

(1) Number of pages 15
 (2) Date of repair _____
 (3) Initials of the Referencer _____

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. <u>989</u>	Press Mis.
Dated <u>20</u> <u>3</u> 18 <u>77</u>	

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department,
20th March 1877. No. 989.

No. 574. Read the following letter from E. H. PRINGLE, Esq., District Engineer, South Canara, to the Chief Engineer, Buildings and Roads Branch, dated Mangalore, 10th March 1877, No. 78 :—

In forwarding a revised estimate for the Rifle Range at Mangalore for sanction, I have the honor to explain that the necessity chiefly arose from the alteration of the site of the stop butt by the late District Engineer.

2. When this alteration was made it was apparently overlooked that the positions, numbers, and dimensions of the firing platforms had likewise to be altered; nor was this discovered by the Divisional Officer carrying out the work.

3. On my inspection of the range, after my return from the district in September 1876, the errors were detected, and I had to change the positions of the platforms, cut down a rise in front of the targets and otherwise deviate from the estimate. The work had to be carried out as hastily as possible for the firing season was close at hand, and all that could be done was to make markers' and ricochet butts safe and finish the firing platforms before work had to be stopped. Sundry other unforeseen items noted in the comparative statement have helped to swell the amount of the revised estimate.

4. The work will be renewed and completed when the monsoon commences, as it will be expensive working during the dry weather. I have the honor to suggest the following transfers to meet the excess over original estimate for the current year, and request a further allotment for the ensuing official year of Rupees 70 :—

From	To	Rs.	Rs.
1. Minor New Works... ..	...	60	
2. Repairs	...	70	
Total ...	130		
	New work, Rifle Range		130

No. 575. ORDER THEREON, 20th March 1877, No. 989.

MILITARY WORKS, No. 14.

(a) Heads of Service.—Imperial.
Fund.—Ordinary.
Class.—Original Works.
Main-head.—Military.
Sub-head.—Miscellaneous, Military.
Name of Work.—Constructing a Rifle Range at Urva, Mangalore Taluk.
Amount.—Rupees 1,030.
To be carried out by the Public Works Department.

* The transfer of Rupees 70 will be reported to the Government of India.

UNDER the explanation afforded by the District Engineer the revised estimate of Rupees 1,030 is sanctioned in lieu of that of Rupees 830, sanctioned in G.O., No. 2,025, dated 17th July 1875; * funds being provided by transfer as proposed by the District Engineer.

2. This sanction has been registered as Imperial No. 154—W of 1876-77.

(True Extract.)

(Signed) W. FAREWELL, Colonel,
Acting Joint Secy. to Govt., P.W.D.,
Buildings and Roads Branch.

To the District Engineer, South Canara.
„ Examiner of Public Works Accounts.
„ Military Department.

Exd. S. T. Austin.

Spare Copies

[illegible]

<u>Markers Butte.</u>					
5	Mud settlement	C. feet -	1329 $\frac{1}{2}$	100	2 4 - 29 14 6 1324 ¹⁰⁰
6	Flooring with laterite jelly in clay square ft -	{	81	20	1 4 - 1 - 2 81 ²⁰
7	wood work -		C. ft	37 $\frac{7}{16}$	C. ft
8	Plastering with mud -	S. ft	168	100	1 4 - 2 17 168 ¹⁰⁰
9	Tarring wood work -	S. ft	297 $\frac{1}{2}$	20	1 8 - 4 7 3 299 $\frac{1}{16}$ ²⁰
10	Laterite in mud	C. ft -	.	.	... 114 $\frac{3}{4}$ ⁹⁰
11	Sundries &c for -	-	-	Cent	7 8 - 7.8 - Cent
Total for one Markers butte -					110 - -
- do - for another -					110 - -
Total Piques -					220 - -

Estimate	Rate	Amount	Increase	Decrease	Amount requiring sanction	Remarks
5.	213 10 11					Alteration of site of stop butt necessitated extra joining plate - found &c
16.	80.6	44 89				
78.	20 14 10	- 73				
16.	183 7 6	74 10				The cost of 2 tables which was included in this item in the original estimate has now been separately shown in item No 28. The scantlings in the revised estimate are less in dimension than those allowed in original - hence the decrease.
	118 6					
	510 ..	52 4 10	2 4 10			
24.	29 12 7					Found pillars necessary.
14.	1 5 2					
12.	48 1 10					
14.	2 17					The cost of 2 tables which was included in this item in the original estimate has now been separately shown in item No 28. The scantlings in the revised estimate are less in dimension than those allowed in original - hence the decrease.
18.	47 8					
15.	173 4	173 4				
78.	74 10	- 47				Found pillars necessary.
110	178 4	178 4				
110	178 4	178 4				
220	35 - 8	35 - 8				

