

(1) Number of pages \_\_\_\_\_

(2) Date of repair \_\_\_\_\_

(3) Initials of the Referencer \_\_\_\_\_

# MADRAS RECORD OFFICE

## Government of Madras

*Public Works*

DEPARTMENT

|          |      |       |
|----------|------|-------|
| G.O. No. | 1979 | Press |
| B.P. No. |      | Mis.  |
| 122/123  |      |       |
| Dated    | 9 8  | 18 73 |

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,  
9th August 1873.*

No. 122. Read the following letter from Major R. F. OAKES, R.E., District Engineer, Tanjore, to Colonel G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Tanjore, 19th June 1873, No. 287 :—

WITH reference to my letter, No. 174, dated 22nd ultimo, I have the honour to inform you that I carefully examined the groynes at Tranquebar on the 2nd instant.

1 Letter, No. 36, of 13th May, from Mr. Stephens.  
1 Comparative Statement.  
1 Estimate, Rupees 3,150.

\* Rupees 3,150.

2. The condition of the existing groynes is as follows, and the details of work required are given in the enclosed estimate\* which provides only for what may be termed the immediate requirements, or for 'the stitch in time' which will prevent the portions which have been much shaken, or which have settled, from sinking below the wave level, and the restoration of which, if they settled and were breached, would entail a heavy outlay at no distant date.

No. 1, or groyne from King's Bastion, in good order with the exception of the slopes round the nose which require making up.

No. 2.—Very much shaken, sides want making up. Caisson at nose exposed. Nose four yards beyond caisson to be made up.

No. 3.—In good order.

No. 4.—Very much shaken, sides to be made up. Queen's Bastion north flank wall requires protection.

No. 5.—From Queen's Bastion in good order, though side slopes have settled somewhat.

No. 6.—Buried in the sand.

No. 7.—Nearly buried in sand, but caisson exposed and requiring protection. Groynes 6 and 7 are now high and dry from 20 to 25 yards within H. W. Sea line, but they protect the citadel and the Sea Custom-house during the north-east monsoon.

3. During the last north-east monsoon the Nundalaur River appears to have extended northwards and to have found an outlet into the sea near this groyne, its proper mouth being some 500 yards further south.

4. The estimate of Rupees 15,000 sanctioned in G. O., No. 20, of 4th April 1872, did not provide for any of the groynes noted above; but it provided for the protection of the angle between the face and flank of the King's Bastion by reforming it, and by throwing out a groyne of 20 yards from it and for protecting the face wall of the bastion.

5. The work executed up to date is shown in the enclosed comparative statement; it will be observed that more concrete work was required than the estimate provided for, and that the cost of the stone exceeded the amount sanctioned for it for reasons given in letter, No. 36, dated 13th May 1873, from Mr. Supervisor Stephens who was in charge of the range when the concrete work was in progress, and when the contracts for the supply of stone were made.

6. The estimate allowed for the supply of  $1,383\frac{1}{2}$  cubic yards of stone; of this 82 yards were provided to protect the face of the King's Bastion and the balance to form a new groyne 20 yards long (top would be 15 yards, foot of slope  $25\frac{1}{2}$  from bastion) at the angle formed by the face and flank of the bastion.

7. The condition of work on the 2nd June was as follows :— $486\frac{1}{2}$  cubic yards of stone (inclusive of  $27\frac{1}{2}$  yards of cubes) had been placed in position forming a

*Proceedings of the Madras Government, Public Works Department,  
9th August 1873.*

groyne 9 yards long at top (16½ to foot of slope) and a small quantity had been placed in front of the face wall, while 358 cubic yards of stone had been collected and were lying at Negapatam, or were being conveyed to Tranquebar. The face of the bastion is 155 yards long between the new groyne and No. 1, and I am of opinion that 333 yards of stone should be provided for the protection of this face wall upon the security of which the native portion of the town of Tranquebar may be said to depend. The new groyne if extended to 20 yards would not sufficiently protect this face; but, as it is desirable that this groyne should be extended to the full length provided in the estimate in order to protect the open beach to its north to a greater extent than it can now do, if funds are available, I would deprecate the surrender of the Rupees 3,500 which the Range Officer proposes to surrender in his No. 39, dated 10th May. At Rupees 10 per cubic yard the stone which could be provided would carry the groyne out to a length of 14 yards at top and 23 at foot, but the groyne will sink when acted upon by the sea during the north-east monsoon, and will have to be made up again when it sinks; for, with 862 yards of stone, the groyne will be carried only 1 yard short of the original length contemplated with an expenditure of 1,301 cubic yards of stone. The estimate having provided for settlement which may not take place for years.

