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(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Public works DEPARTMENT.

G.O. No.	756	Press
		Mis.
393-44		
Dated	14. 3.	18. 11.

Not to be folded or roughly handled

[Signature]

*Proceedings of the Madras Government, Public Works Department,
14th March 1871.*

No. 343. Read the following letter from the Acting Superintending Engineer, 5th Division, to the Secretary to Government, Public Works Department, dated Madras, 14th January 1871, No. 218:—

IN reference to G. O., 25th November 1870, No. 2,846, calling for a report on the alleged bad quality of the materials and workmanship employed in the construction of the Artillery and Cavalry Barracks on the old Race-course,

1 Report.	
1 Memorandum of expenditure.	
1 Register of rain-fall.	

Bangalore, I have the honour, in forwarding herewith the accompanying letter, No. 866, dated 19th December 1870, from Captain Wood, R. E., on the subject, to report as follows.

2. Had such a sweeping condemnation of the whole of the Race-course Barracks buildings, as is contained in the statement put forward by the Assistant Quarter-Master General, Mysore Division, been expressed by a professional officer, or had anything happened as would have necessitated, or even justified such a step, I should not have hesitated to solicit the Government to be pleased to nominate a commission of inquiry to investigate into the very grave charge brought against this department by Major Deane, and concurred with by the General Commanding the Division.

3. But what are the facts of the case? During an exceptionally heavy burst of the south-west monsoon in October last, the roofs of several of the new barrack buildings leaked, but to such a trifling extent that, although even a small leak will occasion a great discomfort, the troops, with the exception of those in one block only, were not subjected to positive inconvenience.

4. It will be seen from the enclosed register* of rain-fall at Bangalore that 13 inches of rain fell during the month of October last. In fact towards the

* Enclosure "B."

middle of the month the rain was so heavy and continuous and the weather so gusty that there was not a single house in Bangalore, as I am informed, that did not leak, whilst several houses of twenty or thirty years' standing fell to the ground.

5. It is well known to all professional men of experience in this country that the prevention of leakage in terraced roofs is at all times a difficult task to accomplish. From these roofs being subjected to the action of a tropical sun for three parts of the year, the materials of which they are composed become so dry from the continued evaporation due to this exposure, that they contract and not only cause large cracks and fissures to open out, but from the constant baking which the materials receive they become friable and honey-combed as it were, and they greedily suck in the first rain that falls on them, and should the rain be very heavy and continuous, the roof gets saturated with moisture and drips, and where a crack or fissure has opened out leakage is the result.

6. But to argue from the mere fact of leakage, and leakage due to such a cause that the barracks are built of materials of "the worst possible description," as stated by Major Deane, appears to me, to say the least, not deducible from the premises.

7. I have inspected a number of the buildings, and I have made such inquiries as appeared to me to be necessary, and though of course I find much

that might be better, still I do not see why I should hesitate in assuring the Government that the unfavourable opinion that has been passed upon these barracks by the Military authorities of the station appears to me, professionally, to have been formed on scarcely adequate grounds.

8. It is not for me to criticize these statements, but I would call the attention of Government to the remarks made on them by the public press. I append for this purpose an extract which appeared as a leader in one of the local journals. It is as follows:—

“The triumphs of the Public Works Department are so many and so various—
“are they not chronicled in the newspapers of the day—that it is with a feeling of
“profound diffidence we add one more to the list. Scarcely any other part of
“India we fancy can boast of such a magnificent pile of barracks as grace the
“old Race-course at this station, and as magnificence means money, it has tacitly
“been understood that the sum paid for them by the tax-payer was something out
“of the common. We now learn that the Commander-in-Chief has brought to the
“notice of Government their disgraceful condition. In the Field Battery
“Barracks the leakage was so bad last October that one barrack had to be vacated.
“The material of which they are built is, as a rule, of the worst description, and
“all the roofs leak more or less after a heavy rain. On the Cavalry Barracks the
“same verdict has been passed. The materials used in their construction are of
“the *worst possible* description, and the workmanship throughout the entire range of
“buildings is *decidedly faulty*. This, be it remembered, is what the Commander-
“in-Chief deliberately says, and General Borton, Commanding the Division, agrees
“with him. Should we not be proud of our Public Works Department? Verily
“it has attained to perfection the divine art of how not to do it; and, in the
“meantime, people in different parts of the country are roused to desperation by
“heavy taxation, and there is none to help; none to insist on inquiries into such an
“iniquitous expenditure on so-called public works of utility. It is too bad.”