Comparative Statement to accompany the Revised Estimate for the Construction of a Rifle Range of 900 yards in length at Erwa in Mangalore Taluk

Particulars of work	original Estimate			Revised Estimate			Increase	Decrease	Amount requiring sanction	Remarks
	Quantity	Per	Rate	Quantity	Per	Rate				
Recessed Butt.										
12 Mud mortarment — C.ft. — 1082 1/4	100	2 4	24 59	107 1/4	100	24	24 18	41		
13 Flooring with latrite jelly in clay s.ft. — { 42	8	1 4	85	42	8	1 4	85			
14 Woodwork C.ft. — 22 35/48	C.ft.	1 12	39 125	12 13/72	C.ft.	1 12	21 5	18 75		
15 Plastering with mud s.ft. — 119	100	1 4	157 9	119	100	1 4	17 9			
16 Tarring wood work — s.ft. 175 1/2	20	1 8	2 101	136 1/12	20	1 8	2 9	9 4		
17 Latrite in mud — C.ft. {				114 3/4	20	15	17 3 4	17 3 4		
18 Sundries &c for do	Cent	7 8	6 37	Cent	7 8	3 51	2 46			
Total for one Recessed Butt. —			75			70	17 8 4	22 3 4		
do for another —			75			70	17 8 4	22 3 4		
Total —			150			140	34 6 8	44 6 8		
Targets										
19 Woodwork — C.ft. — 15	C.ft.	1 10	24 6	24 6						
20 Tarring — s.ft. — 100	100	1 8	18	18						
21 Sundries &c — Cent	7 8	12	12							
Total expenses for Targets —			27			27				
22 Numbered bricks — 48	each	10	30	30						
23 Tables — 4		3	12	12						
24 Benches — 4		1 8	6	6						

Comparative Statement to accompany the Revised Estimate for the Construction of a Rifle Range of 900 yards in length at Erwa in Mangalore Taluk

Particulars of work	original Estimate			Revised Estimate			Increase	Decrease	Amount requiring sanction	Remarks
	Quantity	Per	Rate	Quantity	Per	Rate				
25. Renewal of Road ——— {										Consequence of alteration of site of stop butt.
26. Filling in an old drain and opening a new one ——— {										
27. Removing the refuse heaps laid down by Municipality ——— {										Necessary as the old drain crops & ruined butt site
28. Demarcating the Range & marking firing distances ——— {										
29. Dismantling the old hut ——— {										Municipality refused to do this work
30. Sprinkling sand over the platform ——— {										
31. Sundry items ——— {										
Grand Total ———										
Deduct amount of original Estimate & decrease ———										
Net amount requiring sanction										

District Engineer's Office
Mangalore 10th March 1897

[Signature]
District Eng. Mangalore

Compare these statements
to accompanying Estimate for
Constructing a Light House
Hingham Mass —

Oct 20th Nov 2/77 JB Jr 574

Imperial, ... Revised. Original ...

Miscellaneous Detailed Estimate No. 30 of 1876-77.

South Canara District.

Work Constructing a Rifle Range of 900 yards in length
at Urver in the Mangalore Talook.

Detail of Work.

Measurement in
feet.

No. 2 B 5

Contents.

Stop Butt

Mud revetment for Stop Butt	1	8 1/2	21 7/2	18462
Total Cft. of mud revetment for Stop Butt				18462

Platform

Mud revetment for platform 350 yds	1	1 1/2	42 7/2	641 1/4
Do Do Do at 400 yds	1	4 1/4	57 1/2	2442 5/2
Steps for Do Do Do	1	4 1/2	3 6	81
Mud revetment for Do Do Do	1	3	422 1/2	1267 1/2
Steps for Do Do Do	1	5	2 3 6	60
Mud revetment for Do 450 yds	1	6 1/2	67 1/4	4382 5/8
Steps for Do Do Do	1	9	5 6	270
Mud revetment for Do Do Do	1	8 1/2	789 1/4	6708 7/8
Steps for Do Do Do	1	9	7 6	378
Mud revetment for Do 500 yds	1	5 1/2	625 1/4	3416 7/8
Steps for Do Do Do	1	9 1/2	5 6	285
Mud Revetment for Do Do Do	1	5	595	2975
Steps for Do Do Do	1	9	4 1/2 6	243

Total Cubic feet mud revetment
for Platform

20151 1/2

Cutting & Levelling

Cutting the wall & filling in the trench	1	200	20	6 1/2	29900
Levelling Parry field Northern side	1	115	70 1/2	1 3/8	11121 1/4
Do Do Do in continuation	1	46	24	1 7/8	1840
Do Do Do	1	46	84	1 3/8	6440
Do Do Southern side	1	98	11	1/2	539
Wall	1	166	5 1/2	2	1826
Neon the Butb	1	40	8	3 2/3	1173 1/2