8. The estimate for protecting and repairing the existing groynes amounts to Rupees 3,150, and if this sum cannot be provided in addition to the balance of the original estimate of Rupees 15,000, I would suggest that this work should be provided for from the balance of Rupees 3,500 it was proposed by the Range Officer to surrender. This will render an allotment of Rupees 5,500 necessary for the groynes in 1873-74; but, if funds are available, it would be well to provide at once for the whole of the requirements of Tranquebar, and to allot Rupees 3,150 in addition to the balance of the estimate of Rupees 15,000, or Rupees 9,000 in all.

No. 123.

ORDER THEREON, 9th August 1873, No. 1,979.

**CIVIL WORKS No. 6.**

An allotment of Rupees 2,350 has already been made, which it appears will suffice to enable the 358 yards of stone collected at Negapatam to be utilized in carrying out the new groyne in front of the King's Bastion at Tranquebar almost to the extent originally proposed, and to put in one-fourth more concrete work in repairs to the bastion wall than was first intended, besides as much already done in excess. It would appear, therefore, to be the better plan to provide for the present funds for making up the old groynes to their proper condition, the estimate of Rupees 3,150 for which purpose is accordingly sanctioned, and will be carried out without fail before next monsoon. The District Engineer will then again report on the effects of what has been done, and on any further requirements that may appear needful.

(True Extract.)

*[Signature]* Colonel, R.E.,  
Secretary to Government.

To the District Engineer, Tanjore.  
.. Officiating Controller of Public Works Accounts.  
.. Marine Department

Exd. W. H. French.

10 Spare Copies.

No 36

118

Sub Division Office  
Ningalanjain 13 May 1873  
From The Sub Divisional Officer  
Tumelun Sub Division  
To The Officer in charge No 3 Range  
Tanjore District

I beg to submit the following information with reference to the report called for by you in docket No 69 of the 11 Inst. When the groyne work at Tranquebar was sanctioned, both the Superintending Engineer and myself endeavoured to get Contractors to take the work up, but it being of a comparatively new description, we at the time could get no body to come forward, the Superintending Engineer even tried (I think through the Trichinopoly Range Office) to get the material brought down by boats, but this even had to be given up. The Superintending Engineer then himself authorized Contractor Sackinagar to dismantle a portion of the Fort walls at Vansire and to bring the stone down, he himself settled the rate with the Contractor which came up to 13 Rs per Coyard (it was brought down by Carts from Negapatam to Tranquebar) this however was only meant as a trial trip, to see if the rate could not be reduced, but as the Contractor refused to reduce

reduce it, the work was stopped. after  
a little time one of the present Contractors,  
Seemappa Dyngar, came forward to  
supply the stone, I sent him with a letter  
(which must be in the file) to the Superin-  
tending Engineer, who not long after came  
down himself to Tranquebar, and while  
at my Office, personally settled with both  
the Contractors, he fixed the rate (namely  
five Rupees per  $\text{Cyd}$  for bringing it up to  
Majapattam and five Rupees a  $\text{Cyd}$  for  
bringing it from there to Tranquebar by  
Kulloomarum, this was the lowest the  
Contractors would agree to, he also settled  
the Amount of security ~~for~~ and even  
drew up and gave me a rough draught  
of the tender and Specification.

This work, I beg to say, is one in  
which the Superintending Engineer took  
a great deal of interest, the Estimate was  
made under his personal instructions  
and when the Concrete ~~is~~ was in progress  
he often came up to see how we were  
getting on.

