 8
Works Car		14 0	14 0
Total	228 2 8	12 16 8	240 19 4

Mooring (Auckland)

Labour office	3 8 3	48 4 2	51 12 5
Cartage	3 0	11 17 1	11 12 0
Gen + Tools		3 8 7	3 8 7
Stores		19 7	19 7
To Hamaki		29 19 5	29 19 5
Over		12 13 9	12 13 9
Works Car		1 14 0	1 14 0
Outside Launches		8 15 0	8 15 0
T'port N° 1		49 11	49 1 0
Total	3 13 3	168 19 6	172 12 19

Mooring (Hobsonville)

T'port N° 1		9 2 6	9 2 6
Labour		10 17 4	10 17 4
Over		6 2 6	6 2 6
To Hamaki		7 0 0	7 0 0
Gen + Tools		1 0	1 0

Mooring Blocks (Coventry)

Labour		25 12 4	25 12 4
Matuaia	22 10 3 2 8 3	24 18 6	24 18 6
Gen + Tools		1 5 6	1 5 6
Crane Charge		9 0	9 0
Rent Car		10 0	10 0
Cartage		15 0	15 0
Outside Launches		1 15 0	1 15 0
Workshops		13 6	13 6
Total		55 18 10	55 18 10

94985
989

201/146

Report of the Air Dept.

	Est. Paid	Est to 30/6/39	Est 1/7/39 + 30/9/39	Total
<u>Timber Jetties & Bundring</u>	Cabin July 1939 Bundring 1275			
Labour	62 9 9			62 9 9 ✓
Office	20 3 8			20 3 8 ✓
Machinery w/ Shops	2 13 4	1 6 10		4 0 2 ✓
200 Ton	2 3			2 3 ✓
Timber yd	3 3			3 3 ✓
Iron & Tools	12 17 6			12 17 6 ✓
Cartage	7 8 0			7 8 0 ✓
Works Car	1 6 0			1 6 0 ✓
"Te Works"	15 0			15 0 ✓
T'port N° 1	22 16 3			22 16 3 ✓
" N° 2	10 5 4			10 5 4 ✓
Stones	115 9 4	12 10 10		128 0 2 ✓
	256 9 8	13 1 8		269 0 6 ✓
<u>Brake Pontoon</u>			add from Brough's Car	
Labour	258 2 3	360 5 2	618 13 5	✓
Stones office	138 5 11	2 1 3	3 7 2	✓
"Cover"	2 8 1	104 2 3	242 18 2	✓
T'port N° 1	2 5 8	7 17 6	10 5 7	✓
Mach. w/ Shops	9 0 11	3 15 6	13 3 6	✓
Iron & Tools	24 14 2	23 18 1	48 2 3	✓
Cartage	8 6 6	14 15 6	23 2 0	✓
Motor Car "Works"	2 0 0	5 10 0	7 10 0	✓
Mach. 7 Doston	2 16 0		2 16 0	✓
El. Current		4 8 9	4 8 9	✓
Crane & Turpankin Hair		8 0 4	8 0 4	✓
Chain		15 3 2	15 3 2	✓
Mach. 7 Timber Yard		8 2	8 2	✓
Hair of Riveting Hammers		1 0 0	1 0 0	✓
Stock Slipway		2 9 2	2 9 2	✓
Crane "Makua" - Launching		21 10 0	21 10 0	✓
Use of Erection Site say 11 weeks @ 1		11 0 0	11 0 0	✓
	449 15 3	586 11 11	1035 26 4	✓
<u>Roading (Paving & drainage around Workshops & Office.)</u>			18 13 6	✓
Labour	125 4 1	63 1 10	188 5 11	✓
Office	12 9 11	2 16 0	15 5 11	✓
Stones	21 17 9	359 0 5	380 18 2	✓
pin & Roller		3 0 0	3 0 0	✓
Works Car	7 18 0	2 4 0	10 2 0	✓
Cartage	38 1 6	14 10 6	52 12 0	✓
Iron & Tools	2 5 8	3 14 10	6 20 6	✓
Advertising Contracts		16 0	16 0	✓
	207 16 11	449 12 7	657 9 6	✓
<u>Install Copstons & Fairhads</u>				
Labour		15 14 2	15 14 2	✓
Stones		7 16 8	7 16 8	✓
Iron & Tools		10 10	10 10	✓
Cartage		3 6 0	3 6 0	✓
		27 7 8	27 7 8	✓
Est Paid	914 1 10	1073 17 6	1987 19 4	✓

94985-9

③
Rafay's Air Dept.

Cost to
30/6/59

Cost 1.7.59
to 30.9.59

Total

B. Fund.

Erecting Standard for Wind Rocks

W. Chopra	42	42	✓
labours	204	204	✓
Stones	93	93	✓
Jan. Tools	31	31	✓
	<u>266</u>	<u>266</u>	✓

Steel Pontoon
office labours

26 17 26 17 ✓

4-10' Dinghies (12)

Labours	1104	5932	58136	
Stone	29105	2426	531211	
Stock Shipway		112	112	
Mach 7 Tools	80	160	240	
Taxi	86		86	
Mach 7 Timber 7d.	411		411	
	<u>3222</u>	<u>831210</u>	<u>115150</u>	✓

Info labours and charges
in the labours and stone
to B. Fund. Cost

C/S
4967

Paints

labours	751007	79118	✓
Stones	2185		
baggage	61710}	55186	✓
Seaw Tools	47105}	5	✓
Stock Shipway	146	146	✓
	696	696	✓
	<u>14992</u>	<u>14992</u>	

C/S 4985-9

1446.4.3

1
From

AUCKLAND HARBOUR BOARD
MEMORANDUM

No 3437

FOREMAN OF WORKS

Repay. Air Department.

To

16 October 1939.

The Engineer
A.H.B.

Inst. 9133.

SIR,

I beg to report that

in accordance with instruction 109133 following is detailed cost of installing the necessary ballast into the wooden pontoon & into the Braby Pontoon to Mr. Tunell's instructions :-

19-25 Sept. 1939.

<u>labours</u>				
labourers	53 hrs @ 1/4.	6.	3.	8.
"	1/4 " " 3/6 3/4.		2	8
	53 hrs @ 1/4 1/2	6.	5.	10
	Charge money.		3.	4
	Super. H Barrett.		14.	0
Shipwrights	64 hrs @ 2/10 1/2	9.	4.	0
<u>Gas & Tools</u>			1.	6
<u>Cartage</u>		2.	9.	0
<u>material</u>	T c. @ 1/6			
Ballast.	54 9.1 0	27.	0.	4
9-12" spawls.	3 1/2 lbs Nails		8	
				27-1-0
				<u>52-5-0</u>
<u>Store & Repay</u>	Galv Ring Boels.		11.	1
	7 lbs spikes		2.	0
	4 lbs Bolts.		1.	3
	2 lbs wire Nails		7.	6
	9 lbs Oakum			
				1. 2 9
				<u>53-7-9</u>

FOREMAN OF WORKS

W. Bailey

AUCKLAND HARBOUR BOARD
MEMORANDUM

Nº 3420

From

FOREMAN OF WORKS

Reply T.A.S. An' Dept

To

11 Oct. 1939.
The Engineer
A.H.B.

SIR,

I beg to report that

from 3rd to 20th Oct. The cost of mooring, anchor & chain is:

Labour	3. 8. 1
Cartage	5. 0
	<hr/>
	3. 13. 1.

Foreman of Works
B. J. G.

FOREMAN OF WORKS

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.B.

To

THE ENGINEER

11th October 1939

60' Steel Gangway

Instruction 8702

Tasman Air Landing - Repay Air Department

= 17th April to 28th Sept 1939 =

Cost of construction & delivery of 60' Steel Gangway.

	£.	s.	d.	£.	s.	d.
<u>Labours.</u> details attached.	148	17	4.	148	17	4.
<u>material</u>						
mch 47-7-2						
may 27 3 5.						
june 1. 9. 3						
july 5.6						
sept. 6.0	76	11	4.	76	11	4.
<u>Workshop Machinery</u>	4	18	5.	4	18	5.
<u>Gear & Tools.</u>	4.	2	7	4	2	7
<u>bar. Chev. #2.</u>	14			14		
<u>Electric Current.</u>	3	15	3.	3	15	3.
<u>Lamb over June report.</u>	3	10	-	3	10	-
<u>Transport #1. 1/4 day @ 9/2/6</u> Remove at yard.	2	5	7	2	5	7.
	£			244	14	6

Mr. Baty
Foreman of Works.

Auckland Harbour Board.

MEMORANDUM

From

11th October 1939.

The Foreman of Works
A.M.S.

To

THE ENGINEER

Tasman Air Landing.

Repay Air Dept.

Labour.

60' Steel Gangway

£. s. d.

	No.	Rate.				
Painters	7½	2/9.	9	16	8.	
	"	charge money.		8	6	
Boiler makers	71	2/9¼.	9	19	8.	
	153	2/9.	21	0	9	
	4	2/10½	.	11	6	
	213½	2/4½	25	7	1.	
	44½	2/6½	5	13	2	
	7	2/4.		16	4	
	"	Super.		2	12	6
	"	charge money.		16	10	
Carpenters.	86½	2/9¼.	12	3	3.	
	23	2/4½	2	14	7	
Labourers.	37	2/4.	4.	6	4	
	34½	2/9.	4	14	10	
Fitters	7	2/4½		16	8	
	"	apprentice		6	1	
Pattern maker.	6	2/11		17	6	
Blacksmiths.	16¼	2/9.	2	4	8	
	17¼	2/5¼	2	3	3	
"	140% of 14.8.1		1.	15	3.	
Head office labour	March 35.8.11. May 1.15.9 June 1.0.2.		38	4	10	
			148 = 17 = 4			

Foreman of Works.

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of works
D.H.B.

To

Oct 11th 1939

THE ENGINEER

Tasman Air Landing - Repair Air Department 60' Steel Gangway £ s. d.

Material

4 - 4 ft.	2 1/2" x 2 1/2"	F.C. Kauri.	6	7			
1 -	3' 6"	6" x 4"	T.W. Timber.	3	4		
6 -	16', 3 - 31',	12" x 1 1/4"	Oregon	4	19		
4 -	31',	"	"	3	5		
2 -	31',	"	"	1	12	9	10 6 8
Angles.	4" x 3" x 3/8	- 4,	25' 6"	}	37	15	10
	3" x 3" x 3/8	6,	20' 6"				
	" " "	4,	7' 6"				
	2 1/2" x 2 1/2" x 3/8.	10 - 8' 3"	2/13'				
	2" x 2" x 3/8.	1 - 21' 6"	10/14 9/16				
Channels.	4" x 2" x 7.09	11/10' 6"	1/14' 6"	8	10	6	8 10 6
4.	C. I. Wheels	Pat 2082.	1	0	4.		
1 -	6' x 5' x 1/4"	Checker	4	9	9		
1 -	6' x 14' x 1/4"	"	1	5	9		
2	Hack Saw Blades.		5	10			
25 lb	Engines Bolts.		9	-			
35 "	Coupling Bolts.		12	6			
21 lb.	Shafting.		6	5			
30 lb	Flat steel.		5	2			
10 -	6" x 3/4" flat mild steel		1	6	8		
25 lb	Round steel		3	10			
20 lb.	" Iron		4	8			
2 lb	Hex Nuts.			10			
1/2 lb	Round Washers.			6			
4	Cotter pins			3			
1/2	Cut. 10 10 wire		11	2			
2	only Stanchions		6	-		11	8 8

Carried forward

£ 68 1 8

Auckland Harbour Board.

MEMORANDUM

From

11th October 1939.

The Foreman of works
A.W.S.

To

THE ENGINEER

Tasman Air Landing -

Repay Air Department. 60' Steel Lungway.

Material

Brought Forward

£.68 1.8.

40 H.C. Electrodes

4 6

25 EM7 8 do

4 3.

278 " " 10 do

2. 0.3

40. Besto "

5 9.

320' Oxygen

1 0 2

100 Acetylene.

18.7

Creosote. 4 gallon.

6 6

6' malthoid

2 11.

2 galls Aluminium paint

1 9 3

½ Cwt Red Lead.

1 2.6

2 galls Ran Oil.

8 .

2 " Turp.

7 .

Total.

8-9 8

76 11.4

Foreman of works.

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.B.

To

THE ENGINEER

Sept 26th 1939.

Repay. Air Dept.

Inst. 8866

Assembly, and Erection of Ballysontoon:

£. s. d. £. s. d.

Labour. 22 May to 28th August. 1939.

Boilermakers

300 Hrs @ 2/9 3/4	42	3	9		
485 " " 2/9	66	3	9		
assts 1146 " " 2/4 1/2	136	1	9		
" 8 " " 2/4	18	8			
9 " " 2/6 1/2	1	2	10		
Charge money	3	1	10		
Supervision	11	6	2		
Gas money.	1	10	10	262	9 7

Blacksmiths

7 1/2 Hrs @ 2/9.	1	.	8		
assts 7 1/2 " " 2/5 1/4.	18	2			
40% of B/Smiths	15	6		2	14 4

Shipwrights.

40 1/2 Hrs @ 2/9	5	11	4		
1262 " " 2/10 1/2.	181	8	3		
Charge money.	13	14	0		
assts 38 Hrs @ 2/4 1/2	4	10	3		
" 61 " " 2/4	7	2	4	212	6 2

Carpenters

49 @ 2/9 3/4	6	17	10		
Charge money.	1	6		6	19 4

6. hadigan. make frame mahua
10 Hrs @ 4/0 1/2.

2 . 5 2 - 5

Came's Forward £ 486 9 10

Comptrolr
Foreman of Works

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.B.

To

THE ENGINEER

Sept 26th 1939.