9. It may be said that it is of little moment to the Government what an obscure writer in an obscurer journal may choose to publish; but, as will be observed in this case, the writer is at the pains to assure his readers that it is not his own opinion that he is expressing but that formed and deliberately stated by His Excellency the Commander-in-Chief. I submit that to officers of this department who are personally responsible to the Government for the proper execution of public works, and who strive to do their duty honestly and faithfully, it is not encouraging to be thus publicly reprimanded on *ex parte* statements.

10. I purposely refrain from going over the ground already traversed in Captain Wood's letter, but there are one or two points to which I am desirous of calling the special attention of Government.

11. In paragraph 15 of his letter Captain Wood shows that during the past four years an expenditure on an average of only $\frac{1}{4}$ th per cent. per annum on the original cost of the Bangalore Barracks has been required for their repair. This appears to me an important point as bearing on the imputed worthlessness of the buildings.

12. In regard to the leaks in the family quarters, caused, as explained by Captain Wood in paragraph 12 of his letter, by the failure of a pattern of terrace roof introduced by Captain Tulloch, R. E., when Executive Officer of Bangalore,

there can be no doubt but that that pattern roof is practically faulty, and it has in consequence been altogether abandoned.

13. With regard to the system in force in this country for the upholding and maintenance of barracks, as explained in paragraphs 18 and 19 of Captain Wood's letter, it appears to me very desirable that the Government should make such alterations as will make it conform with the system which obtains in England. The ill-effects of divided responsibility are too notorious; and the experience of very many years has convinced the War Department that the repairs of barracks should be wholly and solely in the hands of the Public Works Department. In the English system the Barrack Master has nothing whatever to do with all such repairs as are due to fair “wear and tear.” But the execution is confided to him of those repairs due to damages caused either wilfully or through carelessness by the troops, the cost of the same being recouped by him, under the head of Barrack damages, from the troops implicated. The maintenance and charge of all furniture are also in his hands. The advantages of this system are self-evident, as it appears to me, and I trust therefore that the Government will be pleased to order its adoption.

14. I have only in conclusion to add that I am far from wishing to exculpate this department from any legitimate censure to which they may render themselves liable, and the “scamping” that was allowed to take place in the roof of the front range of the Artillery Barracks, as mentioned in paragraph 11 of Captain Wood's letter, does not certainly appear altogether creditable to the officer who was then in charge of the range. But it should be borne in mind that a great many buildings were being executed at that period, and were being pushed on in hot haste, so that it was not easy for the Executive Engineer to prevent a fraudulent contractor taking advantage of him in the manner in question. The contract system as carried out heretofore in Bangalore cannot, on the whole, be considered a success; but I am in great hopes that, with the modified system that I have arranged with Captain Wood for adoption in the ensuing official year, a much superior class of work will be turned out, and at a less cost than has recently been the case.

No. 344. ORDER THEREON, 14th March 1871, No. 756.

MILITARY WORKS, No. 13.

COMMUNICATED, through the Military Department, to His Excellency the Commander-in-Chief.

2. The Government are of opinion that the highly unfavourable opinion respecting the construction of the Military buildings at Bangalore communicated by the Assistant Quarter Master General and the Major General Commanding Mysore Division was conceived and expressed under circumstances of an exceptional nature. Although cases may be shown of defective materials and construction, the Government see no reason to doubt, up to the present time, that the work executed has been of an average quality, and they believe that the buildings will prove well adapted to their several purposes.

