Archives I 10,006—16-8 77.

(1) Number of pages 38
(2) Date of repair 20.4.87
(3) Initials of the Referencer

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

PUBLIC WORKS DEPARTMENT

G.O. No. ~~B.P. No.~~ 2507 W Press. ~~Mis.~~

Dated 26.9.1882 ~~197~~ .

Not to be folded or roughly handled

1/2507

26th September 1882, No. 2507 W., Public Works.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 201.

Read—the following papers :—

From Lieutenant-Colonel T. E. TENNANT, Inspector-General of Jails, to the Secretary to Government, Public Works Department, dated Ootacamund, 29th June 1880, No. 168.

I have the honor to forward, for the approval and orders of Government, the accompanying four plans and an estimate, amounting to Rs. 21,574, for the proposed water-supply to the Rajahmundry Central Jail and for the improvement of the existing drainage; also a supplementary estimate, amounting to Rs. 590, for supplying water to the Jailor's quarters attached to the jail.

- 4 Plans.
- 2 Estimates.
- 1 Specification.
- 1 Letter, District Engineer, No. 2944, dated 4th January 1876.
- 1 Letter from Assistant Engineer, No. 401, dated 18th February 1876.
- 1 Letter from Superintendent, Central Jail, No. 65, dated 9th May 1876.
- 1 Copy of G.O., No. 1727, dated 18th June 1875.

2. As explained by the District Engineer, the amount of the original estimate for the construction of the Central Jail was Rs. 3,53,263, and the expenditure against it has been Rs. 3,29,200, leaving a balance of Rs. 24,063 available for further expenditure. A sum of Rs. 1,550 only (exclusive of wells) was allowed in the original estimate for the water-supply and drainage, out of this amount Rs. 177 only were spent for a small quantity of iron piping.

3. The specification accompanying the plans explains the general arrangements proposed. On these I beg to make certain remarks for the consideration of Government. The proposed iron cistern (30 feet by 20 feet by 4 feet) will hold 14,957 gallons of water, which will give a little over 13½ gallons per head for 1,100 men. It is proposed to carry the water from the cistern by a 6-inch pipe to a series of 4-inch pipes which are to be carried round the jail, arranged in the form of a nonagon inscribed in a circle of 280 feet radius. At each angle of the nonagon will be placed a four-way cock to regulate the supply of water to the various compartments, minor 2-inch pipes are to carry the water to the workshops, cook-rooms and female compartment. I consider that the water for drinking purposes should be filtered. The plan of filter I would recommend is taken from Dr. Clarke's work on Army Hygiene. These filters have been adopted in the Coimbatore and several other jails, they have been working for some years and have answered well. At Coimbatore no cost was incurred for their construction except for chunam, as there were plenty of old bricks and stones available at the time.

4. As regards the pumping apparatus and lifting gear the Assistant Engineer recommends that a Bastier chain-pump should be procured from England, and that for working the pump a tread-wheel (to be worked by twenty-eight men) with necessary breaks and regulating gear should be attached. He estimates the cost of the former at Rs. 2,500 and that of the latter at Rs. 2,000. I have never seen the Bastier chain-pump at work, but unless it is simple and not likely to get out of order it will not suit jail work. There are however many excellent kinds of pumps, each claiming its own special advantages: but I would prefer a good double barrel lift and force-pump, made of gun metal, with double lever handles and easy access to valves, every part of the pump should be very strong and very simple, as it is liable to rather rough and ignorant usage occasionally. A pair of smaller pumps will perhaps be better than one large one, for the reason that repairs can be effected without discontinuing the supply of water, and the first cost will not be much more than that of the large one.

5. The surface drainage of the interior of the jail is defective and requires attention, a carefully devised system of surface channels conducting the rain water to the most convenient points at the main wall and a sufficient number of vents or apertures for the escape of the water ought to be provided. I request that the necessary orders may be issued in the Public Works Department.

No. 201-A.

Memorandum from the same Officer, dated Madras, 16th December 1880.

The Inspector-General of Jails has the honor to request attention to his letter entered in the margin regarding supply of water, &c., to the Central Jail at Rajahmundry.

Dated 29th June 1880, No. 168.

No. 201-B.

Note by the Chief Engineer, Public Works Department.

The Inspector-General of Jails submits plans and estimates amounting to Rs. 22,164 for—

I. Supplying the Rajahmundry Central Jail with water;
II. For the improvement of the existing drainage, and
III. For the supply of water to the Jailor's quarters.

2. The original estimate for the construction of the Central Jail was Rs. 3,53,263 and the expenditure against it has been Rs. 3,29,200, leaving a balance of Rs. 24,063 available for the proposed works.

3. The general scheme is to provide an iron supply-cistern, from which a flow of water to the various smaller cisterns and buildings may be arranged by means of pipes and cocks. The supply is calculated for 1,100 men at the rate of a little over $13\frac{1}{2}$ gallons per man per day.

4. It is proposed to purify the drinking water by means of a filter constructed on the plan recommended by Dr. Stewart Clarke in his book on "the Hygiene of the Army of India." A filter of this description was constructed in the Coimbatore Central Jail and the Inspector-General of Jails states that it has "answered the purpose remarkably well."

5. For raising the water from the well to the supply-cistern the Inspector-General of Jails prefers, "a *pair* of good double barrel lift and force pumps, with double lever handles, &c."