Repair Air Dept

Inst 8866

Assembling & Erection of Braly Linton

Brot forward,

Labour (Continued)

Fitters 39 Hrs @ 7/9.

" 005 4 1/2 " " 7/5 1/4.

" Apprentice

£.	s.	d.	£.	s.	d.
486	9	10	486	9	10

5 7 3.

10 11.

6 8 6 4 10

Labourers.

76 1/4 Hrs @ 2/12

23 " " 2/4.

1/4 " " 3/6 3/4.

9 1 1

2 13 8

11 11 15 8

Painters 5 Hrs @ 2/11.

" 533 1/2 " " 7/9.

" Charge money.

14 7.

83. 18 11

6 11 85 0 5

Plumbers 17 Hrs @ 7/9

" Asst. 17 " " 7/4.

" Charge money

2 6 9

1. 19 8

1 10 4. 8 3

Sanjers. 9 Hrs @ 7/7 1/2

" Asst 9 " " 7/4 1/2.

1. 3 7

1. 1 4 2. 4 11

Electrical Dept

Office Labour.

June.
August.

1 5 11

2 1 3 3 7 2

Total Labour

£ 599 16 7

O. B. Bailey
Foreman of Works.

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.B.

To

THE ENGINEER

25 Sept 1939

Repay Air Dept.

Brady Pontoon Assembly structure.

Not. 8866

	Material				f.	s.	d.	f.	s.	d.
<u>Timber</u>	6-20'	1/18'	oregon	18" x 12"	9	3	6			
	2-18'		do	9" x 2"	1	2	8			
	1-10'	2/18'	1/20'	do	13	6	9			
	1-12'	2/18'	4/20'	do	4	14	2			
	205/8ft.		oregon	9" x 2"	51	12	1			
	1-28ft.		9x3 Kauri	T.C.	17	19	1			
	27/20ft.		3" x 3"	" "						
	4/20'		9" x 2"	oregon	2	10	3			
	1/20'		12" x 2"	"		16	10			
	68'		Old Timber			13	7			
	98'		T.C. Kauri		3	8	8			
	200'		Brush Box		4	4	0			
	180'		medium Kauri.		4	3	8			
	1-5ft.		T.W. Timber.	8" x 5"		8	3			
	2-3ft.		Iron Bark.	9" x 9"	18	7		115	2	-1

Painter Material

4 lbs	Tobin Bronze. (Welding Rod)	10	2			
9	Gals Aluminium paint.	8	1	0		
4	Cwt Anti fouling	35	13	5		
4	Cwt Red lead.	13	8	4		
1	" white lead.	2	18	7		
17	gals Boiled oil	3	11	6		
13	" Raw "	2	12	0		
28	lbs Black paint	12	2			
10	Gals Turp	1	16	8		
1/2	" Turbine		4	9		
8	lbs Putty.		1	8		
2	lbs Russian Blue		7	1		
3-2"	paint Brushes	16	10		90	14 2

Carried forward
C.M. Baty

f 185-16 3

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of works
A.H.B.

To

THE ENGINEER

26th September 1939

Repay. Air Dept. Royal Gunboat, assemble & erect.

Inst. 8866

Material.

First Forward.

	£	s	d	£	s	d
				185	16	3
6- ½" plugs.		1	4.			
3 only plugs			10			
2 galv. 2" plugs.		1.	11.			
6 sockets. 1" x ½"		3.	4			
4 " 2"		2	5.			
15'9" - 2" pipe } 120' - 2" pipe }	5	1	3			
80' ½" Galv. Pipe	1.	1	2.			
3" 1" Tee.		2	8			
6 2" x 1" Tee.	14	-				
1- 2" Tee	3	10				
2- 2" Bends	7	1.				
7 Barrel Nipples.	9	3				
1 Elbow.			11.			
Gas 305 ft. Oxygen	1.	5	6			
" 115 ft. Acetylene	1.	6	11			
Plate 102 lb. - 3/8"	19	2				
Angle. 20' 2½" x 2½" x 3/8"	19	4.				
52 Electrodes	3	10				
5.0.25 Engineers Bolts.	10	11	7			
12 doz deck Bolts. 3½ x 3/8"	13	3				
12 " " 2½ x 1/2"	1	5	11.			
56 lb Galv. U. Bolts.	1.	5	8.			
19 lb. Caniago Bolts.	10	5				
10 lb Wire Nails	2	2				
8 lb Ring Bolts. 7" x 7/8"	1	9	8	29	3	5

Carried forward

£ 214 19 8

Om Dalg

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of works
A.H.B.

To

27th Sept 1939.

THE ENGINEER

Repair Air Dept.

Boat Pontoon Assembly & Erection

Inst. 8866

material

£ s d £ s d

		214-19-8	
	Prot. forward.		
1/2 Gross.	Bolts Galv. 5" x 3/8"	15	5
14 lb	" " 7" x 3/8"	13	4.
1/2 Gross	" " 3 1/2" x 3/8"	12	3
1 piece	3 ply	7	8
150'	Galv. Chain	6	7 8
5 fathoms	Galv Chain	1	2 3
38 lb	Shackle chain	1	15 3
6 only	" 3/4 screws, black X	15	3.
4 lb	washers	2	3.
22'	Iron Round. 12" x 1/2"	1	1-2
24 lb	Round Steel	3	8
66 lb	Kat steel.	11	3.
12'	" " 12" x 1/4.	1	6. 3.
15 lb	Rivets	3	7.
1 packet	1 1/2" x 14 Brass screws	2	5 1
4 "	2 1/2" x 16 " "	1	15 6
6 doz	screws.	2	0
1 1/3 gross	Brass screws.	5	4
2 packets	Brass screws. 2 1/2" x 16.	1	15 6
2	Brass Eyelets.	1	8
5 doz	Brass Eyes	8	2
1	file	1	1.
3 lb	Hex Nuts.	2	2
5 doz	Open links	10	5
6 "	Galv. "	1	10
8 lb	Washers.	5	7 23 11 7

Carried forward.

£ 238 11 3

Combaty

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
H.P.S.

To

THE ENGINEER

26 Sept. 1939

Repayable Air Dept. Bratyslanoom assemble 9 ext.

Inst. 8866

Material	Brought forward	£	s	d.
		238	11	3
1 yard metal waste.		17	6	
5 lbs Chalk		1	3	
56 lbs Wood wool		11	3	
Shafting.		6		
Coke	T. C. @ # 4. 16 6. 0.	4	16	6
2264 lbs Chain @ 15/- Cwt. (Transfer)		244	18	3
<u>Purchase Store Credits July + August 1939.</u>		15	3	2
2 Cwt Anti fouling paint		17	16	8
135 ft 2" Galv pipe		11	1	
6 only Tees 2" x 1		12	6	
9- 1" Nipples		4	0	
6- 1" sockets.		3	0	
6- 1/2" plugs.		1	2	
1- 1" plug.		3		
2- 2" plugs.		1	8	
1- 2" Nipple		1	1	
1- 2" Socket.		6		
2 cwt Boets Engineers.		4	2	0
		27	13	11
Store Stock deficiency		217	4	4
		15	3	2
		1	1	10

O.M. Baty
Foreman of Works.

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.B.

To

THE ENGINEER

11 October 1929.

Tasman Air Service. Repair Air Dept. 8th Sept 1929

Haying Moorings at Hobsonville

Labour

Labourers 24 Hrs @ 2/4³.

2 17 0

" 24 " " 2/4.

2 16 -

Boiler maker 8 " " 2/9³.

1 2 6

" Gas money

1 0

Contractor 1/4 @ 8/1.

10 1

" 1 @ 6/0³.

6 1

" 16 @ 4/0²

3 4 8

10 17 4

Lunches

Lunch Te Hauraki 9th Sept. 8 Hrs @ 17/6

7 - -

" Oreye. " " 7 " " "

6 2 6

13 2 6

Transport No. 1. 1 day. @ 2/9. 2 6

9 2 6

9 2 6

£ 33 2 4

Embaly
Foreman of Works.

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.B.

To

THE ENGINEER

October 13th 1939

Repayable. Air Dept.

= 16 June to 23rd Sept. 1939 = met 8866 + 8930

Construction of 4 - 14' Dinghys

Labour.

		L. d.	L. o. d.
Shipwrights	399 hrs @ 2/10 ² .	57.7.2	
" Asst.	5 " " 2/4 ²	11.11.	
" "	3 " " 2/4.	7.0.	
Sawyer	1 ¹ / ₂ " " 2/7 ¹ / ₂	4.0.	
" Asst.	1 ¹ / ₂ " " 2/4 ²	3.7.	58-13.8

Material details attached.

53.12.11. 53.12.11

Laxi Hire W. Clare respect Timber.

8.6. 8.6

Stores Ex Stock Shipway

11.2. 11.2.

Shipway 200 ton, machinery workshops.

2.4.0. 2.4.0.

Workshop machinery Engineer

4.11. 4.11.

115.15.2

A.H.B.
Foreman of Works.

Auckland Harbour Board.

MEMORANDUM

From

Oct 13th. 1959

The Foreman of Works

To

A.H.D.

THE ENGINEER

Repair Air Dept. Construction 4 - 14' Dinghys.

£ s d.

Material

22 G.M. knees.	6	10	3
12 pair G.M. Rowlocks.	3	7	2.
1 Bar Trippols	1	7	
38 lb Copper Rooves.	3	4	11.
1 lb " Tacks.	2	5	
8 Ring Bolts.	18	6	
7 packets Brass screws	2	10	8.
4 lb Chalking Cotton	11	1	
1 doz Galv. 1/2" washers			10
1 Bale Wood Wool	9	9	
1 lb Brass Brads.	3	10	
17 lb 2" manilla Rope	10	1	
6 sheets sand paper.			5.
5 lb Copper Nails	8	10	
4 fenders.	3	19	10
3 pair ash oars. 8' } 1 pair " " 7'6" }	3	17	10.
1 packet 1 1/2" x 12g Brass. screws.	8	3	
1 piece leather. 5' x 1'	11	2	

Timber

4 - 14 ft	F.C. Kauri	9' x 1"	} 20 7 8.
16 "	"	7' x 1"	
8 "	"	7' x 1/2"	
24 "	"	5' x 1 1/2"	
8 - 15'	"	3' x 3/4"	
12 12' 8 10'	"	2" x 1"	
4 - 4'	"	20" x 1"	
8 - 15'	"	.2" x 3/4"	
16 - 9', 8 - 14'	"	2' x 5/8"	
8 - 10'	"	3' x 1 1/4"	
4 - 5'	"	3' x 3"	
2 - 5' 2 - 6'	"	9' x 1"	
4 - 8'	"	12" x 1"	
15 1/2 ft.	F.C. Kauri		

5 7 10
53 12 11

Foreman of Works.

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.P.

To

THE ENGINEER

12 Sept. 1939

Tasman Air Base.

Repay Air Dept. Timber Landings & Landing

24 April to 23 May 1939

Instruction 8812.

£. s. d. £. s. d.

abstract

labour.

84 5 9 84 5 9

Gear & Tools.

12 17 6 12 17 6

Cartage

7 8 0 7 8 0

Car.

1 6 0 1 6 0

Lanterns.

15 0 15 0

Machinery Workshops.

2 18 10 2 18 10

Transport No 1 & 2.

33 1 7 33 1 7

material.

127 4 2 127 4 2

Total.

£ 269 16 10

23
12 17 6
23 17 6
23 17 6

Wm Baty
Foreman of Works.

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.P.

To

13 September 1939

THE ENGINEER

Repayable Tasman Air Base, Air Department, Landing Instruction 8812.
Amount tendering

Labours. 24th April to 23rd May.

Carpenters 325 Hours @ 29 ³ / ₄ .	145	14	1.
" Charge money			9. 2.
" 1 Hr @ 4/2 ⁹ / ₈ .			4. 3.
Labourers. 74 Hrs @ 2/4 ² / ₂ .	8	15	9.
" 1 Hr @ 2/4.			2. 4.
Boiler maker 17 Hrs @ 2/6 ² / ₂ .	2	3	3.
" " supervision			7- 6
Blacksmith 13 Hrs @ 2/9.	1	15	9
" asst. 7 Hrs @ 2/5 ¹ / ₄ .			17 1.
" " 6 Hrs @ 2/4 ² / ₂			14 3.
Joiner asst. 1/2 Hr @ 2/4 ² / ₂ .			1. 2.
Litter 5 Hrs @ 2/6 ² / ₂			12 9.
Lawyer. 2 1/2 Hrs @ 2/7 ² / ₂ .			6. 6.
" asst. 2 1/2 " " 2/4 ² / ₂			5 11
40% of Blacksmith time	1	6	10
Painter 2 Hrs @ 2/9.		5-6	64-2-1
Head Office April Labour	4	19	7
" May "		3	11 7
" June "		11	12 6 20 3 8
<hr/>			
Gear, Tools April	1	17	3
" " May.		11	3 12 17. 6
<hr/>			
Cartage April	1	4	0
" May Eng		5	9 0
" " Pts		15	7 8 0
<hr/>			
Car. April		8	
" May.		18	0 1 6 0
<hr/>			
Carried forward			£ 105 17 3

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.B.

To

THE ENGINEER

13th Sept. 1939.

Reply Air Dept. Landing Air Base.

Inst. 8812

				£.	s.	d.
Timber Landing & Scaffolding.				105	17	3
Boat Forward.						
Launch Tebaka	April	10	-			
" " "	May	5	-		15	0
Machinery Workshops.						
"	April		19	6		
"	May	1	13	10		
"	200 ton slipway.	2	3			
"	Timber mill	3	3		2	18
Punt Transport No 1. Chop & drive piles						
2 1/2 days @ 9/2/6.		22	16	3		
"	" No 2. 1 1/8 " " "	10	5	4	33	1
Material April details attached		3	18	4		
"	May do	107	4	6		
"	June do	8	2	4		
"	July do.	12	10	10		
less Credit 2/18' T.P 12x6		4	11	10	127	4
Total					269	16
					10	

Foreman of Works.

