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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

PUBLIC WORKS. DEPARTMENT

G.O. No.	2823.W.	Press.
B.P. No.		Mis.
Dated	7.12.1880.	197.

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Not to be folded or roughly handled

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

7th December 1880, No. 2,823 W.

Buildings and Roads.
Civil Works.

Read the following paper:—

No. 31. From F. N. THOROWGOOD, Esq., M. Inst. C.E., Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, Buildings and Roads, dated Madras, 15th November 1880, No. 54 W.

In paragraph No. 12 of my Progress Report for the month of October, I mentioned that I should have to address Government specially on the subject of the encroachment of the sea to the north of this Harbour. I now have the honor to place before Government an account of the present state of affairs, accompanied by a detailed survey of the coast line to the north on a scale of 100 feet to an inch.

2. In Mr. Parkes' letter to Government on the subject of the alterations in the coast line, dated 25th February 1879, he recommends that the longitudinal revetment built in front of Mr. Coleman's house should be maintained, and, if necessary, extended as far north as the police tannah, which is shown at the extreme right (or south) of the plan submitted herewith. This revetment is now in good order and answers its purpose well. It has cost Rs. 49,394 to make.

3. To the north of the police tannah I have been hitherto throwing out groynes with the sanction of Government and the approval of Mr. Parkes, but as hardly any sand is travelling up and down the coast to the north of the Harbour the groynes are practically useless. The action of the sea is now, generally speaking, such as to cause direct erosion westward, irrespective in a great measure of the angle at which the waves strike the beach. I would here draw particular attention to paragraphs Nos. 15 and 16 of Mr. Parkes' letter above referred to.

4. On referring to the plan it will be observed that the line of high water in September 1876 is shown in blue dots, and that of 6th November 1880 in a full black line edged with blue tint. The erosion of the coast in four years is here very conspicuous. In consequence of this erosion, three claims for compensation have been presented, one of which is already settled, viz., Mrs. Sadler's. The property purchased from Mrs. Sadler is shown in a red tint just to the south of the fourth groyne. It was originally of larger area, and had the commencement of a brick house upon it.

5. On each side of the property purchased from Mrs. Sadler there extends land (coloured yellow) belonging to one Audenarrian Naick, and he was the original owner of Mrs. Sadler's piece of ground. His land is chiefly used as a depôt for landing and stacking timber. I have examined all the documents relating to his property, and find that the original extent of the boundary was (in 1802) as shown in dotted black lines, extending 345 feet further eastward than at present and 220 feet further than in 1876, when the Harbour Works were commenced.

6. It will be observed that the groynes thrown out and enlarged from time to time with the hope of protecting this property are cut off by the sea at the present date, although occasionally the sand gathers round them for a short time.

7. The man, Audenarrian Naick, has sent in a claim for compensation in November 1879 to the extent of Rs. 20,165, which, considering that there is ample evidence of erosion prior to 1876, I consider to be exorbitant and unreasonable.

8. Going northward from the boundary of this property we come to land belonging, as far as I can ascertain, to McDowell and Company. The whole of this land is used for storing and landing timber. Farther north again is the remains of a brick-building intended for a saw-mill, which is rapidly being cut away by the sea. All the groynes which have been thrown out to save this property have lately been cut off by the sea and are nearly useless; but when such a course seems likely to be useful they are made up and repaired.

9. At the eighth groyne on the plan, and to the south of it, there exists property (coloured yellow) belonging to one M. Parasarathy Chetty, who sends in a claim for Rs. 7,251 for loss of his land. I have shown in dotted lines the original boundary of his property, and it will be observed that there was erosion here prior to 1876.

10. I have discussed this subject of claims for compensation with the Collector of Madras, and with the result that I believe it would be better for Government to take up the whole strip of land which I have shown surrounded by a bright red border, rather than allow a series of individual and exorbitant claims to be made for compensation.

