Public Works (1898) Department.

G.O., No. 2479 W

DATED 27 Sept 98

8/7/4/6

[Despatch Abstract.]

Dredger for the Port of Tuticorin

Estimate of Rs 24000 for building a barge & mounting on it the Priestman's dredger lying at present in the P.W. Workshops, Madras, sanctioned, with remarks. ~~[illegible]~~

110/8

7/B/UKR 29

Indexed. 29/10

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

BUILDINGS AND ROADS.
CIVIL WORKS.

Government (1898) of Madras.

PUBLIC WORKS.

Recd. } 1898. *Enclosures*
Regd. *Spare copies*

G.O., No. 2479 W., 27th September 1898.

SEPTEMBER.

Dredger for the Port of Tuticorin

Estimate of Rs. 24,000 for building a barge and mounting on it the Priestman's dredger lying at present in the Public Works Workshops, Madras, sanctioned, with remarks.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following papers :—

From Commander H. A. STREET, R.I.M., Presidency Port Officer, Madras, to the Secretary to Government, Marine Department, dated 14th April 1898, No. 163/140 G.

With reference to G.O., No. 826, Marine, dated 22nd September 1897, I have the honour to acquaint you, for the information of Government, that the Superintending Engineer, VI Circle, has been consulted as directed in the Government Order above quoted, and I submit herewith a copy of his letter to me on the subject; in paragraph 6 the Superintending Engineer states that he considers a Priestman type of dredger would do very well for the purpose of clearing away the silt, and suggests that a suitable platform to hold the crane might be constructed locally at Tuticorin.

2. I have now received from the Port Officer, Tuticorin, information that a floating platform 40′ × 15′ × 5½′ could be constructed locally at a cost of Rs. 2,101 in round numbers; a platform of this size would suffice for a crane of 10 cwt, and the Director, Royal Indian Marine, estimates that the cost of crane and machinery would be about Rs. 10,000.

3. For receiving the silt, boats would have to be hired or special barges constructed. The hire of boats would be about Rs. 30 each and six boats would probably be necessary. This will not affect the initial cost of the dredger.

4. The total cost of the apparatus including the platform will be about Rs. 13,000 in round numbers, and this sum will have to be met from the Eastern Group Port Funds. In the forecast accompanying the letter No. 1730/18 G., dated 14th January 1898, a sum of Rs. 30,000 was specified as the amount likely to be required to meet dredging purposes.

Enclosure.

From Lieut.-Colonel O. V. BODDY, R.E., Superintending Engineer, VI Circle, to the Presidency Port Officer, Madras, dated Tuticorin, 11th February 1898, No. 85 T.N.

With reference to your letter No. 163/166, Public Works, dated 10th October 1897, I have the honour to inform you that I have had levels taken of the sea bed on each side of the pier at Tuticorin and also round the T head.

2. Comparing these levels with levels taken in 1891, that is, before the construction of the pier, I find that up to the T head, the sea bed remains much as it was. There has been a very little silting. It amounts on the north side to from 1 to 2 inches, and on the south side from 2 to 4 inches.

3. Round the T head there has been more silting. On the north side it amounts to 1 foot, on the east side to 6 inches and on the south side to 1¾ inches.

4. This silting is unquestionably due to the littoral currents bearing silt being checked at the T head, both by the piles, and by the boats lying alongside which draw some 5 feet of water, and thus depositing the silt.

5. I have examined the coast line and waters between Puckle's drain on the north to the Oopar odai on the south. I consider that the drainage carried out to sea through Puckle's drain can have had no effect in tending to silt up the sea bed in the vicinity of the pier, as it is shut off from access to the pier by the sand spit running out from near the Sub-Collector's bungalow and the shoal beyond.

6. The silt which reaches the pier is, I have not the slightest doubt, brought down by the Oopar odai, and carried on by currents to be deposited when their velocity or free flow is checked. The amount of deposit is very small and there is no remedy for this. All that can be done is, as you suggest, to dredge the accumulation out. I consider that a Priestman's type of dredger would do very well for this purpose, but I hardly think that it is necessary to obtain such an expensive apparatus as you propose.

7. The Port officer at Tuticorin could, I believe, construct a floating platform on which to mount the steam crane.

From H. A. Moss, Esq., General Superintendent, Public Works Workshops, to the Superintending Engineer, V Circle, No. 37 S.E./5, dated 7th June 1898.

