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(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No.	<i>3453</i>	Press	<i>Original</i>
B.P. No.		Mis	
Dated	<i>6. 12.</i>	195	<i>1875</i>

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
6th December 1875.*

Read the following papers :—

No. 76.	From	Supg. Engineer, Chingleput, dated	8th July 1875, No. 1,338.
No. 77.	From	"	" 18th Aug. " " 1,948.
No. 78.	From	"	" 27th Sept. " " 2,613.
No. 79.	From	"	" 18th Oct. " " 3,008.

No. 80. ORDER THEREON, 6th December 1875, No. 3,453.

ACCOUNT, No. 2-A.

THE General Superintendent of the Public Works Workshops will be charged under the District Engineer, Presidency, with the duty of carrying out the alterations to the pumping machinery at Guindy, which are necessary for its efficient and economical working. He will also look after the maintenance of the machinery and provide and pay for the labor necessary to work it. The Presidency District Engineer will obtain from Mr. Grainger a report and estimate of the alterations he may propose.

2. The Superintending Engineer, Chingleput, will be relieved of the work in question, and will direct the Executive Engineer, Mount Range, to hand over the machinery, stores, and buildings connected therewith to the Superintendent as soon as practicable.

(True Extract.)

Major-General, R.E.,
Secretary to Government.

To the Superintending Engineer, Chingleput.
" District Engineer, Presidency.
" Controller of Public Works Accounts.

Exd. E. C. Shunker.
Spare Copies

NO. 1338

CHINGLEPUT SUPERINTENDING ENGINEER'S OFFICE.

CHINDY,

8th July

1875

From

THE SUPERINTENDING ENGINEER,

Chingleput

To

The Secretary to Government
Department Public Works.

Sir,

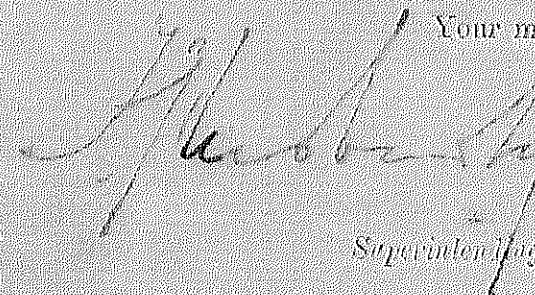
Referring to G.O. No. 1088 dated 10th June, I have the honor to append an extract from a letter from the Private Secretary to His Excellency the Governor No. 337 dated 30th idem, and request the orders of Government on the subject.

"Para 4. Having in view the possibility of the water works getting out of order from time to time, the arrangements for draining the water out of the tank near the Octagon Bungalow should be completed according to the sanctioned estimate."

I have the honor to be,

Sir,

Your most obedient Servant.



Colonel, R.E.

Superintending Engineer, Chingleput.

NO. 1948

SUPERINTENDING ENGINEER'S OFFICE

GUINDY, 18 August 1875

Review

THE SUPERINTENDING ENGINEER.

Chingleput District

34

THE Secretary of Government
Department Public Works.

Sir

Sir,

Referring to my No 1338 of 8th ultimo, I have the honor to suggest that if funds cannot be made available for the well in the pond in the garden of Quaidy Government House, costing Rs 830, the grant made in budget to meet the estimate sanctioned in G.O. No 3545 dated 16th December 1874 might be transferred in aid.

2. This latter estimate amounting to Rs 400 is for a double action pump in the Sib. de. Camp's lungalow which is not so important as the well in the garden.

^{w.} I have the honor to be

Sir
Your most obedient servant

Colonel R. S.

Chas Eugene Chapple

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**THE
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OF
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ENCLOSURE

1917

McCormick & Co. 216

[Faint handwritten text, possibly "G. W. ..."]

Mr. C. J. ...

continued on the

1861-1862

卷之四

From

Ling

2. The Superintendent of Public Works Workshops will prepare a pump better suited to the 10 Horse Power engine now in the building near the Adyar to raise 14,400 gallons 80 ft per hour which is equivalent to keeping the 5" pipe full.

4

4. Major Vihart calls it 8 Horse
Power and reports that it raises
8,000 gallons 27.8 per hour.

5. The size of the Guinidy Engine
is very confined and large expen-
-ture will be required to alter
the arrangements. The bullocks will
probably cost more than the engine.

I have &c

/signed/ J. J. Moleirly Coll R.E.

Supy Engrs Chingleput

No 2613

Submitted to the Chief Engineer

D. P. M. with reference to his Memo No.
545 dated 20th Sept. 1875.

J. J. Moleirly Coll R.E.

Supy Engr Chingleput

Chngt. Supy Engrs Office

Guinidy 27th Sept 1875

Desd 28th — " —

59

really

G.O. 5 July 175 No 147 6188
" 10 June 175 No 225 6221

S. W. 1875 Sept.
No. 6228

From
The Chief Engineer
Chingleput

To
The Chief Engineer
D.P.P.

Dated 27th
Sept 1875
Recd 25th Sept 1875
No. 2613

Forwards Copy of Copy
Aug 15 Letter No 1875 dated 10th
August 1875. Regarding the
expense for a letter to the
the machine is awarded in
No. 1875 dated 10th June 1875 for
the water for the engine and
also the what amount will be
required for the same. The
fact that the expense of running
the water.