11. I can suggest no way of preventing the erosion of the shore except by means of a revetment extending for a distance of 1,200 yards, which would cost approximately Rs. 1,25,000. But I think that it is not probable that the sea will encroach so much during the next four years as in the past four years, because, the north pier having now reached its full length, it will continue in the same relative position to the coast line as at present, and will not be the cause of additional changes.

12. The piece of land that I would suggest taking up (shown with a red border) extends from the second groyne on the plan, along the west boundary of Casemode street, for a distance of 3,500 feet, and has an average width of 120 feet. I cannot place the acquisition of it before Government as a suggestion, which I believe to be reasonable, and preferable to settling many individual claims. I would remark, however, that this question was always regarded by Mr. Parkes as likely to prove the heaviest charge on our "Contingencies," and that up to 31st October 1880 there was still a sum of Rs. 3,38,000 remaining under this head.

13. Before leaving this subject I should like to draw attention to a matter that is connected with the question of compensation for erosion of shore although precisely its opposite, and which I think may in a small degree affect the funds for the construction of the Harbour. I allude to the reclaimed land to the south of the Harbour, whose existence is entirely due to the south pier. This land is already being utilized and doubtless will shortly be very valuable. The stables for horses landed from Australia, and the new Commissariat Mule-stables are both on sites where they could not have existed four years ago, and I would suggest, on behalf of the Harbour estimates, that some small revenue might be earned as rent of the newly created ground. By this means a very small, but probably increasing income might be made which would in some degree balance the outlay to the north.

No. 32.

ORDER THEREON, 7th December 1880, No. 2,823 W.

THE Superintendent of the Harbour Works submits his opinion that in order to correct the erosive action of the sea, north of Mr. Coleman's house, the safety of which since last year has been effectually secured by a rough stone revetment along the shore in its front, it will be necessary to carry on a revetment of similar character for

a further distance of 1,200 yards, and that it would at the same time be desirable to take up a piece of land of about 10 acres in extent (measuring 3,500 feet long, 120 feet wide in the average) along the shore line so as to obviate the necessity for settling the many small individual claims for compensation that would otherwise have to be dealt with.

2. His Grace in Council considers that no time should be lost in pushing forward the proposed longitudinal revetment, using at the same time all the available material from the existing groynes which have now proved quite useless in correcting the action of the sea in this locality, and the Superintendent of Harbour Works is authorised in anticipation of formal sanction to carry out the work along such line as may be approved by the Harbour Committee, but which must not involve the necessity for taking up any fresh land.

3. The Collector of Madras will be requested in the Revenue Department to report as fully and as early as circumstances admit, the nature of tenure and the amount of compensation which will probably be necessary to meet all existing claims against Government, giving due weight to the facts adduced by Mr. Thorowgood as to the erosive action of the sea having shown itself along this portion of the shore prior to the commencement of the Harbour Works.

4. The Superintendent of Harbour Works will then submit for sanction a sufficiently detailed estimate for the proposed revetment and for the amount of compensation as reported by the Collector.

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintendent, Madras Harbour Works.

" Examiner of Public Works Accounts.

" Marine Department.

" Revenue Department,

with copies of Notes by His Grace the Governor and the Honorable W. Hudleston.

Erd. S. T. Austin.

Spare Copy

Publ. of 1880) 344ms.
PUBLIC WORKS.

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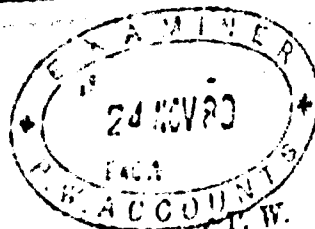
G. O., 7th Dec 1961, No. 2008

DECEMBER.

Nos. 31-32.

Dr. J. H. H. H. H.—Authorizes the
formation of a portion of land about the
North Sea there for constructing a rough
stone pierhead to connect the cross-
section of the sea.

No. 556



GOVT.
OF MADRAS. }

1880.