With reference to paragraph 1 of the Chief Engineer's letter, received with your No. 132 P.W.S., dated 2nd April 1898, I have the honour to forward herewith a plan and estimate, amounting to Rs. 24,000, for building a barge for the Priestman's dredge at present in our stores and mounting the dredge on it.

2. I regret the long delay in sending the plan and estimate. It is due partly to the difficulty in getting at the weight of the dredge and partly to the delay in fitting it, to see what was required to complete it, but chiefly to the insufficiency of the drawing establishment in the Workshops office. We have only one draughtsman, a feeble old man, who is very slow. He gets a certain amount of assistance from the workshops marker, but he being equally ancient and feeble, his assistance is not of much value. These men may have been equal to their work formerly, but of late it has been too much for them and would be even if they were more capable than they are.

3. Consequently I have been unable to submit the complete set of working drawings showing every bolt and rivet that I should like to have sent in. This drawing now sent, however, will give a pretty complete idea of the construction of the barge proposed and will be enough for us to work from. The estimate too, I believe, will be found sufficient though necessarily only roughly approximate in some items. It allows for building the barge in the workshops here, and then sending it in pieces and fitting it up at Tuticorin.

4. The cost of the dredge itself has been taken at Rs. 11,000 which is its value as it lies in the stores now (Rs. 10,000 *plus* Rs. 1,000 the cost of completing and fitting it here. The latter item, I consider, ought to be written off from the first. I think Rs. 10,000 is too high and does not represent its present market value even if complete. The whole amount of Rs. 24,000, I think, will be found to be moderate when compared with the cost of any other floating dredge of equal power.

5. The object aimed at in the design of this barge has been to make it very strong to withstand the racking action of a large grab-dredge in working to make it stable and steady in working, by giving it considerable width and keeping the heavy weights as low as possible to make it of small draught and therefore as useful as possible, and by giving it a high free board to make it safe to work even in rough water. Its properties as a sea-going boat have been kept entirely subsidiary to these and the only attempt in that way has been to make it capable of steering sufficiently well when towed.

6. As the dredge complete with the framing necessary to secure it and distribute its weight will weigh nearly 20 tons, an equal amount of ballast will be required in the after-end of the barge to keep it on an even keel. It is so arranged that this ballast should as far as possible consist of a supply of coal and fresh water. Extra weight will, however, be needed. This will consist of stone, sand or other material as may be found convenient.

7. The cabins for the Engineer and crew will be placed amidships. A passage 5 feet wide is left between the two cabins for the carriage of coal, and to receive the grab when the dredge is not at work.

8. As the dredge is to work in salt water, the bottom would quickly become foul, if of iron, and the hull would require to be hauled up scraped and painted every year at least. As this is a slow and costly business, it has been thought best to build the hull of a strong iron framing covered with stout planking sheathed with copper.

The cost is not more than an entire iron hull would be, and it will have the advantage of not needing to be taken out of the water for repairs more than once in several years. The cross-frames of the barge are of angle iron as shown in the drawing. Longitudinal stiffness is given by four kelsons of 6″ × 4″ steel beams and a deep stringer of ½″ plate all round, just under the gunwale. The dredge itself is carried by two box-girders resting on and attached to the kelsons and extending from side to side. Additional intermediate kelsons are provided under these girders to better distribute the concentrated weight of the dredge over the forward-end of the boat. Four hand-winches are provided for warping the barge. Chains are led from these over-guide pulleys, two ahead and two astern.

9. The space for coals and ballast and the passage between the cabins will be floored with some hard jungle wood laid diagonally as shown. The portion of the passage floor on which the grab rests will be strengthened with an iron plate. Fully loaded and in working order, the barge ought to draw about 2 feet of water or less.

No. 391 W.

Submitted to the Chief Engineer, Public Works Department, with reference to paragraph 1 of his office-note No. $\frac{1871}{A}$ C., dated 26th March 1898.

14th June 1898.

(Signed). A. W. SMART, Colonel, R.E.,
Offg. Supg. Engineer, V Circle.

From H. A. MOSS, Esq., General Superintendent, Public Works Workshops, to the Chief Engineer, Public Works Department, dated Madras, 14th July 1898, No. 65 C.

With reference to your office-note No. 3106 C., dated 8th July 1898, I have the honour to report that the dredger can raise 600 tons per working day of 10 hours in free soil, and two-thirds of this quantity in sand or stiff soil. The stuff will have to be deposited in barges alongside. No barges are available in the Public Works Workshops.

