

- (1) பக்கங்களின் எண்ணிக்கை 22
 (2) புதுக்கித் திருப்பிய நாள் 1-92
 (3) ஆதாரம் குறிப்பவர் எழுக்கோப்பம்

தமிழ்நாடு ஆவணக் காப்பகம்.

தமிழ்நாடு அரசு

P.W.D துறை

அரசாணை எண். 3114 மு. கோப்புத் தாள் எண். 3115	அச்சகம் பலவகை
நாள் : 2. 12. 1883	199

மடிக்கலோ கண்டயடி கையாளலோ கூடாது.

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following paper :—

From J. A. JONES, Esq., MEM. INST. C.E., F.R.S.E., Sanitary Engineer to Government, to the Chief Secretary to Government, dated Fort St. George, 31st July 1893, No. 1564.

With reference to memorandum No. 408, dated the 29th June 1893, transferring to me note by the Acting Chief Engineer, Public Works Department, dated 10th June 1893, regarding the improvement of Guindy water-supply and requesting me to draw up a scheme, I have now the honour to report as follows and to forward plans and estimates.

2. In the Chief Engineer's note it is stated that 900 gallons only are required for baths, but Major Lawley's No. 58, dated 2nd June 1893, paragraph 6, states the requirement to be 1,350 gallons.

3. I had doubts, however, as to this quantity being ample and, after a further inquiry at Guindy and a consultation with Dr. Browning and Major Lawley, the amounts required were finally determined as follows (*vide* letter No. 111 of 14th July 1893 from the Military Secretary to His Excellency) :—

	GALS.
Baths	2,500
Horses	800
Servants	1,200
Wastage, hot water, &c.	500
Total	5,000

and on this basis the scheme has been framed.

4. The scheme is as follows :—

- (1) The provision of filters of sufficient area to filter the above supply of 5,000 gallons daily.
- (2) The provision of a service reservoir to contain the supply and allow filtration to proceed regularly.
- (3) The provision of a pump for the raising of the supply to the various places and heights required.
- (4) The provision of the necessary pipes for the distribution of the supply.

5. *Filters.*—These with the service reservoir adjoining have been placed nearly opposite the Military Secretary's office. There are two filters, one will ordinarily be out of use for cleaning. Each filter has an area of 16 square yards and at 400 gallons per yard will filter 6,400 gallons daily when clean. The filters have been made of somewhat ample size for the work to be done, so that on special occasions it will be possible to filter an increased quantity. A reduction in size would not effect much economy in cost.

6. In order to have continuous filtration, the supply to the filters will be drawn directly from the garden tank; the pipe to the filters will pass out at the bottom of that tank. The filters are sand filters of the usual pattern with regulating valves to ensure filtration proceeding regularly.

7. *Service Reservoir*.—The filtered water will pass into the service reservoir which will have a capacity of 900 feet. It is in two portions, each of which is $7\frac{1}{2}' \times 10' \times 6' = 450$ feet or 2,812 gallons, equal to slightly more than half-a-day's supply. The service reservoir is necessary to compensate for the difference between the average rate of filtration and the demand.

8. *Hydraulic Pump*.—This pump will draw water from the service reservoir and lift it—

- (1) To the top of Government house, a maximum height of 55 feet.
- (2) To tanks on the top of the coach-house.
- (3) To a tank over the hot water boiler.

The pump will be worked by pressure from the pumping main, the pressure anticipated being ahead of about 42 feet of water. The water from the main will, after working the pump, pass round the filters back again to the main and thence into the garden tank. I have not yet been able to get a proper quotation for a pump of less than Rs. 1,800, but I believe that the Rs. 1,200 in the estimate or probably less will cover the cost; if not, a petroleum engine which needs no attention will be substituted. From the pump the water will pass (1) partially by the existing 5" main to the upper tank on Government house, (2) partially by an existing main to the tank about the hot water boiler, (3) by a new 2½" main to the tanks on the top of the coach-house. The pumping will be done during three hours in the morning and three in the evening.