DEPT.

SECRETARY.

Chepauk,

22nd Nov. 1880.

OFFICE NOTE.

To

C^d
In para 12 of
his letter No. 5210
of 15th Nov. the Supt.
of the Madras Harbour
works states that up
to the 31st October
there was still an
unexpended balance
of Rs 3,38,000 on the
item of Contingencies
in the Harbour works
estimate. Will you
please verify this
statement.

L

Sy. W.

15.25.11.80. 24.30.11.80.

(para 12) trust a Supt.

Offici. tot. $\frac{22.811}{25/11/51}$

1/2.

The unexpended balance
of the item of Contingencies
in the Madras Harbour
Works Estimate, as far as amounts
rendered for October last
is Rs 2,031.6.

26
24/11
27/11

233

The question of the best
mode of checking the
erosion is purely a
technical one and
we must be guided
by experts. I have no
doubt that the long
experience of the
Government will be
of great help.
As to the fact of the
existence of the question of
compensation there
are I think certain
incidents which are of
primary importance.
We perhaps have
seriously considered

Dec 26. 11. 80. Sat 30. 11. 80

2823 W
 1/4 Sec 10 of T1N R1E S12E
 1/4 Sec 10 of T1N R1E S12E

For order

The Sup't. of the Harbor
works submits under
his letter No 520 W. of
the 15th inst. a statement
showing the action of
the sea in the course
north of the Harbor
where from sea coming
but he can suggest
(para 11) no way of
preventing the erosion
excepting by a revetment
extending for 1200 yds.
which would cost approx-
imately Rs. 125,000

The bowers elaborate,
a doubt-as to the action
in Virtue being equally
marked with that in
the past, and suggests
(para 12) that a strict

of land north of the
Pierhead - Police Channel
(which again is just
beyond Mr. Coleman's
house) in a distance
of 3500 ft. and away
in water 120 ft. (about
10 acres in all in extent)
in taking up - at the
same time Mr. Stum-
-pord cannot give any
information as to the
cost of this - All he
can say is that the
"contingencies" of the
estimate will bear the
amount of the charge.

I three days ago
examined the shore
in company with Mr.
Thompson and
as in the first place
the work of the Lon-
-gitudinal section
which he has carried
out in front of Mr.
Coleman's house.

Being then shown the
letter sent to the
question (as in Mr.
Stum-pord's case for the
Stum-pord's case that it
is by no means established
that the Harbour works
have increased the
rapid erosion of the
north of the river.

The necessity for
the Harbour works
is the more recent progress
shows that the
was in existence long
before the works were
begun. & Capt. Fisher
told me many years
ago that he had himself
seen the ground of

the sea which few
hours within a of the
shore & have probably
fractured the ridge
& caused at places
a dislocation similar to
that occurred at
Greenwich a
few years ago.

The Harbour works
have been & have
acted exactly as the
old Groyne & the
Lark in their did
in inducing accretion
to the south of them.
but from their greater
length seaward &
have neutralised
the recuperative
action on the part
of the Groyne north
of them. & I gather

in morning of the
morning there by the
storm this time last
year has apparently
advanced remarkably
well, and though likely
to sink perhaps a
little will only need so
far as can be judged a
little care and looking
up of times; and as
in the west place the
groynes north of this
In the reasons stated
in Mr. Thompson's
letter have now become
isolated from the shore
and useless, I think
there can be no question
but that the continuation
of the longitudinal or
section westward
from the Police Channel
in 1200 yards in the
only measure looking
out prospects of
success

