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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Pw DEPARTMENT

G.O. No. <u>658W</u>	Press.
B.P. No.	Mis.
Dated <u>12 - 3 - 1881</u> <i>197</i> .	

V. S. M

Not to be folded or roughly handled

658W
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GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

12th March 1881, No. 658 W.

Buildings and Roads.
Civil Works.

Read the following papers:—

Muttum Lighthouse.

No. 33. NOTE BY THE CHIEF ENGINEER.

I VISITED this place in company with the Master Attendant on the 8th instant. It is about 14 miles west by north from Cape Comorin and 3 miles east of the Crocodile Rock which has always been considered as the most dangerous point on the coast for all vessels coming from Europe or Bombay. Though part of it is apparently at times visible above high water, the surf does not always break on it and it is thus frequently invisible at high water when the sea is smooth.

2. About six years ago two first-class dioptric lights, one revolving and the other fixed, were, I am informed by the Master Attendant, sent out by the Home Government, and after much discussion the first of these was assigned to Karraachi (where it has been exhibited for the last two or three years) and the other to Muttum.

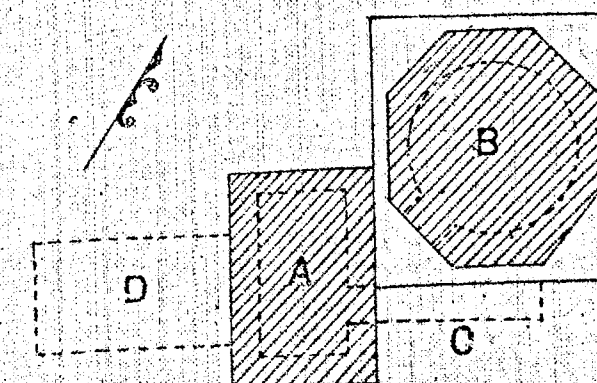
3. Owing to some misapprehensions regarding the height of tower required for the display of the light at the latter point, and discussions as to the amount of the estimate resulting therefrom, nothing further than the collection of some stone for the building has been attempted by this department, and the light has remained in its packing case at Tuticorin though quite lately removed to Madras for examination.

4. Pending the settlement of the question the Master Attendant had a small tower, 15 feet high and rectangular in plan, $10\frac{1}{2}$ feet by 8 feet, built on a rocky elevation 80 feet above mean sea level (not quarter of a mile from the beach), on which a lamp with three parabolic reflectors has been placed, and this has no doubt been of very considerable service.

5. The radius commanded by this light is not more than 12 miles, but as it is very essential that the radius for ordinary vessels should be increased if possible to 18 or 20 miles, the Master Attendant is anxious that in deciding on the position for the new light arrangements should be made for its display at 130 feet above mean sea level, or at least 33 feet above the present one.

6. There can, in my opinion, be no difficulty in designing a tower which shall fulfil these conditions at a very moderate cost.

In the rough marginal plan—



A is the existing tower with flat top on which the light is displayed, said to be 95 feet above mean sea level. The lower portion is used as an oil godown and the walls are about $2\frac{1}{2}$ feet thick.

B is the tower which I would

Circle, for information and guidance in the speedy preparation of the plans and estimates for the proposed lighthouse at Muttum, which should be expedited as much as possible.

2. Captain Taylor recommends that the light should be 130 feet high, to admit of which the column should be designed for a height of 44 feet. Of the remainder, 75 feet are gained by the site, and 11 feet by the focal light.

3. The proposals will, on submission in a complete form, be forwarded to the Government of India, for the opinion of the Marine Survey Department, and the execution of the work will, when approved, be entrusted to the Marine Department under the immediate supervision of the lighthouse-keeper, Mr. Chatterton, who will be guided by instructions from the Executive Engineer, and supplied with the requisite working drawings and specifications. The Executive Engineer will be expected to visit the work as often as may be practicable.

4. Provision should be made in the estimate for remunerating Mr. Chatterton for his services, and for the requisite subordinate supervision to aid him.

5. The proposed light is intended to supersede the existing one, and to provide the necessary guide and warning as regards the Crocodile Rock.

6. The remarks in paragraph 8 of the Master Attendant's letter of the 3rd March 1881, No. 1,988, will be duly attended to by the officers concerned.

(True Extract.)

