M.R.O. 1—77,006—8-6-37.

(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. 181, 182, 183	2391-92	Press / Mis.
Dated	11-10-	1879.

Not to be folded or roughly handled

No. 181. Read the following letter from the Superintending Engineer, 5th Division, to the Secretary to Government, Public Works Department, dated Camp at Salem, 10th September 1872, No. 118:—

I HAVE the honour to forward the information called for in your memorandum No. 178 of the 17th of August, regarding the roofing of the Rajah's Palace at Mercara.

One Comparative Statement.

2. The expenditure in each year on the sanctioned estimate of Rupees 44,000 was as follows:—

	RS.	A.	P.
In 1866-67	11,406	8	0
,, 1867-68	10,069	0	0
,, 1868-69	12,544	10	6
,, 1869-70	10,007	4	3
Total expenditure ...	44,027	6	9

3. The work was carried out, up to its completion, under the superintendence of Mr. Supervisor Cowley, then attached to the Bangalore Range. The work was inspected only once by one of the Executive Engineers (Captain Wood, R.E.,) in November 1869.

4. The proposal to substitute continuous iron roofing for corrugated iron may have been made, in the first instance, by the contractor, but the change was strongly recommended by Lieutenant Pennycuick, also by Captain Tulloch for the following reasons: first, the price of corrugated iron having gone up 30 per cent. after the estimate was made, it would not have been possible to use it for roofing under Rupees 60 or 65 a square, the rate allowed in the estimate being Rupees 50. At the same time the continuous roofing could be delivered at Mercara at 4 Annas a square foot, which would allow of the roofing being executed at the estimated rate; secondly, the continuous roofing was considered quite as durable as the other and well adapted for the Mercara Palace roof, as the rafters were only 1 foot 7½ inches apart, so that any deficiency in strength of the continuous as compared with the corrugated iron was not of any consequence, the sheets of the latter kind being used with rafters 3 feet apart; thirdly, there was an opportunity at the time of purchasing the whole quantity of continuous roofing that would be required at Mercara. After having obtained all the information I could on the subject, I approved of the substitution of the continuous for the corrugated iron. I am not aware whether any boarding was used under the iron sheets, but its use was insisted on in the correspondence regarding the roof.

5. A revised estimate was prepared in June 1868. I enclose a copy of the comparative statement which accompanied it, in which all the deviations from the original estimate are shown.

6. The repairs to the palace were inspected in May 1870 by Colonel Roberts, Acting Superintending Engineer, who in his letter to Government, recorded in Proceedings of the 15th July 1870, states, "I think that Government have every reason to be satisfied with the manner in which these repairs have been carried out. Mr. Cowley has had a difficult task to perform, and I am of opinion that, on the whole, he has executed it most creditably."

Proceedings of the Madras Government, Public Works Department, 11th October 1872.

No. 182. ORDER THEREON, 11th October 1872, No. 2,391.

MILITARY WORKS, No. 6.

ORDERED that the following letter be sent:—

(Here enter No. 2,392, dated 11th October 1872.)

(True Extract.)

(Signed) G. W. WALKER, Colonel, R.E.,
Secretary to Government.

Exd. S. T. Austin.

PUBLIC WORKS DEPARTMENT,
OOTACAMUND, 11*th October* 1872.

No. 183. No. 2,392.

To
THE SECRETARY TO THE GOVERNMENT OF INDIA,
PUBLIC WORKS DEPARTMENT.

MILITARY WORKS, No. 7.

SIR,—I am now directed to supply the explanation promised in paragraph 2 of my letter, No. 2,063 of 28th August, regarding the work done to the Palace at Mercara.

2. From the papers accompanying Public Works Order, No. 3,155 of 4th October 1866, (herewith forwarded,) it will appear that the use of corrugated iron, not of continuous iron sheeting, was originally proposed and sanctioned.

3. From the Superintending Engineer's letter of 10th September accompanying, it appears that the works extended over a period of four years under a Supervisor of the Madras Public Works Department, unchecked by the Executive Engineer of Coorg, and unvisited except once by the Executive Engineer of Bangalore; also that the use of continuous iron sheeting laid on boarding was sanctioned by him on the recommendation of the Executive Engineer and Assistant Executive Engineer of Bangalore. He also quotes extract of the Acting Superintending Engineer's report of the complete success of the work, copy of which is herewith forwarded in extenso.