Mr. Parker in para
25 of his letter (enclosed)
no 6 W of 25 Feb 1879
considered that a great
deal might be done by
taking advantage of the
accumulations which
will take place any
N.E. monsoon and
secure them as they
accrue by groynes,
and in para 26 he
specifies this as part
of the future programme,
but experience has
shown that no sand
accumulates between
the existing groynes
and that from the
peculiar set of the
waves direct erosion
which can only be corrected
by a constitutional remedy
lies in steadily - from
this peculiarity of the
set of the sea waves

from Mr. Parker's letter
that he is much in
view. The harbours
groynes in fact have
sand, but indirectly, as
set off the sand &
aggravated erosion -
but this is the first
with the natural process
of periodical recession
only partial recovery
of sand from
S. & N. in the N.E.
monsoon. I checked
by any original
of this theory is
sound & if inspection
of the harbour works
shows kind of protection
work was necessary
to aid the partial
natural action
of recovery & to
check progress
of erosion by
natural causes

the liability of Mr. Parker
compensation for damage
to property & to the
materially reduced. altho
at the same time it may
properly be the duty of the
State to prevent
advisable to check
injury to the property of
the subjects.
The other question is
I suppose that the
atmosphere at the coast is
bad. The cause
would be the
shutting the wind from
the coast is fairly
said to be the cause
of the bad air. I doubt
whether the distance
is so great from the coast
as to allow of the
the question
of the air is
the cause of the
the cause of the

(a matter mentioned
by Mr. Parker see
para 16 of his letter)
I do not feel the
confidence expressed
by the Government
that the sea will not
be so encroaching in
the next 4 years as in
the past 4 years.
No doubt a certain
regime will eventually
establish itself even if nothing
whatsoever were done to
maintain the stone
line, but I see no
sufficient proof as to
the continuance or
otherwise of the present
action, and I am
suspicious of opinion
that it will be
safest to go on with
the same class of

Protection which has
already proved to
be efficacious.

If this be accepted
the next point is to
decide on the particular
line along which such
revestment shall
be carried.

Mr. Samuel Woodhouse
is to buy up the whole
strip 10 acres in
extent; but is this
essential? - When
it has been bought up
the revetment will
still have to be carried
out; therefore why
incurs the extra
expense of Compens.
Sation?

I would simply
accept the best
line I could now

claim against the lease
for the effect on the land
of the lease's work
in constructing the
harbour frigates. &
whether the lease
has strictly performed
the conditions of that
lease was a point
maintained all this
right under the Statute
there may be. I have
doubt if I think that
these conditions have
very generally not been
satisfied in Madras
especially in the article
of periodical fines for
renewal. The point
may not be one on which
the Govt. could insist
for assertions of

claims or others. But
it may be worth
looking at it carefully
& guard ourselves
against obtaining
claims for expenses
for damages.

As regards the "Set off"
suggested in acct. of
the formation of the
south of the S. Locks.
it may properly be
considered by Govt. as
a possible counterbalancing
advantage secured. I
don't think that
any more this can be
allowed. or that any
proportion for re-compensating
the Harbour Dept. by
the value of the formation
& perhaps reclamation. in forming the pro-
posed Compensating
revestment & thus
if this is intended - I
think the counterbalance
claims should be set off.

Secure along the
evoked shore and
carry out the revetment
into the interest. &
finally leaving all
questions of Compens.
Sations in part in-
jury to be settled
as the cases come in.

The money is already
done and will have to
be paid for, and to
buy under the main
point is to stop as
soon as possible any
further injury to
property.

As the frigates have
proved useless they
material may with
advantage be used
in forming the pro-
posed Compensating
revestment & thus
"pro tanto" save
expense.

The demands for
compensation in the
native timber yard
and the old saw
mill (on east wall
of which has lately
been destroyed) will
no doubt be heavy but
I agree with Mr. Dennis
as to the thing. No
question that ex-
-sion of the shore had
been in progress prior
to the commencement
of the Harbour Works
in 1876, though no
doubt the action has
been intensified since then.