Proceedings of the Madras Government, Public Works Department,
14th March 1871.

3. The Government think it right before ordering any formal inquiry into the quality of these works to have the experience of another wet season. The Executive Engineer will be directed to continue to examine the quality of the mortar employed in contract works with the greatest care.

(True Extract.)

To the Acting Superintending Engineer, 5th Division.
.. Military Department.

N^o 218.

Superintg Engrs Office, 5th Division,
Madras, 14th January 1871.

From, Lieut-Col: R. A. Roberts, R.E.,
Actg Superintg Engrs, 5th Division,
To, Colonel Charles A. Oss, R.E.,
Secretary to Government, P.W.D.

Sir,

In reference to G.O. 25th Nov^r 1870, N^o 2846, calling for a report on the alleged bad quality of the materials and workmanship employed in the construction of the Artillery & Cavalry Barracks on the old Race Course, Bangalore. I have the honor in forwarding herewith the accompanying letter N^o 866 dated 19th December 1871 from Captain Wood R.E., on the subject to report as follows:-

2. Had such a sweeping condemnation of the whole of the Race Course Barracks Buildings, as is contained in the statement put forward by the Asst. Lt. Col. General, Mysore Division, been expressed by a Professional officer, it had anything happened as would have necessitated, or even justified such a step, I should not have hesitated to solicit

the Government to be placed to nominate
a Commission of enquiry to investigate into
the very grave charges brought against
this Department by Major Seane, and
incurred with by the General Commanding
the Division.

3. But what are the facts of the
case? During an exceptionally heavy
burst of the South West Monsoon in
October last, the roofs of several of the
new barrack buildings leaked, but to such
a trifling extent that although even a
small leak will occasion a great discomfort,
the Troops, with the exception of those
in one block only, were not subjected
to positive inconvenience.

4. It will be seen from the
enclosed Register of Rain-fall at
Bangalore that 13 inches of rain fell
during the month of October last. In
fact towards the middle of the month
the rain was so heavy and continuous
and the weather so gusty that there was
not a single house in Bangalore, as I
am informed, that did not leak whilst
several houses of 20 or 30 years standing
fell to the ground.

5. It is well known to all

Enclosure B

professional men of experience in this
country that the preventing of leakage
in tiled roofs is at all times a difficult
task to accomplish. - From these roofs
being subjected to the action of a tropical
sun for three parts of the year, the
materials of which they are composed
become so dry from the continued evaporation
due to this exposure, that they contract
and not only cause large cracks and
fissures to open out, but from the
constant baking which the materials
receive they become friable & honey-combed,
as it were, and they quickly suck in
the first rain that falls on them; and
should the rain be very heavy and
continuous, the roof gets saturated
with moisture and drips, and where
a crack or fissure has opened out
leakage is the result.

6. But to argue from the mere
fact of leakage, and leakage due to
such a cause, that the barracks are
built of materials of the worst possible
description? as stated by Major
Seane, appears to me, to say the least,
not deducible from the premises.

7. I have inspected a number of
the buildings and I have made such
enquiries as appeared to me to be necessary
and thought of consequence. I find much that
might be better, still I do not see why
I should hesitate in assuming the govern-
ment that the unfavorable opinion that
has been passed upon these barracks
by the Military authorities of the State
appears to me, professionally to have been
sound, or scarcely adequate grounds.