I beg to remain  
Sir

Your most Obedt. Servt

H. J. J. J.  
Sub. Dir. Office

92



From  
the Dutchess Office  
Chambers and the  
do  
the Officers in charge  
of the 3rd Regt  
dated 13<sup>th</sup> day 1873  
Mar 15<sup>th</sup> 1873  
No 36

15570

He made her and my  
the Georges, with  
at Washington  
called for in doctor  
Feb 69 of the 11 inst.

Enclosure in letter  
No. 287 dated 19 June/3  
from the District  
Engineer Sanjod  
to the Secretary of  
Govt. D. P. W.

G. C. No. 1979-

9 Aug/73  
Mr 3582/73

Mr Supervisor  
Stephen's letter  
No. 36, dated 13<sup>th</sup>  
May 1873.-



90

No. 3 Range

Provincial Service

Langur District

Comparative Statement of work Protecting Kings Bastion at Langurbar Estimate Rs 15,000 - - - upto end of March 1873

| Work                                                            | Estimated                        |      |         | Executed                         |                                      |                                     | Sole executed | Total    |           | Difference     |         | Remarks |                                                                             |
|-----------------------------------------------------------------|----------------------------------|------|---------|----------------------------------|--------------------------------------|-------------------------------------|---------------|----------|-----------|----------------|---------|---------|-----------------------------------------------------------------------------|
|                                                                 | Quantity                         | Rate | Amount  | Quantity                         | Rate                                 | Amount                              |               | Quantity | Rate      | Amount of 8/10 | Saving  |         | Excess                                                                      |
|                                                                 |                                  |      |         |                                  |                                      |                                     |               |          |           |                |         |         |                                                                             |
| 1                                                               | 2                                | 3    | 4       | 5                                | 6                                    | 7                                   | 8             | 9        | 10        | 11             | 12      | 13      | 14                                                                          |
| Granite Stone Boulders. Cysd 1383 <sup>11</sup> / <sub>18</sub> | 9                                |      | 12452 8 | 64 <sup>23</sup> / <sub>36</sub> | 13                                   | 840 4 <sup>10</sup> / <sub>10</sub> |               |          |           |                |         |         | 486 1/2 Cysd at 10-2-8 <sup>832</sup> / <sub>972</sub> executed Rs 4948-4-0 |
|                                                                 |                                  |      |         | 385 <sup>8</sup> / <sub>27</sub> | 10 3                                 | 3924 14 1                           |               |          |           |                |         |         | do at 9- - - Rs estimated Rs 4375-8-0                                       |
|                                                                 |                                  |      |         | 8 <sup>22</sup> / <sub>27</sub>  | 9 12                                 | 85 15 1                             |               |          |           |                |         |         | Excess Rupees 569-12-0                                                      |
|                                                                 |                                  |      |         | 27 <sup>3</sup> / <sub>4</sub>   | 3 8                                  | 97 2                                |               |          |           |                |         |         | 358 Cysd of work including hire of                                          |
|                                                                 |                                  |      |         | 486 1/2                          | 10 2 <sup>832</sup> / <sub>972</sub> | 4948 4                              | 358           | 5        | 1790      | 4948 4         |         | 569 12  | do at Reg - - - as estimated Rs 3222 - - -                                  |
|                                                                 |                                  |      |         | 358                              | 5                                    | 1790                                |               |          |           | 3580           |         | 358     | Excess Rupees 358 - - -                                                     |
|                                                                 |                                  |      |         | 844 1/2                          |                                      | 6736 4                              |               |          |           | 8528 4         | 3924 4  | 927 12  | = This quantity has been received at                                        |
|                                                                 |                                  |      |         |                                  |                                      | 1877 2 2                            |               |          |           | 420 8 10       | 2297 11 | 661 12  | at Negapatam -                                                              |
|                                                                 |                                  |      |         |                                  |                                      |                                     |               |          |           | 5 10           |         |         | = For Carriage from Negapatam to                                            |
|                                                                 |                                  |      |         |                                  |                                      |                                     |               |          |           |                |         |         | Languebar.                                                                  |
|                                                                 |                                  |      |         |                                  |                                      |                                     |               |          |           |                |         |         | = This amount is required for                                               |
|                                                                 |                                  |      |         |                                  |                                      |                                     |               |          |           |                |         |         | further repairs to the Bastion wall                                         |
| Concrete - - - - -                                              | 1308 <sup>7</sup> / <sub>2</sub> | 2    | 1635 15 | 1609 <sup>3</sup> / <sub>2</sub> |                                      |                                     |               |          |           |                |         |         |                                                                             |
| Old Brick cubes cost of work only                               | 180                              | 6    | 5 10    | 180                              | 6                                    | 5 10                                |               |          |           |                |         |         |                                                                             |
| Cost of Ballast stones to be broken                             |                                  |      |         |                                  |                                      |                                     |               |          | 64        | 64             |         |         |                                                                             |
| and mixed with concrete                                         |                                  |      |         |                                  |                                      |                                     |               |          |           | 37 8           |         | 27 8    |                                                                             |
| Cost of breaking up the above                                   |                                  |      | 64      |                                  |                                      |                                     |               |          |           |                | 25      |         | Not required                                                                |
| Wooden frame Boxes                                              |                                  |      | 10      |                                  |                                      | 37 8 0                              |               |          |           |                | 50      |         | do                                                                          |
| Temporary Dam                                                   |                                  |      | 25      |                                  |                                      |                                     |               |          |           |                | 15      |         | do                                                                          |
| Digging Foundation                                              |                                  |      | 50      |                                  |                                      |                                     |               |          | 76 6 9    | 566 15         | 175     |         |                                                                             |
| Superintendence and Sundries                                    |                                  |      | 15      |                                  |                                      |                                     |               |          | 2350 15 7 | 11500          | 4189 4  | 689 4   |                                                                             |
|                                                                 |                                  |      | 741 15  |                                  |                                      | 493 5 3                             |               |          |           | 15000          | 689 4   |         |                                                                             |
| Total Rupees                                                    |                                  |      | 15000   |                                  |                                      | 9149 0 5                            |               |          |           |                | 3500    | 3500    |                                                                             |