I have endeavoured
to ascertain precisely
the condition of the
shore in the early part
of the century, but
the waves in the
Office do not help
while there may be
some ground for the
argument. That erosion
took place before 1876
and therefore claim
for compensation for
loss cannot be
maintained as to the
portion south - I do
not think it is to
be taken as Mr. Dennis
seems to consider -
So far as I can gather
the erosion was of
an artificial shore
not of the natural
coast line.

coast -
The action is admitted
of the F.C. to be much
intensified -
if the Harbour works
stop the compensating
accumulation which
formerly maintained
the shore - They are as
distinctly responsible
for the loss as if they
had created the ebbing
current -

The points as to
whether the
causally looked
in to at once -

The suggestion that
'Parker's land' be
a set-off against
is I think inadvisable
already that action

and at this point
I have no better
evidence to turn to
than that afforded
by Captain Rawlin's
maps of 10th Sept. 1856
(unwritten)

From this it would
seem that dykes
were constructed in
1844 to correct the
erosion of the shore
near Chepauk and
had gradually been
extended in the
next 11 years up as
far as the timber
yards in which com-
pensation is now de-
manded.

Mr. Thompson's
evidence is that
bank Charles
out even by the evidence

we now have, and
the Claimants would
should think find it
difficult to make
good any large demand
before a court, and
very therefore in dis-
posed, in this kind
made claim to them
to accept a compro-
mise.

Simultaneously
therefore into the order
to push on the Con-
-tinental movement
as rapidly as possible
I would venture to
suggest that a Special
Officer be appointed
to go into the claims
for compensation in
the manner decided
in a later document
of order.

is becoming
source of expense
of its interest of
in the fact of
transferring the
cost sea keep into
a small harbor
of air - and doing
back the sea line
until the coming of
if the ship stays
not to the winter
the sea face quarters
which 5 years ago
was spoken of by the
occupants as cost
speech from the ship
charge - but now from
the reason I have
mentioned out - but
unsuccessful -

1891

10
As regards the
prohibition action to
be taken in regard
to the claims in America
after 1200,000
above details with
it seems to me pre-
-lusive to decide
in any particular
course at present
not to resign until too
doubt I think estab-
lish itself besides
which the land is an-
-paritely valuable
the Parker will
also apparently be
at home at the
end of next winter
when the American
other matters will
no doubt be reported
in conclusion it

is only necessary
to see to ensure
what Government are
prepared to attempt.
The claim, put forward
by Mr. Sumnerwood (and
indeed by Mr. Parker)
that the value of the
land reclaimed
within of the Harbour
should be looked on
as a set-off against
the cost of the bridge
and works within

The claim it seems
to me is "prima facie"
erroneous, and if
admitted will
possibly affect the
cost of the Harbour
works

appreciable and
consequently

26. 11. 50
Wm. [Signature]

11

Please see the
enclosed plans of
1854 and 1875.

It is evident that
the course of the
Leach was in progress
long before the
works were begun,
though checked by the
juggles thrown up
in 1855/6, and while
it is certain that
the Harbour has
reclaimed ground to
the south, it is
extremely doubtful
whether it has not

increased the natural
erosion of the north -

We must however
use information as
to the history of the
changes in the beach
line -

Done per

No. 514 W

From

THE SUPERINTENDENT,
MADRAS HARBOUR WORKS.

To Colonel R. H. Semkey, C. B. R. &
Secretary to Government P. W. Dept.
Buildings and Roads

MADRAS, 15th November 1880

SIR, In paragraph No. 12 of my progress
report for the month of October I
mentioned that I should have to
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subject of the encroachment of the
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I now have the honor to place before
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line to the North on a scale of
100 feet to an inch -

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front of Mr. Coleman's house
should be maintained, and, if
necessary, extended as far North
as

as the Police Tammah, which is shown at the extreme right (or South) of the plan submitted herewith. This monument is now in good order and answers its purpose well. It has cost £119.39⁰ to make.