8. It is not for me to criticize
these statements, but I would call the
attention of Government to the remarks
made in them by the Public Press. I
aspire for this purpose on select which
appeared as a leader in one of the local
journals. It is as follows:

"The triumphs of the Public Works
Department are so many and so various
are they not chronicled in the news papers
of the day - that it is with a feeling
of profound diffidence we add one
more to the list. - Scarcely any other
part of India, we fancy, can boast
of such a magnificent pile of barracks
as

3
"as grace the Old Nere House at this
"Station, and as magnificence means
"money, it has tacitly been understood
"that the ^{sum} paid for them by the Govt-
"payer was something out of the common.
"We now learn that the Commander-in-
"Chief has brought to the notice of
"Government their disgraceful condition.
"In the Field Battery Barracks the
"leakage was so bad last October that
"the barracks had to be vacated. The
"material of which they are built is,
"as a rule, of the worst description,
"and all the roofs leak more or less
"after a heavy rain. - In the Cavalry
"barracks the same verdict has been
"passed. - The materials used in their
"construction are of the worst possible
"description, and the workmanship
"throughout the entire range of buildings
"is decidedly faulty. This, be it
"remembered, is what the Commander-in-
"Chief deliberately says, and General
"Baker commanding the Division agrees
"with him. - Should we not be proud
"of our P.W.D.? Verily it has attained

"to perfection the divine art of how not to
"do it. And in the meantime, people in
"different parts of the country are under
"to desperation by heavy taxation, and
"there is none to help, none to insist
"on inquiries into such an iniquitous
"expenditure on so called public works
"of utility. It is too bad."

9. Hancey has said that it is
of little moment to the Government
what an obscure writer in an obscure
journal may choose to publish. But
as will be observed in this case, the
writer is at the pains to assume his
readers that it is not his own opinion
that he is expressing but that of some
and deliberately stated by this Secretary
the Commander-in-Chief. I submit
that to officers of this Department who
are personally responsible to the Govern-
ment for the proper execution of Public
works, and who strive to do their duty
honestly and faithfully, it is not encouraging
to be publicly reprimanded, or to have
statements.

10. I purposely refrain from going

over the ground already traversed in
Captain Wood's letter, but there are
one or two points to which I am
desirous of calling the special
attention of Government.

11. In para 5 of his letter Captain
Wood shows that during the past few
years an expenditure on an average of
only $\frac{5}{8}$ per cent ^{per annum} on the original cost of
the Bangalore barracks has been
required for their repair. This appears
to me an important point as bearing
on the imputed worthlessness of the
buildings.

12. In regard to the leaks in the
Sanitary Lines, caused, as explained
by Captain Wood in para 12 of his
letter, by the failure of a pattern of
teraced roof introduced by Captain
Tulloch R.E. a former officer of
Bangalore, there can be no doubt but
that that pattern roof is practically
sound and it has in consequence been
altogether abandoned.

13. With regard to the system in
force in this country for the repair, building
and maintenance of barracks, as

explained in para. 1549 of Captain Wood's
letter it appears to me very desirable
that the Government should make
such alterations as will make it
conform with the system which obtains
in England. - The ill effects of divided
responsibility are too notorious, and the
experience of many many years has convinced
the War Department that the repairs of
Barracks should be wholly and solely in
the hands of the Public Works Department.
In the English system the Public Works
- has nothing whatever to do with the
repairs as are due to fair wear and tear.
But the question is imputed to him of
those repairs due to damages caused
either wilfully or through carelessness by
the troops, the cost of the same being
reimposed by him under the head of
Barrack Damages, from the troops
implicated. - The maintenance and
charge of all furniture are also in his
hands. - The advantages of this system
are self evident, as it appears to me, and
I must therefore think that the Government
will be pleased to order its adoption.

Yours
W. J.

Mr. . . . I have only in conclusion to
add that I am far from wishing to
requisite this Department from any
legitimate concern to which they may
render themselves liable, and the "scamp-
ing" that was allowed to take place
in the roof of the first range of the
Artillery Barracks as mentioned in
para 11 of Captain Wood's letter, does
not certainly appear altogether
creditable to the officer who was then
in charge of the Range. - But it should
be borne in mind that a great many
buildings were being erected at that
period, and were being pushed on in
hot haste, so that it was not easy for
the Scientific Engineer to prevent a
fraudulent barter, taking advantage
of him in the manner in question.
The barter system as carried out
heretofore in Bangalore cannot on that
whole be considered a success, but I am
in great hopes that with the modified
system, that I have arranged with
Captain Wood, for adoption in the
ensuing official year, a much superior

et al.

class of work will be turned out, and
at a less cost than has recently been
the case.—

I have the honor to be
Sir,

Your most obedt. Servant.