Auckland Harbour Board.

MEMORANDUM

From

13 Sept.

1939

The Foreman of Works

To

A.H.B.

THE ENGINEER

Repay Air Dept. Timber Landing, Tendering Incl. 8812

Material

	£	s.	d
1/22', 2/18' 12"x6" T.P.	7	7	11
1/15', 2/24', 1/14' 1/21' 1/17' 12"x6" T.P.	15	10	6
2/13', 1/17' 1/20' Ironbark 12"x6"	8	10	1.
1/18' Ironbark 10"x10"	3-7=	6	
1/2' " " 10"x10"	7	8	
44 ft " "	19	10	
1 - 18 ft Tallowood 12x6	2	11	10
324 S. ft Brush box	7	4	2
44 " " "	19	7	
247 " " "	5	9	11
152 S. ft T.W. Timber	3	13	0
49 " " " "	9	10	
6 - 35 T.P. Pile	37	12	6
2 - 35 Imp Pile	12	10	10
148 lb Bolts.	4	14	4
15 lb Engine Bolts.	5	5	
47 lb Barge Bolts.	1	0	10
6 - 15' Flat mild steel.	7	19	3.
10 lb Hex Nuts.	4	1	
6 doz Rivets	5	1	
25 lb deck spikes	6	5	
2 lb Galv Spouts	1	1	
40 lb Logs.	1	8	4
5 lb Galv. Nails	3	0	
2 lb Coach screws.	11		
7 lb Round washers.	2	4	
17 lb Hoop iron	8	1	
331 33 lb Round Iron	3	8	9
120 lb Flat Iron	1	0	4
38 lb shackles.	1	3	0

Carried forward

£ 129-6-5

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.B.

To

THE ENGINEER

13th Sept 1939.

Repay. Air Dept. Timber Landing & Fendering Inst 8812.

Material (Continued).

6 Hack Saw Blades.

4 lb Grease.

11 ft 1" Chain

6 yds malthoid

½ doz. P.G. Iron.

66 Electrodes

1 lb Chalk.

1 Gallon Grease.

6 old Tyres.

Brought Forward.

£. s. d.

129 6 5

1 4.

1 7.

1 - -

8 10

2 0

11 0

. 3

1 7.

3 6

£ 131 16 0

4 11 10

£ 127 4 2

less credit for 2/18' T.P. 12x6

Comptey
Foreman of Works

Auckland Harbour Board.

MEMORANDUM

October 11th 1929.

From

The Foreman of Works
A.H.B.

To

THE ENGINEER

Taoman Air way. Refay Air Sept.

Lay moorings ~~remove~~ at Air Base 31st July - 14 apt.
~~do do do Hobanville 29th Sept~~

Moorings Air Base.

Labours.

		£.	s.	d.	£.	s.	d.
Boiler-makers	7 hrs @ 3/9.	19	3				
" asst.	1 @ 2/5 1/4.	2	5				
" "	30 @ 2/4 1/2	3	11	3.			
Gas money		-	-	9			
Boiler maker.	1/2 @ 4/2 7/8	2	1.		5	12	8
" "	6 @ 2/9 3/4.	16	11.				
Letters Assistant	3 @ 2/5 1/4.	7	4.				
C. Madigan, Superintending	12 @ 4/0 1/2	2	8	6			
" "		4	8	4			
Labourers.	118 hrs @ 3/4.	13	15	4			
" "	128 @ 2/4 1/2	15	4	0			
" "	3 @ 3/6 3/4.	10	9				
Dist money.		1	4	1			
Labourer	6 @ 3/6	1	1	0			
" "	2 @ 4/9	9	6				
Diver	1 @ 11.8	1	11	8			
" "	3 1/2 @ 2/4 1/2.	8	4.				
" asst.	4 @ 2/5 1/4.	9	9.				
Anchor Puffs	Blacksmith	1 @ 2/9	2	9			
	" asst	1 @ 2/5 1/4.	2	5.			
	40% of 3/2.	2	0		42	5	9
					<u>£ 47 18 5</u>		

Comptrolly
Foreman of Works.

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of works
A.H.B.

To

THE ENGINEER

11th October 1939.

Taeman Air Service. Air Dept. Repair

31st July to 14th Sept

Moorings ~~Remove~~ at Air Base.

		£	s	d	£	s	d
<u>Labour.</u>	Details attached	47	18	5	47	18	5
<u>Cartage</u>	July 8 5.6	11	7	0	11	7	0
<u>do</u>	Sept. 3 1.6						
<u>Transport. No 1.</u>	July 3/8 day @ 9.2.6	3.	8	6			
<u>do</u>	Sept. 5 day " " "	45	12	6	49	1	0
<u>Launches.</u>	Te Hānaki 34 1/4 @ 17/6	29	19	5			
	Oreva. 14 1/2 " "	12	13	9			
	Bradney rd. 4 @ 17/6	3.	1	3			
	AKS Lch + Ton B6. 6 " "	5	5	0	51	8	2
<u>Gear + Tools.</u>		3.	8	7	3	8	7
<u>Material</u>	3 Ring Bolts. 5" x 5/8" @ 0.11.1			163	3	2	
	Total			11	1		

Combaty
Foreman of works.

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.B.

To

13th October 1939.

THE ENGINEER

Repair Air Dept. Installation of Capstans at Air Base

21st - 28th August 1939

Following is the cost of installation of the 2 Electric Capstans on Taoman Air Base embracing pit for Capstans + trench across the roadway for electric current, and concreting the above Capstans, also concrete block near kerb with eye bolt for snatch block leads.

Labour.

Carpenters	2 hrs @ 2/9 3/4.	5	8.		
	Charge money.		4.		
Labourers.	63 hours @ 1/4 1/2.	7	9	8	
"	60 " @ 2/4.	7	0	0	
"	3/4 " @ 3/6 3/4	3	6		
"	charge money.		8	0	
"	Supervision 1/4 of 1-8-0	7	0	15	14 2

Material

5 gallons Emoleum	4	7		
1 lb waste		8		
6 Bus. shingle		5	0	
1 Bag Wilsnite		5	8	
4 yds shingle	3	12	8.	
12 Bag Wilsnite	3	8	1.	7 16 8

Gear, tools

2 3 2 3

Cartage.

3. 6 0 3 6 0

£ 26 19 1

A.H.B.
Foreman of Works.

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.B.

To

THE ENGINEER

Sept. 23rd 1939.

Repay. Air Department.	Mooring Blocks.	£. s. d.	
Brot Forward		30	18 7
<u>Cartage</u>	15 0	15	0
<u>Launch "Tawa" 24 July. 2 Hrs @ 17/6</u>	1. 15 0	1. 15	0
<u>Transfer of material Wilsonite, Shingle, fabe-work + hire of Gear.</u>	22 10 3	22	10 3
Total.		£ 55	18 10

W. Baty
Foreman of Works.

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.B.

To

THE ENGINEER

Sept 19th 1939.

Repay Air Dept. Roadway & Drainages June to 31 & July 1939.
& adjacent areas.

Labour.

Excavate & foundation	46	16	6			
Drains	32	10	6			
Hand packing	60	3	7			
Blinding	5	17	6			
Spread Scoria & metal.	14	2	10			
Tar & metal.	26	19	9	188	5	11 -
Load spoil.	1	15	3	15	5	11 40
Total.	188	5	11	203	11	10

Details of labour, as below.

Labourers	388 $\frac{1}{2}$	16	2			
"	655	15	8			
"	434 $\frac{1}{2}$	10	0			
"	charge money.	1	19	9		
"	super. foreman.	7	7	0		
"	13 $\frac{3}{4}$ @ 3/6 $\frac{3}{4}$.	2	9	-		
"	2 @ 4/9	14	3			
Cfts.	2 @ 2/9 $\frac{3}{4}$.	5	8			
Plumbers	1 @ 2/9	2	9			
"	asst. 2 @ 2/4.	4	8			
Head office labour.	June	12	9	11		
"	July.	2	16	0	203	11 10

Carried forward.

£ 203 11 10

Wm Batey
Foreman of Works.

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.D.


To

THE ENGINEER

19 September 1939.

Repay. Air Dept. Roadway & Drainage 5th June 1939 to 31st July 1939.
+ adjacent areas.

		L.	s.	d.	L.	s.	d.	
Brought forward.					203	11	10	
<u>Material</u>	June details attached	21	17	9				
	July. "	121	3	10				
	August. "	137	16	7	280	18	2	
<u>Roller.</u>	} Hire of from Onehunga Poro Council 12 July 1939 (Public Works Roller used for the remainder of the job + not charged.)	3	0	0	3	0	0	
<u>Water</u>			9	-		9	-	
<u>Advertising</u>			16	0		16	0	
<u>Cartage</u>	May	5	4	6				
	June	32	17	0				
	July	14	10	6	52	12	0	
<u>Gear & Tools.</u>	June	2	5	8				
	July	2	9	9	6	0	6	
	August	1	5	1				
<u>Gas.</u>	May	2	8	0				
	June	5	10	0				
	July	2	4	0	10	2	0	
Total					£	551	9	6


 Foreman of Works.

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.D.

To

19th September 1939

THE ENGINEER

Repay Air Dept. Roadway & Drainage ^{5th June to 31st July 1939 =}
+ adjacent areas

Detail of material

	£	s.	d.
1 1/2 Tons Cement	5	19	1.
5 Bags Cement.	1	2	1
10 Buckets Sand		9	4.
2 Bags.			
Distar spraying 3140 gallons.	137	7	6.
Stone 50 yds 3" to 6"	13	10	10
Shingle 6 1/2 yds.	5	13	9
Scoria 293 1/2 yds.	74	11	1.
6 pieces 3' x 10' x 3/8" checker plate.	4	1	10
metal waste ^{T. C. O. S.} 7. 0 2 21.	4	7	11
metal 1" chips 2-19-3-7	1	12	2
Blue stone 26 14 0 21, 1/2"	16	5	0
" 10 0 2 7, 1/2"	7		5.
" 162 12 0 14, 2"	87	8	0.
Round steel 1/2", 345 lin ft.	1	2	4
60' medium Timber	1	7	11
14' pinus Timber.		1	8
66' Earth pipes 4"	12	14	10
100' " " " 6"			
1- 4" Bend 90°			
1- 6' x 2' x 3/8" plates.	5	15	6
4- 3'6" x 10" x 3/8" plates.			
20 Acetylen Drain Cover		3	9
50 Oxygen " "		3	2.

£ 280 18 2

Com Daty
Foreman of Works.

AUCKLAND HARBOUR BOARD
MEMORANDUM

No 3421

From

FOREMAN OF WORKS

Repair ~~to~~ Air Dept
Windsock

To

The Engineer

A.H.R.

Oct 11. 1919.

SIR,

I beg to report that

on 18th & 20th Sept, the cost of making Windsock for Air Base is :-

<u>Labour</u>			
700.	Blacksmith	2 hrs @ 2/9	5 6
	Asst.	2 " @ 2/5 1/4	4 11
	40% of above		4 2
	Boiler maker	2 hrs @ 2/9	5 6
	" " Asst.	2 " @ 2/5 1/2	4 9
	Charge man		4
<u>Labour (Mr Luffus)</u>	8 hrs @ 2/5.	19 4	1 5 27
<u>Tools</u>		3-1	19-45
<u>Material</u>	4'8" - 3" Galv pipe	8-7	3-1
	5 Electrodes	8	9 3
			<u>2-16-10</u>

Wm Batty

FOREMAN OF WORKS

Draby Porton K4 Roads East-Entrance (Slipway bords)

Desc pro of Work Date Labour Stores Timber Cost's.

Building Porton	7 6 29 219 11 1	35 1 3 118 1 8 3/2 14 0	
" 4 Roads	16 6 29 56 9 0	25 10 0 20 7 8 102 6 8	
clejning Porton	19 9 39 9 4 0	1 2 9 . . .	10 6 9
Porton K4 Roads	19 9 29 1 14 6	1 13 4 . . .	3 8 1
			<u>488 156</u>
Supervision			<u>125 147</u>
			<u>613 303</u>

16

ENGINEER A.H.B.

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.S.

To

THE ENGINEER

Repay Air Department.

Construction of 2 Timber Gangways. Inst. 8710

19 September 1939.

Following Abstract shows details in connection with construction & delivery to Air Dept of 2 Timber Gangways from 13th March 1939 to 21st August 1939 :-
Ref No E. 487/2.

Abstract

	£.	s.	d.	£.	s.	d.
<u>Labour.</u> details attached	55	5	5			
<u>machinery workshop.</u>	1	13	10			
<u>Gen. & Tool. Eng Dept.</u>	1	0	5			
<u>Cartage</u>	1	18	0			
<u>material</u> details attached	42	4	9			
<u>Launch "over"</u> approx 2 hrs @ 17/6		8	9			

102-11-2

Wm Batley
Foreman of Works.

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of works
A.H.B.

To

THE ENGINEER

19 September 1939.

Repay in Dept. Construction of 2 Timber Jangways. Inst. 8710

March to 21st August 1939.

Labour.