3. To the North of the Police Tammah I have been hitherto throwing out groynes with the sanction of Government and the approval of Mr. Parkes, but as hardly any sand is travelling up and down the coast to the North of the harbour the groynes are practically useless. The action of the sea is now, generally speaking, such as to cause direct erosion westward, irrespective in a great measure of the angle at which the waves strike the beach. I would here draw particular attention to paragraphs 15 & 16 of Mr. Parkes's letter above referred to.

4. On referring to the plan, it will be observed that the line of High Water in September 1875 is shown in blue dots, and that of November 6. 1880 in a full black line edged with blue tint. The

erosion

erosion of the coast in 4 years is here very conspicuous. In consequence of this erosion, three claims for compensation have been presented, one of which is already settled, namely Mrs. Sadler's. The property, purchased from Mrs. Sadler is shown in a red tint just to the South of the fourth groyne. It was originally of larger area and had the commencement of a brick house upon it.

5. On each side of the property purchased from Mrs. Sadler, there extends land (coloured yellow) belonging to one Audenarian Staich, and he was the original owner of Mrs. Sadler's piece of ground. This land is chiefly used as a depot for landing and stacking timber. I have examined all the documents relating to his property and find that the original extent of the boundary was (in 1802) as shown in dotted black lines, extending 34.5 feet further eastward than at present and 220 feet further than in 1875 when the Harbour Works were commenced. It

6. It will be observed that the groynes thrown out and enlarged from time to time with the hope of protecting this property are cut off by the sea at the present date although occasionally the sand gathers round them for a short time.

7. The man Audenorian Naick, has sent in a claim for compensation in November 1879, to the extent of Rs. 20,165, which, considering that there is ample evidence of erosion prior to 1876, I consider to be exorbitant and unreasonable.

8. Going Northward from the boundary of this property we come to land belonging, as far as I can ascertain, to Messrs. Dowell & Co. The whole of this land is used for storing and landing timber. Farther north again is the remains of a brick building intended for a Saw mill, which is rapidly being cut away by the sea. All the groynes which have been thrown out to save this property have lately been cut off by the sea and are nearly useless; but when such a course seems likely to be useful they are made up and repaired.

at

9. At the eighth groyne on the plan, and to the South of it, there exists property (coloured yellow) belonging to one Mr. Parasurath Chetty who sends in a claim for Rs. 7251 for loss of his land. I have shown in dotted lines the original bound any of his property, and it will be observed that there was erosion here prior to 1876.

10. I have discussed this subject of claims for compensation with the Collector of Madras, and with the result that I believe it would be better for Government to take up the whole strip of land which I have shown surrounded by a bright red border, rather than allow a series of individual and exorbitant claims to be made for compensation.

11. I can suggest no way of preventing the erosion of the shore except by means of a revetment extending for a distance of 1200 yards, which would cost approximately Rs. 125,000. But I think that it is not probable that the sea will encroach so much during the next 14 years as in the past 14 years, because, the North Pier having now reached its full length, it will continue in the same relative position to the coast line as at present, and will not

not be the cause of additional changes.
12. The piece of land that I would suggest taking up (shown with a red border) extends from the second grange on the plan, along the west boundary of Cassmoad Street, for a distance of 3,500 feet, and has an average width of 120 feet. I cannot venture to give any information as to what it would cost to acquire it, and I merely place the acquisition of it before Government as a suggestion, which I believe to be reasonable, and preferable to settling many individual claims. I would remark, however, that this question was always regarded by Mr. Parkes as likely to prove the heaviest charge on our Contingencies, and that up to October 31st 1880 there was still a sum of Rs. 3,38,000 remaining under this head.
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Shave the honor to be,
Sir,
Your most Obedt. Servant.

J. H. McGraw & Co. Inc. N. Y. C.
 Superintendent
 N. Y. C.

it will be necessary to carry on a resurvey of similar character for a further distance of 1200 yards, and that it would at the same time be desirable to take up a piece of land of about 10 acres in extent (measuring 3500 ft. long, 120 ft. wide in the average) along the shore line so as to obviate the necessity for settling the many small individual claims for compensation that would otherwise have to be dealt with.