Richd. Roberts Lieut. Col. R.E.,
Ag. Supt. Engrs, 5th Div.

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Richd. Roberts Lieut. Col. R.E.,
Ag. Supt. Engrs, 5th Div.

N^o 866

Executive Engineer's Office
Bangalore 19 December 1900

From

The Executive Engineer
Bangalore

To

The Superintending Eng^r
5th Division.

Sir,

With reference to your Memo

Enclosed 2

Sketch

no of

the

cases

N^o 191 dated 30th November 1870 endorsed on

G. O 25th November 1870 N^o 2,846 I have the

honor to state as follows.

2. The remarks of the Assistant
Quarter Master General regarding the
Race Course Barracks are of so astonish-
-ing a nature, that I feel some diffi-
-dence in replying to them.

3. I cannot realize that the Asst.
Quarter Master General felt the full
force of the expressions used - and when

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he says that the materials of which the Barracks are built are "as a rule of the worst possible description" I can only apprehend that what is really implied is that, the materials are in his opinion bad or ought to be much better than they are. Otherwise it is not easy to understand how the buildings can possibly stand at all.

4. Although I am not in any way prepared to admit that the materials are as a rule bad - at the same time, I could wish that they might have been better. The material against which there may be a legitimate ground of complaint, is the mortar, and no doubt in some cases, it is to be feared

that the lime used by contractors is adulterated with the white clay peculiar to the locality.

5. The sole means of guarding against this adulteration is to have the lime slaked on the works. Personally I have done my utmost to enforce this condition, but it is manifest that many facilities exist in the quantity of work done as compared with the Establishment of this Range, for its non-observance by contractors. For remarks bearing generally on this point, I beg to refer you to administration reports for the years 1866/67, 1868/69, 1869/70 together with my letter N^o 820 dated 14

17th October 1868 to the address of the Sup^r
Engineer 5th Division.

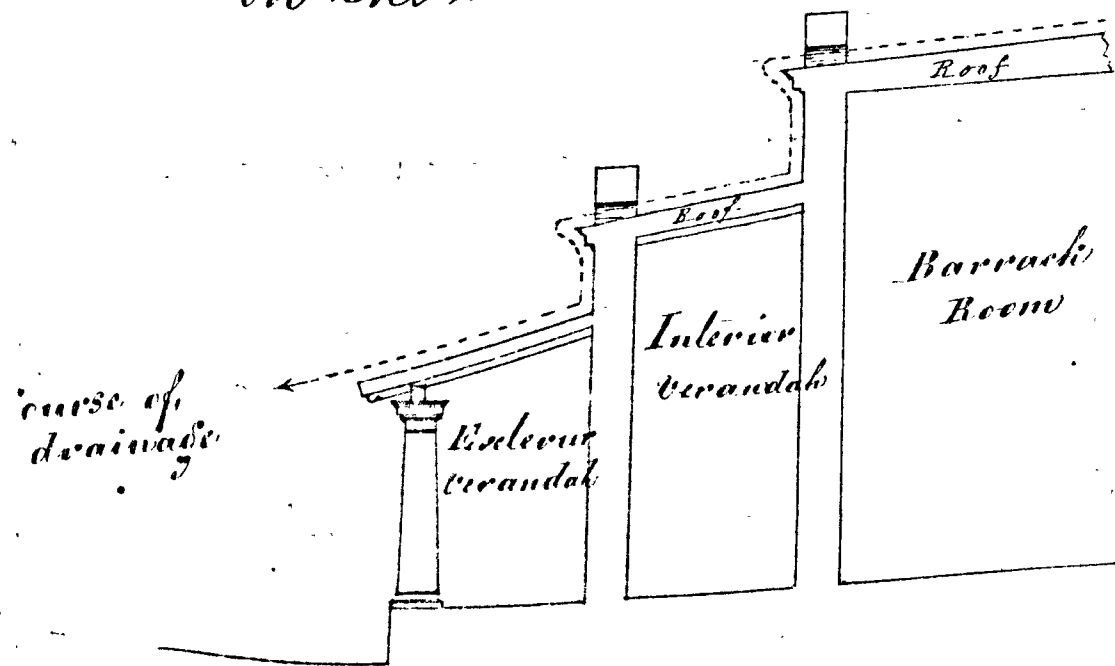
b. The specific causes of the com-
plaints made by the Asst. Quarter Master
General regarding the Race Course
Barracks are I think due