4. I am directed to observe that, in the opinion of His Excellency the Governor in Council, the adoption of iron as a roofing material in a climate like that of Mercara, within the influence of the south-west monsoon, was a fundamental error. Since his sanction of it was accorded it has been proved by experience at Ootacamund that corrugated iron sheets are only efficacious when used to cover small spans in sheltered situations; and that the only method of using continuous iron to advantage is under a layer of tiles where exposure to wind and wet is great as in the case of the Mercara Palace.

5. It is to be regretted that the Supervisor who carried out the work was not placed under the general supervision of the Executive Engineer of Coorg, as was anticipated, from the wording of Lieutenant-Colonel Sankey's letter No. 3,316 of 14th November 1865, would have been done. The man has since been dismissed from the Department; and doubtless fell into evil courses from having been so long his own master. How far his management of the work may have contributed to its ultimate failure can now only be a matter of conjecture.

I have the honour to be,
Sir,
Your most obedient servant,

Colonel, R.E.,
Secretary to Government.

Exd. S. T. Austin.

Mew

Govt. of [1872] Madras.

PUBLIC WORKS.

To

THE SECRETARY TO GOVERNMENT

OF INDIA.

Dated October 11th

Read. *Encl.*

G. O., 11th October 1872, No. 2,392.

OCTOBER.

No. 183

AFFORDING certain information respecting the re-roofing of the old Mercara Palace.

No. 118.

Supg: Engineer's Office, 5th Dn.
Camp Salem, 10th Septr: 1872

From

The Superintending Engineer
5th Division

To

The Secretary to Government
Public Works Department.

Sir,

Enclosure
1 comparative
statement.

I have the honor to forward the information called for in your Memo: No. 178 of the 17th of August regarding the roofing of the Rajahs Palace at Mercara.

2. The expenditure in each year on the sanctioned estimate of Rs: 44,000 was as follows:

In 1866/67	Rs:	11406 . 8 . 0
" 1867/68	"	19069 " 0 . 0
" 1868/69	"	12544 . 10 " 6
" 1869/70	"	10007 " 4 . 3
Total expenditure	Rs:	44027 " 6 . 9

3. The work was carried on, up to its completion, under the superintend= ence of Mr. Supervisor Bowley then

then attached to the Bangalore Range.
Thereafter was inspected only once, by one
of the Executive Engineers (Captain
Wood R.E.) in November 1869.

4. The proposal to substitute
continuous iron roofing for corrugated
iron may have been made in the first
instance by the Contractor, but the
change was strongly recommended by
Lieutenant Pennycuick also by Cap-
tain Sulloch for the following reasons.
1st The price of corrugated iron having
gone up 30 per cent after the estimate
was made, it would not have been
possible to use it for roofing under
Rs: 60 or 65 a square the rate allowed
in the estimate being Rs: 50. At the
same time the continuous roofing could
be delivered at Mercara at 4 annas
a square foot which would allow of
the roofing being executed at the es-
timated rate. 2dly The continuous
roofing was considered quite as
durable as the other and well adapt-
ed for the Mercara Palace roof,
as the rafters were only 1-7½ apart

so that any deficiency in strength of the
continuous as compared with the corrugated
iron was not of any consequence, the
sheets of the latter kind being used with
rafters 3 feet a part. 3rdly There was an
opportunity at the time of purchasing
the whole quantity of continuous roof-
ing that would be required at Mer-
cara. After having obtained all
the information I could on the subject,
I approved of the substitution of the
continuous for the corrugated iron. I
am not aware whether any boarding
was used under the iron sheets, but
its use was insisted on in the corres-
pondence regarding the roof.

5. A revised estimate was pre-
pared in June 1868. I enclose a copy
of the Comparative Statement which
accompanied it, in which all the
deviations from the original estimate
are shown.