6. The water will be distributed by gravitation from the supply-cistern to the various points where it is required.—(*Vide* general plan of the arrangement for distribution).

7. The drainage will be improved by converting some of the existing drains into V shaped drains and constructing others of similar shape where required.—(*Vide* general plan.)

2/2507

8. An estimate for a Stewart Clarke's filter does not accompany these papers, but it has been called for and will be submitted in due course. A balance of Rs. 1,899 is available to cover its cost after meeting the other estimates herewith submitted.

(Signed) R. H. SANKEY, Col., R.E.,
Chief Engineer, P.W.D.

13th September 1882.

No. 202.

Order—dated 26th September 1882, No. 2507 W., Public Works.

The estimates amounting to Rs. 22,160, for water-supply and drainage of the Rajahmundry Central Jail, are sanctioned for execution by the Public Works Department.

2. An appropriation of Rs. 22,164 is made for the works in the Convict Labor Fund Budget of the current official year.

3. This sanction has been registered as Provincial No. 119 W. of 1882-83 and classified as Civil Buildings, Original Works.

(True Extract.)

Lieut.-Col., R.E.,
Ag. Under Secy. to Govt., P.W.D.

To the Inspector-General of Jails.
„ Superintending Engineer, First Circle.
„ Examiner, Public Works Accounts.
„ Judicial Department.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1882} Madras.
PUBLIC WORKS.

Dated September, 26th.

Recd. Encl.

G.O., 26th Sept. 1882, No. 2507 W.

SEPTEMBER.
Nos. 201-202.

Central Jail, Rajahmundry.

Estimates amounting to Rs. 22,160 *for water-supply and drainage of the* —, sanctioned, and Rs. 22,164 appropriated from the Convict Labor Fund.

No 168

8+ B/2507

Ootacamund 29th June 1880

From
Lt Colonel T. E. Tennant
Inspector General of Jails

To
The Chief Engineer
and Secretary to Government
Department Public Works
Ootacamund

21574
590
22164

Sir

I have the honor to forward for the approval and orders of Government the accompanying 4 plans and an Estimate amounting to Rupees 21574 for the proposed water supply to the Rajahmundry Central Jail and for the improvement of the existing drainage; also a supplementary Estimate amounting to Rupees 590 for supplying water to the Jailor's quarters attached to the jail.

2. As explained by the District Engineer the amount of the original Estimate for the construction of the Central Jail was Rupees 3.53.263 and the expenditure against it has been Rupees 3.29.200 leaving a balance of Rupees 24,063 available for further expenditure. A sum of Rupees 1,550 only, (exclusive of wells,) was allowed in the original Estimate for the water supply and drainage, out of this amount Rupees 177 only were spent for a small quantity of iron piping.

3 The Specification accompanying the plans explains, the general arrangements proposed. On

3507 P2

On these I beg to make certain remarks for the consideration of Government. The proposed iron cistern (30' x 20' x 4') will hold 14.957 gallons of water which will give a little over 13½ gallons per head for 1100 men. It is proposed to carry the water from the cistern by a 6" pipe to a series of 4" pipes which are to be carried round the jail arranged in the form of a nonagon inscribed in a circle of 280 feet radius. At each angle of the nonagon will be placed a four-way cock to regulate the supply of water to the various compartments, minor 2" pipes are to carry the water to the workshops, cook rooms and female compartment

I consider that the water for drinking purposes should be filtered. The plan of filter I would recommend is taken from Dr Clarke's work on Army Hygiene. These filters have been adopted in the Coimbatore and several other jails, they have been working for some years and have answered well. At Coimbatore no cost was incurred for their construction except for chunam as there were plenty of old bricks and stones available at the time.

4. As regards the pumping apparatus and lifting gear the aſsistant Engineer recommends that a Bastier chain pump should be procured from England and that for working the pump a tread wheel

wheel (to be worked by 28 men) with neceſsary breaks and regulating gear should be attached. He estimates the cost of the former at Rupees 2,500 and that of the latter at Rupees 2,000. I have never seen the Bastier chain pump at work, but unleſs it is simple and not likely to get out of order it will not suit jail work. There are however many excellent kinds of pumps, each claiming its own special advantages: but I would prefer a good double barrel lift and force-pump, made of gun metal, with double lever handle, and easy acceſs to valves, every part of the pump should be very strong and very simple, as it is liable to rather rough and ignorant usage occasionally. A pair of smaller pumps will perhaps be better than one large one, for the reason that repairs can be effected without discontinuing the supply of water and the first cost will not be much more than that of the large one.

5 The surface drainage of the interior of the jail is defective and requires attention, a carefully devised system of surface channels conducting the rain water to the most convenient points at the main wall and a sufficient number of vents or apertures for the escape of the water ought to be provided, I request that the necessary orders may be issued in the Public Works Department.

I have the honor to be
Sir
Your most obedient Servant
T. E. Tennent
Inspector General of Jails

P.W.D.
6 JUL 80
No. 4342

From
The Inspector General of Jails
to
Chief Engineer & Secy to Govt D.P.W.
Ootacamund

Dated 29th June 1880
Recd

No. 168
Encl 11

Forwarding plans & estimate for supplying water &c to the Central Jail Rajahmundry for approval and orders with remarks.

Recd
4/7/80

OL 37.8
roky 14/8

Tp/ V5
2507

N.

Madras 16th December 1880.

s Memorandum

Inspector General of Jails has the honor to request attention to his letter entered in the margin regarding supply of water &c to the Central Jail at Rajahmundry.

