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 (3) Initials of the Referencer Car

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P.W.D. DEPARTMENT

G.O. No.	3404 w	Press.
B.P. No.		Mis.
Dated. 26. 8. 1878		197.

Not to be folded or roughly handled

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GOVERNMENT OF MADRAS
PUBLIC WORKS DEPARTMENT.

26th August 1878, No 3,404 W.

Buildings and Roads.
Military Works.

Read the following papers —

No 299 From Major J L L MORANT, R E, District Engineer, Nilgiri, to the Chief Engineer, Public Works Department, dated Ootacamund, 6th November 1877, No 449.

With reference to Public Works Department G O, No. 824 W, dated the 1st of October last, I have the honor to submit a plan and estimate for disposing of the roof drainage of the bachelor blocks of the Wellington Barracks so as to prevent erosion at the base of the buildings.

2 These blocks are six in number and form a rectangular enclosure. They are built on a flattened spur of land and the ground slopes at about an angle of 45° away from the buildings on three out of the four sides of the rectangular plateau. The roofs of each block are in two parts, one a centre tiled roof, the other a surrounding terraced roof. The whole of the former drains on to the latter, and from the terraced roof the water is led by pipes down to six inches from the ground. Here it discharges itself and, in spite of cutstone slabs on which the water falls, erodes the earth at the foundations of the buildings. In front of the four centre of the six blocks which face each other by twos is an open cutstone drain in two lines running parallel to the blocks and at a distance of 21 feet from them. The roof water on that side after issuing from the roof pipes eventually finds its way into these drains, but meanwhile cuts up the intervening space of ground. In front of the remaining two blocks, which face each other and form the shorter sides of the rectangular enclosure, are four large underground storm water culverts into which the roof water on that side of the blocks tortuously finds its way by means of eight wells covered with bell traps. During its passage to these wells the water cuts up the ground at the base of the buildings. On the rear side of the blocks on outer side of the rectangle the roof water streams down the pipes and spreads over the adjoining parts of the plateau eventually finding its way after a long circuit into the other bell trapped wells. In the south-west corner, where the made edge of the plateau is within a few feet of the corner of the block, and where the side of the plateau is very steep, the feet of the roof pipes rest on small shallow masonry cisterns which are longitudinally connected by large earthenware pipes which convey the roof water into drains running quite clear of the toe of the plateau slope. This arrangement I carried out a few years ago, and it answers well.

3 The proposed remedies for the above evils are as follow. —

To each of the feet of the existing roof pipes in front of the four central blocks it is proposed to attach a small length of 5 inch cast iron piping with a quadrant bend to bury this pipe six inches beneath the ground, and to lead it directly into the existing open cutstone drain by a cut in its side, the intervening spaces between the blocks and the stone drain being repaved with tamped gravel. The fronts of the

remaining two blocks (No 5 and the staff block) will be similarly treated (except in a small part near the centre of each), but the proposed iron pipes will lead the water direct into the existing underground culverts. Small masonry cisterns will be built at the feet of all the pipes on the back or eastern side of the staff block. These cisterns will dip down into a line of 12 inch earthenware pipes laid at a least depth of 3 feet below the ground, and with a fall of 1 in 300, and these pipes will carry off the water clear of the plateau, half passing northwards and half passing southwards, as indicated by arrows on the plan. Very small brick drains now exist here which carry off the spill of the washing water, which is conducted into them by one inch leaden pipes, but they are far too small to receive the roof drainage. The backs of the remaining five blocks will be similarly treated, only their roof drainage will be divided into three parts, the centre part passing into the large existing wash-house drains, and the two outer parts into the existing storm water culverts before mentioned. The division is indicated by arrows on the plan. Thus the whole of the water of all the roofs will be passed directly under ground into the existing drains, and there can be no further erosion of the soil at the base of the blocks, the damage already done being repaired.

4 I submit this letter and its accompaniments through the Commandant at Wellington who has kindly signed the plan in token of his approval of the proposed remedies

No. 290-A From the same Officer, dated Ootacamund, 14th June 1878, No 168

With reference to your memorandum, No 3,942, of 16th November 1877, I have the honor to submit a revised estimate with plan, amounting to Rupees 7,740, for disposing of the roof drainage of the bachelors' blocks of the Wellington Barracks for sanction and provision of funds

2. I have allowed earthenware pipes (with iron bends at foot of roof pipes) instead of iron pipes in front and at ends of Nos 1, 2, 3, and 4 blocks, and have omitted the drainage in rear of the Staff block which reduces the original estimate of Rupees 10,330 to Rupees 7,740

No 290-B From Major J. L. L. MORANT, R.E., District Engineer, Nilgiri, to the Deputy Chief Engineer, Public Works Department, dated Ootacamund, 5th July 1878, No. 173

I HAVE the honor to forward herewith the original letter, No 449, of 1877, of this office relating to the disposal of the roof drainage of the bachelors' blocks of the Wellington Barracks taken by my clerk from the Secretariat's Office at Stonehouse on the 28th May last

No 290-C Note by the Chief Engineer, Public Works Department.