1st To the excessive rain-fall...
during the South West monsoon, and

2nd To the want of funds on...
account of which small repairs
which remained unexecuted deve-
loped into something more serious.

7. The remarks of the Assistant
Quarter Master General seem
to refer in the main to leakage
of roofs. The whole of the roofs com-
plained of are terraced roofs of the
ordinary pattern viz beams support^{ing}

ing joists on which are placed brick
on edge, 3 inches of brick concrete, 3
courses of flat tiles laid diagonally...
across one another and plastered with
two coats of plaster. The drainage is
passed from these roofs, by means of
openings, left in the parapet walls;
through these openings the water passes
down the exterior walls, on to the roof
of the inner verandah, thro' the parapet
wall of the roof of which is again passed by
similar openings, as before, on to the sloping
roof of the exterior verandah, as shown
in the sketch.



8. Now it is manifest that this is scarcely the best way of disposing of the drainage from the roofs. (No suggestion has been made by me for its improvement as the Government have for some time had in view a scheme for collecting the rain fall from the roofs of these buildings). There are also objections to this system of draining the roofs which are not so evident at first sight. For example during the dry months, large quantities of dust are carried on to the roofs by the wind; and kites and other scavenger birds frequenting the Barracks carry up incredible quantities of bones. This dust and these bones clog up the drainage holes of the parapet walls, prevent the rain passing away, and thus soakage is occasioned, and leakage inevitably takes place

at any weak point in the plaster. I may mention that from the roof of ~~two~~ barracks, three cart loads of bones and dirt were recently removed. To prevent this accumulation the Barrack Department should invariably inspect the roof at the monthly inspection of Barracks.

9. Notwithstanding the bad conditions of drainage above described, I cannot however think that the leakage has been excessive (except in three instances I shall hereafter detail) in these barracks.

10. The nine blocks of Barracks occupied by the Cavalry and Artillery on the Race Course cost Government Rspees 34,000 and taking one with another, have been occupied on an average 6 years. On referring to the accounts of this Office, I find up to this

date since January 1867 Rupees 1516 have been spent on repairing cracks and remedying leaks. Of this sum Rs 421 are due to common petty repairs, and Rupees 1095 on the three instances of special leakage I mentioned above. The first and second of these instances is the case of the roof of No: 5 Cavalry Block and those of Nos: 1 and 2 occupied by Artillery. In the roof of these blocks the small binding walls which are usually built over the ends of the joists, resting on the beams, supporting the roof, were for some unknown reason omitted. The joists not being fixed at their extremities naturally sagged and caused cracks over the beams in the direction of their length when the roof took its ultimate true bearing. Rupees 250 were spent in remedying

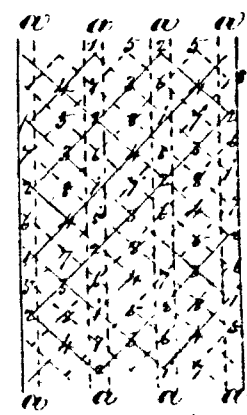
remedying this in the Cavalry Block, and Rupees 290 in the Artillery Blocks. You accompanied me round the Cavalry barrack lately, and you personally enquired from the men as to the amount of leakage, which happened this year, and you learnt that there was scarcely ground for complaint in this respect. The roof no doubt is not so perfect a one as it would have been, had the binding walls been built, as they ought to have been, in the first instance.