D/29th June 1880
No 168.

[illegible]

T. E. [illegible]
In tor General of Jails

To

The Chief Engineer
and Secy to Government
D. P. W.
Fort St. George

Note.

The Inspector General of Jails submits four plans and an Estimate amounting to Rs 22,164 for supplying the Rajahmundry Central

I Jail with water –

II For the improvement of the Existing Drainage

and

III For the supply of water to the Jailors Quarters.

The Original Estimate for the Construction of the Central Jail was Rs 353,263 and the Expenditure against it has been Rs 329,200 leaving a balance of Rs 24,063 available for the proposed works.

The General Scheme is to provide an Iron Supply

Cistern, from which a flow of water to the various smaller cisterns and buildings may be arranged by means of pipes and cocks.

The supply is calculated for 1100 men at the rate of a little over 13½ gallons per man per day.

It is proposed to purify the drinking water by means of a filter constructed on the plan recommended by Dr. Stewart Clark in his book on "the Hygiene of the Army of India". A filter of this description was constructed in the Coimbatore Central Jail and the Inspector General of Jails states that it has "answered the purpose remarkably well".

For raising the water from the well to the supply cistern ~~it is proposed to procure~~

9/2507 87

~~a "Baxter Pump" from Eng~~ — ~~For a description of these pumps see G.O. No 1727 of 18th June 1878 herewith.~~

The Inspector General of Jails prefers: "a "pair of good double "barrel lift and force "pumps with double "lever handles &c — ~~As he states he has never seen the "Baxter Pumps" in use — and fears that it may not be sufficiently strong and simple for the work it is required to do. The "Baxter Pump" however bears a good character and it might be well to give it a trial~~

The water will be distributed by gravitation from the supply cistern to the various points where it is required (vide general plan of the arrangement for distributing

No 7980 Lie Over.

10
2507

W.

Submitted for
ormation.

R.S.
5. 3. 81.

C.A.W.

909

Please see W's note of 15.9.82. annexed. I have scored out the portions regarding the Boiler Pump.

15.9.82

12
2507

C.A.W.

Herewith the papers relating to the water supply of the Rajahmundry Central Jail, which I mentioned on Saturday as having been found in Dy W's room -

Before a draft order can be put up, W's orders will be required on the points raised by the Inspr: Genl, relative to pumping & filtering arrangements &c.

Ch /
14/4/82

Dr. W

Please note on this — I have no time just at present to go into the matter

16/8/82

W.

Noted herewith. The details appear well considered and correct.

13-9-82

No 4313 / 4930.

List of previous papers

813 / 2507

A. No. 1782 - 24-7-62.
" " 2366 - 3-10- "
" " 210 - 24-1- 63
" " 514 - 27-2- "
" " 1285 - 21-5- "
" " 1416 - 3-6- "
" " 1819 - 9-7- "
" " 2265 - 12-8- "
" " 3153 - 29-10- "
" " 926 - 2-4- 64
" " 3035 - 21-10- "
" " 3259 - 14-11- "
" " 41 - 9-1- 65
" " 378 - 9-2- "
" " 533 / 534 - 24-2- "
" " 851 - 14-6- "
" " 2469 - 24-7- "
" " 1534 - 14-5- 66
" " 1968 - 22-6- "
" " 2063 - 2-7- "
" " 2819 - 4-9- "

P.T.O.

A. No. 3006 - 19 - 9 - 66.
" " 3207 - 9 - 10 - "
" " 3478 - 1 - 11 - "
" " 3785 - 28 - 11 - "
" " 3871 - 18 - 12 - "
" " 656 - 4 - 3 - 67
" " 1868 - 22 - 6 - "
" " 2114 - 13 - 7 - "
" " 2360 - 5 - 8 - "
" " 2849 - 14 - 9 - "
2850
" " 3676 - 26 - 11 - "
" " 3867 - 12 - 12 - "
" " 168 - 18 - 1 - 68.
" " 368 - 3 - 2 - "
" " 432 - 8 - 2 - "
" " 1048 - 2 - 4 - "
" " 1359 - 1 - 5 - "
" " 1397 - 5 - 5 - "
" " 1689 - 28 - 5 - "
" " 1048 - 2 - 4 - "
" " 1809 - 9 - 6 - "
" " 3285 - 17 - 10 - "
" " 3866 - 11 - 12 - "
" " 363 - 4 - 2 - 69.
" "

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(2)

14
2507

A. No. 708 - 4 - 3 - 69
" " 1076 2 - 4 - "
" " 1917 - 12 - 6 - "
" " 241 - 20 - 1 - 70
" " 3043 - 15 - 12 - "
" " 137 - 17 - 1 - 71
" " 1429 - 8 - 6 - 72.
" " 2057 - 28 - 8 - "
B - " 189 - 22 - 5 - "
A - " 3161 - 15 - 12 - 71 (orig)
B " 47 - 14 - 8 - 70
A " 2438 - 23 - 7 - 71
B " 233 - 31 - 7 - "
B " 83 - 15 - 11 - 70
" " 136 - 25 - 3 - 70
A - " 1727 - 18 - 6 - 75
" " 934 - 12 - 1 - 82.

C. No. 4313, 17980 of 1880.

P. W. Secretariat.

15/2507

Note by Budget Section.