Total Cft of levelling & cutting the ground 52839 1/4

Marker's Butb

Wall	1	20	2	4	184
Triangular part	1	27	7	4	756
Segmental part	1	27	10		270
Wedge	1	8	8		64
Flooring over joists	1	10	10	1/2	50

Total Cft of mud revetment 7324

Laterite in mud

Foundation to masonry Pillar	4	2 1/4	2 1/4	3	60 1/4
Pillars above	4	1 1/2	1 1/2	6	54

Total Cft of laterite in mud 114 3/4

Flooring the ground with laterite jelly in clay well beaten with wooden rammers	1	9	9		81
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Total Sqft of flooring 81

Wood work

Sleepers	1	11 1/2	6	4	1 1/2
Beams	1	11 1/2	8	4	2 7/8
Joists	7	8	5	3	5 1/6

Planking 12 10 10 1/6 16 2/3

Pillar Plates 4 1 1 1/6 3/3

Total Cft of wood work 27 2/3

Plastering the inside with mud 1 24 168

Total Sqft of plastering with mud 168

Tarring 1 11 11 1/2

Both inside & outside of planks 2 10 10 1/2 20 1/2

Beam 1 11 1/2 16 19 1/6

Sleepers 1 11 1/2 16 15 1/3

Joists 7 8 13 62 1/3

Pillar Plates 4 1 12 4

Total Sqft of tarring the wood 299 1/6

Richochet Butb

Wall 1 16 2 3 1/4 120

Triangular part 1 22 4 1/4 7 1/2 70 1/4

Segmental part 1 22 7 1/2 165

Flooring over joists 1 6 1/2 6 1/2 1/2 21 1/2

Wedge 1 8 8 64

Total Cft of mud revetment 1071 1/8

Laterite in mud

Foundation to masonry Pillar 4 2 1/4 2 1/4 3 60 1/4

Masonry Pillars above 4 1 1/2 1 1/2 6 54

Total Cft of laterite in mud 114 3/4

Flooring with laterite jelly 1 7 6 42

Total Sqft of flooring with laterite jelly
in clay well beaten with wooden rammers 42

Woodwork

Beam	1	8	6	4	1 1/2
Sleeper	1	8	6	4	1 1/2
Pillar plates	4	1	1	1/2	1 3/4
Joist	5	6 1/2	4	2	1 3/4
Planking	1	6 1/2	6 1/2	1/6	7 1/24

Total Cft of jungle wood work - 12 1/2

Plastering	1	17	7		119
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Total Sqft of Plastering with mud - 119

Tarring

Planks both inside & outside	2	6 1/2	6 1/2	8 1/2
Joists	5	6 1/2	10	27 1/2
Beams	1	8	16	10 2/3
Sleeper	1	8	16	10 2/3
Pillar plates	4	1	12	4

Total Sqft of tarring the wood - 136 1/2

Jungle wood work

Wooden beams for Targets	2	20	9	6	150 Cft
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Total Cft of jungle wood work - 15

Tarring

Wooden beams	2	20	2 1/2	100
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Total Sqft of tarring - 100

Numbered Bricks	48			48
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Benchies	4			4
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Mangalore

10 March 1877

L. O. 201. March 1877

Sub Singh
District Eng. S. P. S. S. S.

Revised

Abstract Estimate No. 30 of 1876-77

South Canara District

Work. Constructing a Rifle Range of 900 yards in length at Uruva Mangalore Taluk

Quantities

Description of work Per Rate Amount Total

Stop Butt

683 21/27 Cft Mud mntment 5 - 213 10 1

Sundries 16 5 1

Total 230

2315 1/32 Plat frame

52839 1/24 Cutting & leveling

75990 1/5 Total Cft or 2814 1/2 Cft of mud work Cft - 16 263 13 9

Sundries 16 2 3

Total 280

Markers Butt

1324 Cft Mud mntment 100 24 - 29 12 7

114 3/4 - latite in mud 15 23 - 17 8 4

81 Sft Flooring with latite jelly 12 2 - 7 2 2

27 23/38 Cft wood work Cft 7 12 - 48 7 0

168 Sft Plastering with mud inside 14 2 - 2 1 7

299 1/16 - Tarring 18 2 - 6 7 8

Sundries 102 4 2

Total for one 110

do for two 220

Recochet Butte.