No 78

29-2-75
29-2-75

G.O. No 3453. 6-12-75

Mount Range Office
12th October 1875
Chingleput

Abstract Estimate No 2374/1875-76
District Chingleput Taluk Chingleput
Work. Maintenance Estimate for Quindry Engine for 1875-1876

Description	Rate	Per	Amount	Total
Engine Driver for 12 months	30	Month	360	✓
Stokers for do	7	do	168	✓
Fuel for 12 months 8 Tons per month @ 9 Rs	72	do	864	✓
Oil for lubrication do 4 Vins per month @ 10 Rs per mas	2	12	33	✓
Blowing V. for Engine	5	do	60	✓
Renewing & fixing an Indicator as per P.W.S. Bill			41	13 2
Unrecovered			3	2 10
Total Estimate			Rs per	1530

Approved by Capt. R. C.
Supd. Chingleput.
Aldrich Captain R. C.
Executive Engineer

① 225 1000

Chief Med. Surg. Genl's Office,
Quincy, 18 October 1878.

From

THE SUP. ENGINEER,

To, *Chief Engineer*
The Secretary to Government,
Public Works Department.

Enclosures,
2 - 11/11/11

1993

Feb. I have the honor to submit for the sanction of Government a maintenance estimate amounting to Rspees 1530 ² for working the Grindly engine and pump during the current year.

I have the honor to be,

Sir,

Your most obedient Servant,

Yours most
affectionately
Sup

Colonel, R. E.,

Supy. Engineer Chinghsun.

Monthly Maintenance & estimate
for quantity compare for 10/15/14.

Howard Stamp
Michael to Samuel 89237041872/176

Geo. & Co. Inc. 75
 1000 11-79
 Amount of Sales 1530.00

5/27/99

1875 Sept. 18

56/3992/15

1530

P. W. 1875 Sept.
No 6664

THE SUPER ENGINEER,
CHINGLEPUT.

Secretary to Gov.
P. W. Dept.

18
19 Oct 15

3008

15

Submits for the
sanction of Govern-
ment a maintenance
estimate amounting to
Rs 1530 for working
the Grindly Engine
and pump during the
current year.
G.O. No 3453. 6.12.75

1875

1875

No 601

Memo:

Referring to his letter No 2490
dated 18th Sept 75, the Super Engineer
Chingleput is requested to re-
-port the amount of costs
in connection with the suit of
Rungachary versus Captain
A. Smith R.E. and others.

127 G. D. Daulton & Co. Secy.
Chief Engineer. P.W.D.

Colacamaund
1st Oct 75

To The Super Engineer
Chingleput.

report how much water will
really

To, The Chief Engineer
and Secretary to Govt. P. W. D.

The letter of the District
(Superintending) Engineer leaves the
question of the Gundy Water Supply
very much where it was when the
order of Govt. of the 10th June
1875. No. 135 was passed; for
the considerations on which
the action to be taken rest, have
not been touched on. It has
to be ascertained whether an
annual outlay of Rs 2353 re-
presenting at 4 per cent a
capital of Rs 58825 is required
to provide a supply of water
for the household and gardens
at Gundy Park.

2. It is not stated in
the Superintending Engineer's
report how much water will
really

1. really be required for house-
2. hold purposes and for the
3. garden daily; what is the capacity
4. collectively and separately
5. of the tanks at the top of
6. the house or in the garden
7. of any kind in which water
8. might be stored for daily
9. use; what is the length of
10. pipe through which the water
has to be pumped; and
11. what are the working
particulars of the Engine
now in use. It is to be
observed however that in
Memo No. 541 of the late
Engineer, Colonel Moberly
was requested to ascertain
accurately what was the
maximum supply of water
required

* Apr 2nd June 1875

required daily for all
purposes as well as the
distance and height
at which it was to be
delivered and to base
his arrangements and
data on this estimate.
3. The possibility of
working the Engine more
economically as regards
absolute consumption
of fuel by diminishing
the area of fire grate and
by careful packing of
boiler and steam pipe
while maintaining a lower
than the regular steam
pressure and of driving
at a lower velocity so as
to save the pumps - which
itself

itself, but the nature of the boiler, the pressure of steam ordinarily used, the length of stroke of the piston and the velocity or number of revolutions per minute must be known and taken into account.

4. It is stated that a six HP. Engine would be quite insufficient but it is not shown on what ground this assertion is made. If the water has to be raised 80 feet as stated and it is assumed that the length of pipe is 300 yards, the total height may be taken at 83 feet for the head due



to friction in 300 yards of 5 inch pipe velocity 112 feet per minute is 3 feet. Then 25 per cent is a full allowance to make for Horse power lost by the friction of Engines and Pumps.

The HP available in a 6 HP Engine would therefore be $4\frac{1}{2}$ HP and this in 8 working hours ought to raise 152,000 gallons 83 feet high.