	£	s.	d.
Fitters 8 Hrs @ 2/9.	1	2	0
" charge money.		1	4
" asst. 8 Hrs @ 2/5 1/4.	19	6	
" " 8 " @ 2/4 1/2.	9	6	
Carpenters. 266 1/2 Hrs @ 2/9 3/4	37	9	7
" charge money.		7	0
Sawyers. 3 1/2 @ 2/7 1/2.	9	2	
asst. 3 1/2 @ 2/4 1/2.	8	4	
Boiler maker 6 Hrs @ 2/9.	16	6	
" Gas.		7	
" asst. 6 3/4 Hrs @ 2/5 1/4.	16	6	
" Supervision	7	6	
" asst. 4 1/2 @ 2/4 1/2.	10	8	
Joiner asst. 9 1/2 @ 2/6 1/2	1	3	7
Painters 24 1/2 @ 2/9.	3	7	5
Labourers. 2 1/2 @ 2/4	5	10	
Head office Labour March	2	6	1
Blacksmith 9 1/2 @ 2/11.	1	7	9
" asst. 9 1/2 @ 2/5 1/4	1	3	2
" " 4 @ 2/4.		9	4
40% of Bsmith 40% $\frac{3}{11} \frac{0}{4} \frac{3}{1}$	1	4	1
Machinery Workshop 200 ton Slipway	2	0	
" " 4 Hobart St.	1	11	10
Gear 1 tool Eng Dept. March.	1	0	5
@ M. B. Bailey Foreman of works		57	19 8

Carried forward

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A. H. B.

To

THE ENGINEER

19th September 1939

Inst 8/10.

Repay in Dept. Construction 2 Timber Gangway.

£. s. d. £. s. d.

	Prot Forward.				57	19	8.
<u>bandage</u>	trch	1	0	0			
	aqt.		18	0	1	18	0
<u>Material</u>	details attached.	42	4	9	42	4	9
"Lamb over"	appt. $\frac{1}{2}$ hr @ 17/6		8	9		8	9
	Total				102	11	2

A. H. B.
Foreman of Works

Auckland Harbour Board.

MEMORANDUM

From

The Foreman of Works
A.H.B.

To

THE ENGINEER

19th Sept.

1939.

Repay air Dept. Construction 2 Timber Gangways. Inst. 8710.

= material. =

	£.	s.	d.
4- 34' oregon 12" x 3"	15	8	3
4 1/4' 6 x 3, 12 1/4' 6 x 2	9	7	6
10 3/4' 9 x 1, 16 1/4' 6 x 1; 4 1/4' 16 1/5' 4 x 3			
4 1/4' 3' x 2"			
{ 9 s.f. oregon timber. = 26 s.f.	7	4	1
18 " " T.W. Timber	13	11	
108' Brush Box	2	8	8
Kauri 16 1/4' 6", 12 1/4' 4 3/4', 1st. 2 1/2' x 2 1/2'	6	18	7
{ 120 lb Carriage Bolts.	1	10	4 1/2
5 1/2 Gals creosote.		8	11
10 lb Hex Nuts.		3	9
13 lb Gal. Nails		5	5
8 lb Round washers.		2	8
1 Hack Saw Blade 28" spant		2	11
6 " " "		1	4
1 only 2 1/2" flat Brush		3	9
10 sheets Sandpaper.			10
30 lb Eng Bolts.		7	5
1/2 cwt white lead.		1	9
2 gallons Raw Oil.		7	9
1 Coil No 8 wire		9	6
32/ 16" Gal Iron 2 1/2' x 14 1/2'		1	1
Brass Screws.			3-
	£	42	4
			9

Ombalig
Foreman of Works.

Auckland Harbour Board

MEMORANDUM

FROM Electrician's Office

7th. August 19 39

To

THE ENGINEER

INGERSOLL RAND. 15 H.P. AIR COMPRESSOR. BRABY PONTOON.

CENTRAL WHARF

AIR DEPARTMENT : REPAYABLE A/C.

460 VOLT CURRENT SUPPLIED FOR OPERATING.

1939

June 7th.

to = 1578 units @ $\frac{3}{4}$ d. per unit

=

£4.18. 7

July 3rd.


.....
CHIEF CLERK & TIME KEEPER
ELECTRICIAN'S OFFICE

Auckland Harbour Board

MEMORANDUM

FROM

Electrician's Office

To

29th June

1939

THE ENGINEER

15 H.P. AIR COMPRESSOR. CENTRAL WHARF

BRAIBY PONTOON. REPAYABLE A/C

air department

LABOUR

1939

June 8th: Wireman, 2 Hours @ 2/9 Per Hour. = £0- 5- 6

7 - Elective Current
6 - Reply Mr Commins re this

D. Jamming
CHIEF CLERK & TIME KEEPER
ELECTRICIAN'S OFFICE

AUCKLAND HARBOUR BOARD
MEMORANDUM

Nº 3025

7
From

FOREMAN OF WORKS

Repay. Tasmans Air Base

To

The Engineer
AHB

March 31st 1929

SIR,

I beg to report that

Receive moorings

on 8th Mch the cost of receiving moorings is:-

<u>Labour</u>		
3 hrs @ 2/4 th	+ 4 th Am.	7.6
10 hrs @ 3/4.		1. 3. 4
		<u>1. 10. 10</u>

with 16, Receive Anchors.

<u>Labour</u>	9 hrs @ 3/4.	1. 1. 0
"	1 @ 2/4 th	2. 5.

2.14.5

Berthage

	5. 0
<u>1. 8. 5</u>	

2.19.5

Hold up for other charges

Combaty

FOREMAN OF WORKS

AUCKLAND HARBOUR BOARD
MEMORANDUM

No 3279

From

FOREMAN OF WORKS

Repay. ^{Air Department} F.A.S. Braby Pontoon
"Mahua"

To

Sept 8th 1927
The Engineer
A.H.B.

SIR,

I beg to report that

on 2nd Sept "Mahua" left Bath 8 A.M. steamed to end of Central Wharf arrived 8.7 commenced to lift Braby Pontoon at 8.30 lifted same wharf to water finished 9.30 Removed ships finished 9.45 left Central Wharf at 9.50 steamed to Bath arrived 10 o'clock
weight 43 tons - crew 7.

old. per ton

labours		
2 hrs @ 4/6's	0.8.1	
2 hrs @ 7/6's	5.9.	
6 " " 3/4's	14.3	
4 " " 7/4	9.4	
	<u>1.17.5</u>	

abstract	
labours	1-17-5
Coal.	3.6.0
Stores	8.0
	<u>5-11-5</u>

This charge will be part of cost constructing the Braby Pontoon
O.M.B.

W. M. Batley

Charge 43 tons @ 10/- ton
= £21.10.0

FOREMAN OF WORKS

861
3

- C O P Y -

AUCKLAND HARBOUR BOARD.

No.9133.

INSTRUCTIONS TO FOREMEN AND INSPECTORS.

15th. September, 1939.

Foreman of Works.

AIR BASE - REPAY. AIR DEPT..

As discussed with you, the "Braby" Pontoon is to be ballasted so as to reduce the freeboard by 9".

This will necessitate $7\frac{1}{2}$ tons of ballast being distributed, 15 cwt in each chamber.

It will also be necessary to reduce the freeboard of the large pontoon at the same time and about 40 tons of ballast should be distributed so as to reduce the freeboard by 12".

D. Holderness

ENGINEER TO THE BOARD.

per: A.N.T.

- C O P Y -

AUCKLAND HARBOUR BOARD.

No.9079.

INSTRUCTIONS TO FOREMEN AND INSPECTORS.

25th. August, 1939.

Foreman of Works.

ARRIVAL OF "AOTEAROA"

REPAY. TASMAN EMPIRE AIRWAYS LTD.

As arranged with you this morning, supply 4 capable men to Mr. Turnill at 8 a.m. on Monday, 28th. inst., and if necessary on 29th. inst., to assist in the berthing of the "Aotearoa".

Two of these men are required to handle the ropes and operate the capstans, and two will be handling dinghys.

In the meantime, it is anticipated that the "Aotearoa" will be arriving on Monday afternoon.

Send in a special report giving the cost after this has been completed.

D. Holderness
ENGINEER TO THE BOARD.
per: A.N.T.

AUCKLAND HARBOUR BOARD

No 5903

Memorandum

From

Engineer
INSPECTOR AT

Dredge, Hapai

To

THE ENGINEER

A. H. B.

Wed. July 26th 1939

Overland Air Base

I beg to report that work at above job is now finished and moorings are being lifted. Soundings show 12' w. s. for the final cut off 20' or so from the corner dredged area. One mooring, which was lifted from the Pan-American area, will be replaced to their satisfaction while the "Hapai" is lifting remaining mooring on Thursday tide. Main time sundry defective but **SEEN** limits will be changed.

Supervisor
and Engineer

Date 27. JUL 1939

Signature

A. H. B. Butler

7
861
3

- C O P Y -

AUCKLAND HARBOUR BOARD.

No.9007.

INSTRUCTIONS TO FOREMEN AND INSPECTORS.

19th. July, 1939.

Mr. J.R. Sutton.

REPAYABLE AIR DEPT.

Further to Instruction No.9004, dated 19th.
inst., make one more anchor block similar to that shown
2' 6" high.

D. Holderness
ENGINEER TO THE BOARD.
per: A.N.T.

- C O P Y -

AUCKLAND HARBOUR BOARD.

No.9004.

INSTRUCTIONS TO FOREMEN AND INSPECTORS.

19th. July, 1939.

Mr. J.R. Sutton.

REPAYABLE AIR DEPT.

*(See Lett No 9007 -
to make one additional
Anchor Block)*

Please make two concrete anchor blocks to
Drawing A.D.O.16011.

Steel bars and rails will be supplied by P.W.D.

Blocks are to be handled by crane to lorry for
shipment on 15th. August, 1939.

D. Holderness
ENGINEER TO THE BOARD.

per: A.N.T.

861
1

- COPY -

AUCKLAND HARBOUR BOARD.

No.8930.

INSTRUCTIONS TO FOREMEN AND INSPECTORS.

9th. June, 1939.

Foreman of Works.

CONSTRUCTION OF 4 ONLY 14' DINGHYS.

- REPAY. AIR DEPARTMENT -

With reference to Paragraph (3) of Instruction No.8866, dated 16th. May, 1939, please put in hand the construction of the 4 only 14' dinghys for use at the Trans-Tasman Air Base, Mechanics Bay, in accordance with your estimate on Report No.3134, dated 18th. May, 1939.

Report cost for charging with the other work specified in Instruction No.8866.

N.B. Office only:

See P.W.D. Order No.A.5088.

Charge Air Department £112 nett for these four dinghys and recover any additional cost on other work being carried out for Air Department.

(as arranged verbally with Mr. Rabone, P.W.D.)

D. Holderness

ENGINEER TO THE BOARD.

per: A.N.T.

861
3

18th. July, 39.

The Purchasing Officer.

SUPPLYING AND SPRAYING OF "DISTAR".

Please note that arrangements have been made with the Auckland Gas Company to supply and spray "Distar" for the road base and seal coat of the area round the Tasman Empire Airways' administration building and workshops at the same price as was arranged for Haig Street Extension in January 1939, viz. 10½d per gallon.

This work is being carried out by the Board on behalf of the Air Department.

SUPERINTENDENT & ENGINEER.

861/3

30th June, 1939.

Mr. T. Barrow,
Air Secretary,
Air Department,
WELLINGTON. C.1.

Dear Mr. Barrow,

I am proposing to submit an account for progress payment on the various items being undertaken by the Board in connection with the Air Terminal.

Some of these items were arranged direct with you and some through the Public Works Department, and, as the Board is now standing out of a fairly large amount of money, I would like to get payment made as soon as possible.

The Treasurer tells me that an account for approximately \$480 for excavating and clearing the site rendered in March last has not yet been paid, and other outgoings since that time on gangways, landings, fendering, erection of "Braby" pontoon and paving work round the Workshop and Administrative Building already exceed \$900. To whom should accounts be rendered to ensure prompt attention?

All works are well in hand and you will find everything in order when the boats arrive.

Regards,
Yours sincerely,

Superintendent.

DH. MIJ

861
3

- COPY -

AUCKLAND HARBOUR BOARD.

No.8866.

INSTRUCTIONS TO FOREMEN AND INSPECTORS.

16th. May, 1939.

Foreman of Works.

AIR BASE, MECHANICS BAY.

REPAY. AIR DEPT.

A request has now been received for:-

(1). The assembly and erection of the "Braby" Pontoon for which Blueprints and notes on erection are enclosed. All plans and notes are to be carefully preserved and returned to me when the erection has been completed.

(2). Paving around Administration Building and Workshops of similar construction to the Quay recently paved by Harbour Board. Certain drainage will also be required in connection with this, and the P.W.D. Inspector will indicate the extent of the work, levels, drainage, etc.

(3). The construction of 4 only 14' dinghies to sketch and notes herewith. This latter item is not to be put in hand until an estimate has been supplied and approved. Go carefully into this with Clare and let me have an estimate for these dinghies so that it may be submitted to the Department for approval.

(4). Laying of moorings. Moorings in accordance with Blueprints enclosed are to be laid in the positions shown at Mechanics Bay and at Hobsonville. The actual placing of the moorings will be determined after consultation with the P.W.D. Inspector and the Technical Officer of Union Airways.

D. Holderness

ENGINEER TO THE BOARD.

per: A.N.T.

*(Blueprints returned
by P.O. in 13.9.39
& are now filed in
Drawing Office - B.959.)*

QUOTATIONS FOR BLUESTONE FOR TASMAN AIR BASE SITE.

9.6.1939.

Firm	29 Tons $\frac{1}{2}$ "		10 Tons $\frac{1}{4}$ "		140 Tons 2"		Total Net
	Rate	Amount	Rate	Amount	Rate	Amount	
Mt. Eden Prison Quarry	12/2	17.12.10	14/-	7. 0.0	10/9	75. 5.0	99.17.10
Ferguson & Kew Ltd.	13/3	19. 4. 3	15/-	7.10.0	10/6	73.10.0	100. 4. 3
J.J. Craig Ltd.	12/5	18. 0. 1	14/-	7. 0.0	10/9	75. 5.0	100. 5. 1
Wilson Rothery Ltd.	12/11	18.14. 7	14/-	7. 0.0	10/8	74.13.4	100. 7.11
W.I. Hancock	15/6	22. 9. 6	17/9	8.17.6	11/6	80.10.0	111.17. 0

Copy for Engineer's File

Recommend acceptance of quotation
of Mt Eden Prison Quarry.