2. The working day of a dredger is always 10 hours. It would interfere with work too much to make it less. A lot of time is necessarily lost in getting to work, and as this is the same for a short spell of work as for a long, more work is proportionately done in the long working day.

From Commander W. AVES, R.I.M., Acting Presidency Port Officer, Madras, to the Secretary to Government, Marine Department, dated 25th August 1898, No. 163/289 G.

With respect to Public Works Department Memorandum, No. 3384 C., dated 29th July 1898 (enclosures * herewith returned) I have the honour to report that the dredger in store at the Public Works Workshops appears to be well suited for the requirements of the port of Tuticorin. An extra allotment must, however, be made for anchors and chains.

* Per packet post.

2. No boats suitable for spoil are available at Tuticorin. They could, however, be built locally; but, I think, they would be better constructed at the Public Works Workshops and the draft could be fixed with greater certainty.

3. I would suggest the construction of three barges to carry the greatest possible quantity of spoil on a draft of 1½ feet.

4. In regard to the disposal of the spoil, the question has not yet been settled, but the best and most profitable method would appear to be to utilize the same in reclaiming more foreshore in extension of that already reclaimed. In the meantime the construction of the barges and the completing and fitting of the dredger might be proceeded with.

5. A small cooking place should be provided in the dredger.

Note by the Chief Engineer, Public Works Department.

Submitted to Government with the recommendation that the estimate be sanctioned. Copper sheathing to the hull is essential for working in salt water.

(Signed) W. B. DEWINTON,
Chief Engineer.

12th September 1898.

ORDER—No. 2479 W., dated 27th September 1898.

The estimate, amounting to Rs. 24,000, for building a barge and mounting on it the Priestman's dredger lying at present in the Public Works Workshops, Madras, is sanctioned.

2. The attention of the Superintending Engineer is drawn to paragraph 5 of the Presidency Port Officer's second letter above recorded, and to the note by the Chief Engineer, and he will submit, at an early date, an estimate for the construction of the three barges referred to in paragraph 3 of the same letter.

3. In the budget estimate under Port and Marine Funds for 1898–99, there is an allotment of Rs. 28,000 for a dredger for Tuticorin. The Financial Department will be requested to transfer the above provision to the Public Works Department.

4. The Presidency Port Officer will report whether the anchors and chains, required for the dredger, will be provided by the Port Department. The proposal of the same officer to utilise the spoil in the further reclamation of the foreshore at Tuticorin will be considered in the Marine Department.

5. The sanction accorded in paragraph 1 has been registered as Excluded Local No. 22 W., of 1898–99, and classified as Miscellaneous Public Improvements, Original Works.

(True Extract.)

Under Secretary to Government.

To the Superintending Engineer, V Circle,
with three enclosures.
„ Superintending Engineer, VI Circle.
„ Examiner, Public Works Accounts.
„ Presidency Port Officer.
„ Marine Department.
„ Financial Department.

Exd. Shaik Karim.

(1) The Hon Sir Henry Bliss, K C I E
(2) H E the Governor

P. W. DEPARTMENT.

Papers to be read in Proceedings :—

Again G.O., dated 189 , No.

Again G.O., dated 189 , No.

Current No. 464 (marine) of 1898, dated 14th April 1898, from The Presidency Port Officer.
" " 5079 " 1898, " 14th June 1898, " " Supdg. Engineer V Circ
" " 5941 " 1898, " 14th July 1898, " " General Supdt. P.W. Workshops
" " 1093 (marine) " 1898, " 25th Aug 1898, " " Presidency Port Officer

Note by the Chief Engineer, P.W. D, d/ No: 2479 W d/ 27.9.98,

ORDER.

To

(1) The Chief Secretary
~~(2) " In "~~

for favour of C. i.

17/11/98

A. G. H
21.9.98

× whe

D/W

× vide p 19 of the budget with G O No 243 marine d/ 31st March 1898. Flag B

The estimate, amounting to Rs 24,000, for building a barge an mounting on it the Priestman's dredger lying at present in the P.W. Workshops, Madras, is sanction

2. The attention of the Supdg. Eng is drawn to para 5 of the Presi Port Officer's second letter abov recorded, and to the note by the Chief Engineer, and he will subm at an early date, an estimate the construction of the three ba referred to in para 3 of the sa letter.

