

Public Works (1896) Department.

G.O., No. 1506W

DATED 13th May 1896

[Despatch Abstract.]

Pamban Lighthouse: The S. E. Officer directed to prepare without delay the requisite plan and estimate for alterations to the —, in communication with Mr. Ashpitel.

BACK PAPERS.

FURTHER PAPERS.

saying that either
 admitted or the
 we're doing business
 be asked to
 have plans and
 made for the
 entrance to the
 within eight hours

The Chief Engineer
 to Government
 P. W. Department
 No. 690 P. W.
 74
 at 29 April 1896
 Recd: 1.5.96

P.S. No 15064 of 13th May
 1896.
 The Suptg. Engr.
VI Circle, will, without
 delay, prepare the
 requisite plan and
 estimate in com-
 munication with Mr.
 Ashpitel.

No 2334 W of 14-9-94
2754 C of 23-8-94
3206 C of 19-10-94
1551 W of 23-6-94
245 W of 8-4-96

8/5/96

CHOS
F.S.VB.

S. E. IV Church 20/5
Marine Dept
J. W. Ashpitel Esq
(thru the S. E. IV Church)
O. L. S. 64 B 11/5

N^o 690 PW
94

Presidency

Madras 29th April 1896.

To

The Chief Engineer to Government
Public Works Department,
Chennai.

Sir,

With reference to the accompanying copy of letter dated 25th April 1896 N^o 419 M.D. from the Superintending Engineer, 5th Circle, I have the honor to point out that the alterations to the Pamban Light-house should be commenced without further delay. I therefore beg that either Mr. Ashpitel or the Superintending Engineer may be desired to prepare the necessary plans and Estimate.

I have the honor to be

Sir,

Your obedient servant

K. A. Theet

Commander R. I. M.

Presidency Port Officer.

N^o 419 M.D.

Office of the Superintendent
Engineer to the Circle,
Trichinopoly 28th April/96

From

The Superintending Engineer,
5th Circle.

To

The Presidency Port Officer,
Madras.

Sir,

With reference to your letter N^o 690 PW dated 25th April 1896, calling for the estimate for alterations to the Pamban Lighthouse, referred to in G. O. N^o 1651 W dated 22nd June 1894, I have the honor to inform you that Mr. Ashpitel having subsequently been deputed on special duty to inspect and report on all the coast lights in G. O. Marine N^o 318 of 10th August 1894 (P.W. N^o 233 W dated 6th September 1894) the plans of the Light houses at Pamban and Stare Island were forwarded to that Officer with this Office letter N^o 1040 M.D. dated 21st November 1894 in view to the necessary estimates being prepared by him, agreeably to this Office N^o 858 M.D. dated 6th October 1894 to the Chief

2334 W S 14.9
94

I have seen
(Sd) W. Hughes
Superintending Engineer
at the 1st Birch.

(Sd) W. Hughes

Superintendent Engineer
and Civil Engrs.

True Copy

W.B. Fernandez

Manager

Presidency Post Office.

Qwe.
14052/56

True copy
W.B. Fernandez
Manager
Presidency Post Office.

was across of "Reading very close for many years"

1896-1897.

FROM

THE REGISTRAR OF THE
UNIVERSITY OF MADRAS.

No. 2685 cal 5-7-95
2478 cal 9-8-95
2299 cal 16-7-95
2155 cal 28-6-95
2326 cal 27-6-94
2283 cal 22-6-94
2002 cal 22-5-94
1801 cal 27-4-94
No. 193.
1800 cal 27-4-94

Dated

Received

1st

May

1896.

SUBJECT.

Returning, duly approved,
the within mentioned estimates
received from the Consulting
Architect to the Government
of Madras.

O.L.S. 71 R13/5

No. 193 OF 1896-1897.

SENATE HOUSE, 1st May 1896.

FROM

THE REGISTRAR OF THE

UNIVERSITY OF MADRAS,

TO

The Secretary to Government
and Chief Engineer, P.W.D.,
Madras.