No. 3 Range Office  
 Shrivastava  
 9 June 1873

W. H. H. H. H.  
 Executive Engineer

1/5

130

*[Faint, mostly illegible handwritten notes in the top right section.]*

Provincial Service

Don't Range Land

Comparative Statement  
of the Protective  
Action at  
Savannah, Georgia  
in 1850-1851  
with the March 1853

*[Faint handwritten notes and numbers, possibly a list or ledger, located below the main title.]*

*[Handwritten signature or name at the bottom left.]*

Enclosure in  
No 287 dated 19 June  
from the District  
Tanjore to the Secy  
to Government  
Department.

G.O. No 1979  
9 Augt  
Mr 3582/73

Comparative sta-  
ment of work -  
Protecting Kings  
-tion at Tranquebar



Tanjore District  
No 307 Tranquebar Range  
Mayavaram Taluq.

Estimate No of 1873/74.

Work. Repairing the existing Groynes at Tranquebar  
Commencing from No 100 Kings Bastion

| Number | Measure-<br>ment |    |    | Contents | Description of charges                        | Rate  | Per | Amount |
|--------|------------------|----|----|----------|-----------------------------------------------|-------|-----|--------|
|        | ft               | in | ft |          |                                               |       |     |        |
| 20     | 1                | 2  | 40 |          | No 1 Groyne<br>making up round nose           |       |     |        |
| 2      | 16               | 1  | 12 | 48       | No 2 Groyne<br>making up sides                |       |     |        |
| 2      | 6                | 1  | 1  | 12       | No 2 Groyne<br>making up sides                |       |     |        |
| 2      | 3                | 1  | 3  | 18       | No 2 Groyne<br>making up Round Caisson        |       |     |        |
| 4      | 6                | 2  | 48 |          | Beyond                                        |       |     |        |
| 2      | 14               | 1  | 1  | 28       | No 3 Groyne<br>food                           |       |     |        |
| 2      | 3                | 1  | 1  | 9        | No 4 Groyne<br>making up sides                |       |     |        |
| 22     | 1                | 2  | 66 |          | No 4 Groyne<br>making up sides                |       |     |        |
|        |                  |    |    |          | To protect north flank of<br>Queen's Bastion. |       |     |        |
|        |                  |    |    |          | No 5 Queen's Bastion food                     |       |     |        |
|        |                  |    |    |          | No 6 food                                     |       |     |        |
| 2      | 3                | 1  | 6  |          | No 7 Groyne<br>at sides of caisson            |       |     |        |
| 4      | 3                | 2  | 24 |          | Beyond                                        |       |     |        |
|        |                  |    |    | 299      | Cubic yards                                   | at 10 | cs  | 2990   |
|        |                  |    |    |          | syndies                                       |       |     | 160    |
|        |                  |    |    |          | Total Estimate Rs                             |       |     | 3150   |