Work

1 Water supply and for the improvement of the existing drainage to the Rajahmundry Jail Rs 21,574
2 - Do. to the Jailors Qrs attached to the Jail Rs 590
22,160

Remarks and References.

Fund Provincial (Convict Labor Fund)
Service Head Civil Building Rs.
Departmental Head Orig. Works

Amount of estimate	Rs 22,160
Expenditure in previous year	-
Allotment in current year	22,164
Balance required to complete	-
Total Rs.	22,160

Note of available funds.

Rs 22,164 (or Rs 4 in excess of the amount required) are provided in the Convict Labor Fund Budget of 1882/83 for this work —

14/8/82

R.P.
Budget Clerk.

P. W. SECRETARIAT—1879-80.

KEEP-WITH.

16/3507

Current No. 4313.

Letter No. 168.

Dated the 29th June 1880.

from the Inspr. Genl. of Jails.

Note of Remarks.

The undermentioned Estimates with Plans & Specification for the proposed Water supply to the Rajahmundri Central Jail & Jailer Quarters, & for the improvement of the Existing drainage, amount to Rs. 22164.

1	Water supply & for the improvement of the Existing drainage to the Rajahmundry Jail	Rs 21574
2	do. to the Jailors Quarters attached to the Jail	590
	Total Rupees	22160

As explained by the Dist. Engr. the amount of the Original Estimate for the Construction of the Central Jail was Rs. 353,263, & the Expenditure against it has been Rs. 329200, leaving a balance of Rs 24063, available for further Expenditure.

The proposed Cast Iron supply Cistern, 30×20×4 will hold 14,957 gallons of Water.

The Specification accompanying the Plans & Estimates, explains the General arrangements proposed.

The

The Rates more or less agree with the Dist. Schedule. (Except Iron Work &c. no data has been furnished.)

Contingencies has been charged at 10 per cent.

The Plan & Estimates have not been countersigned by the Inspr. Genl. of Jails.

10th July 1880.

No 1880 Dept.

17/2507

The Inspector Genl of Jails submits plans & estimates for water supply to the Rajahmundry Jail & for improving the existing drainage; also a supplemental estimate for supplying water to the Jailors' quarters.

Aug 1/7

To the Tech. Section for check & exam.

E.P.

1/7/80

Plans belonging to this file already sent to Office

15.9.80

No 2507 W B R Works

18/250

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 26th Septr/82

Read the following:—

From

The Inspr. Genl. of Jails (No. No. 168 d/ 29th June/80)

" — do — do — (" " — d/ 16th Decr. /80)

Note by the Chief Engr. P. W. D (" " — d/ 13th Septr. 1882)

The estimates amounting to Rs 22,160, for water supply and drainage of the Rajahmundry Central Jail, are sanctioned for execution by the P. W. Dept.

2. An appropriation of Rs 22,164 is made for the works in the Convict Labor Fund Budget of the current

19/2507

official year.

3. This sanction has been registered as Provincial No. 119 W of 1882-83 and classified as Civil Buildings Original Works.

17.9.82

47/5

Desd
6/10/8

Inspr. Genl. of Jails ~~with~~ w. enclosure
S.E. First Circle
Genr. P.W. Accts.
Judl. Dept.

21

R.S.
4/Gen.l.

7980 t
4313 Sy/809 n

Govt. of (1882) Madras.
PUBLIC WORKS.

Dated
Sent Comm
~~27/9~~
11-10.

Recd.
Encl.

G. O., 26th Sept. 1882, No. 2507 W.

Nos. 201 to 202

Central Jail ~~at~~
Rajahmundry.

Estimates amounting to Rs 22160, for water supply and drainage of the — sanctioned and ~~appropriation~~ Rs 22164 appropriated from the Convict Labour Fund.

[illegible] 7/9/82

Entd in Receipt Regr

27TH SEPTEMBER 1882, No. 2508 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 203.

READ—the following papers :—

From J. C. LARMINIE, Esq., Executi ve Engineer, in charge First Circle, to the Chief Engineer, Public Works Department, dated Dowlaishweram, 19th August 1882, No. 1194 G.D.

In accordance with G.O., No. 1543 W. of the 19th June 1882, I have to furnish information regarding probable cost of con veyance of coal from the Godávari to Madras.

2. As per Public Works Department, Rubakar No. 77, dated 5th April 1882, printed with the above-mentioned Governmen t Order, the points to be replied to are—

1st.—Information regarding the traffic rate which has been fixed for conveyance of such an article as coal.

2nd.—As to how the rate, Rs. 5 per to n, for conveyance of Singarani coal to Madras has been arrived at.

With reference to the first query, I have the honor to state that I am not aware of any particular rate having been fixed for th e conveyance of goods by canal or river. The navigation rules regulate the passenger rates, but no rates have been laid down for merchandise of any kind, so charges must be settled with the boat-owners.

Query No. 2.—A full reply to this will be found in the letters from the Consulting Engineer for Railways printed with—

G.O., No. 1257 of 2nd May 1873,
" " 2024 of 14th August 1873,

so I presume no further remarks from me are necessary, but I may mention the following in connection with probable rates between *this place* and Madras. The particulars have been procured from a Dowlaishweram boat-owner and as given by him the cost for conveyance to Madras—da ta being given for a 27 and an 18-ton dinghy—amounts to nearly 4 pice per ton per mile, assuming that a month is occupied on the double journey and that the boat returns empty. But I know well that the boat-owners' data are most extravagant, so I shall here enter probable cost, a cost which would certainly not be exceeded were Governm ent to employ their own boats, as would be found most economical were large quantitie s of coal to be transported :—

Data for a 27-to n Dinghy.