9. *Distribution*.—Before describing the proposed distribution, it is necessary to detail to some extent present arrangements. The tank on the top of the house not only feeds the pipes throughout the house, but by another outlet pipe distributes water to the garden in front of the house. It was this which misled me in my original calculation based on the number of times the tank was filled, as I was unaware the garden was also supplied; this connection will be cut off. The two cisterns in the stable yard are fed by pipes from the garden cistern; this system will be continued but to one cistern only. The cisterns or tanks over the kitchen are connected with the pumping main; this connection will be cut off and the tanks taken and placed over the coach-house. The hot water boiler is connected directly to the pumping main; this connection will also be cut off.

10. The distribution will be as follows:—

- (1) To the Government house from the upper tank.
 - (2) From the coach-house tank to (1) one of the stable yard cisterns, (2) the existing fountain, (3) a new self-closing fountain nearer the apothecary's quarters.
 - (3) From a tank over the hot water boiler room to the hot water boiler.
- To effect these proposals alterations in existing pipes are necessary as follows:—

- (1) The existing valves at S. on plan will be removed and the pipe line here relaid.
- (2) A new valve will be placed at V, all the water passing through hydraulic pump when it is at work; this will be for three hours morning and evening.
- (3) A new stoneware pipe in addition to some old pipes will be laid from the large garden reservoir to the small tanks in the garden opposite Government house.
- (4) The pipe from the well, where the chain and bucket pump is, to the small tank at the back of Government house will be removed and laid from the garden reservoir to the filters.

11. Sections attached to plans show the various levels of existing pipes, &c., and also sections and cross sections at the Adyar river. The section across the river shows a maximum depth of 9 feet. It was suggested that a bund should be placed across the river below the pumping station, but the cost of any bund or dam which would be of any use would be so great that I have omitted it from my estimates. I have, however, entered a small sum for permanently fixing masonry pillars to support a new screen, and from contingencies I hope to effect some improvements by clearing and sectioning the inlet at the river.

12. *Estimate*.—The estimate amounts to Rs. 7,000; the length of pipe to be lifted and relaid and new pipes to be laid amount to much more than anticipated, so that notwithstanding the reduced quantity of water the estimate is about the same

amount as previously advised. The working charges will be comparatively small; the pump will cost nothing to work. The only extra cost will be for cleaning the filters and service reservoir, and this can be done and the sand washed at intervals by the gardeners under proper supervision.

13. If the scheme is to be sanctioned, His Excellency's Military Secretary desires it to be carried out before November next when His Excellency will be in Madras. If the scheme is approved very early orders are requested for its execution.

No. 534, Local and Municipal.

Transferred to the Public Works Department.

Fort St. George,
10th August 1893.

(Signed) A. T. PRINGLE,
Assistant Secretary.

ORDER—dated 4th September 1893, No. 2265 W., Public Works.

The estimate, amounting to Rs. 7,000, for improving the water-supply to the Government house at Guindy, is sanctioned for execution by the Consulting Architect and the amount is appropriated from the Provincial reserve with the Government.

2. This sanction has been registered as Provincial No. 85 W. of 1893-94 and classified as Civil Buildings, Original Works.

(True Extract.)

(Signed) J. HANNAN,
Ag. Joint Secy. to Govt., P.W.D.,
General, Buildings and Roads Branch.

To the Consulting Architect to Government, with four enclosures.
" Examiner, Public Works Accounts.
" Military Secretary to His Excellency the Governor.
" Local and Municipal Department.

Exd. C. A. Munisawmy.
Spore Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1893} Madras.
PUBLIC WORKS.

Dated September, 4th.

Recd.

Encl.

G.O., 4th Sept. 1893, No. 2265 W.

SEPTEMBER.

Government House, Guindy

Estimate of Rs. 7,000 for improving the water-supply to —, sanctioned for execution by the Consulting Architect.

2ND DECEMBER 1893, No. 3114 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

General.
Account.

READ—the following paper:—

From L. L. WICKHAM, Esq., General Superintendent, Public Works Stores, to the Examiner, Public Works Accounts, dated Madras, 20th November 1893, No. 70 S.

I have the honour to forward herewith, for submission to Government, an indent No. 14, in triplicate, for hydraulic motor and pump required from England for the Government House at Guindy.

ENCLOSURE.

Report to accompany indent for a hydraulic motor and pump required in connection with the improvements to the water-supply of the Government House, Guindy, Madras, sanctioned in G.O., No. 2265 W., dated 4th September 1893.