11. The third instance is the front range of barracks occupied by the Artillery on the Race Course. It leaked excessively during the exceptionally

heavy rain this year, and the men were necessarily moved out of it. I caused the roof to be examined, and I find that in this instance one course out of the three courses of flat tiles, which should compose the roof was wanting. As the roof was ordered to be made water-tight on emergency, a course of flat tiles has been added, and the whole replastered with two coats at an expense of Rupees 585.

12. In my opinion a reason for some of the Serjeants Quarters of the Cavalry leaking is the following. A late Ex. Engineer at this station designed a pattern of terraced roof to be constructed as follows. Over the joists he placed

two courses of square flat tiles supported by their corners on the joists thus.



a, a, a, a are joists
1 2 3 4 are first layer
5 6 7 8 are second layer
of tiles

13. Over these two courses of tiles, two other courses of flat (small) tiles were laid diagonally, and the whole plastered with two coats chunam.

Experience has shewn that these tiles break at the corners where they rest on the joists, and consequently a displacement of the terrace must take place, and leakage will probably ensue.

14. During the past four years from 1st January 1867, the grant for repairs at this station has aggregated to Rupees 141,300. But out of this sum

15. Of the balance of Rupees 111,300 more than Rs 16,500 have been devoted to House-rent, and Rs 27,250 to road repairs, leaving about Rs 67,500 as absolutely spent in repairs proper to the Military buildings at this station the value of which are at least

16. I beg to subjoin a memo showing the amount spent on repairs from 1st January 1864 to 30th November/70 as well as a sketch showing the blocks of barracks on the Race Course.

17. In conclusion, as it appears that the Asst. Secy. of this Division considers that this Department is solely responsible for leaks in buildings, I think it but right to call attention to the relations existing between the Bk Dept. and that of the Dept. Public Works.

18. By para 16 of G.O. dated 21 Decr 1866 *Fort St George*
N^o 477 of 1866, "All petty repairs, that *Gazette*
is, those costing Rupees 50 or under, to *Decr 21, 1866*
Military Buildings, will be carried *Page 1010*
out by the Barrack Master on the *1011*
requisitions of Commanding Officers of *1012*
Regiments, or on the necessity for any
such repairs being apparent to him
on his periodical inspections, or at
other times. The requisition will be sent
by the Barrack Master to the Executive
Engineer, and if approved will be
~~performed~~ by the Executive Engineer's Coun-
cil, and then for execution. The Barrack
Master will ^{then} make his own arrange-
ments independently of the Executive
Engineer for the labor and materials
required for any work approved for

~~execution by him~~, and will be responsi-
ble both for the execution of the work
and its costs. The necessary funds for
such repairs will be supplied to him
by the Executive Engineer."

Fort St George
Gazette
11 Sept 1868
Page 458.

19. The red ink alterations and emen-
dations were made by G.O. 11 September
1868 N^o 357, and it requires but the most
superficial reading of them to gather
that their intention was to take away
from the Executive Engineer any
power of interfering professionally
with the repairs executed by the
Barrack Master.

20. The alterations referred to were,
I believe, made in consequence of a
reference made by the Officer lately
Commanding the Mysore Division,
which reference was caused by my

assuming that the original reading of the para of the Barrack rules quoted justified my professionally supervising the work executed by the Barrack Master, a view in which Major Genl. Haines did not concur.

21. It results then that the Barrack Master is responsible for primary repairs, and it can be easily understood how in many cases (as I have above mentioned) leaks of the pettiest description may develop into serious matters, how accumulations of dust and bones on the top of the barracks cause leakage and soakage which timely attention would prevent, and how finally this Department is charged with actual inefficiency which might more properly be traced

to passive inefficiency elsewhere. Numberless instances might be adduced of this - for example a few tiles are displaced from a roof by a kite. Heavy rain supervenes, the building is flooded, and a loud outcry arises. The building may possibly be an outhouse but it may also be a hospital or a store room containing valuable medicines or saddlery.