	RS.	A.	P.
Godávari and Kistna license fees for one month (*i.e.*, $\frac{1}{12}$ of the fee for such licenses)	13	8	0
Toll fees on the Buckingham Canal, 5 t ll stations at 4 annas per ton	33	12	0
Crew—One man at Rs. 8	8	0	0
Seven men at Rs. 7 per month	49	0	0
Boat rent for one month	*20	0	0
Interest 5 per cent., depreciation and repai s 15 per cent. (Total, 20 per cent.) ...	16	4	0
	140	4	0

or Rs. 5-9-0 per ton taking a load of 25 tons only or 3 pice per ton per mile. Distance from Dowlaishweram to Madras bein g some 350 miles.

---

* *Rent*—(Cost of boat about Rs. 1,000), taking Government charge of 2 per cent. per month on cost of boat.

3. The double journey to and from would occupy about a month, the canals being in good order, but frequent delays are very common, and owing to the shallowness of the canal in places, boats cannot carry their registered tonnage. As the canal now is the 27-ton dinghy under reference would not probably carry more than 20 tons.

4. Under favorable circumstances, i.e., for distances between 20 and 30 miles, Government stone boats working on the Delta Canals have carried stone for about 1½ pices per ton per mile (cost of crews only). It may be noticed that the Buckingham Canal toll fees are heavy as also the amount of boat rent, possibly also return freight would now and then be available, so everything considered and with good management I have little doubt that 2 pice per ton per mile would cover all charges.

From J. W. RUNDALL, Esq., Superintending Engineer, Second Circle, to the Chief Engineer for Irrigation, dated Masulipatam, 8th September 1882, No. 1087 K.

I have the honor, with reference to your No. 28 of the 5th ultimo, to forward herewith a statement giving the rates at which goods are carried by private parties in canal boats. The rates have been deduced from information supplied by merchants at Bezváda.

2. The Executive Engineer, Eastern Division, has likewise worked out from the punt books the actual cost of conveying heavy goods by Government boats, and finds that it varies from 2 pies to 5 pies per ton per mile, the principal cause of the difference being in the time occupied in loading and unloading.

3. Mr. Grant says that, under the most favorable circumstances, when there is no delay either in loading or in unloading, and whent he boat returns with a load, the cost is 2·5 pies per ton per mile, exclusive of interest and depreciation of the punt and its cost of maintenance. This, the Executive Engineer calculates, at 12 annas per diem for a punt carrying 18 tons, equivalent to 8 pies per ton per day or, say, ½ pie per ton per mile.

4. Under the most favorable circumstances the cost may be taken at 3 pies per ton per mile. This is only for long journeys, say over 30 miles. This rate would have to be increased for short trips when the time occupied in loading and unloading bore greater proportion to the time occupied in the whole trip.

5. The rates charged in private boats varies with the demand and the condition of the canals. At present owing to the Buckingham Canal being silted near Madras freights are 50 per cent. higher than ordinary.

ENCLOSURE.

SCHEDULE showing rates at which Goods are conveyed by Boats on Northern Canal, from Bezváda to Madras.—Miles 270.

Description.		All kinds of Grains per bandy-load, 10 bags each, weighing 164 pounds = Mds. 65. lb. 15.			Cotton per bandy-load, 4 bales each, weighing 400 pounds = Maunds 64.			Tobacco per bandy-load, 10 bundle each, weighing 200 pounds = Maunds 80.			Remarks.
		RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	
Dates hitherto current by private boats.	Per bandy load.	5	0	0	4	8	0	10	0	0	
	Per ton	6	13	3	6	4	9	11	3	2	
	Per ton per mile.	0	0	4·85	0	0	4·47	0	0	7·96	
Present rates by do.	Per bandy load.	7	8	0	5	0	0	12	8	0	Madras Canal having been silted up higher rates are being charged for by boat-owners.
	Per ton	10	3	11	7	0	0	14	0	0	
	Per ton per mile.	0	0	7·28	0	0	4·97	0	0	9·95	

The calculation for tonnage rate is on the assumption that a bandy-load is 10 bags of 168 lb. each a total load of ¾ ton.

The above rates include loading and unloading here; and these rates are arrived at from information supplied by local merchants.

MASULIPATAM,
8th September 1882.

(Signed) J. W. RUNDALL,
Suptg. Engineer, Second Circle.

No. 203 M.

Endorsement on the above.

Forwarded to the Consulting Engineer for Railways with reference to his letter No. 592 of 31st July 1882.

CHEPAUK,
16th September 1882.

(Signed) A. S. RUSSELL,
for Chief Engineer for Irrigation.

No. 204.

From D. LOGAN, Esq., Acting Agent, South Indian Railway, to the Consulting Engineer for Railways, dated Trichinopoly, 24th July 1882, No. 614.

Consumption of Indian Coal.

In reply to your letter No. 415, dated 10th July 1882, I have the honor to subjoin copy of the Locomotive Superintendent's letter to me on the subject.—

> "If the Indian coal proposed to be delivered at Egmore station is of good quality and equal to the sample which was experimented upon by my predecessor, Mr. Sheward in September 1874 and reported upon in G.O., 16th December 1874, No. 3532, I consider it would be well worth using at the price quoted, viz.,Rs. 13 per ton delivered, and our probable annual consumption would amount to from 18,000 to 20,000 tons."