Reg: 13550
14/6/39

861/3

22nd. May, 1939.

The District Engineer,
Public Works Department,
AUCKLAND, C.I.

Dear Sir,

TRANS-TASMAN TERMINAL.

Your letter P.W.8/86, of 15th. instant, has been received and the various works outlined therein have been put in hand.

With regard to the 14ft. dinghies, it is estimated that these will cost approximately £33/10/- each, and I shall be glad to know whether they are to be proceeded with at this approximate price.

Yours truly,

SUPERINTENDENT & ENGINEER.

AUCKLAND HARBOUR BOARD
MEMORANDUM

Nº 3134

From

FOREMAN OF WORKS

Air Base, Mechanics Bay

To

May 18th 1939

The Engineer

A.H.B.

Inst. 8866 + 8867.

SIR,

I beg to report that

Construction of 4 only 1st Dumphys.

The estimated cost of each dumphy is £30, which includes fitting 8 gunmetal knees which are not shown on sketch, also fitting the small compartment aft instead of forward, & the rings in an altered position, all of these additions & alterations are approved by the Inspector at the Air Base
Thos W. Blair

W. Baty

A.P.D. £ 30
10/6 on
Cabin & met. 3
£ 33-10/6

2) 670
7 038
40

SEEN

Memo to
District Eng.
P.W.D.
22.5.39.

Superintendent
and Engineer

Date.....
22. MAY 1939

FOREMAN OF WORKS



G.M.C.G. GC

P.W.	8	7	86
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please quote these numbers.

PUBLIC WORKS DEPARTMENT,

AUCKLAND C. 1: N.Z. 15th May, 1939

Trans-Tasman Terminal, Auckland.

The Superintendent,
Auckland Harbour Board,
AUCKLAND C. 1:

Dear Sir,

Following the recent discussion relative to the work to be carried out for the Trans-Tasman service, I have now received details from my Head Office of the work which it is desired should be undertaken by your Board. Particulars are as follows:-

1. Laying of Moorings: I am enclosing herewith blue prints (2) indicating the position of the moorings at Mechanics Bay and Hobsonville. The placing of the moorings will be determined after consultation between this Department's Inspector of Works and the Technical Officer, Union Airways.
 2. Assembly of "Braby" Pontoon: It is desired that the erection of the pontoon be proceeded with and the sections are being delivered to the site selected for assembling. In addition to the three small photographs already handed to you, I am enclosing copy of notes on erection of raft and fitting "Avon" Fender together with fourteen blue prints as per list attached.
- Provision of Dinghies. Four 14 ft. dinghies in accordance with the attached specification are required and I should be pleased if you would submit a quotation for their supply
- Tarmac and Drainage. It is proposed that your Board should undertake this work and this Department's Inspector of Works will collaborate with you regarding commencement.

Yours faithfully,

F. Soyson
District Engineer.

MS
22.5.39

(all the following were sent +
Journal of Works with Particulars 8866 + 7. 14/5/39
to be returned)

{ Returned by
P.O.D. no 13.9.39
& filed in Drawing
Office 8.9.39.1

Data From Tasman Airways Ltd.

(for Public Works Dept)

handed to Mr Holderness by
P.W.D. man on 15/5/39)

Moorings - Aircraft Moorings Mechanics Bay
Moorings at Hobsonville Air Base

14' Dmglyps - Notes re Dmglyp Construction (2 sheets)
Plan of Dmglyp.

Braly Raft -

List of prints etc.

Notes on fitting of G. Raft Fender
erection of Braly Raft (3 sheets)

Materials list etc. (321, 328, 330, 329, 331, 348, 349

350, 351, 352, 353)

Prints

S.D. —	Moorings for A. G. Raft
SD 674	Flying Boat Outline
SK 1362	Layout of tubes in Fenders
SK 1387	Raft Fender
SK 1361	11" c Spoon Fend-off
SK 1361A	" " "
SD 682	Details of Floats
SD 789	Main Frame Details. (Showing fenders in yellow)
SD 789	Main Frame Details
SD 790	Deck Details for A. G. Raft
S.D. 676	cross frame details
SD 677	Centre top Brackets etc.
SD 678	Detail of Bottom Brackets
SD 679	Moorings Connections

71

List of blue prints received from Messrs. Brabys
on 3rd March, 1939.

- ✓ Materials List. (11 sheets)
- ✓ Drawing S.D. - Moorings - of 12.12.38.
- ✓ " S.D. 676.
- ✓ " S.D. 677.
- ✓ " S.D. 678.
- ✓ " S.D. 679.
- ✓ " S.D. 682.
- ✓ " S.D. 789.
- ✓ " S.D. 790.

One blue print of Stanchions. (unnumbered)

not received
16/6/39

Avon Drawings.

- ✓ Drawing S.K. 1361.
- ✓ " S.K. 1362.
- ✓ " S.D. 789 - with outlines of fender tube in yellow.
- ✓ " S.D. 674.
- ✓ " S.K. 1357.
- ✓ " S.K. 1351A.

(Returned by D.O.S. on 13.9.39 & filed in Drawing Office as B.959) } *All prints returned to P. Hanks Dept 10/4/40*

RECEIVING DISTRICT COPY.	(1) From PUBLIC WORKS DEPARTMENT, <u>Auckland.</u>	PACKING- LIST.	No 114
	P.W.S.—S.]		

(2) Consigned to <u>Officer In Charge</u> <u>Harbour Board,</u> <u>Auckland.</u>	(3) Per <u>Sorry to</u> <u>cancel Wharf.</u>
----------------------------------------------------------------------------------------------	-------------------------------------------------------

(4) Requisition No. _____ Order No. <u>Air Dept.</u> Transfer No. _____	(5) Received ; quantities checked and found correct. Signature: _____ _____/_____/193
----------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------

(6) Marks.	(7) Number of Packages.	(8) Brief Description of Packages or Contents.
<u>g/p.</u> <u>P.W.D.</u> <u>Auck.</u> <u>15/140B.</u>	<u>140</u>	<u>pkgs. Pontoon & moorings.</u> <u>To Air Dept., Order.</u> <u>Ex. S.S. Port Alma.</u> <u>Advice of Shipment. 1156.</u> <u>Note: Please find copy Shipping</u> <u>Specifications attached</u> <u>hereto.</u>

(9)
Prepared by F. J. Jaffer
_____/_____/193

ISSUING
DISTRICT
OFFICE
COPY.

(1)
From
PUBLIC WORKS DEPARTMENT,
Auckland.

PACKING-
LIST.

Nº 114

P.W.S.—8A.]

[DUPLICATE.]

Consigned to ⁽²⁾
Officer In Charge,
Harbour Board,
Auckland.

Per ⁽³⁾
Sorry to
Central Wharf.

Requisition No. ⁽⁴⁾

Order No. Air Dept.

Transfer No.

Packed by ⁽⁵⁾

—/—/193

Checked by

(6)
Marks.

(7)
Number of
Packages.

(8)
Brief Description of Packages or Contents.

D.P.S.
P.W.D.
Auck.
18/140B.

140 pkgs, Pontoon + moorings.

To Air Dept., Order.
Ex. S.S. Port Alma.
Advice of Shipment. 1156.

Note: Please find copy Shipping
Specifications attached
hereto.

Prepared by ⁽⁹⁾
F. J. Jeffer.
14/5/1937.

NOTE.—If any package short received, consignor to be advised.

2283

Fredk. Braby & Co. Ltd.,

Ida Works. Deptford. London. S.E.8.



"Port Alma"

27th March 1939

The District Storekeeper,
Public Works Department,
AUCKLAND N.Z.

I	B	I	bdl	Plates.	2 plates I05 4-67	¹⁶ C	¹³ Q	L	
						I	I	2	27" x 19" x 3 1/2"
2	B	do.		2-89	4-I22 I6-93	2	3	6	I'4" x I2" x I2"
3	B	do.		2-96	2 - I04	I	I24		28" x I7" x 3"
4	B	do.		8-87		I	II4		16" x I4" x 4"
5	B	do.		6 - 82		I	0	0	24" x II" x 3 1/2"
6	B	do.		4 -98	2 - I02	I	I	4	2I" x I7" x 3 1/2"
7	B	do.		2 -I0I	4 - I05	2	3	I4	38" x I8" x 3 1/2"
8	B	do.		I2 - 66				324	II" x II" x 6"
9	B	do.		I6 - II2		3	0	0	16 x I4" x 7"
10	B	do.		8 - 76			2I4		II" x II" x 5"
11	B	do.		2 - I03	2 - 9I		2	I	16" x I5" x 3"
12	B	do.		8 - II3			3	2	II" x I0" x 5"
13	B	do.		4 - 84			3	4	16" x I4" x 3"
14	B	do.		4 - 83			2	5	16" x I4" x 3"
15	B	do.		8 - I6			2I7		II" x 9" x 4"
16	B	do.		20 - I20		3	0	8	22" x I3" x IO"
17	B	do.		24 - 79		2	0	0	I2" x I2" x IO"
18	B	do.		20 - II9	4 - 38	I	2I2		I4" x I2" x II"
19	B	do.		8 - I5		I	2	4	25" x II" x 4"
20	B	do.		6 - 68		2	2I4		27" x I8" x 3 1/2"
21	B	do.		8 - II5		2	2I0		23" x I6" x 4"
22	B	do.		20 - 78		II	3I2		26" x 24" x I2"
23	B	do.		I2 - 92		5	I24		28" x I7" x 5 1/2"
24	B	do.		8 - 94		I	3	I	23" x I6" x 4"
25	B	do.		8 - II8		I	II8		16" x I3" x 4"
26	B	do.		22 - 80		7	2	0	27" x I4" x IO"
27	B	do.		8 - 80		2	0	0	27" x I4" x 3 1/2"
28	B	do.		8 - 99		I	0I4		2" x II" x 4"
29	B	do.		8 - 88		I	2	8	16" x I5" x 5"
30	B	do.		16 - 8I		2	0	IO	I9" x I2" x 7"
31	B	do.		24 - III		4	II2		16" x I4" x II"
32	B	do.		8 - II7	6 - IIO	3	022		27" x I5" x 7"
33	B	do.		16 - I2I		I	2I8		I4" x I2" x 7"
34	B	do.		8 - 77	2-74 4 - 3	3	0	I4	30" x I9" x 7"
35	B	do.		2 -I08	2-I09 2 - 4	2	0	I5	28" x I8" x 3 1/2"
36	B	do.		4 - 34	4 - 35	0	3	26	I4" x IO" x 3 1/2"
37	B	do.		4-29	2-30 4-3I				
					8-37	2	0	I6	16" x I6" x 8"

4-5-2-21

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CONTINUED.

Fredk. Braby & Co. Ltd.

Ida Works. Deptford. London. S.E.8.

Port Alma.



27th March 1939

The District Storekeeper,
Public Works Department.
AUCKLAND. N.Z.

			1	15	16	#	
38 B	I Bdle	I8 - 32	14	15	2	21	10" x 8" x 7"
39 B	I	2-2I 2-2IA 4-22 4-22A	1	1	19		16" x 16" x 6"
40 B	I	6 - 36	1	1	8		25" x 10" x 3 1/2"
41 B	I	2-90 2 - 97	2	1	10		38" x 18" x 3"
42 B	I	2 - 24 4 - 23	2	0	16		27" x 15" x 4"
43 B	I	I2 - 33	2	3	8		25" x 11" x 6"
44 B	I	6 - I07 2 - I06	2	2	18		28" x 25" x 8"
45 B	I	8 - II4	3	1	2		27" x 24" x 3 1/2"
46 B	I	2.25 2.25A I.24 I.24A I.28. I.28A	4	3	18		36" x 26" x 8"
47 B	I	I.27 I.27A 2.26 2.26A	3	2	26		29" x 27" x 6"
48 B	I	2 - 8" 4 - 7"	4	0	12		30" x 30" x 3 1/2"
49 B	I	4 - 6 2 - 9	3	1	14		28" x 27" x 3 1/2"
50 B	I	4 - 5 4 - I	4	0	18		29" x 27" x 4"
51 B	I	2 - IO 2 - 2	2	0	19		27" x 27" x 3"
52 B	I	2-I67 2-I67A Flat	I	5			24" x 3" x 2 1/2"
53 B	I	4-I34 4 - I34 Angles	I	13			11" x 10" x 6"
54 B	I	IO-I69 Brackets	I	24			19" x 8" x 3 1/2"
55 B	I	IO - I69 "	I	24			19" x 8" x 3 1/2"
56 B	I	IO - I69 "	I	24			19" x 8" x 3 1/2"
57 B	I	IO x I69 "	I	24			19" x 8" x 3 1/2"
58 B	I	IO - I69 "	I	24			19" x 8" x 3 1/2"
59 B	I	I - 72 I - 72A	IO	I	0		5'5" x 5'3" x 2'10"
60 B	I Bag	Bag Bolts I 1/2" x 3/4" X.O.X.	I	0	0		19" x 19" x 5"
61 B	Ibdle	I - 86 I - 86A	I	I	20		57" x 14" x 8"
62 B	I	2-I57 2-I57A I-I58 8-I28 8-I28A I-I58A	14	3	20		13'2" x 14" x 7"
63 B	I	I4-I54 2-I55	7	2	0		9'3" x 11" x 5"
64 B	I	20-I37 2-I38	IO	I	0		9'3" x 10" x 7"
65 B	I	4-I32 4-I32A	I	2	8		3'10" x 7" x 4"
66 B	I	38 - I26	I4	2	26		7'6" x 11" x 10"
67 B	I	38 - I26	I4	2	26		7'6" x 11" x 10"
68 B	I	8-I3I 5-I47 5-I47A	I2	0	0		7'1" x 10" x 9"
69 B	I	4-I27 4-I27A 6-I29 6-I29A	15	3	0		IO'7" x 12" x IO"

11.12.0 = 1

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CONTINUED.