1071 ³ / ₈	Cft. Mud cement	100	2	4	24	1	8
114 ³ / ₄	" Lattice in mud	8	15		17	3	4
42	Sft. flooring with lattice gally	8	1	4		8	6
12 ¹ / ₂	Cft. Jungewood work	1	1	12	21	5	
119	Sft. Plastering with mud	100	1	4		1	7
136 ¹¹ / ₁₂	" Tarring	8	1	8	2		19

66 10 11

Sundries 3 5 1

Total for one 70

Two 140

Targets

15 Cft. wood work 1 10 24 8

100 Sft. Tarring 1 1 8 7 8

Sundries 1 2

Total 27

48 Sps. Bricks 1 10 30 30

4 Tables 1 3 12 12

4 Benches 1 8 6 6

Renewal of Road 15 15

Filling an old drain & opening 6 4 4 6 4 4

Renewing one 6 4 4 6 4 4

Removing refuse heaps 8 6 4 8 6 4

Demarcating the Range & mark 23 11 9 23 11 9

ing firing distances 23 11 9 23 11 9

Dismantling the old huts 2 8 10 2 8 10

Sprinkling sand over flat 2 13 2 13

forms 2 13 2 13

Carried over 1003 12 3

Brought forward

26 3 9 26 3 9

Sundry items

educt amount of estimate already sanctioned 800

Net amount of estimate Rupees 200

16 March 1877

LLB

District Engineer
Panara

No 48 South Cairns Dist. Engrs. Office
Mangalore 10th March 1877

From
The District Engineer
South Cairns.
The Chief Engineer
Roads and Buildings.
Sir,

In forwarding a revised estimate for
the Rifer Range at Mangalore, for sanction,
I have the honor to explain that the necessity
arose from the alteration of the site of the
Stapleforth by the late District Engineer.

2. When this alteration was made, it
was apparently overlooked that the positions,
numbers, & dimensions of the firing plat-
forms had likewise to be altered. It was
this discovered by the Divisional Officer com-
mencing the work.

3. On my inspection of the Range, after
my return from the District in September/76
the errors were detected and I had to change
the positions of the platforms, cut down
a rise in front of the targets & otherwise
deviate from the estimate. The work has
to be carried out as hastily as possible
for

P.W.D.

16 MAR 77

2810

3

1877.

D.P. 97. South Cairns 21.

Revised

Estimated by Mr. J. M. 11/77

Thos. Cunningham

a Rifer Range 900

yards in length at

base in Mangalore

city

Amount 200-0-0.

L. G. 20th March/77 L.B. 574

for the firing season was close at hand; and all that could be done was to make markers & rocket butts safe, and finish the firing platforms before work had to be stopped. Sundry other unforeseen items noted in the comparative statement have helped to swell the amount of the revised estimate.

4. The work will be renewed & completed when the monsoon commences, as it will be expensive working during the dry season. I have the honor to suggest the following transfers to meet the excess over original estimate for the current year & request a further allotment for the ensuing official year.

1 million New works Rs 60--	
2. Repairs Rs 70--	New work
Total 130--	Rifle Range Rs 130--

I have the honor to be

Sir

Yours faithfully

Dist. Engr.

M. J. J.

(a) Heads of Service—Imperial

Fund. Ordinary

Class. Original Works

Main-head. Military

Sub-head. Miscellaneous Military

Section

Name of Work Constructing a Rifle Range at
Uwa, Mangalore Taluk—

Amount. 1030

To be carried out by the Public Works Department.

Print in the margin of G.O. No 989 of 20/3/77

26.2.76. No 224 Mis
17.7.75 " 625.

P.W.D.
16 MAR 77
No 2810

~~With Revenue Department~~
submitted for sanction a
revised estimate for
with explanation for
the necessity.

from the District Engineer
to the District Engineer
Rovers & Buildings
Dated 10th March 1877
Recd 12th March 1877
No 178
Dated 12th March

G.O 20th March/77 J.B. to 574

On 19.3.77 C.20/07/77

Public Works Department. 13

No 909

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 20 March/77
Read the following:—

From the District Engineer, South Canara (H. E. No. 78 of 10 March/77)

Under the explanation afforded by the District Engineer, the revised estimate of Rs. 1030 is sanctioned in lieu of that of Rs. 830 sanctioned in G.O. No. 2025 dated 17th July 1875; funds being provided by transfer as proposed by the District Engineer.

This sanction has been re-
-sited as Imperial
No. 154 M. of 1876-77.

S. S. Anand.
H. P. W. A. ✓
M. P. W. A. ✓

W. A. S. D. No. 7-4-77

1877
Obt. of 1877 Madras.
PUBLIC WORKS.

To *the N. & S. Canals*

Dated

Issued

Recd.

Encl.

G. O. *20th March* 1877, No. 989

Nos. 574-575

*Rifle Range at
Mangalore, South Canara*

or — The revised estimate
of Rs. 1030 for erecting
the —, Launching, and
funds provided.

Est. in Rs. 1030