Major, R.E.,
Under Secy. to Govt., P.W.D.

To the Superintending Engineer, Third Circle,
Marine Department.

Exd. S. T. Austin.
Spare Copies



BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1881) Madras.
PUBLIC WORKS.

To
THE SUPERINTENDING ENGINEER,
THIRD CIRCLE,
&c., &c., &c.

Dated March, 12th.

Issued

Recd.

Encl.

G. O., 12th March 1881, No. 653 W.

MARCH.
Nos. 33-34.

Proposed Lighthouse at Muttum. — Orders
issued for the speedy preparation of the
plans and estimates for the —.

Muttum Light House

Note by the Chief Engineer

I visited this place
in company with the
District Attendant on
the 8th instant. It is
about 10 miles west by
north from Cape Comorin
and 3 miles east of the
Crocodile rock which
has always been con-
sidered as the most
dangerous point on the
coast for all vessels
coming from Europe &
Bombay. — Though part
of it is apparently at
times visible above
high water, the light
does not always break
on it and it is thus
frequently invisible at
high water when the
sea is smooth.
About six years ago

It is truly a
great day in the history
of this Government.
Broken under the
for years is now
credit to the
It is a great
work which
pride.
I am sure
the light will

two first class dioptric
lights one revolving
and the other fixed were
I am informed by the
Master Attendant sent
out by the Home Port
and after much dis-
cussion the first light
was assigned to
Carrack (where it has
been exhibited in the
last two or three years)
and the other to
Mutton

Owing to some mis-
apprehensions regarding
the weight of tower
required in the display
of the light at the
latter point and dis-
cussions as to the
amount of the estimate
resulting therefrom
nothing further than
the collection of some
stone in the building
has been attempted
by the department

Supposed the existing one
and that to be replaced
with the other light. or
objection by the Marine
Survey Dept. will be
caused by the change
in light description
of light.

What that it
will provide the
necessary guide
to naming as
lighted the Crocodile
Rock. I have some
recollection that
a special red lamp
at a lower level

below the upper
lantern was origi-
nally as an
ad- distinctive
mark for the
Mutton light.

Also that there
was discussion
as to its relation
with the light
at Cape Horn

I should like
to know more
about them. but
I don't doubt
that they were all
in the collection
of the N. B. &
that the fact of

and the light has
remained in its
case at Anticorin this
quite lately removed
to London for exam-
ination

Regarding the settlement
of the question the Master
Attendant had a small
tower 15 ft. high and
rectangular in plan
10 ft. by 8 ft. built
on a rocky elevation
80 ft. above mean
sea level (not 1/2 mile
from the beach) on which
a lamp with 3 parabolic
reflectors has been placed
and this has no doubt
been of very considerable
service

The radius emanat-
ing from this light is
not more than 12
miles, but as it is very
essential that the
radius in ordinary
vessels should be
increased if possible

to 18 or 20 miles the
 Master Attendant is
 anxious that in deciding
 on the position for the
 new light arrangements
 should be made for
 its display at 130 ft.
 above mean sea level
 or at least 33 ft. above
 the present one.

There can in my opinion
 be no difficulty in
 designing a tower which
 shall fulfil these con-
 ditions at a very moder-
 ate cost.

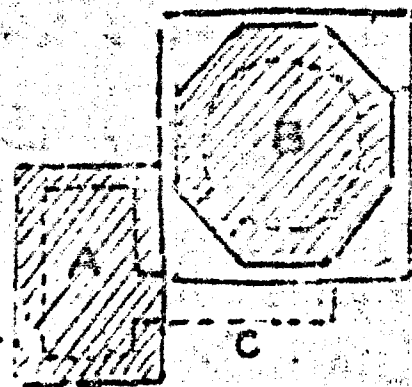
In the rough marginal
 plan

A is the existing tower
 with flat top on which
 the light is displayed
 said to be 95 feet
 above mean sea
 level. The lower
 portion is used as
 an oil storehouse &
 the walls are about
 2½ ft. thick.

B is the tower which
 I would propose to

The existing light being
 proposed to be
 15 ft. above the
 can be done & it
 is proposed.

R.H. 18/3



build close along side
 square in base & turning
 above into a spiral
 or octagon with spiral
 stair case in the centre
 extend on from the
 present platform A at
 15 ft. from the ground.