22. A very few rupees expended at the proper time would have sufficed to prevent this small leakage - when it becomes serious and excessive the Public Works is called in and the work has to be done emergently in the worst of weather.

I have the honor to be
Sir,
Your Most Obedt. Servant
H. M. R. E. Captain R. E.
Executive Engineer Bangalore

20 Re. 11

Total Pipers 64,500. " "

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Executive Engr Bangalore

From
The Committee
January 1871

To the City Super
54 Essex
19th December 1870
Dear Mr. Mayor,
We beg to
acknowledge the info
received from you
re the materials and
workmen employed
in the repair
of the City Super
and to inform you
that the same have
been forwarded to
the City Super
for their consideration.

May 56.

Public Works Department

Proceedings of the Board of Engineers

and the following

George S. Engineer

of the 1st Division

(H. E. of 218 of 14 Jan'y/71)

Communicated

through the Military

Department to His

Excellency the Com.

Commander in Chief

The Government

was of opinion that the

highly unfavorable opinion

respecting the construction

of the Military Buildings

at Bangalore committed

to the E. the

Quartermaster General

and the Major General

Commanding

not having seen

the billings

hesitate to pass

such a condemnation

to the E. the

Commissioner

and the Major General

the Division in this

1871/72
March 11/72

Commanding Mysore
 Division was (partly) omitted
 conceived and expressed Order in the
 under circumstances of in its 2^d part
 an exceptional nature which is that
 Although cases may be the same be omitted
 shown of defective materials
 and construction the
 Government see no reason
 to doubt up to the present
 time that the work
 executed has been at
 least of an average quality
 and they believe that the
 buildings will prove well
 adapted to their several
 purposes.
 The Government
 think it right before
 ordering any formal enquiry
 into the quality of these works
 to have the experience
 of

of another wet season.
 The Executive Engineer
 will be directed to
 continue to examine
 the quality of the mortar
 employed in contract
 works with the greatest
 care.

The Supr Engineer S. S. S.
 Military Department
 Resd 16/3/71

Received from the
 Engineer's Office
 at Bangalore
 on 30th Jan 1871
 the following
 order in reply
 to the letter of the
 24th Jan 1871

30 Jan 1871
 24 Feb

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From the Acting Supr Engineer
 of the 5th Division, No. 218, dated 14th
 January 1871.

I would make the
 following order.

Circulated for

Communicated to H.E. Orders.

The Commander in Chief.

The Government are of

the opinion that the

highly important

matter respecting the

construction of the

Military Buildings

at Bangalore has

been lately concerned

in a number of

circumstances of an

exceptional nature.

Although cases have

W. H. Col. P. E.
 Secretary to Govt.

P. W. D.

communicated to the
 Engineer in Chief
 General Manager
 General Manager
 Mysore Division

to show of defective
materials & construction
the Govt see no reason
to doubt what the
present time that
the work executed has
been at least of an
average quality as
that the buildings
will give fine well
adapted to their
several purposes.

The Govt think it safe
before ordering any for
erigging into the
quality of this building
works to have the
experience of another
set seasons. The
Execution Engineer can
be directed to continue
to examine the
quality of the Master
employed in contract

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Govt of 1871: Madras.

PUBLIC WORKS.

The Superintending Engineer
& the Division

Date

Recd.

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G. O. 14th March 1895.

Nos. 243-244

Artilley Cavalry Barracks
on the Race Course at Bangalore.
- Many orders on the
letter from the Superintending
Engineer on the alleged
bad quality of materials &
workmanship employed
in constructing the Artilley
Cavalry Barracks at
Bangalore.

623 24/7/91 24/7/91 24/7/91 24/7/91
24/7/91 24/7/91 24/7/91 24/7/91