6. The repairs to the Palace were
inspected in May 1870 by Colonel
Roberts Acting Superintending Engineer
who in his letter to Government re-
corded in Proceedings of the 15th July 1870
states,

states, "I think that Government have every reason to be satisfied with the manner in which these repairs have been carried out. Mr. Conley has had a difficult task to perform and I am of opinion that, on the whole, he has executed it most creditably."

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

Edmd. Cotton R.E.
Superintg: Engineer, 5th Dn.

states, "I think that Government have
every reason to be satisfied with the manner
in which these repairs have been
carried out. Mr. Conley has had
a difficult task to perform and I
am of
he has

Copy Report 1872 Signature
for Engr. Gen.
from Sept. 12/72

The Asst. Engineer
5th Dist.

To
The Secretary to Govt.
Public Works Department

Dated 10th
Rec'd 12 } Sept. 1872.
No. 1185
Encls: one

Forwarding the information called
for, regarding the
roofing of the Rajah's
Palace at Mercara.

No. 2391-2392 - 11 Oct. 72

No. 181
Recd 16 Oct. 72 Letter

Sup[t] Off. Cooley
Mercara.

To
The Executive Engineer
Bangalore

D.No. 447/22.

Comparative Statement
of Mercara Palace
Works showing diff-
erence between Orgi-
nal & Revised Esti-
mate.

Mercara 13th June 1865.

No 2391 Read.

Rec. of the Trades Journ.

Read the following

From his Excellency S. of S. (Mil. No 1180/11 Sept/12)

Ordered that the following

letter be sent

Mil. Dept

No 2392

To The Secy: to the Government

of India. P. W. Dept.

Sir

I am now directed

to supply the explanation promised

in para 2 of my letter

No 2063 of 28 August

regarding the works

done to the Palace

at Mercara.

From the papers

accompanying Public

Works Order No 3155

of 4th October 1866
(herewith forwarded)
it will appear that
the use of corrugated
Iron, not of continuous
Iron sheeting, was
originally proposed
and sanctioned.

From the Superin-
-tending Engineer's letter
of 10th September accom-
-panying it appears
that the works extended
over a period of 4
years under a Super-
-visor of the Madras
Public Works Depart-
-ment selected by the

Executive Engineer
of Coorg, and unvi-
-sited except once
by the Executive En-
-gineer of Bangalore.
Also that the use of
continuous Iron
sheeting laid on
boarding was sanc-
-tioned by him on
the recommendation
of the Executive
Engineer and Assistant
Executive Engineer
of Bangalore.
He also quotes
extract of the Acting
Supt Engineer's Report

of the complete success of the work, copy of which is herewith forwarded in extenso.

I am directed to observe that in the opinion of His Excellency the Governor in Council the adoption of Iron as a roofing material in a climate like that of Mercara in the South West monsoon, was a fundamental error. Since his sanction of it was accorded it has been proved by experience at Ootacamund that Corrugated Iron sheets are only efficacious when used to cover small spaces in sheltered situations; and that the only method of using Continuous Iron to advantage was under a layer of tiles where exposure to wind and wet is so great as in the case of the Mercara Palace.

It is to be regretted that the Supervisor who carried out the

work was not placed under the general superviscion of the Executive Engineer of Coorg, as was anticipated, from the wording of Lieutenant Colonel San Reyo letter No. 3316 of 14th November 1865, would have been done. The man has since had to be dismissed from the Department; and doubtless fell into evil courses from having been

been so long his own master. How far his management of the work may have contributed to its ultimate failure can now only be a matter of conjecture.

G.H.W.

Desp. 18/10/72 into Jedhos
of the Govt 2391 of 1872 from
Secy Jenck of the Govt
3155 of 1866 into bills Nos. 1701 of
1870 & 3824 of 1865 into bills
Nos.

No 4470

Govt. of {1872} Madras.

PUBLIC WORKS.

To The Secretary to the Govt. of India

Dated

Recd. Encl. /

G. O. 11th Oct 1872. 2391-2392

Nos. 181-182 & /C

Peacock Palace. Peking

Orders on letter from the Mission at Peking dated the 5th Sept affording certain information respecting the re-roofing of the Peacock Palace

Affording certain information respecting the re-roofing of Moorish Peacock Palace.