As the diameter of the
 new light is believed to
 be 9 feet (the present
 dimensions will be from
 afterwards) the dimen-
 sions of the tower will
 be so arranged as to
 allow a clear passage
 at base of the light of
 not less than 2 feet all
 round to provide for
 the attendant, but here
 it may be assumed
 that at base the tower
 will not be more than
 15 feet square and the
 diameter of the tower
 above say 13 feet.
 The height of the base
 of the lantern would
 probably be 45 feet above
 the present ground.

level and 30 ft. above
the platform of the
existing light

From these several
dimensions it will be
seen that the work
is within any moderate
compass

Instead of the ladders
now used at C in the
plan I would substitute
a simple earthen ramp
with convenient slope
and rough stone steps
at D

There is an abundance
of material in the
form of roughly wedged
blocks of hornblende
rock (each measuring
from 2 to 3 cubic feet)
lying about within a
radius of a quarter
of a mile, and there
are stacks of rather
roughly squared granite
stones (about 1 ft. each
each) all of which

would come in very
handy for the work
if this be carried out
in rough cyclopean style
with courses of from 1 1/2
to 2 ft. in depth each
each course, well wedged
up and floated full

The foundations are
apparently amorphous
granite not very regular
and seeming to have
the irregularities worked
up with concrete, but
probably in the whole
very good & likely to
involve very little work

All the basement
might be built up
solid, or roughly
arched if it be found
necessary to economize
material

I made no detailed
measurements as to the
latter but should suppose
that half of not
less fourth of the
quantity needed is
in the ground and

and various collecting
either ^{the} shelled lime
or shells can be had
as required, and on the
whole these would
seem to be no difficulty
in carrying out the
work as there is abun-
dance of unskilled
labour at the place.
Nothing then as concerns
Superintendence

We should probably
be unable to spare
the services of an Upper
Subordinate without
serious inconvenience
and as Mr. Chatterton
the present Light House
Keeper is an intelligent
and active man (he
was formerly a surveyor)
and is willing if given
a good encasement, and
furnished with plan
and specification, also
if possible with guiding
instructions by the
Executive Superintendent

may once and again
visit the work, to
carry out the building
I am inclined to re-
commend that this
course may "faute de
mieux" be adopted
it being in every way
desirable that no
further time should be
lost in carrying out a
work so necessary in the
interests of trade.

Some small remun-
eration should be included
in the Estimate for Mr.
Chatterton's services

The work being Im-
perial funds will be
assigned him "Personal
Other Services" when the
Estimate which shall
now be prepared under
the direction of the
Superintending Engineer
has been submitted
by that Officer

This note is now
to some time shown

To the Master
attendant for any
observations he
may wish to offer

W. H. L. H. H.
A. R.

9 Feb. 1861

I enclose herewith in the
above remarks letter to
the Master of the Light and
the simple structure of the
first edition

W. H. L. H. H.

711
6584
9

15

S. W. C. 1372.

From
The Master Attendant
Administrative Department
Madras

To
The Secretary to Government
Public Works Department
Fort Saint George

Dated 3 }
March 1881

No. 1990
Enclures Two

Remarks regarding the
first class light and
lighthouse at Muthum

Administrative Department.

MADRAS,

Marine Office,

5 March 1881

No. 1990

From

THE MASTER ATTENDANT,
ADMINISTRATIVE DEPARTMENT,
MADRAS,

To

The Secretary to Government
Public Works Department
Fort Saint George

SIR,

In reply to your letter, 22 February
1881, No. 445, I have the honor to state that
accurate information seems now to be obtained
regarding the 1st class light and lighthouse
at Muthum.

The platform including gallery — 21 feet high
Height of plane from platform — 11 feet

I beg to submit as result of my
long sea experience that a light about the
height of the Madras light, say 130 feet high
at sea, is the best for all practical purposes in
a site like the one contemplated. Promontories
like Muthum and Cansum are often enveloped
in thin haze or mist, and a very lofty light
might be misleading, while as a measure of
distance, a very bright light appearing the
moment it is above the horizon, at 20 miles, is an
exact and great height, moreover, while it
enormously increases the expense of a building.

and not extend the area of visibility in any reasonable proportion. Thus from an elevation of 130 to 150 feet the increased view is only ^{nearly} 1.83
 150 to 200 feet ————— 1.31 and so on

3 I would respectfully propose therefore a light of 130 feet, of which 75 is gained by the site, 11 by the least height in the dune line, and 44 by an inexpensive building, such as we projected on our recent visit to Mullum, only rather larger. The Superintendent's house is abundantly provided.