District Engineer's office  
Tanjore 19 June 1873

W. F. A. K. Major  
B. Pitt. Esq. Tanjore

No 287

District Engineer's Office —  
Tanjore 19 June 1973

From  
Major R. F. Oakes R.E.  
District Engineer, Tanjore

To,  
Colonel G. W. Walker R.E.  
Secretary to Govt P.W.D.  
Fort Saint George

Enclosed in a letter from the Dist Engineer to Government P.W.D. No 287 dated 19 June 73

With reference to my letter No 174, dated 9.2.73, I have the honor to inform you that I am carefully examining the proposals at Tanjore in the 2<sup>nd</sup> instance and as follows, and the details of work required are given in the accompanying estimate which provides only for what may be termed the immediate requirements or for the stretch in time which will prevent the portions, which have been much shaken or which have settled, from sinking below the wave level and the restoration of which, if they settled, were

- 1 - Letter No 36 of 13.11.72 may be seen herewith.
- 1 - Comparative Statement.
- 1 - Estimate R.F. - 3/50

R.F. - 3/50

Enclosure in a letter from the Dist Engineer to Government P.W.D. No 287 dated 19 June 73

Mr 5582/73  
1973

Estimate for repairing the existing groynes at Tanjore from Major R. F. Oakes

1973

were breached, would entail a heavy  
outlay at no distant date.

No 1 or Groynes from Kings Bastion in  
good order with the exception of the  
slopes around the stone which re-  
quire making up.

No 2 - Very much shaken. Sides want  
making up. Caisson at base be-  
hind stone 4 yards beyond Caisson  
to be made up.

No 3 - In good order.

No 4 - Very much shaken sides to be  
made up. Queen's Bastion with  
flank wall requires protection.

No 5 - From Queen's Bastion in good  
order though sides slopes have  
settled somewhat.

No 6 - Buried in the sand.

No 7 - Buried in sand but  
Caisson exposed requiring protection.

No 8 - Groynes ground is now high  
and dry from 20 to 25 yards within  
the H.W. sea line but they protect  
the Citadel and the Sea Customs  
House during the N.E. monsoon.

No 9 - During the last N.E. monsoon  
the stone of the Range appears to have  
been

extended northwards and to have found  
an outlet into the sea near the  
Groyne its proper mouth being some  
500 yards further south.

No 10 - The estimate of Rs 15,000  
sanctioned in G.O. No 20 of 4 April 72  
did not provide for any of the  
groynes noted above, but it provided  
for the protection of the angle between  
the faces and flank of the Kings  
Bastion by reforming it & by throw-  
ing out a groyne of 20 yards from it  
and for protecting the face wall  
of the Bastion.

No 11 - The work seemed up to date  
as shown in the enclosed Compara-  
tive statement. It will be observed  
that more concrete work was re-  
quired than the estimate provided for  
and that the cost of the stone ex-  
ceeded the amount sanctioned for  
it for reasons given in letter No 36  
dated 13 May 1873 from Mr. Superintendent  
Stephens who was in charge of the  
Range when the concrete work was  
in progress and when the contracts  
for the supply of stone were made.

The

6. The Estimate allowed for the supply of 4383 cubic yards of Stone of this 82 yards were provided to protect the face of the inner Bastion under the balance to form a new fosse 20 yards long (top) would be 15 yards foot of slope  $25\frac{1}{2}$  from Bastion) at the angle formed by the face & flank of the Bastion.