Endorsement on the above.

Submitted to Government, with reference to their Proceedings No. 1543 W. of 19th June 1882.

2. The rate of Rs. 5 for conveyance of Godávari coal to Madras, quoted in the note by the Consulting Engineer, dated 3rd March 1880, embodied in Proceedings of Government, No. 638 W., dated 13th March 1880, was arrived at by calculating the freight at 2 pies per mile for 480 miles.

3. The Locomotive Superintendent of the South Indian Railway estimates that the annual consumption of Indian coal delivered at Egmore at the rate of Rs. 13 per ton would amount to 20,000 tons, making, with the estimated consumption of the same coal on the Madras Railway (16,000 tons), a total probable annual demand of 36,000 tons.

4. The communication at the head of these papers from the Superintending Engineer of the Second Circle appears to confirm, rather than otherwise, the estimate of 2 pies per mile for the carriage of coal from long distance; if Government stores, such as stone, lime, &c., with loading and unloading once in, say, 40 miles, are found to cost only 2⅓ pies per ton per mile, it is probable that with a large and regular demand, and with boats specially constructed and worked, the rate would not exceed 2 pies per mile for a lead of 274 miles—but with a margin of price exceeding Rs. 4 (value of Indian coal at Madras Rs. 17-13-6 less cost Rs. 13) the freight might be doubled without driving Indian coal from the Madras market.

MADRAS,
27th September 1882.

(Signed) C. J. SMITH, Lt.-Col. R.E.,
for Consulting Engineer for Railway.

No. 205.

Order—dated 27th September 1882, No. 2508 W., Public Works.

Ordered to be forwarded to the Resident in Hyderabad.

(Here enter No. 2509 W dated 27th September 1882.)

(True Extract.)

Lieut.-Col., R.E.,
Ag. Under Secy. to Govt., P.W.D.

To the Superintending Engineer, First Circle
" " " Second Circle.
" " " Fifth Circle.
To the Consulting Engineer for Railways.
" Chief Engineer for Irrigation.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1882) Madras.

PUBLIC WORKS.

Dated September, 27th.

Recd. *Encl.*

G.O., 27th Sept. 1882, No. 2508 W.

SEPTEMBER.
Nos. 203–205.

Coal.

Correspondence regarding the cost of — from Godávari to Madras, ordered to be forwarded to the Resident in Hyderabad.

27th September 1882, No. 2509 W., Public Works.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 206.

Letter—from

Colonel R. H. SANKEY, R.E., C.B.,
Secretary to Government, Public Works Department,

To

The RESIDENT in HYDERABAD.

Sir,

With reference to your letter No. 797, dated 30th May 1882, I am directed to forward the accompanying copy of the Proceedings of this Government, No. 2508 W., dated 27th September 1882, embodying the information asked for by His Highness the Nizam's Government on the subject of the cost of conveyance of coal from the Godávari to Madras, and I am at the same time to forward a copy of Proceedings No. 2097 W., dated 15th August 1882, from which it will be seen that this Government have resolved to abandon any further inquiry as to the existence of coal at Bhadráchalam on the British side of the river.

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

Lieut.-Col., R.E.,
Ag. Under Secy. to Govt., P.W.D.

Fort St. George,
27th September 1882.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1882} Madras.
PUBLIC WORKS.

Dated September, 27th.

Recd. *Encl.*

27th Sept. 1882, No. 2509 W.

SEPTEMBER.
No. 206.

Coal.

FORWARDING correspondence regarding the cost of conveyance of coal from Godávari to Madras.

P 1

No. 1194 G.S.

FROM
THE ~~SUPERINTENDING~~ Executive ENGINEER in charge
FIRST CIRCLE.

TO,
THE CHIEF ENGINEER
P.W. Department ~~FOR IRRIGATION.~~

Enclos.

Dowlaishweram, 19 August 1882
Despd 22 do

SIR,

In accordance with G.O. No. 1543 W. of the 19/6/82 I have to furnish information regarding probable cost of conveyance of coal from the Godavari to Madras.

2. As per P.W.D. Rubakar No. 77 dated 5/4/82 printed with the above mentioned G.O the points to be replied to are

1st Information regarding the traffic rate which has been fixed for conveyance of such an article as coal.

2nd As to how the rate Rs 5 per ton for conveyance of Singarani Coal to Madras has been arrived at. With reference to the 1st query I have the honor to state that I am not aware of any particular rate having been fixed

fixed for the conveyan e of goods by Canal or River – Th e navigation rules regulate the passe nger rates but no rates have been laid down for merchandise of any kin d, so charges must be settled with th e boat owner.