4 The distances with their details are -

130 feet elevation gives in	Statute miles 15.083	Nautical miles 13.08
30 feet from bridge of Mullum	2.268	6.28
	22.328	19.36
From Mullum head land 30 feet	11.067	9.60
Distance available	33.395	28.96

5 The new light is intended entirely to supersede the existing one, and no complication with other lights is intended

6 The proceedings will, however, have to be submitted to the Government of India for the opinion of the Marine Survey Department.

7 The light provides the necessary guide and warning as regards the hazardous Rocks and will extend beyond

beyond Cape Comorin
 I do not see further consideration recommend the red stripes over the blackish. Myse Chame Brothers' Red light at Pulicat and Coimbatore absorb about 60 per cent of the rays of light, and are constantly the subject of complaint from commanders. The very bright 1st class light above it would diminish its chance of being seen very greatly, and the bearing of the bright light is a sufficient guide. It is to be supposed that when the Rock is in with the light, careful soundings will be taken. I have had many opportunities of visiting Mullum in the last five years, and my own observation, and the Light Superintendent's evidence, show that steamers keep a considerable offing in passing. The glass of the light is being examined in the Public Works Shop at Madras, it has been in India six years, and examination was necessary, so far as that has been conducted, it is satisfactory.

I have the honor to be Sir

Your Most Obedt Servant
 J. P. Carter
 Master Attendant
 Administration Department

Colonel Francis
 Commanding Officer
 Light House with sent,
 to be returned when
 no longer required.
 Working of light house
 at South Island
 about also forwarded

Returned to
 Master Attendant
 on 6/1/52 - vide
 letter 24.3767
 of idem.

N^o 6588.

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 12th March 1881

Read the following

Note by the Chief Engineer, P. R. D. dated
9th February 1881.
From the Master Attendant, Madras,
N^o 1978, dated 3rd March 1881.

The note recorded
above by the Chief
Engineer, concurred in by
the Master Attendant,
Madras, will be commu-
nicated to the Chief
Engineer & Mr. [unclear] for
information and guidance
in the ^{study} preparation of
the plans and estimates
for the proposed Light
House at Mouthum.
S. Notes & figures as
much as possible.

MR

R.S.

FROM

THE MASTER ATTENDANT,
ADMINISTRATIVE DEPARTMENT,

MADRAS,

TO
THE

Dated
Received

No.

188

2. Captain Taylor recom-
mends that the light
should be 130 feet high,
to admit of which the
column should be
designed for a height
of 44 feet. Of the
remainder, 75 feet are
gained by the site, and
11 feet by the focal light.

3. The proposals will,
on submission in a
complete form, be
forwarded to the Secy
of India for the opinion
of the Marine Survey
Department, and the
execution of the work
will, when approved,

be entrusted to the
Marine Department under
the immediate super-
vision of the Light
House Keeper, Mr. Chatter-
ton, who will be guided
by instructions from
the Executive Engineer,
and supplied with
the requisite working
drawings and specifi-
cations. The Executive
Engineer will be
expected to visit
the work as often
as may be practicable.
4. Provision should
be made in the
estimate for man-
-rating Mr. Chatterton

for his services, and for the
 requisite subordinates
 supervision to aid him.

5. The proposed light
 is intended to supersede
 the existing one, and to
 provide the necessary
 guide and warning
 as regards the Crocodile
 Rock.

6. The Surgeon in
 charge of the Marine
 Attendants Letter of the
 3^d March 1881 &c. 1988,
 will be duly attended
 to by the officers concerned.

[Signature]

5/3/87

Ch. & Ad. Secy. ✓
 Marine Dept. ✓

Recd
22-3-87

6580
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13720

Govt. of (1881) Madrid
PUBLIC WORKS.

To

Label

Found

Recd.

Recd.

G.O. 12 Dec 1881, No. 6586

Mo. 1881

Proposed Lighthouse at
Mullum. Orders issued
for the speedy preparation
of the plans & estimates
for the —