Fredk. Braby & Co. Ltd.,

Ida Works. Deptford. London S.E. 8.

Port Alma

27th March 1933

The District Storekeeper.
Public Works Department.
AUCKLAND. N.Z.

			12	0	7	
70 B	I bdle	I2-I62 5-I65A 5-I65 2-I68 2-I68A 2-I61	II	0	0	8' x 10' x 9"
71 B	I	I6-I63 I6-I64	I3	0	I6	8' x 10" x 9"
72 B	I	2-I35 2-I35A 8-I66 I-I24 I-I24A 2-I56 2-I56A 2-I30 2-I30A 4-I25 4-I25A 6-I23	I3	0	I4	9'6" x 12" x 10"
73 B	I	2-46 2-53 I-54 4-45 I6-39 8-40 4-48 4-48A 2-49 2-49A	9	I	I6	5'7" x 12" x 10"
74 B	I	2-55A 2-56 2-55 2-5I 2-5IA 2-52				
75 B	I	2-50 4-47 4-41 I2-43 8-58 4-59 4-59A 2-64 2-64A 2-62 2-62A 2-63 2-63A 2-6I 2-6IA 2-65 2-65A 3-42 3-42A 6-4I 6-4IA	I6	3	24	I2'3" x II" x 10"
76 B	I	2-I5 2-I5A 4-I4 4-I4A 4-I9 2-20 2-I7 I-I8	8	I	0	60" x 15" x 10"
77 B	I	4-I3 4-I2 I2-II 2-I6	4	3	4	69" x 10" x 7"
78 B	I	I-I52A I-I53A I-I52 I-I59A I-I60 I-I60A I-I50 I-I53 I-I50A I-I59 I-I5I	8	3	I6	8'4" x 10" x 7"
79 B	I	I-69 & I5-3"x2 1/4"x 3/4" Washers	I9	0	0	25'4" x 9" x 8"
80 B	I	I-I4IA I-I43A I-I44 I-I44a I-I4I I-I45 I-I42 I-I45A I-I43 I-I46A I-I46 I-I42A	I0	3	I8	3I'I" x I2" x 7"
81 B	I	I-I33 I-I33A		3	I0	I9'8" x 9" x 8"
82 B	I	I-60AI I-60A 2-60B	7	2	I9	8' x 9" x 4"
83 B	I	4-57	7	0	3	30'9" x 5" x 5"
						30'9" x 36" x 5"

15-3-0-7

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Fredk. Braby & Co. Ltd

Ida Works. Deptford. S.E.8.

Port Alma

27th March 1939

The District Storekeeper.
Public Works Department.
AUCKLAND. N.Z.

6 6
T c a s.
18. 3 0 7

84 B I	bdle	I - I40 I-I40A	2	3	22	20'6" x 3'9" x 6"
85 B I		I-I48 I-I48A	3	2	15	26" x 3'8" x 8"
86 B I		I-I49 I-I49A	3	1	16	26'6" x 3'8" x 6"
87 B I		I-I39 I-I39A	2	2	17	19'10" x 3' x 6"
88B I		Bollard	1	0	6	12" x 12" x 12"
89 B I		do.	1	0	6	12" x 12" x 12"
90 B I		do.	1	0	6	12" x 12" x 12"
91 B I		do.	1	0	6	12" x 12" x 12"
92 B I		do.	1	0	6	12" x 12" x 12"
93 B I		do.	1	0	6	12" x 12" x 12"
94 B I		do.	1	0	6	12" x 12" x 12"
95 B I		do.	1	0	6	12" x 02" x 12"
96 B I	bag	2		3	16	24" x 12" x 8"
97 B I	"	2		3	16	24" x 12" x 8"
98 B I	Case	26 Standards & Bases also pins etc. 50 Valves 2 bags bolts	8	3	14	3'9" x 2'1" x 18"
99 B I	Tank.		20	0	0	7' x 5'6" x 6'1"
I00B	do.		20	0	0	7' x 5'6" x 6'1"
I01B	do.		20	0	0	7' x 5'6" x 6'1"
I02B	do.		20	0	0	7' x 5'6" x 6'1"
I03B	do.		20	0	0	7' x 5'6" x 6'1"
I04B	do.		20	0	0	7' x 5'6" x 6'1"
I05B	do.		20	0	0	7' x 5'6" x 6'1"
I06B	do.		20	0	0	7' x 5'6" x 6'1"
I07B	do.		20	0	0	7' x 5'6" x 6'1"
I08B	do.		20	0	0	7' x 5'6" x 6'1"
I09B	do.		20	0	0	7' x 5'6" x 6'1"
			<p><i>Lotao</i> 29 - 15 - 3 = 3</p>			
I16B		Chains. See attached list.				
I17B	I Bag	I Bag of 2 1/2" x 3/8"				
		I Pkg 1 1/2" x 3/8"		2	10	16" x 15" x 10"
I18B	I Bag	I Bag 1 1/2" x 3/8"	I	0	0	19" x 19" x 4"
I19B	I Bag	I Bag 2" x 3/8"		2	16	19" x 19" x 5"
I20B	I "	I " 1 1/2" x 3/8"	I	0	0	19" x 19" x 5"
I21B	I "	I " 1 1/2" x 3/8"	I	0	0	19" x 19" x 5"
I22B	I "	I " 1 1/2" x 3/8"	I	0	0	19" x 19" x 5"
I23B	I "	I " 1 1/2" x 3/8"	I	0	0	19" x 19" x 5"



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CONTINUED.

Fredk. Braby & Co. Ltd.,

Ida Works, Deptford. S.E.8.

Port Alma

27th March 1939

The District Storekeeper.
Public Works Department,
AUCKLAND. N.Z.

I24B	I	Bag ✓	IBag	2" x 3"	Rivets	I	0	4	I9"	x	I6"	x	7"
I25B	I	" ✓	I "	2" x 3"	"	I	0	4	I9"	x	I6"	x	7"
I26B	I	" ✓	I "	2" x 3"	"	I	0	4	I9"	x	I6"	x	7"
I27B	I	" ✓	I "	2" x 3"	"	I	0	4	I9"	x	I6"	x	7"
I28B	I	" ✓	I "	2" x 3"	"	I	0	4	I9"	x	I6"	x	7"
I29B	I	" ✓	I "	2" x 3"	"	I	0	4	I9"	x	I6"	x	7"
I30B	I	" ✓	I "	2" x 3"	"	I	0	4	I9"	x	I6"	x	7"
I31B	I	" ✓	I "	2" x 3"	"	I	0	4	I9"	x	I6"	x	7"
I32B	I	" ✓	I "	2" x 3"	"	I	0	4	I9"	x	I6"	x	7"
I33B	I	" ✓	I "	2" x 3"	"	I	0	4	I9"	x	I6"	x	7"
I34B	I	" ✓	I "	2" x 3"	"	I	0	4	I9"	x	I6"	x	7"
I35B	I	" ✓	I "	2" x 3"	"	I	0	4	I9"	x	I6"	x	7"
I36B	I	" ✓	I "	2" x 3"	"	I	0	4	I9"	x	I6"	x	7"
I37B	I	" ✓	I "	2" x 3"	"	I	0	4	I9"	x	I6"	x	7"
I38B	I	" ✓	I "	2" x 3"	"	I	0	4	I9"	x	I6"	x	7"
I39B	I	" ✓	I "	2" x 3"	"	I	0	4	I9"	x	I6"	x	7"
				& 3" x 3"				3					
I40B	I	" ✓	I bag	2" x 3"				0					

SHIPPING SPECIFICATION.

2283

Fredk. Braby & Co. Ltd.,

Ida Works. Deptford. S.E.8.

Marked District Storekeeper Port Alma
Public Works Dept.
AUCKLAND N.Z.

27th March 1939

Nos. IO9B	} 109/110 ✓ 111/112 113 - cable companion 114 → 115 116	2 Anchors & Stocks.	
to		2 Chains each with 2 Shackles attached.	
II6B		3 Chains with 3 Shackles attached.	T C. Q. L.
		1 Chain with 2 Shackles attached.	5 6 0 24.
		1 piece Ironwork.	
		1 bag Ironworks.	

[Handwritten signature]



NOTES ON FITTING NEW ZEALAND RAFT FENDER

28.2.39.

Sequence of operations :

Check that drainage groove holes have been cut in outer surface of wooden wall of raft (See Sk. No. 1361A).

Fit rubber apron in position - commencing from rear (square end of raft).

Mark off and cut valve holes in rubber apron. Holes 1/2" diam.

Fit outer cover with black rubber side outermost.

(Before fitting battens counterbore underside of screw holes in battens to clear eyelets and thus ensure full clamping effect.)

Place inner tubes in final position with rubber bung in 5/8" dia. hole already drilled in wall of raft. Inflate tube very slightly before fixing final edge of outer cover.

Fit top edge of outer cover as Sk. No. 1361A.

For the square end of the fender a rubber disc has been provided - this is laced in position with a rubber beading for the outer edge - see perspective drawing (Sk. No. 1387).

Sk. No. 1387 shews also the method of finishing the taper end of fender.

Inflate tubes to pressure of 1/2 lb. per square inch.

ERECTION OF BRABY PARALLEL RAFT.

Before commencing erection of the Raft Framework, launching ways must be laid down.

These consist of 4 timbers 12" x 12" or nearest, laid lengthwise in the direction of launching and placed under each main lattice girder.

The tops of the timbers are then soaped or tallowed and the sliding portion of the ways laid on, these being securely dogged to retain them in position until launching time.

On these ways should be laid 8 cross supports placed as shown in the accompanying photographs. It is on these supports which should be about 9" x 9" or nearest, that the actual Raft framing is laid.

The first operation is to lay out the bottom plane of framing ensuring that the end under which is placed the 8" x 8" mooring angle is nearest to the water into which the raft will be launched.

The Keel girders together with their centre top bracings as detailed on Drawing No. S.D. 677 can now be built up. During this procedure it is important that the 2 main horizontal members of the cross frames items No 57 and 60 should be placed in position otherwise difficulty will be experienced later in inserting them.

The inner main lattice girders may now be erected together with the sloping bracing from the Keel girders.

The centre portion is now complete.

Now comes the erection of the tanks, these may be handled as best suits the tackle available, their weight is approximately 1 ton each. It is suggested that the outside 4" x 3" Tank supporting angles item I29 and I29A should be in position together with the lower side bracing, the tanks may then be inserted from the side and then brought along into position on its respective supporting angle, the remaining vertical angles and side bracing may now be fixed in position. This leaves only the deck framing to be fixed, this should not be done until some rivetting has been done for reasons which follow.

It is assumed that rivetting will commence from the bottom working upwards, it will then be found that with the tanks in their normal position, it is impossible to drive the rivets in the plate item 78, to overcome this difficulty, it will be found necessary to raise the tanks temporarily, thus enabling these rivets to be driven, it is due to this operation that the deck framing could not be fixed. The tanks should now be lowered below their normal position, the deck framing may now be fixed and rivetted whilst the tanks are in the lowered position, the tanks may now be returned to the normal position and their fixing rivets driven.

During the process of rivetting it may be found necessary from time to time to remove certain angle members in order to get at the rivets.

Erection of Braby Parallel Raft. Continued.

Care should be taken in fixing the tanks as these are of opposite hand construction, so that the manhole will clear the deck framing diagonal bracings.

Assuming the framing to be now complete the next operation is the fixing of the decking.

This is attached by means of a 3" x 3" timber, coach bolted around the outer edge of the framing, The deck planks are screwed down to the 3" x 3" surround.

On the inside and carried round the curved end of each pontoon of the raft, is fixed an 11" Avon Air fend-off, to carry this is fixed on an 18" deep x 2" wide fender board, this is coach screwed at the top to the 3" x 3" surround timber and supported at the lower end by flat brackets on each vertical member, it is suggested that this 18" deep Fender board be carried round the entire edge of each pontoon, this prevents small craft such as dinghys from becoming lodged under the deck.

Fastened on to each deck and bolting through to the deck framing are 4 Galvanised bollards, also supplied are 4 - 18" Galvanised Fairleads these may be coach screwed, 2 to each deck in positions determined by site requirements.

Collapsible Guard Stanchions and chains are provided as shown on the General Arrangement, the bases are let into the timber decking and back plates are provided to prevent racking.

This completes the Raft Construction.

.....

MOORINGS.

These are as shown on Drawing S.D. 794 and should be laid in 2 Parts as follows, before the Raft is launched the 2 - 1½" dia. "U" Bolts and 45 ft. "legs" should be connected thereto, the "U" bolts should be well burred over after fitting, the two legs should then be hoisted on deck.

The laying of the other portion must be undertaken by a diver, the flukes of the Anchors should be well buried in the sea bed and the concrete sinker positioned, the 180 ft. of chain should then be laid away from the sinker, and the end buoyed for connecting to the ends of the 2 - 45 ft. legs which are on the deck of the raft.

In the process of launching the Raft should be made fast by Ropes through eyebolts, or, should one be available to a tractor, the dogs which were fixed in the launching ways may now be removed and the raft allowed to slide SLOWLY down the ways into the water.

A check should be kept on the movement until the raft is completely floating.

The buoyed end of the 180 ft. length of chain may now be

To

Erection of Braby Parallel Raft. Continued.

/be picked up and connected to the 45 ft. legs on deck and the whole lowered overboard, and the raft then swung into its final position.

.....