Query No 2. A full rep ly to this will be found in the letters fr om the Consulting Engineer for Railway printed with
G.Os No 1257 of 2/5/ 73.
No 2024 of 14/8/ 73

So I presume no further remarks from me are necessary but I may mention the following in connec tion with probable rates between this p lace & Madras. The particulars have been procured from a Dowlaishweram boat owner & as given by him the cost fo r conveyance to Madras; data being given for a 27 & an 18 ton Dinghy; amoun ts to nearly 4 pice per ton per mile, assuming that a month is occupied on the double journey & that the boat returns empty. But I know well that the boat owners data are most extrava gant so I shall here enter probable cost a cost which would certainly not be exceeded were Government to employ th ir own boats as would be found most economical were large quantities of Coal to be transpte

Data fo r a 27 ton Dinghy

Godavari & Kistna license fees fo r 1 month (i.e. 1/12 of the fee for such license) — 13-8-0
Toll fees on the Buckingham Canal – 5 toll stations at 4 anna s per ton — 33-12-0
Crew – One m an at Rs 8 — 8-0-0
7 Men at Rs 7 per month 49-0-0
Boat rent f or one month — x x 20-0-0
Interest 5 p er cent, depreciation and r epairs 15 per cent} (total 20 per ct) 16-0-0
140-4-0

Rent – x x x (cost of boat about Rs 1000) taking Govt charge of 2 per cent per month – on cost of boat

Or Rs 5-9-0 per ton taking a load of 25 tons or y or 3 pice per ton per mile. Distance from Dowlaishweram to Madras be g some 350 miles.

3. The double journey to & from would occ y about a month, the canals being in g d order, but frequent delay are very mmon & owing to the shallowness of the anal in places, boats cannot carry thei egistered tonnage. As the canal n is, the 27 ton Dinghy under reference ould not probably carry more tha 20 tons.

4. der favourable circumstances for distances between

20 and 30 miles Government stone boats working on the Delta Canals have carried stone for about 1½ pies per ton per mile (cost of crews only). It may be noticed that the Buckingham Canal toll fees are heavy as also the amount of boat rent possibly also return freight would now and then be available So everything considered & with good management I have little doubt that 2 pie per ton per mile would cover all charges.

I have the honor to be,
Sir,
Your most obedient Sᵗ
Ex Engineer in charge 1ˢᵗ Circle.

Comp'd JK

From P.W.C. No. 5778
The Supg Engineer
1st Circle

To The Chief Engineer
P. W. D.
Madras

Dated 19th August }
Despd 22nd — do — } 1882
Received 24th }

No. 1194 G.S.
Enclosure Nil
(Wk. Cho. 6477)

Coal — Conveyance of — from the Godavari to Madras — Furnishing information regarding probable cost of —

Await reply from Cmg Engr for Rep. to whom reminder should be sent — CE

(20)

Reminder issued 31/8/82

P4

Superintending Engineer's Office
No: 1087 K. 2nd Circle, Masulipatam
8th September 1882

From,
The Superintending Engnr.,
2nd Circle

To
The Chief Engineer for Irrign.

Enclosure one
1 schedule

Sir,

I have the honor, with reference to your No: 28 of the 5th ultimo, to forward herewith, a statement giving the rates at which goods are carried by private parties in Canal Boats. The rates have been deduced from information supplied by merchants at Bezwada.

2. The Executive Engineer, Eastern Division has likewise worked out from the [illegible] Books, the actual cost

cost of conveying heavy goods by Government Boats and finds, that it varies from 2 pies to 5 pies per ton per mile, the principal Cause of the difference being in the time occupied in loading and unloading.

3. Mr Grant says that under the most favorable circumstances when there is no delay either in loading or in unloading, and when the Boat returns with a load the cost is 2.5 pies per ton per mile, exclusive of interest and depreciation of the punt and its cost of maintenance. This the Executive Engineer Calculates at 12 annas per diem for a punt carrying 18 Tons equivalent to 8 pies per ton per day or say ½ pie per Ton per mile.

4. Under the most favorable circumstances, the cost may be taken at 3 pies per ton per mile. This is only for long journeys, say over 30 miles. This rate would have to be increased for short trips when the time occupied in loading and unloading bore greater proportion to the time occupied in the whole trip.

5. The rates charged in private boats varies with the demand and the condition of the Canals. At present owing to the Buckingham Canal being silted near Madras.

Freights

freights are 50 per cent higher than ordinary.

I have &c

Sd/ J. W. Rundall,

Superintending Engineer

2nd Circle

No. 203. M

True copy forwarded to the Consulting Engineer for Railways with reference to his letter No: 592 of 31st July 1882.

A. S. Russell

For Ch: Engineer for Irrign.

Chepauk

16 Septr 1882

W.H.
21.9

Schedule showing rates at which goods are conveyed by boats on Northern Canal from Bezwada to Madras. Miles 270.

Description		All kinds of grains per bandy load 10 bags each weighing 164 pounds. = Maunds 65. 15	Cotton per bandy load 4 bales each weighing 400 pounds = Maunds 64	Tobacco per bandy load, 10 bundles each weighing 200 pounds = Maunds 80	Remarks.
		R A P	R A P	R A P	
Rates hitherto current by private boats.	Per bandy load	5 — „ — „	4 — 8 — „	10 — 0 — 0	
	Per Ton	6 — 13 — 3	6 — 4 — 9	11 — 3 — 2	
	Per ton per mile	0 — 0 — 4.85	0 — 0 — 4.47	0 — 0 — 7.96	
Present rates by — do —	Per bandy load	7 — 8 — 0	5 — 0 — 0	12 — 8 — 0	Madras Canal having been silted up higher rates are being charged for by boat owners.
	Per Ton	10 — 3 — 11	7 — 0 — 0	14 — 0 — 0	
	Per ton per mile	0 — 0 — 7.28	0 — 0 — 4.97	0 — 0 — 9.95	

The calculation for tonnage rate is on the assumption that a bandy load is 10 bags of 160 lbs each a total load of 3/4 Ton.