3. In the budget estima Port and Marine Funds for 18 there is an allotment × of Rs 20,0 dredger for Tuticorin. The Financi Deptt. will be requested to tr

P. W. 4.
500—27-1-98.

16.9.98 19.9.98 19.9.98 20.9.98

Superintendent, P

he above provision to ~~this~~ the Public Works department.

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5. The sanction accorded in para 1 has been registered s Excluded Local No 22 W f 1898-99, and classified as iscellaneous Public Improvements, riginal works.

APR
10.9.98.

W. 12-9-98

14/9/98

ts

Note. In G.O. No. 524 Marine, dated th June 1897, the Presidency Port Officer was requested to investigate and port the cause and extent of the ting at the port of Tuticorin. eport was submitted by that cer in September 1897, when was directed to consult the Supt. Engineer, VI Circle, as to what eded and should be done for the removal of the silt, *vide* G.O. No. 826 Marine, dated 22nd Sept. 1897. The Supt. Engineer's opinion is contained in the paper flagged G.

2. When inspecting the P.W. Workshops last March, the undersigned saw a Priestman's dredger lying there, and at once called for an estimate for putting it into working order and for constructing a barge ~~to on which to [illegible] put it on~~. The estimate was received and then referred to to the Presidency Port Officer for report whether the dredger will suit[×] the requirements of the Tuticorin port. In reply, the Presidency Port Officer states that it will be well suited to the port *vide* his letter flagged T.

3. The Presidency Port Offic reports that no boats suitabl for spoil are available at Tuticorin, and suggests that 3 bar to carry the greatest possibl quantity of spoil, on a dra of 1½ feet, may be construct at the workshops. It is prop

× When inspecting Tuticorin port in March last in company with the P.P.O & S.E. VI circle he decided that dredging round the T head of the pier would best meet the requirements of the port

T/B
14.241
28/9/98
U.R.C.

O Flag H

To

The S.E. V Circle with encls
" S.E. VI Circle √
" Examiner P.W. Accts.
" P.P.O.
" Marine Deptt. √
" Financial Deptt. √

17/10/98

(3)

O Flag G

4 Flag S

to ask the Supt.g Engineer V Circle, to submit an estimate for the barges.

4. The draft order ~~provides for~~ contains a para requesting the Financial Dept ~~the~~ to transfer, to the P.W. Deptt., ~~&~~ the provision of Rs. 28,000 in the Port and Marine fund budget for 1898-99, for a dredger for Tuticorin.

5. The suggestion of the Presidency Port Officer to utilise the spoil in reclaiming more foreshore, in extension of that already reclaimed, will be considered in the Marine Deptt.

6. In regard to the provision of anchors and chains for the dredger, adverted to in para 1 of the P.P.O's letter No. 163/289 G. d/25.8.98, that officer does not definitely say which department is to provide them. It is proposed to ask him to report on the point.

The technical details of the estimate re reviewed in the note flagged A.

APR
10.9.98.

W 12.9.98

P.K.S

+ Flag T

Marine (1898) Department.

CURRENT No. 464

From

The Presidency Port Officer,
Madras

Order

No. 163/140 G

Dated 14th april 1898
Received } 18 - do -
Registered }
Enclosures 1.
Spare copies

SUBJECT.

Forwarding with remarks a copy of letter from the Superintending Engineer, 6th Circle, in connection with the removal of the silt in the vicinity of the Tuticorin Pier.

(1)

Marine

0
16/4/98

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

No. 163/140 G

Heading

Presidency Port Office,

Madras, 14th April 1898.

From

Commander H.A.Street, R.I.M.,
Presidency Port Officer,
Madras,

To

THE SECRETARY TO GOVERNMENT,
MARINE DEPARTMENT,
CHEPAK.

Sir,

With reference to G. O. No. 826, Marine, dated 22nd September 1897, I have the honor to acquaint you, for the information of Government, that the Superintending Engineer, 6th Circle, has been consulted as directed in the G.O. above quoted, and I submit herewith a copy of his letter to me on the subject, in para 6 the Superintending Engineer states that he considers a Priestman type of dredger would do very well for the purpose of clearing away the silt, and suggests that a suitable platform to hold the crane might be constructed locally at Tuticorin.

2. I have now received from the Port Officer, Tuticorin, information that a floating platform 40' x 15' x 5½ could be constructed locally at a cost of ₨ 2,104 in round numbers; a platform of this size would suffice for a crane of 10 Cwts, and the Director, Royal Indian Marine, estimates that the cost of crane and machinery would be about ₨ 10,000.