RECEIVING DISTRICT COPY.	(1)	PACKING- LIST.	No 449
	From PUBLIC WORKS DEPARTMENT, <u>Auck. Land.</u>		
		P.W.S-8.]	[ORIGINAL.]

(2) Consigned to <u>Superintendent,</u> <u>Harbor Board Wharfs,</u> <u>Auckland.</u>	(3) Per <u>Lorry</u>
-----------------------------------------------------------------------------------------------	-------------------------

(4) Requisition No. _____ Order No. <u>Air Dept. Order</u> Transfer No. _____	(5) Received ; quantities checked and found correct. Signature: _____ _____/_____/193
----------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------

(6) Marks.	(7) Number of Packages.	(8) Brief Description of Packages or Contents.
<u>D.S.</u> <u>F.W.D.</u> <u>Auck.</u>	<u>2</u>	<u>2 cys. 12 bot. Single Arm Anchors.</u> <u>(To San American Bank).</u> <u>To Air Dept. Order.</u> <u>Ex. S.S. Panama branch</u> <u>Advice of Shipments. 933.</u>

(9)
Prepared by H. J. Joffe
_____/_____/193

NOTE.—If any package short received, consignor to be advised.

1
861
3

- COPY -

AUCKLAND HARBOUR BOARD.

No.8730.

INSTRUCTIONS TO FOREMEN AND INSPECTORS.

20th. March, 1939.

Foreman of Works.

EASTERN RECLAMATION NO.2 - ROADWAY C/A.

Make good the roadway and footpath surfaces where trenches have been dug by the Public Works Dept. Contractor, Mr. J.B. Mennie, in installing drainage to the Administration Buildings, etc., for the Trans-Tasman Air Terminal.

A sum of £12/10/- has been paid to the Board by Mr. Mennie to cover the cost of this work.

Charge all labour, materials, etc. on this job to - Eastern Reclamation No.2 C/a.

D. Holderness

ENGINEER TO THE BOARD.

per: A. N. T.

- C O P Y -

AUCKLAND HARBOUR BOARD.

No.8702.

INSTRUCTIONS TO FOREMEN AND INSPECTORS.

6th. March, 1939.

TASMAN AIR LANDING - REPAY. AIR DEPARTMENT.

Construct a 60ft. steel gangway in accordance with E.487/3 and details to be supplied.

Steel sections for this have been ordered.

No.8710.

6th. March, 1939.

Construct two timber gangways to E.487/2 herewith.

D. Holderness
ENGINEER TO THE BOARD.

per: A. N. T.

RECEIVING
DISTRICT
COPY.

From
PUBLIC WORKS DEPARTMENT,

Auckland

PACKING-
LIST.

No 380

P.W.S-8.]

[ORIGINAL.]

Consigned to Superintendent
Harbour Road Works
Auckland

Per Loopy
As below

Requisition No. _____
Order No. Air Dept. Order
Transfer No. _____

Received ; quantities checked and found correct.
Signature: _____
_____/_____/193

(6) Marks.	(7) Number of Packages.	(8) Brief Description of Packages or Contents.
<u>Dist. Stockport</u> <u>P.W.D.</u> <u>Auck.</u>	<u>2</u> <u>3</u> <u>2</u> <u>12</u> <u>3</u> <u>6</u> <u>3</u>	<u>2</u> <u>6</u> <u>Flareheads.</u> <u>3</u> <u>only</u> <u>Locklock Shackles</u> <u>2</u> <u>only</u> <u>1" End</u> <u>12</u> <u>only</u> <u>Loose Chains & Shackles</u> <u>3</u> <u>only</u> <u>Clump Anchors</u> <u>6</u> <u>only</u> <u>Single Arm</u> <u>3</u> <u>only</u> <u>3 way connections</u> <u>Ex. S.S. Mataora</u> <u>Advice of Shipment. 807.</u>

Prepared by F. J. Jeffers
5/3/1937

No 320

PACKING LIST

PUBLIC WORKS DEPARTMENT

RECEIVED
DISTRICT
OFFICE

[ORIGINAL]

Description of Goods	Quantity
Description of Goods	Quantity
Description of Goods	Quantity

Langmuir
Markham Board

1921

Prepared by _____

7
RECEIVING
DISTRICT
COPY.

(1)
From
PUBLIC WORKS DEPARTMENT,

PACKING-
LIST.

Nº 404

P.W.S-8.]

[ORIGINAL.]

(2)
Consigned to Superintendent
Harbor Board Wharfs,
Auckland.

(3)
Per Looy
as below

(4)
Requisition No. _____
Order No. Air Dept. Order
Transfer No. _____

(5)
Received ; quantities checked and found correct.
Signature : _____
____/____/193

(6) Marks.	(7) Number of Packages.	(8) Brief Description of Packages or Contents.
<u>P.S.</u> <u>P.N.P.</u> <u>Auck.</u> <u>E. 1/4.</u> <u>9.30/54.</u>	<u>4</u> <u>25</u>	<u>4 pps. Floats.</u> <u>25 pps. Mooring.</u> } <u>A.H.B. yard.</u> <u>Ex. S.S. Rangitoto.</u> <u>Advice of Shipment. 843.</u>

(9)
Prepared by F. J. Jeffers.
16/3/1939.

7

(COPY - See File No.861/1
for ESTIMATES and details
of services required).

3rd. March, 1939.

The Air Secretary,
Air Department,
WELLINGTON, C.I.

Dear Sir,

I have for acknowledgment your 235/3/34 of 22nd. ultimo stating that the work outlined in my letter of 11th. idem had been authorised by Cabinet to be undertaken by the Auckland Harbour Board and asking that the work be proceeded with.

In reply I have to say that the work is in hand and will be carried to completion with the utmost expedition.

I appreciate your kind reference to the assistance it has been possible to render to you and your Department and assure you that the Board will continue at all times to co-operate to the fullest extent in the inauguration and operation of Air Services to this Port.

Yours faithfully,

Superintendent.

- C O P Y -

AIR DEPARTMENT.

235/3/34.

Wellington, C.I.

22nd. February, 1939.

The Superintendent & Engineer,
Auckland Harbour Board,
P.O. Box 1259,
AUCKLAND.

Dear Sir,

In reply to your letter of the 11th.
instant I have to say that Cabinet Authority has been
obtained for the work outlined therein to be undertaken
by your Board and I should be glad if you would make the
necessary arrangements to proceed with the work.

The assistance that you have so willingly
given is very much appreciated by the Department.

Yours faithfully,

(Sgd) T.A. Barrow.

AIR SECRETARY.

Auckland Harbour Board.

MEMORANDUM

From

Drawing Office

2nd Mar. 1939.

To

THE ENGINEER

Steel required for 60 ft. Gangway
Trans-Tasman Air Services

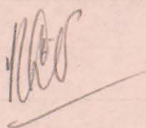
Description	No of Lengths Required	Length in ft.	Weight lbs.
<u>Channels</u> C			
4" x 2"	11	10'-6"	
4" x 2"	1	13'-6"	915
<u>Angles</u> L			
4" x 3" x 3/8"	4	25'-6"	862
3" x 3" x 3/8"	6	20'-6"	
3" x 3" x 3/8"	4	7'-6"	1,100
2 1/2" x 2 1/2" x 3/8"	10	8'-3"	
2 1/2" x 2 1/2" x 3/8"	2	13'-0"	640
2" x 2" x 3/8"	11	21'-6"	
2" x 2" x 3/8"	10	14'-9"	1,775
<u>Total =</u>			<u>5,292 lbs.</u>

or 2.36 tons.

Ordered 3.3.1939.

By Air Department.

By Nos 1027 + 1028.0.



W.P.

2.3.39.

7
861
3

15th. March, 1939.

Mr. J.B. Mennie,
14 Arney Crescent,
REMUEIRA.

Dear Sir,

DRAINAGE TO TRANS-TASMAN AIR BASE - HAIG ST.

Referring to your verbal request that the Board should make good the roadway and footpath surfaces where trenches for drains have been cut by you, I am willing to carry out this work for the sum of £12.10.0d.

On payment of this amount you will be relieved of the responsibility of making good the roadway surface.

Yours truly,

*L12/101. paid 20/3/39
Ser 95 4407.*

SUPERINTENDENT & ENGINEER.

*Instruction to Foreman
of Works. 20/3/39.*

Estimate for Haig & Extension for Inno Deaman Air Base
making Good Road Surface after laying Drains

Estimate of Payment to be made by Drainage Contractor
 if Atk makes good road surface where trenches have been cut.

40ft trench across road for foulwater sewer.

Trenches 2ft wide (allow for making good 3ft)

Area $40 \times 3 \div 9 = 13\frac{1}{2}$ sq yds

Description	Quantity	Item	Rate	£	s.	d.
Material 2 1/2" metal	13 1/2	ton	4/-	6	8	
3/4" chips	13 1/2 x 2/36 = 3/4 yd	ton	13/3	12	0	
1/4" chips	13 1/2 x 3/2 = 3/8 yd	ton	16/-	8	0	
Supplying & spraying bitum						
13 1/2 sq yds @ 2 gals	27	gals	10 1/2	1	3	8
Rolling	1	hr	15/-	15	0	
Labour 2 men 4 hrs	8	hrs	2/6	1	0	0

Trenches in foot path.

12ft single trench 2' wide (say 3ft)

100ft double trench 3' wide (say 4ft)

$(12 \times 3 + 100 \times 4) \div 9 = 48$ sq yds

Description	Quantity	Item	Rate	£	s.	d.
Material 1/2" chips	48 x 2/36 = 2.7 yds	ton	14/-	2	4	10
1/4" chips	48 x 1/72 = 0.7 yds	ton	16/-	12	10	
Supplying & spraying bitum						
48 sq yds @ 1/2 gal	24	gals	10 1/2	1	1	0
Rolling						10 0
Labour 2 men 8 hrs	16	hrs	7/6	2	0	0

10 14 0

Contingencies 10 1/2

1 1 5

11 15 5

Change sq 12/10/-

[Signature]
 14.3.39

And allowed by Contractor for this work was.

Road - 40ft single trench @ 1/9	=	£3/10/-
Footpath 12ft single trench @ 1/9	=	13/-
" 100ft double trench @ 2/-	=	£10/-
<u>Total</u>		<u>£14/2/-</u>

7
861
/3

15th March, 1939.

Mr. T. Barrow,
Air Secretary,
Air Department,
WELLINGTON.

Dear Sir,

I enclose herewith account for clearing and excavating the site for the Air Base at Mechanics Bay.

You will recall that the site was originally covered with concrete and timber piles and other harbour equipment and it was arranged at my interview with you on 22nd December last that the clearing and excavation of the site should be put in hand at once so as to enable the contractor to start work on the erection of the buildings immediately after the New Year.

You will recall also that both then and later I suggested that, in the event of this Board charging a rental for the land bearing a reasonable relationship to its capital value, it might be reasonable for this Board to assume responsibility for the cost of clearing and excavating the site, but that, if the area were leased at a nominal or relatively low rental, I considered that the Department should bear the cost. As the rental has now been fixed at a peppercorn I think you will agree that the cost of clearing and excavating the site can reasonably be a charge against your Department.

Yours faithfully,

Superintendent.

DH.IH.

Repayable Air Department

J. E. A. L. Base

7

Excavation

December
January

Office Labour	changed to	4 7 5	
	Structs + Kds	16 6 4	
Transport 752	Basin Red	16 19 9	
	Gas 2 1/2		
Winston Ltd	excavate filling	V880/3	
	excavate filling		
	Excavation gas	11 12 6	
	Repay Air Dept		
	Repay Air Dept		
	Repay Air Dept		

To be checked later
and going to be
checked

20	13	9	
4	19	5	
18	3	9	
2	12	3	
8	6	1	
5	6		

January

Labour	bleas site	28	12	3	
gas + tools					
Churned Over	6 1/2 hrs @ 17/6	5	9	5	
"	Te Kaurahi 7 1/2 hrs @ 17/6	6	6	11	
Silt Pumps	2 days @ 2/5/-	4	0	0	
Transport Gas	5 days @ 9/2/6	4	3	0	
Sew Pumping	3 days @ 3/1/-	9	0	0	
Motor Car	16 hrs @ 7/-	6	8	0	
J. Mungle Lumber		9	8	0	
R. & L. Lumber	carriage	4	9	6	

1st Motor Road
2nd Motor

9 4402

4	7	5
16	6	4
78	12	3
49	6	0

11th. February, 1939.

T. Barrow Esq.,
Air Secretary,
WELLINGTON.

Dear Sir,

As promised at my interview with you in Wellington on 9th. instant, I forward under separate cover, two copies of blueprint from drawing No.E487/1 showing items to be constructed in connection with the landing and embarkation of passengers and goods for Trans-Tasman and other Air Services at Mechanics Bay.

It is understood that a "Braby" U-type raft with its necessary, moorings, is being supplied by your Department. It is also understood that everything required in the way of rubber or other buoys, chains, cables, shackles, links etc. for the safety and control of the flying boats while lying at the Base are to be supplied by you.

The additional items required to complete the installation in-so-far as the landing and embarkation of passengers, goods, stores, machinery etc. are concerned are understood to be as follows:-

1. Timber landing projecting from existing breastwork to take shore end of main gangway.
If built by Auckland Harbour Board this is estimated to cost, say, £150.
 2. Steel framed gangway 60' x 6' to provide access to pontoon 40' x 22' at maximum grade of 1 in 5 at L.W.S.T.
If built by Auckland Harbour Board, estimated cost, £275.
 3. Steel pontoon 40' x 22' x 6'.
If not ready for opening of service, and at times of overhaul and slipping, Auckland Harbour Board could provide temporary use of a suitable wooden pontoon.
If built by Auckland Harbour Board, estimated cost, £2,750.
 4. Timber fendering for pontoon to provide for rise and fall of tide.
If built by Auckland Harbour Board, estimated cost, £275.
 5. Chain moorings for pontoon with special anchorages on shore.
If provided by Auckland Harbour Board, estimated cost, £400.
 6. Wooden gangways (two) each 34' x 4' giving access from 40' x 22' pontoon to each side of "Braby" raft.
If provided by Auckland Harbour Board, estimated cost, £150.
-
- £4,000.
-

No provision has been made at this stage for a crane to lift goods, machinery etc. from the "Braby" raft to the quay (and vice versa) or for mooring winches on the quay for the control of the "Braby" raft and/or flying-boats.