The motor and pump should work under the following conditions:—

The water for working the motor will be from a 5" main delivery at about 74 gallons per minute with a head or pressure equal to 45 feet (the whole supply of 74 gallons is available for use in pumping). The water to be pumped amounts to 860 gallons per hour, or, say, 15 gallons per minute to a height of 54 feet.

A suitable pump and motor is manufactured by the Glenfield Company, Kilmarnock.

(Signed) H. IRWIN,
Consulting Architect to Government.

Endorsement by the Examiner, Public Works Accounts, dated 28th Nov. 1893, No. 1977 D.

ORDER—dated 2nd December 1893, No. 3114 W., Public Works.

The indent will be forwarded to the Home Government for compliance.

[Here enter No. 3115 W., dated 2nd December 1893.]

(True Extract.)

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

To the Consulting Architect to Government.
" Superintending Engineer, V Circle.
" Examiner, Public Works Accounts.

Exd. C. A. Mouliswamy.
Spare Copies

GENERAL
ACCOUNT.

Govt. of {1893} Madras.
PUBLIC WORKS.

Dated December, 2nd.

Recd.

Encl.

G.O., 2nd Dec. 1893, No. 3114 W.

DECEMBER.

Indent

The — for a hydraulic motor and pump required in connection with certain proposed improvements to the water-supply of Government House, Guindy, Consulting Architect's division, Madras, ordered to be forwarded to the Home Government for compliance.

2ND DECEMBER 1893, No. 3115 W., PUBLIC WORKS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

3114-15
4

LETTER—from

COLONEL J. PENNYCUICK, R.E.,
*Secretary to the Government of Madras,
Public Works Department,*

To

THE DIRECTOR-GENERAL OF STORES,
INDIA OFFICE,
LONDON.

SIR,

I am directed to forward, for favour of early compliance, an indent, in duplicate, for a hydraulic motor and pump required in connection with certain proposed improvements to the water-supply of Government House, Guindy, Consulting Architect's division, Madras.

2. A certificate by the Examiner, Public Works Accounts, showing that due provision has been made to meet the outlay is endorsed on the original indent.

3. The accompanying copy of the Proceedings of this Government, No. 3114 W., dated 2nd December 1893, contains a report by the Consulting Architect showing the conditions under which the motor and pump should work.

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

Colonel, R.E.,
Secretary to Govt., P.W.D.

FORT ST. GEORGE,
2nd December 1893.

Ext. C. A. Muniswamy.
Spare Copies

GENERAL.
ACCOUNT.

Gobt. of {1893} Madras.
PUBLIC WORKS.

Dated December, 2nd.

Recd.

Encl.

2nd December 1893, No. 3115 W.

DECEMBER.

Indent

Forwarding an — for a hydraulic motor and pump required in connection with certain proposed improvements to the water-supply of Government House, Guindy, Consulting Architect's division, Madras.

Accompaniment to Public Works Department Circular No. XV of 1882.

No. _____

INDENT ON ENGLAND FOR STORES required for the Public Works Department in the Presidency of Madras for the service of the Indian Government.

3114-15
6

I HEREBY certify that the Stores enumerated in this Indent are absolutely required for the service of the Public Works Department for a period of _____ months, and I further certify that I have, by a personal inspection of Books and Stores, satisfied myself that they comprise the least possible quantity necessary for the above period.

Dated this _____ day of _____ 189

at _____

Signature _____

Rank *Secretary to Government P. W. D.*

Note.—1. In cases in which a personal inspection of Books and Stores cannot be made, the portion of the Certificate relating thereto should be reared through.

2. The Indent should be pagged, and the signature attached to the last line of the Indent.

3. The Indent should be submitted in triplicate.

4. The quantities entered in the Indent should invariably be given in English weights and measures.

Received by the Director-General of Stores in England the _____ day of _____ 189

Hydraulic Motor pump
to deliver 15 gallons per
minute 54 feet high.
Natural head 45 feet.
supply 74 gallons per
minute.

Provisional

" " " " "

Add 10 per cent to freight

Port of landing
Madras
Particulars are
given in the
Report.

7.10-0
80.0.0

3114-15
7

Henry Green
Consulting Architect
to Government
10. 11. 93.