SIR,

I have the honor to forward,
duly approved, the following estimates
received from the Consulting
Architect to the Government of Madras:

(1) Estimate for Rs 348 for establish-
ment required for cleaning and
dusting the Senate House during
1896-97.

(2) Estimate for Rs 582/- for the
Conservancy establishment for the
Senate House and Revenue Board
Latrines for 1896-97.

2. The Accountant General
has been requested to place at the
disposal of the Public Works Depart-
ment the sum required for the purpose.

I have the honor to be,
Sir,
Your most obedient Servant,

H. C. Oakley
Registrar.

No. 1507 Wd 14th May 1896

Office:
PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following

From the Registrar of the University of Madras No. 193 of 1896-97 dt 1st May 1896

The estimates, aggregated
Rs 930 for the undermentioned
works in connection with the
Senate House, Madras, are
returned to the Consulting
Architect for sanction and
execution:-

(a) Establishment required for
cleaning and dusting the
Senate House during 1896-97 Rs 348

(b) Conservancy establishment
for the Senate House and the
Revenue Board Latrines
for 1896-97 - Rs 582

Total Rs 930

2. The Registrar of the University
of

of Madras not having
provided the usual percentage
charges on account of the
work lettered (a), that officer
will be requested in the
Educational Department
to place at the disposal
of this Department a further
sum of Rs 85 therefor.

9/5/86

CMS
9.5.86.

No 1507 Wdy 14th May 1896

x vide No 2241 Cdy 13th
May 1896.

H.B. disposal on Chy 212

DESPATCHED
15 MAY 96

To
The C.A. to Govt with 4 enclos.
" Inxan P.W. Accts
" Educational Deptt

CMS

CMS

No 953

Supervisor's Office:
Cannanore 25th February 1896

From
Mr J. Pereira
Supervisor of Govt. Works.
To
The Executive Engineer
West Coast Division
Thro'
The Sub Divisional Officer
Wynaad

Received
1. J. Pereira
24.2.96

Enclosure 6

P.O. No 696 of 11/10/93
Detail R.A.
Absd do
Report
Plans (Section & level)

Sub report

Sir,
In compliance with your No 72 Sd/18/1/96
I beg to submit my report on the blasting operations
conducted at the entrance to the Androth harbour,
one of the Laccadive Islands.
I started from Calicut per S.S. Mangalore
on the 20th January '96 with a party of 4 blasters &
kindly procured thro' the help of Sub Div Officer
Wynaad, from the Tamarcherry grant. We reached
Androth on the evening of the 21st and returned to
Calicut on the 29th forenoon. My stay in the
island, exclusive of the time engaged on the voyage
is therefore between the 22nd & 27th or 6 working days.
2. Position of the Island - Androth, one
of the five inhabited islands of the Laccadives, at
present under the Collectorate of Malabar, lies
almost due West & 120 miles off the coast of Calicut.
It is 2 1/2 miles in length East to West, & 1 mile in
breadth nearly, with a population of about 3000
inhabitants - all moplaks. It has a luxuriant
top of Coconut plantation, and its exports are
Coconuts & Coir. The island depends for all its
other

uses a row of blasting being done by ordinary junks

other necessities of life, from the West Coast - main
Land - Mangrove & Cahent forming its chief
ports of calling - It is protected by a
natural barrier of coral reef - that on the north
face comprises 2 arms, enclosing a lagoon with a sandy
beach sloping gradually into the sea, as shown
in the Survey - The barrier on the south face, is
an almost flat, close grained, hard coral rock,
resembling white marble about 200 ft. wide. This
rock is exposed during low tide -

The surf along this rocky margin, is generally
rough. Beyond this line, the rocky reef falls abruptly
into fathomless sea.

3. Rocky obstructions - The services of the Amin
and a Karmaven having been kindly deputed by
the Collector - Mr. Hewison, I inspected the
inner harbour and noted the coral rock obstructions
along the entrance to the lagoon, marking their
positions by temporary buoys.