If you desire the Board to proceed with the construction and erection of the items enumerated above, at the cost of your Department, the work will be put in hand immediately advice is received from you.

I would point out that the estimates submitted are believed to fully cover the cost of the individual items, and any saving effected would be a credit to your Department. If however the cost should exceed the estimate, your Department would be expected to meet such extra cost.

Yours faithfully,

Superintendent & Engineer.

Auckland Harbour Board.

PROGRESS REPORT for Period ending 31st. January 1939. on Road & Quay
Access to Tasman Airways Works.

This work was commenced on January 9th with a contract by Winstone Ltd to remove surplus spoil off Tasman Airways section and to excavate down to formation level an extension of 130 ft of the turned quay, an extension of 205 ft of Haig St., and 143'-6" of lane 25 ft wide joining the ends of the above two extensions. This contract was completed on 18th January with the removal of 1362 cub. yds of spoil of which 435 cub yds came from Tasman Airways section and the balance, 927 cub yds, from the road, quay and lane.

A start has been made in trimming the foundation of the extension to Haig St.

[Handwritten signature]
2.2.39

Date 1st. Feb. 1939.

Signature

[Handwritten signature]

Auckland Harbour Board.

MEMORANDUM

From

18th Jan. 1939

The Drawing Office.

To

THE ENGINEER

Excavation of Spoil from Tasman Airways Section
at Mechanics Bay Reclamation

Contract by Winstone Ltd.

The total quantity of spoil removed under this contract was 1362 cub yds. of which 435 cub yds. came from the Tasman Airways section and the balance from the road, quay and 25 ft lane.

R. Young.

Account No. ER No. 296

Debit	Haig St Extension	927 cub yds	at Contract price	£ 183-9-5
	Repayable (A.H.B.)	435 cub yds	" "	£ 86-1-10
		<u>1362</u>		<u>£ 269-11-3</u>

M.R.C.

Auckland Harbour Board

SPECIAL MEETING-BOARD IN COMMITTEE.

TUESDAY, 10th JANUARY 1939, AT 3.0 p.m.

PRESENT:- The Chairman (Mr. W.B. Darlow),
Messrs. A.S. Sutherland, H. Luke, T.A.
Bishop, F.H. Gifford, E.J. Phelan, J.H.
Frater, C.G. Macindoe, H.R. Mackenzie,
R.T. Reid, H. Turner, J.H. Kinnear, J.
Sayegh and E.V. Sutherland.

An apology for absence was received from
Mr. J.B. Donald.

The Chairman stated that he had called Members together in order that the proposals of the Government in connection with the Trans-Tasman Air Base at Mechanic's Bay might be explained to them. Many visits had been received from representatives of the Government and of Union Airways but nothing concrete had been submitted which could be placed before the Board earlier. On the 22nd of December last the Board was asked to clear an area in Mechanic's Bay in order to have it ready for the erection of buildings to be commenced on the 4th January, 1939, as the matter was urgent. He had therefore called Members together so that the proposals could be fully explained by the Superintendent and Engineer.

Letter from the Air Secretary, 21.12.1938, asking if the Board would be prepared to grant a lease to the Crown of the necessary area of land required for a period not exceeding ten years at a nominal rental, was read.

The Superintendent stated that he had attended a meeting in Wellington on the 22nd of December last when certain proposals were placed before him for the establishment of an Air Base at Auckland. The original proposals provided for the use of a large area of the reclamation in Mechanic's Bay and he had been able to curtail this area to 175' X 141' immediately to the west of the site occupied by the Pan American Airways. The Government proposed erecting immediately administrative buildings, workshop and test house on the area and had already let a contract for the work. The Board was asked to clear the area at the Government's expense and to submit plans and estimate of cost of pontoons, gangways etc. These proposals had been submitted to the Chairman who had approved the use of the site being made available on 4th January for the Contractor and the necessary arrangements had accordingly been made to clear the area required. (Estimate
in file
867)

Several questions were asked by Members and were answered by the Chairman and Superintendent.

Mr. Macindoe then moved:-

That the Chairman's action in agreeing to the use of the site asked for be confirmed. Carried.

Mr. Luke moved:-

That a reply be sent that the Board is prepared to grant a lease of the area under review to the Crown; question of rental to be charged to be considered by the Board at its first meeting in February.

Carried.

The meeting terminated at 4.0 p.m.

CONFIRMED:

CHAIRMAN.

- C O P Y -

AUCKLAND HARBOUR BOARD.

No.8571.

INSTRUCTIONS TO FOREMEN AND INSPECTORS.

30th. December, 1938.

Foreman of Works.

SITE FOR AIR BASE.

Remove immediately all piles and timber from the breastwork at Campbell's Point for a length of 200 feet to the west of the boundary fence of Pan-American Airways.

This site has been leased to T.E.A.L. and the Edwards Construction Co. Ltd. will start work on the foundations for the buildings on 4th. January.

A contract has been let to Messrs. Winstone Ltd. for excavations of approximately 1,200 cubic yards of surface spoil from the area, which work will start on 4th. January.

The material will be carted to the tip at corner of Fanshawe and Halsey Streets.

Please arrange for the necessary tipmen.

D. Holderness

ENGINEER TO THE BOARD.

per: A. N. T.

1
86/3

30th. December, 1938.

Messrs. Winstone Ltd.,
69-77 Queen Street,
AUCKLAND, C.I.

Dear Sirs,

I have received your letter of even date quoting 3/11½d per cubic yard of solid material, for excavation of surface spoil at Campbell's Point Reclamation and tipping at Reclamation at corner of Halsey and Fanshawe Streets, and in confirmation of our telephone conversation have to state that your price is accepted.

As stated in your letter, work is to be commenced on 4th. January 1939 and be completed within ten working days.

Order No.C.77 and voucher forms enclosed herewith.

Yours truly,

ACTG. ENGINEER TO THE BOARD.

ESTABLISHED 1864



69-77 Queen St.
AUCKLAND NZ
ALSO WELLINGTON &
PALMERSTON NORTH
P.O. BOX 395
TELEGRAMS & CABLES
WINSCOAL AUCKLAND
CODES: BENTLEYS. ACME.
ABC 5th EDITION-

WINSTONE LIMITED

*Manufacturers & Distributors
of Building Materials -*

Auckland C.I.

30th December, 1938

The Engineer,
Auckland Harbour Board,
Quay Street, CITY. C.1

Dear Sir,

All contracts and agreements contingent on strikes, and causes beyond our control. Prices are based on current Awards and are subject to rise and fall in costs due to variation of same.

In the terms and conditions of your letter of 29th December, we have pleasure in tendering for the excavation of surface spoil from Campbell's Point Reclamation and tipping at Reclamation corner of Halsey and Fanshawe Streets, at the rate of -

3/11½d. per cubic yard of
solid material.

The work can be commenced on 4th January, and we will be able to complete it within the allotted time of ten working days.

Yours faithfully,
WINSTONE LIMITED.

England

Sales Manager.

HE. EB

*Accept this
11/12/38
30-12-38*

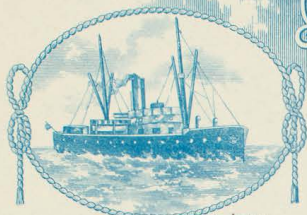
Telegraphic & Cable Address.

CRAIGCOAL

Codes used
A. B. C. 5th EDITION
BENTLEYS & WESTERN UNION.

TELEPHONE 44.840
PRIVATE EXCHANGE
CONNECTS ALL DEPTS

BRANCHES AT:
MT. EDEN ONEHUNGA
DEVONPORT HAMILTON



FC/FE
SHIPPING AGENTS.

Memo from *J. I. Craig Ltd.*

SHIP OWNERS, CARRIERS, COAL & GENERAL MERCHANTS,
BRICK & LIME MANUFACTURERS,
CUSTOMS, RECEIVING & FORWARDING AGENTS

CRAIG'S BLDGS. STREET,
QUEEN'S STREET,

P.O. BOX 1534

Auckland, C.I.

30th December, 1938.

The Acting Engineer,
The Auckland Harbour Board,
AUCKLAND. C.I.

Dear Sir,

EXCAVATION OF SURFACE SPOIL FROM CAMPBELL'S
POINT RECLAMATION AND TIPPING AT RECLAMATION -
CORNER OF HALSEY STREET AND FANSHAWE STREET.

We are pleased to quote for the excavation and removal of surface spoil from section as above in accordance with the terms of your specification (except that the price does not include the removal of timber, etc. from site) at 5/9 net per solid yard.

Owing to the shallow nature of some of the work the price is slightly higher than our previous quotation. We feel sure, however, that you will appreciate that the working costs are higher on this occasion.

We are prepared to commence on the 4th January and clear site for buildings, after which we may have to remove the excavator to the Auckland Farmers' Freezing Company's job for a few days. We can then return and finish the Board's job. We will endeavour to delay the starting of the Freezing Company's job, but as we are already committed to them we do not wish to disappoint them if their job is ready to proceed. We understand from conversation with Mr Vickerman that this arrangement will be satisfactory.

The Acting Engineer, Auckland Harbour Board.

30/12/38

to proceed with the work,

Hoping to receive your instructions

Yours faithfully,

J.J. CRAIG LIMITED.

F. Colledge

F. Colledge.
SALES MANAGER.

Rejection notice sent.

30.12.38.

Col.

AUCKLAND HARBOUR BOARD.

Engineer's Office,

29th. December, 1938.

EXCAVATION OF SURFACE SPOIL FROM CAMPBELL'S POINT
RECLAMATION AND TIPPING AT RECLAMATION AT CORNER OF
HALSEY STREET AND FANSHAWE STREET.

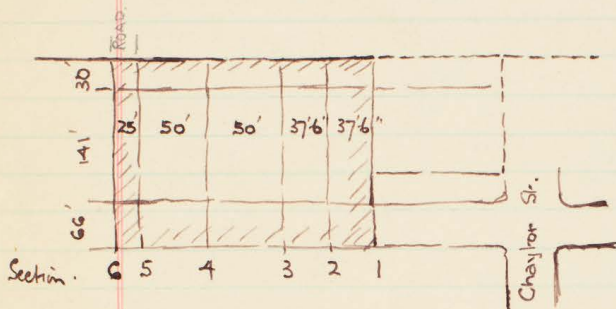
- (1) QUOTATIONS will be received up till 2.30 p.m. on Friday, 30th. December 1938, for the excavation of not less than 1,200 cubic yards of spoil from Campbell's Point Reclamation and for its transport to and dumping in the Reclamation at Corner of Halsey Street and Fanshawe Street.
- (2) TIME FOR COMPLETION: The excavation is being carried out to enable buildings to be erected on the site, and also for the formation of roadways. Excavation shall commence on 4th. January 1939, and the whole of the area to be occupied by buildings shall be first cleared and levelled and the work shall be carried out in such order as may be required by the Board's Engineer. The whole of the excavation shall be completed within ten (10) working days from time of commencement.
- (3) SITE TO BE LEFT EVEN AND CORRECT LEVEL: Pegs will be driven to the finished levels and grades, and the Contractor shall leave the site smooth and even to correct levels and grades between the several pegs, to the satisfaction of the Board's Engineer.
- (4) PRICES: The price quoted shall be at per cubic yard of solid material removed as determined by careful levelling before and after excavation of the site.
- (5) ADDITIONAL QUANTITIES: The Board shall have the right to call upon the Contractor to carry out any additional excavation in the same area and under the same conditions, at the price quoted.

ACTING ENGINEER TO THE BOARD.

QUOTATIONS CLOSE AT 2.30 P.M. ON FRIDAY, 30th. DECEMBER, 1938.

Estimate for Excavation necessary at Site for T.E.A.L. at Mechanics Bay, including Quay & roadway.

allowing for excavating 9" below finished level over 30' quay & 53 ft of 66' roadway with 141' deep allotment. - all x 200' long.



Section No.	Excavation.	Filling.
1	102 sq. ft.	44. sq. ft.
2	116	12
3	160	9
4	217	-
5	230	-
6	377	-

Quantities.

Excavation.		Filling.	
1-2	$\frac{218}{2} \times \frac{37.5}{27} = 151 \text{ yds}^3$	$\frac{56}{2} \times \frac{37.5}{27} = 39 \text{ yds}^3$	
2-3	$\frac{276}{2} \times \frac{37.5}{27} = 192 \text{ yds}^3$	$\frac{21}{2} \times \frac{37.5}{27} = 14 \text{ ''}$	
3-4	$\frac{377}{2} \times \frac{50}{27} = 349 \text{ yds}^3$	$\frac{9}{2} \times \frac{50}{27} = 8 \text{ ''}$	
4-5	$\frac{447}{2} \times \frac{50}{27} = 414 \text{ yds}^3$	$\frac{0}{2} \times \frac{50}{27}$	
5-6	$\frac{607}{2} \times \frac{25}{27} = 282 \text{ yds}^3$	$\frac{0}{2} \times \frac{25}{27}$	
Total. 1388 yds ³		Filling 61 yds ³	
Excavation. 1456 yds ³			
61			
1395			

Not less than 1200 cub yds.

[Signature]
29. 12. 38

[Signature]