THE revised estimate of Rupees 7,740, forwarded with the second of the above letters, is for a system of earthenware piping for carrying away the roof drainage of the bachelor blocks of the Wellington Barracks to prevent erosion at the base of the buildings

2 The Chief Engineer having lately seen the buildings is of opinion that there is no urgent necessity for the work, except for one block, viz, No 5. This block comes very near the edge of the plateau, and the proposed system has been already carried out at one end of the block. It might now be carried out at the other end also of this block.

OOTACAMUND,
22nd August 1878

(Signed) E. A. FOORD, Colonel, R.E.,
Chief Engineer, P.W.D.

No. 300 ORDER THEREON, 26th August 1878, No 3,404 W.

HIS GRACE the Governor in Council approves of the Chief Engineer's recommendation—which the District Engineer will estimate for

(True Extract)

(Signed) F. A. FOORD, Colonel, R.E.,
Secretary to Govt, P.W.D.

(True Copy)

Major, R.E.,
Under Secy to Govt, P.W.D.

To the District Engineer Nilgiri, with plans and estimates
„ Military Department

Ltd G Howarth.
Spare Copies



1871

Vol. of 1132

PUBLIC WORKS.

1871

1871

1871

District Engineer's Office,
Patacamund 6th November 1871.
246/3

No 449

From

The District Engineer
Nilgiris

To

The Chief Engineer,
P. W. D.,
Madras

Sir

With reference to Public
Works Department G.O. No 824 W dated
the 1st of October last I have the honor
to submit a Plan and Estimate for dis-
-posing of the roof drainage of the Ba-
-chelon Block of the Wellington Barracks,
so as to prevent erosion at the base of
the buildings.

2. These Blocks are six in number
and form a rectangular enclosure. They
are built on a flattened spur of land,
and the ground slopes at about an angle
of 45° away from the buildings on
three out of the four sides of the rec-
-tangular platform. The roofs of each
block are in two parts, one a central
tiled roof, the other a surrounding ter-
-raced roof. The whole of the former

drains on to the latter; and from the terrace roof the water is led by pipes down to six inches from the ground. Here it discharges itself and, in spite of cutstone slabs on which the water falls, erodes the earth at the foundations of the buildings. In front of the four Center of the six blocks which face each other by two is an open cut stone drain in two directions - viz parallel to the blocks and at a distance of 21 feet from them. The roof water on that side after issuing from the roof pipes eventually finds its way into these drains but runs - while into up the intervening space of ground. In front of the remaining two blocks, which face each other and form the shorter sides of the rectangle - i.e. enclosures, are 4 large underground stone water culverts into which the roof water on that side of the blocks eventually finds its way by means of 8 wells covered with bell traps. During its passage to these wells the water runs up the ground at the base of the buildings. On the rear side of the blocks on the side of the

rectangle the roof water stagnates on the pipes and spreads over the adjoining parts of the platform eventually finding its way after a long circuit into the other bell-trapped wells. In the S. W. corner where the inside edge of the platform is within a few feet of the corner of the block and where the side of the platform is very steep the feet of the roof pipes rest on small shallow masonry cisterns which are longitudinally connected by large earthenware pipes which convey the roof water into drains running quite clear of the top of the platform slope. This arrangement I carried out a few years ago and it answers well.

3. The proposed remedies for the above evils are as follows:—

To each of the feet of the existing roof pipes in front of the 4 central blocks it is proposed to attach a small length of 5 inch cast iron piping with a quadrantale bend, to bury this pipe six inches beneath

the ground, and to lead it directly
into the existing open cut stone drain
by, or cut in its side, the intervening
spaces between the blocks and the
stone drain being repaired with
tamped gravel. The fronts of the
remaining two blocks (No. 5 and
the staff block) will be similarly
treated (except in a small part
near the center of each), but the
proposed iron pipes will lead the
water direct into the existing under-
ground culverts. Small masonry
cisterns will be built at the foot of
all the pipes on the back or Eastern
side of the staff block. These cisterns
will dip down into a line of
12 inch ~~galvanized~~ ironware pipes laid
at a least depth of 3 feet below
the ground and with a fall of
1 in 300, and these pipes will carry
off the water clear of the platform,
half passing Northwards and half
passing Southwards as indicated
by arrows on the plan. Very small
brick drains now exist ~~in the platform~~

2

carry off the spill of the standing
water, which is conducted into them
by one inch leaden pipes, but they
are far too small to receive the roof
drainage. The backs of the remaining
5 blocks will be similarly treated,
only their roof drainage will be
divided into 3 parts; the center part
passing into the large existing wash
house drains, and the two outer
parts into the existing storm water
culverts before mentioned. The divisions
so indicated by arrows on the Plan.
Thus the whole of the water of all
the roofs will be passed directly
underground into the existing
drains, and there can be no further
erosion of the soil at the base of
the blocks, the damage already
done being repaired.