N.B.—The red ink columns to be left blank for
filling up in England.

* Imperial, Provincial, Local, Mysore, or Bazar.
† This column should be left blank if the charge is not admissible to the Imperial Revenue.

He must give (here enter the
Royalty sanctioned in P.O.
1st September 1890.

Consulting
Certificate by
of P. W. Stores

"Certified that the stores in
the indent are absolutely required
that they cannot be procured
manufacture or grow supply
other Departments, Railways and

L. L. Clerk
20th November 1893. General Supt

Examiner's Certificate

"I certify that funds to meet
which, it is estimated, will be
in England in connection with
indent during 18 have been
provided for in the estimate
to the extent of £ 20

Instructions

This indent is to be filled
as far as possible by the
in the first instance, and
at its Government Store
intendent, P. W. Stores, and
who will make the
entries

No. 70. S.

PRESIDENCY P. W. STORES,

Madras, 20th November 1893.

From

L. L. Clerk P-1
GENERAL SUPERINTENDENT,

PUBLIC WORKS STORES,

To

THE *Examiners of P. W. Accounts*
Chapank.

Sir,

I have the honor to forward
Enclosure No. herewith for submission to Government an Indent
1 Indent in duplicate & 1 in triplicate for Hydraulic Motor Pump
1 Report. required from England for the Government House
at Quindly.

I have the honor to be,
Sir,

Yours most Obedient Servant,

L. L. Clerk
General Supt P. W. Stores.

Presidency P. W. Stores:

From

THE GENERAL SUPERINTENDENT,
PUBLIC WORKS STORES,
Madras,

To

No. _____ S.

Dated _____

Despatched _____

Received _____

No. of ENCLOSURES _____

Subject.

No. 2265 of 4-7-93

*Report to accompany indent for a Hydraulic
Motor & Pump required in connection with the
improvements to the water supply of the Government
Horse Quindry, Madras, sanctioned in G.O. No. 2265
of dated 4th September 1893.*

*The Motor and Pump should work
under the following conditions:*

*The water for working the Motor
will be from a 5" main delivery at about 7 1/4
gallons per minute with a head or pressure
equal to 45 feet (the water supply of 7 1/4 gallons
is available for use in pumping). The water
to be pumped amounts to 850 gallons per hour
or say 15 gallons per minute to a height of
5 1/4 feet.*

*A suitable pump & motor is
manufactured by the Glenfield Company
Kilmarnock.*

*Henry J. J. J.
Consulting Architect
to Government*

N^o 3114 W d/2-12-93

PUBLIC WORKS DEPARTMENT.

Genl. Secy

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following

From the Genl. Supdt. P.W. Stores. (H.V. No. 70 S. d/20 Novr. '93)

Cudt. by the Exr. P.W. Accto. (H.V. No. 1977 B. d/28 - do -)

31/12/93

P. G.

The indent will be forwarded to the Home Government for compliance.

C. A. to Govt.

Sd/- & Circle.

Exr. P.W. Accto.

(H.V. No. 3115 W d/2-12-93)

To

The Director Genl. of Stores,
India Office, London.

W

1 Dec.

Sir,

I am directed to forward, for favour of early compliance, an indent in duplicate for a hydraulic motor and pump

pump required in connection with certain proposed improvements to the water supply of Govt. House, Quindry, Consulting Architects' division Madras

2. A certificate by the Examiner, P.W. Accounts, showing that due provision has been made to meet the outlay, is endorsed on the original indent.

3. The accompanying copy of the Proceedings of the Govt. No. 3144 W. & A. 1000/10 contains a report by the Cong. Architect showing the conditions under which the motor and pump should work.

I have read

W. J. S. 10/10/10

Handwritten notes on the left page, partially obscured by a dark vertical band.

314-15/11

Gobi. of (1893) Madras.
PUBLIC WORKS.

2/10/93

2/12
3/14
3/15

2/12
J.C. 2nd

The — for a hydraulic
motor and pump
required in con-
nection with certain
proposed improvements
to the water supply
of the Home
Station, ordered
to be forwarded
to the Home
for compliance.

xx for a hydraulic
motor and pump
required in connection
with certain proposed
improvements to
the water supply of
the Home
Station, Consulting
Architect's division
Madras.

10/4
50/2

Ordering an