2. His Grace in Council

19
considers that no time should be lost in pushing forward the proposed longitudinal revetment, using at the same time all the available material from the existing groynes which have now proved quite useless in correcting the action of the sea in this locality, and the Superintendent of Harbour Works is authorised in anticipation of formal sanction to carry out the work along each

line, as may be approved
by the Harbort Committee,
but which must not
involve the necessity
for taking up any
fresh land.

3. The Collector of Madras will be re-
-quested in the Revenue
Department to report
as fully and as early
as circumstances admit,
the nature of tenure
and the amount of
compensation which
will probably be
necessary to meet all
existing claims against
Government giving
due

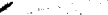
due weight to the facts
adduced by Mr. Horwys
as to the erosive action
of the sea having shown
itself along this portion
of the shore prior to the
commencement of the
Bastion Works.

4- The Superintendent
of Harbour Works will
then submit for exam-
-ination a sufficiently
detailed estimate for
the proposed revetment
and for the amount
of compensation as
reported by the Collector.

S. M. H. W. to
Ex P. W. to
Machine Dept.

Rev. Sept. with copies
of notes by this space the
five more of them to H. H. H. H.

Dead
18-12-80
1/12/80



5-11-18

10/10/89

7256

1880

CHIEF OF PUBLIC WORKS.

PUBLIC WORKS.

To

By

For

Per

W. O. Rees 1880 18234

Nov 9

Headquarters Marine Corps.

Authorizes the acquisition
of a portion of land along
the north sea shore for
constructing a rough stone
embankment to correct the
erosive action of the sea.

Encl. 1/2

10/10/27

7256

1880
COUNCIL OF (1878) PUBLIC WORKS.

To
Date
From
By

20.7 Dec 1880 18234

Recd

San Diego Harbours Com.
Authorises the acquisition
of a portion of land along
the north sea shore for
constructing a rough stone
embankment to correct the
erosive action of the sea.

San Diego.

18/12/87

7256

1887

Col. of (1887) ~~Public~~

PUBLIC WORKS.

To

By

For

By

W. J. Rees 1888 18234

Recd.

Hendro Harbours North.

Authorises the acquisition
of a portion of land along
the north sea shore for
constructing a rough stone
embankment to correct the
erosive action of the sea.

Emb. No.

18/10/27

7256



1885
Publ. of (1885) Public
PUBLIC WORKS.

To
Date
By
For

W. O. 7 Reer 1886 1823 1/2

Recd.

Head Quarters North
Authorises the acquisition
of a portion of land along
the north sea shore for
constructing a rough stone
embankment to correct the
erosive action of the sea.

Encl. 1/2

10/10/87

7256

1880



Publ. of (1879) ~~Public Works~~

PUBLIC WORKS.

To

Dated

Issued

By

By

G.O. 7 Rees 1880 28234

Nov. 31 - 32

Madras Harbour work.

Authorises the acquisition
of a portion of land along
the north sea shore for
constructing a rough stone
revetment to correct the
erroneous action of the sea.

Encl. 1/2

10/10/89

7256

1880

Publ. of (1879) ~~Public~~

PUBLIC WORKS.

To

Dated

For

By

By

G. O. J. Rees 1880 2823 1/2

Nov 31 1880

Madras Harbour Works.

Authorises the acquisition
of a portion of land along
the north sea shore for
constructing a rough stone
embankment to correct the
erosive action of the sea.

Encl. 1/2

10/10/87

7256

1886

Publ. of (1879) ~~Public~~

PUBLIC WORKS.

To

Date

From

For

By

G. O. J. Rees 1880 1823 1/2

Nov. 31 - 87

Headquarters Harbor Works.

Authorizes the acquisition
of a portion of land along
the north sea shore for
constructing a rough stone
revetment to correct the
erroneous action of the sea.

Encl. 1/2