3. For receiving the silt, boats would have to be hired

hired or special barges constructed. The hire of boats would be about ₨ 30 each and 6 boats would probably be necessary. This will not affect the initial cost of the dredger.

4. The total cost of the apparatus including the platform will be about ₨ 13,000 in round numbers, and this sum will have to be met from the Eastern Group Port Funds. In the forecast accompanying the letter No. 1730/18,G,dated 14th × January 1898, a sum of ₨ 30,000 was specified as the amount likely to be required to meet dredging purposes.

× Item 3 on page 80b G.O. 316 Mar. 729 apr '98 There is a provision of ₨ 25000 in the budget page 19 [illegible] 243 Mar 31-3-98

I have the honor to be,

Sir,

Your obedient servant,

H A Street

Commander, R.I.M.,

Presidency Port Officer.

No. 85. T.N.

Office of the Superintending Engineer,

6th Circle,

Tuticorin, 11th February 1898.

From

Lt. Col. O. V. Boddy R.E.

Superintending Engineer

VIth Circle.

To

The Presidency Port Officer

Madras.

Sir,

With reference to your letter No. 163/166 P.W. dated 10th October 1897, I have the honor to inform you that I have had levels taken of the Sea bed on each side of the pier at Tuticorin and also round the T head.

2. Comparing these levels with levels taken in 1891, that is, before the Construction of the pier, I find that up to the T head, the Sea bed remains much as it was. There has been a very little silting. It amounts on the north side to from 1 to 2 inches, and on the South side from 2 to 4 inches.

3. Round the T head there has been more silting. On the north side it amounts to 1 foot, on the east side to 6 inches and on the South side to 13/4 inches.

4

4. This Silting is unquestionably due to the littoral currents bearing Silt being checked at the "T" head, both by the piles, and by the boats lying alongside which draw some 5 feet of water, and thus depositing the Silt.

5. I have examined the coast line and waters between Puckles drain on the north, to the Oopar odai on the South – I consider that the drainage carried out to Sea through Puckle's drain can have had no effect in tending to Silt up the Sea bed in the vicinity of the Pier, as it is Shut off from access to the Pier by the Sand Spit running out from near the Sub Collector's bungalow and the Shoal beyond.

6. The Silt which reaches the pier is, I have not the Slightest doubt, brought down by the Oopar odai, and carried on by currents to be deposited when their velocity or free flow is checked: The amount of deposit is very Small and there is no remedy for this. All that can be done is as you Suggest, to to dredge the accumulation out. I consider that a Priestman's type of dredger would do very well for this purpose, but I hardly think that it is necessary to obtain such an expensive apparatus as you propose.

7/

7. The Port Officer at Tuticorin could, I believe, construct a floating platform on which to mount the Steam Crane.

I have &ca

(Sd) O. J. Boddy

Lt. Col. R.E.

Superintending Engineer

VI Circle

(True Copy)

H. A. Street

Commander, R.I.M.,

Presidency Port Officer

Madras

14th April 1898

Ma. E.1
464/98

No. 3106 C - d/8-7-98 No.

Government of Madras.

DEPARTMENT.

9

Madras, 189 .

OFFICE NOTE.

From
W

To The Genl. Supt. P. W. Workshops

With reference to your letter to the S.E. V Circle, No: $37\frac{\text{SE}}{5}$ d/7 June 1898 forwarding an estimate of Rs: 24,000 for building a barge for the Priestman's Dredger at present lying in the P. W. Workshops and mounting the dredger on it for use at Tuticorin, please say what amount of stuff the dredger can raise per working day of 8 hours - It is presumed that it will have to be deposited into barges alongside - Are any available in the shops?

(Sd) W. B. de W
W

T. A

11/7/98 9/7/98

P. W. 48.
500—1-7-98.

... when sending it in pie...
and fitting it at Tuticorin
The co...
Superintendent, P

Cur. 5079

CAW

I send this paper through you, as the question of providing funds for the ~~w~~ work must be considered if it is intended to carry ~~out~~ it out immediately —

The provision of a dredger for Tuticorin Port is entered in the 5 year estimate of Port Fund expenditure & the cost is set down at Rs 28,000 — No grant for the work has however been made in the C. W. Excluded Local Budget.

Memo no 1871C d/ 26-3-98, in which this estimate was

No: 316 Marine d/ 29-4-98
" 1871/A C d/ 26.3.98
" 826 Mar: d/ 22.9.97
" 524 Mar: d/ 11.6.97
" 830 Mar: d/ 30.11.96

Public Works (1898) Department.