7. The condition of work on the 2<sup>d</sup> June is as follows. 862 cubic yards of Stone (necessaries of 127  $\frac{1}{2}$  yards of cubic) has been placed in position forming a fosse 9 yards long at top ( $16\frac{1}{2}$  to foot of slope) and a small quantity had been placed in front of the face wall. While 308 cubic yards of Stone had been collected and were lying at Negapatam or were being conveyed to Tanjore. The face of the Bastion is 155 yards long between the New Fosse and N. 1 and I am of opinion that 333 yards of Stone should be provided for the protection of this face wall, upon the security of which the future portion of the Town of Tanjore may be said to depend.

The

W.C.  
The new fosse if extended to 20 yards would not sufficiently protect this face, but, as it is desirable that this fosse should be extended to the full length provided in the Estimate in order to protect the open beach to its north to a greater extent than it can now do, if funds are available, I would deprecate the surrender of the Rs. 3500 which the Range Officer proposes to surrender in his No. 39 dated 10<sup>th</sup> May. At Rs. 10 per cubic yard the stone which could be provided would carry the fosse out to a length of 14 yards at top and 23 at foot, but the fosse will sink when acted upon by the sea during the N.E. monsoon and will have to be made up again when it sinks, for with 862 yards of Stone the fosse will be carried only 1 yard short of the original length contemplated with an expenditure of 1301 cubic yards of Stone. The Estimate having provided for settlement which may not take place for years.

8. The Estimate for protecting & repairing the existing fosses amounts to

to Rs 3150 if this sum cannot be provided in addition to the balance of the original estimate of Rs 15,000. I would suggest that this work should be provided for from the balance of Rs 3500 it was proposed by the Range Officer to surrender - This will render an allotment of Rs 5500 necessary for the works in 1873-74 but if funds are available it would be well to provide at once for the whole of the requirements of Tranquebar & to allot Rs 3150 in addition to the balance of the estimate of Rs 15,000 or Rs 9000 in all.

2350  
9150  
3500  
3500

I have the honor to be

Yours most obedt Servt

A. F. Drake Major R.E.

District Engineer Tanjore -

Public Works 1873 Department  
Office of the District Engineer  
No. 3582  
Tanjore

To  
The Secretary to Govt.  
P.W. Department.

No. 287.

Dated 19 June 1873  
Received 21<sup>st</sup> 1873

Forwards an Estimate  
for protecting and re-  
pairing the existing  
Eroynes at Tranquebar  
amounting to Rs 3150.

No 122  
Recd by Secy 25 June 73

No 1979. 9<sup>th</sup> Aug 6/73.



No 1979 P.W.D.  
Pror. of the Madras Govt.  
Read the following:-  
From the District Engineer (H.E. No 287 of 19 June 73)

L. O. S.

An allotment of  
Rs 2350 has already  
been made, which it  
appears will suffice  
to enable the 368 yards  
of stone collected at  
Nagapattam to be  
utilized in carrying  
out the new Eroyn  
in front of the

at Trinquebar  
King's Bastion, almost  
to the extent originally  
proposed and to put  
in one-fourth more  
Concrete work in repairs  
to the Bastion wall  
than was first in-  
tended; besides as much  
already done in excess.  
It would appear  
therefore to be the  
better plan to provide,  
for the present, funds  
for making up the  
old groyne to their  
proper condition.  
The Estimate of Rs. 3150  
for

for which purpose is  
accordingly sanctioned  
and will be carried  
out without fail  
before next monsoon.  
The District Engineer  
will then again  
report on the effects  
of what has been  
done, and on any  
further requirements  
that may appear  
needful.

G.M.W.

40  
4

To, The Dt. Engr. Bangalore  
50 Cont. P. & A. Accts. ✓ Sd. dt. 16/8/73  
119 ~~Marine Department~~

123582  
Govt. of 1873 Madras.

PUBLIC WORKS.

To the District Engineer  
Tanjore

Dated

Recd.

Encl.

G. O. 9<sup>th</sup> Aug 73. No 1979.

Nos. 1221/23.

Groynes at Tranquebar.

Replying to letter  
from the District Engineer,  
forwarding an esti-  
mate for repairing the  
groynes at Tranquebar.

122.23.