(a) Survey & Levels - To elucidate my report, I
append a Survey & Cross Sections of the harbour,
showing the positions of the rocky obstructions under
complaint.

4. Magnitude of rocky obstructions - A reference
to survey & levels will give an idea of the magni-
tude of the rocky obstructions A. B. C. D & E as
nearly as could be ascertained from sounding.

Rock A	55' x 40' x 9'	or ft	19800
" B	40 x 35 x 11	"	15400
" C	40 x 30 x 12	"	14400
" D	70 x 50 x 13	"	45500
" E	80 x 40 x 15	"	48000

= 1,43,100

5. Nature of rock to be blasted - The rocks to be blasted
is coral-rock. It is porous in nature, whitish in
colour.

colour - It is soft at the exposed surface, but harder
as it approaches the stem or root with fissures &
hollows in the body - It may be chipped off or cleaved
at the edges with crow bar, but cannot be entirely
removed, unless by blasting - It is a lime stone
and is extensively used by the islanders.

6. Tidal Observations - The depth of water over
these stones is reduced to datum. The M. S. Level
arrived at, 22.45, is from a temporary tide gauge
erected by me during the working days in the island,
giving a mean reading of 2.00 as the difference between
the low & high tides. The readings recorded are given
in a table on the level sheet.

7. Nature of Work - From the levels & the tidal
observations, as also to the boring-irons, - 6 ft. steel
jammers, at my disposal, it is clear that I had
no means to attempt at bore holes beyond 2 feet
under water.

The rocks, being also situated in 2 1/2 to 3 ft
fathoms of water around them, due allowance for
swells & breakers during the work should also be
considered.

8. Island Labour - The islanders are unwilling
to take work under daily labours. They appear
timid to engage themselves, being evidently accustomed to
lethargic habits. Thro' the interference of the Amin
however, I engaged 8 men at 6 as per day - of these,
only four attended work fairly well - They however
render gratuitous help in jumping bore holes, and
removing debris lying under water. This hap-hazard
labour lasts but a little while, and is given as
suit their convenience. - They are however good
swimmers & divers, & once they make up their mind
to engage themselves, render good service in charging
bore holes.

bore holes in deep water.

In this connection, their usefulness for submarine blasting, is unquestionable as compared to labour transported from the main land.

9. Blasting Work Executed. As explained in paras 6 & 7 rock A alone admitted of blasting operations being taken up on the 22nd, 23rd & 24th.

With the low tide of the 24th reading 3.50', I secured the services of the 4 islanders divers. With these, I picked out 11 minor rocks perched on rocks B, C & D (see Cross Section) & measuring on an average 5' x 3' x 2' each. With some difficulty, bore holes of from 12 to 18" in depth, were jumped on these boulders and fired with very good results. Boulders shattered disappearing from the surface of the main rock.

The low tides between the 25th & 27th however, allowed some good work being done along the Eastern faces of rocks B, C, D & E. The work on these rocks is shown in red ink shading in the survey & sections.

An approximate measurement of blasting work done on the different rocks, between the 22nd & 27th is as follows:

Rock - A - Cft 1875 - Edges all round widened to average section of 4 x 2. Body reduced to a depth of 1 1/2 ft. - Existing body shattered to a depth of 2 ft. preventing further bore holes being jumped.

Rocks - B, C, D & E - Cft 1041 - Minor boulders perched on main rock blasted - Projecting ends on Eastern faces removed & the entrance to harbour widened by an average of 5 ft.

Total Cft 2856 debris of rocks blasted lying

lying in the deep and has to be removed by the islanders.
10. Working data. The direct cost per 100 cft of rock blasted is 8 Rs., while, the charges inclusive of batta & other sundry charges to work people, is Rs. 10 per 100 cft.

The cost does not include the removal of debris blasted which are still lying in 2 to 3 fathoms of water. The Amin and the Karaman of the island, however, promised to have this done.