Considering that 36,000 gallons per diem is the allowance for the whole of the troops in Bangalore it is not easy to understand

why

why a 6 H.P. Engine is
considered insufficient
for household and garden
supply at Gwindy. But
in fact the useful effect
~~or~~ the work to be done at
Gwindy and that done
at the Alvor wells, mea-
sured by the quantity of
water pumped is utterly
insignificant when com-
pared with the nominal
Horse Power of the Engines
used. At the latter place
it represents an effect
equivalent to that due
to one twenty fifth of one
Horse Power and to the
consumption of a corres-
pondingly small quantity
of

of fuel and when it
is considered that all
the remaining outlay
for coal is rendered
necessary by the friction
of the Engine and pumps
by leakage by bad boilers
&c. it will be understood
how necessary it is to go
into these questions.

5. The ordinary con-
sumption of coal for high
pressure non condensing
Engines does not usually
exceed 12 to 20 lbs of coal
per indicated H.P. per
hour. and judging by
the actual work to be
done the indicated Horse
power of the Gwindy Engine
when

when in use ought not
to exceed $2\frac{1}{2}$ Horse Power.

6. As the water is driven
upwards and there is a
valve to prevent its return
it is not understood why
as stated (para 2) a
certain rate of supply from
the pumps is necessary to
keep the pipe full.

The substitution of animal
power for steam may or
may not be more expensive
but it is a matter for
demonstration and the
mechanical contrivances
available - the quantity
of water required and
the cost of keep and
wages

152
wages of bullocks require
to be considered in relation
to the cost of fuel &c. for
the Engine. It is not
clear that these points
have been investigated.

7. All the matters
above referred to and
others equally pertinent
can only be profitably
discussed with a full
knowledge of the actual
features of the project
and the machinery now
set up and the officers
on the spot are alone ac-
quainted with them.
The report submitted by
the

19
was the Superintending Engineer
to does not deal with the
P. questions involved

up 8. Since writing the
above a revised Estimate
it has been forwarded by
Colonel Moberly for
working the Engines amounts
to Rs 1530 per annum.
The outlay for coal being
Rs 864. Economical con-
siderations are still not
touched upon.

Aug. 1860.

Major R.R.

Under Secy to Govt.

X^{attys}

Public Works Dept.

Public Works Dept.
Proceedings P.W.D. No. 88 of 10th June 1895.
Letter from the Supt. Engrs. Chinglaput
No. 1338 of 5th July 1895

Memo. to do — of 20th July 1895 No. 280
Letter from do — of 18th Aug 1895. 1948
Memo to do — of 31st Aug 1895. 453

*For orders, if any be
necessary —*

*None reported hereby
informal — W
3/9*

*Submitted for the
orders of the Honble
the Governor.*

C. M. A. K. S. M. J. G. M. S.

*Secretary to Govt.
P.W.D.*

No 3653

1129

Public Works Department

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 6th May 75.

Read the following :-

From the Superintendent Engineer, Bangalore (No. 1538 of 8th July 1875)

Do	Do	Do	1948 " 18th Oct "
"	"	"	" 2618 " 27th Sept "
"	"	"	" 2008 " 18th Oct "

The General Superintendent of the Public Works Works - shops will be charged under the District Engineer Presidency with the duty of carrying out the alterations to the Pumping Machinery at Quindry, which are necessary for its efficient and economical

economical working.
We will also look
after the maintenance
of the Machinery and
provide and pay
for the labour ne-
cessary to work it.

The Presidency District
Engineer will obtain
from Mr. Gainger
a report and estimate
of the alterations he
may propose.

2. The Superintending
Engineer Chingleput
will be relieved of the
work in question
and will direct the
Executive Engineer
Mount

Mount Range to
hand over the Ma-
chinery, Stores and
Buildings connected
therewith to the
Resident as soon
as practicable.

Recd.
J. M. S.
11-12-75

Sd/- J. M. S.
Dist. Pres.
Chingleput - 11-12-75

X^o att^o

14- March /73 No 479-480
 16- Decr /74 - 342-343.
 10- June /75 - 88 hms: aigl.
 with Chas 6913.6 72.57-
 with aigl hms 886 912/1175
 10- June /75 No 225 to 231 with Chas 689
 1163-1107-1819 with hms: 1200
 923/3/75-2058-995 with hms 2719/4/75
 memo: No 166 9/4/75
 .. 165 .. 9/4/75.
 25- July /75 No 147-188.
 memo: 280 923 July /75
 455-30: Aug 7/75
 5801 with hms: No 545+628 910-
 Sept 12+7- Oct 2/75-
 2-400/1876
 6226 together with hms: 786 9/4/75.
 6605 all in wrapper containing
 copies of hms: No 382 9/4/75+52
 922 June /75 + Chas 27560 copy of
 many alone 6605 with hms: 15 9/4/75
 de Lee's hms: to the address of the
 (Chief Eng & Secy (no date)-
 memo: for orders.

May 6-80
 11-75

5327 ~~6044~~ 4486 5328

Supg: Eggs
Chungfent

Rec'd 3453

46-80

Camping Machinery from
Quislat Pit — The
Capt. Public Works Works
Instructed to carry out the re-
quisite alterations to the
and to look after its main-
tenance.

Exp 2004-75