The above rates include loading and unloading here; and these rates are arrived at from information supplied by Local Merchants.

Sd/ J. W. Rundall,
S. Engnr, 2nd Circle.

S. E's Office, 2nd Circle
On a boat at Nellore
8th September 1882

/True copy/

A. S. Russell

For Ch: Engnr for Irrign.

P.W. Encl 3/
Gn 77

P 8

No ~~6352~~ 614
vide letter from A No 616
d/ 1-8-82

South Indian Railway
Agents' Office
Trichinopoly 24th July 1882

From
The Acting Agent
South Indian Railway

To
The Consulting Engineer
for Railways
Madras

Sir,

Consumption of Indian Coal.

In reply to your letter No 415 dated 10th July 1882 I have the honor to subjoin copy of the Locomotive Superintendent's letter to me on the subject.—

"If the Indian Coal proposed to be delivered "at Egmore Station is of good quality and equal to the "sample which was experimented upon by my "predecessor Mr Sheward in September 1874, and reported "upon in G.O. 16th December 1874 No 3532 I consider "it would be well worth using at the price quoted "viz Rs 13 per ton delivered, and our probable annual "consumption would amount to from 18 to 20,000 tons."

I have the honor to be
Sir,
Your most obdt servant
David Logan
Acting Agent
(Kumbakonam 26. 7. 82)

437

Sub
6477 / 12

29.7.82.

P9

Form No. 2.

Public Works Department,

Railway Branch.

Consulting Engineer's Office,

Madras, 23rd September 1882.

Letter from the Superintending Engineer, 2nd Circle dated 8th September 1882 No 1087 K
Letter from the Acting Agent, South Indian Railway No 614 dated 24th July 1882.

No.

Submitted to Government with reference to their Proceedings No 1543 W of 19th June 1882.

+Please see file with (84 6778 (Civil)) 25/9/82

2. The rate of Rs. 5 for conveyance of Godavery coal to Madras quoted in the note by the Consulting Engineer dated 3rd March 1880 embodied in Proceedings of Government No 638 W dated 13th March 1880 was arrived at by calculating the freight at 2 pie per mile for 480 miles.

3. The Locomotive Superintendent

tendent of the South Indian Railway estimates that the **annual** consumption of Indian coal delivered at Egmore at the rate of Rs 13 per ton would amount to 20,000 tons, making, with the estimated consumption of the same coal on the Madras Railway (16000) tons, a total probable annual demand of 36,000 tons.

4. The communication at the head of these papers from the Superintending Engineer of the 2d Circle appears to confirm, rather than otherwise, the estimate of 2 pies per mile for the carriage of coal for long distances; if Government stores, such as stone lime &c, with loading and unloading once in say 40 miles, are found to cost only 2½ pies per ton per mile, it is probable that with a large and regular

demand

demand and with boats specially constructed and worked, the rate would not exceed 2 pies per mile for a lead of 274 miles — but with a margin of price exceeding Rs 4 (value of Indian Coal at Madras Rs 17-13-6 less cost Rs 13) the freight might be doubled without driving Indian coal from the Madras market.

C. J. Smith Lieutt Colonel R.E.

for Consulting Engineer Rlys

Form No. 3.

RAILWAY DEPARTMENT, MADRAS.

P.W.C. No 6477

From

The Consulting Engineer
for Railways.

No.
Dated 23rd } September 1882
Received 25 }

No. of Enclosures. 2

Subject.

Transport of Coal from Bhadrachalam Coal Fields to Madras.

With C. No. 5778
Linked

68

No. 2508 W B&R Civil Wks

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 27 Septer/82

Read the following:—

Print with Enclo

From

The Supt. Engineer First Circle } (H. C. No: 1194 G.D. of 19th Augt/82.)

" The Cons: Engineer for Rys: } (" " — of 23rd Sept/82.)

Ordered to be forwarded to the Resident in ~~Mysore~~ Hyderabad

(H. C. No: 2509 W. of 27th Septr/82)

To The Resident in ~~Mysore~~ Hyderabad.

Sir, With reference to your letter No: 797 dated 30th May 1882, I am directed to forward the

Desp. 75
6/10 6

To
The Supt. Engr. First Circle 57.
— " — Second " — 3.
— " — Fifth " 7.
C. E. for Railways 7
Chief Engr. for Irrigation 9
21

accompanying copy of the Proceedings of this Government No 2508 W dated 27th September 1882, embodying the information asked for by His Highness the Nizams Government on the subject of the cost of conveyance of coal from the Godavari to Madras, and I am at the same time to forward a copy of Proceedings No: 2097 W dated 15th August 1882 from which it will be seen that this Govt: have resolved to abandon any further inquiry as to the existence of coal at Bhadra=chalam on the British side of the river.

Cu/

26.9.82

D/ ✓ Despd with 6 spare copies of letter No 1209 also 7 copies of GO No 2508 W and 1 copy of GO No 2097 W
3/10/82

Go No 2508 W 27/9/82

5778
6477

Govt. of {1882} Madras.
PUBLIC WORKS.

Presd 24/9/82
Recd - 5 - 30 pm

Dated

Recd. Encl.

G. O., 27th Sept. 1882, No. 2508 W

Nos. 203 to 205

Coal.

Correspondence
regarding the cost of
— from ~~the~~ Govern
Madras ordered
shipped to the Residency
Hyde

1882

P. W. D

2508 - 27-9-82