I consider, this should be insisted upon where the depth is less than 1 1/2 fathoms.

11. Result of blasting on rock A. Projecting edges having been removed in a section of 4 x 2' all round, - a few charges were fired on the body or surfaces of the rock, which reduced the depth by 1 1/2 ft. - These charges have so much shaken the rock, that the jumping of further bore holes is not feasible, as they get clogged up with particles of sand, below a few inches of the surface.

I consider, that crow bars can now be freely used to remove debris, & reduce the depth of this rock.

Proposals for future operations - From the result experienced in blasting the body of rock A, as explained in para 11, it is evident that blasting with shallow bore holes and small charges on coral rock, is a drawback to blasting with ordinary jumpers - subsequent bore holes being clogged up with sandy particles - The only advantage in blasting by this simple method, is to detach projecting ends of rocks - This has more or less been effected.

The depth of water on rocks B, C, D & E do not also allow of blasting being done by ordinary jumpers.

set to the root, is by deep bore hole and heavy charges.
 This work, in 2 to 3 fathoms of water should
 in my humble opinion, be taken up by an
 in Experience Staff in Submarine Blasting. The best
 of time however to commence work is at Spring tide.

The party deputed for the work, should be
 allowed to start work at the beginning of the
 inspecting season - The Collector deferring his
 inspection to the island to the last -

This arrangement will allow the blasting
 party to work undisturbed and with the co-operation
 of the island, which is otherwise disturbed by
 the bustle of the Collector's inspection. -

I beg to remain
 Sir,
 Yours most Obedt. Servt.

Macleura
 Supr. Sp. Commr. Cantt Wko.

Mearns
 Executive Engineer

+ 40 lbs of
 Dynamite
 50 fathoms of
 being all, the
 - plowing act
 had during
 present operat
 J. Macleura

average
 Total Cft 2856
 section of rocks blasted
 lying

total effect 2006 debris ref no blasted
lying

6000

No 172 dated 20th April 1896.

Copy - Submitted to the Chief Engineer,
W.D. with reference to L.O. No 2797 W, dated
2nd November 1893, with a request that an
allotment of Rs 300 may be made for the
lasting operations carried out.

Encls. 4

- 1. Mr. Pereira Report
- 2. Tracing
- 1. Estimate with Report

Supg. Engineer, & Fiske.

AP

P. W. CURRENT 3859

From
The Suptg. Engineer
IV Circle

Encls 6 (2 plans)

Dated: 23.4.96

Dated 20th
Sept 22nd } April
Rec^d } 1896

No. 172.4
Encls. 4

Androth Harbour,
Laccadive Islands.

Requests to allot Rs. 300
to meet the cost of blasting
operations for removing
obstructions in the -

Mr. S. S. letter, with
Mr. Pereira's report in
an enclo. handed
in copied in the
P.W. Dept. to Pol
Dept.

No. 801 W of 21-3-94 W
2797 W of 2-11-93 W. 3.94

No. 1508 W of 14-May 1896

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

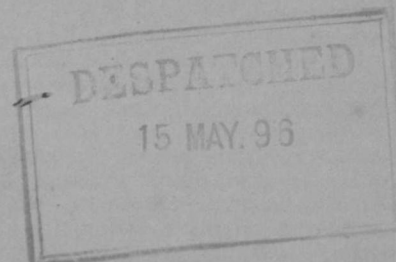
Read the following

From the Suptg. Engineer IV Circle No. 172 W dated 20th April 1896

Mr. Supervisor Pereira's report
will be communicated to the Political
Department in continuation of
G.O. No. 801 W dated 21st March 1894.
2. The estimate will be returned
to the Suptg. Engineer IV Circle for
sanction under Provincial, ^{Miscellaneous} Public Im-
provements. An allotment is not now
necessary as the expenditure was
incurred in the past official year.

C. S. 96

9/5/96



To.

The Political Department

with 2 plans.

" Suptg. Engineer IV Circle

with estimate. (3)

Cu