11. I submit this letter and its
accompaniments through the Com-
mandant at Wellington who has

Widely signed & have been taken of
his approval of the proposed amendments.

I have the honor to be
Sir

Your most obedt servant

John Morant Major R.E.
District Engineer.

3404
6

5. Q. No 824 W of 10. 5. 77

Roads and Buildings

From

The District Engineer
Nilgiris

To

The Chief Engineer,
P. W. D.,
Madras.

No 449

Dated 6th November 1877

Enclosures 2⁺ + Ret 16th
9 1/2

Bachelor Blocks of the
Wellington Barracks —
Submits a Plan and
Estimate for disposing
of the roof drainage
of the — so as to prevent
erosion at the base of
the buildings — as called
for in P. W. D. S. O. No. 1077

No 173

From

District Engineer's Office

Ootacamund 5th July 1878

31/7

The District Engineer

Nilgiris

The Dy. Chief Engineer

J. W. D.

Ootacamund.

Sir

I have the honor to forward
herewith the original letter No 449
of 1877 of this Office relating to
the disposal of the roof drainage
of the Bachelor's Blocks of the
Wellington Barracks taken by my
order from the Secretariat Office
at Coimbatore on the 28th May
last.

I have the honor to be

Sir

your most obedient servant

J. W. D.

District Engineer

District Engineer

Roads and Buildings
From

The District Engineer
Calcutta

To

The Dy Chief Engineer
P. W. D.
Calcutta

No 173

Dated 3rd July 1878

Is of enclosed ones.

Letter No 449 of 1877
of this Office - return

the - taken from the

Secretariat Office
at Storm House on
the 28th May last.

No 168

From

District Engineer's Office
Calcutta 11th June 1878

3404
E

The District Engineer
Calcutta

To

The Chief Engineer
P. W. Department
Madras

Sir

With reference to your Memorandum
No 3942 of 11th November 1877, I have
the honor to submit a Revised Estimate
with Plan
amounting to Rupees 7,740 --- for disposal
of the roof drainage of the Bachelor's Blocks
of the Wellington Barracks for sanction and
provision of funds.

2. I have allowed Earthenware Pipes (with
iron bands at foot of roof pipes) instead of
iron pipes in front and at ends of Nos 1, 2,
3 and 4 blocks and have omitted the
drainage in rear of the Staff Block which
reduces the Original Estimate of Rupees
10,330 --- to Rupees 7,740 ---.

I have the honor to be
Sir

Your most Obedient Servant
John Morant, Majr R. E.
District Engineer

No 824 of 1. 6. 77
 CE 2756. 25. 6. 77
 - 3942 of 16. 11. 77

Roads and Buildings

From
 The District Engineer
 & Nilgiris

To
 The Chief Engineer
 I. W. D.
 Madras

No 168
 Dated 14th June 1878
 No. of enclosures. 2
 Roof drainage of the
 Bachelor's Blocks of the
 Wellington Barracks -
 - Enclosed is proposed
 estimate with plan
 for disposing of the
 for sanction and for
 - vision of funds.

To Aoty 20-5-78

PUBLIC WORKS DEPARTMENT.

Letter from the District Engineer Nilgiris
 No 449 of 6th November 1877
 - do - do - 12th June 1878.

FOR ORDERS.

The revised estimate
 of Rs 7,740 forwarded with
 the second of the above letters
 is for a system of earthenware
 piping for carrying away
 the roof drainage of the
 Bachelor's blocks of the
 Wellington Barracks to
 prevent erosion at the base
 of the buildings.

The Chief Engineer
 having lately seen the
 buildings is of opinion that
 there is an urgent necessity
 for the work, except for one
 block, viz. the

[Faint handwritten notes and signatures in the bottom left corner of the right page.]

comes very near the edge
 of the tank and the
 proposed station has been
 already carried out to the
 end of the tank. It is to
 have been worked at the
 other end also of the
 tank

FOR ORDERS.

2nd 10.4.78.
 C.E. [unclear] [unclear] [unclear]

1844
 Chief Works.
 Public Works Department

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 26 Aug 1878
 Read the following

From
 The Dist. Eng^r Nilgiris (H.C. No 449 d/b^d Nov 1877)
 " do do do (" " 168 " 14th June 1878
 " do do do (" " 173 " 5th July ")
 Note by the Chief Eng^r P.W.D. (" " 22nd Aug ")

His Grace the Governor
 in Council approves of the
 Chief Engineer's recommenda-
 tion - which the District
 Engineer will estimate
 for.

907
 24/8

H.C. Nilgiris with [unclear] in 5 d/b^d 26/8.
 Military Dept^t [unclear] 5-7-78.

[Signature]

3404
11

11611 9676 6983
Gold. of (1878) Madras.

PUBLIC WORKS

To

By

For

At

At

G O. 26 Aug 1878, No 3404 W

No. 27. 1878.

Bachelor Blocks of the
Wellington Barracks

Approving of the Chief
Engineers' recommendations
with reference to the roof
drainage of No 5 of the
& estimate called for.

W. W. W. W.