CURRENT No. 5079

Order

From The Supdg Engineer 5th Circle

No. 3918

Dated 14/16 June 1898.

Received 16.6.98

Enclosures ~~2~~ 3 (1 Plan)

Spare copies

SUBJECT.

Forwarding a Plan and Estimate for Rs 24,000 for building a Barge for the "Priestman's Dredge" at present lying in the Dock-ships Yard & mounting the Dredge on it.

To Superintendent
ACW 18-6-98

o L.S. 199 8/7

...re, and th...

and fitting it up at Tuticorin

The co... Superintendent

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

Public Works Department.

Current No. 5079

Letter No. 391 W

Dated 14/16 June 1898

From the Supdt. Engineer V Circle

NOTE BY TECHNICAL SECTION.

W

Name of work — Building a Barge for the Priestman's Dredge at present lying in the P.W.D. Workshops Yard, and mounting the Dredge on it. Est Rs 24,000.

This Estimate was called for in para 1 of Chief Engineer's Office-note No 1871 C dated 26th March 1898.

The Estimate provides for completing & fitting the Dredge and constructing a Barge for it in the workshops at Madras, & then sending it in pieces & fitting it up at Tuticorin.

The Estimate though necessarily roughly approximate will, it is believed, be fd. sufficient.

The Supdt. Engr. reports he is not able to furnish a comp[illegible] [illegible] working drawing[illegible] [illegible] e, and then send a [illegible] have [illegible] little [illegible]

and fitting it up at Tuticorin.

The co[illegible] [illegible] itself [illegible] taken [illegible]

at Ooty write

Cho 808

The barge seems [illegible]. Send plan, estimate & report to C.E. & ask him if he thinks it will fulfil the requirements of Tuticorin. Draft that will not [illegible] 2' — but first ask [illegible] Govt. Sec.

500— Superintendent, P

Draftsman, but believes the drawing submitted will give a good idea of the construction of the Barge and will be enough to work from.

The cost of Priestman's Dredge complete is valued at Rs. 10,000.

The Supdt's letter to the Supg. Engineer forwarding the Estimate & which is attached fully explains the nature of the construction of the Barge &c.

Rates. The P.W. Workshop rates have been accepted.

AEK
24. 6. 98. H.R.M.
23.6.98

note what am
stuff the dre
can raise per
day of 8 hours
& include this inf
in memo to G.O.
Ask the Collector if
are any barges or
boats at Tuticorin
suitable to take its
discharge into

5-7 [illegible]

Noted by Chief Engr.

Submitted to Govt. with the recommendation that the estimate be sanctioned. Copper sheathing to the hull is essential for working in salt water

AEK
24. 6. 98.

W

Draft office note to the General Supdt. P.W. Workshops is submitted for approval. On receipt of his reply the necessary reference to the P. P. O. will be made.

Maj
5/7/98.

(No. 5079)

Copy of a letter from H. A. Stoes Esquire, General Superintendent, P.W. Workshops, to the Superintending Engineer, 5th Circle, No. 37 S.E./5 dated 7th June 1898.

With reference to para 1 of the Chief Engineer's letter, received with your No. 132 P.W.S dated 2nd Ap 1898, I have the honour to forward herewith, a plan a estimate amounting to Rs 24,000/- for building a Bar for the Priestman's Dredge at present in our stores a mounting the Dredge on it.

2. I regret the long delay in sending the plan and estimate. It is due partly to the difficulty in getting at weight of the Dredge and partly to the delay in fittin to see what was required to complete it, but chiefly the insufficiency of the drawing establishment in the Workshops Office. We have only one Draughtsm a feeble old man, who is very slow. He gets a certain amount of assistance from the Workshops marker bu he being equally ancient and feeble, his assistance not of much value. These men may have been equal to their work formerly, but of late it has been too much for them and would be, even if they were more capable than they are.

3. Consequently I have been unable to submit the complete set of working drawings showing every bolt and rivet that I should like to have sent in. This drawing now sent however, will give a prett complete idea of the construction of the Barge proposed and will be enough for us to work from. The estimate too I believe will be found sufficient though necessarily only roughly approximate in some items. It allows for building the Barge in the Workshops here, and then sending it in pie and fitting it up at Tutiecorin.

4. The co [illegible]

500— Superintendent, P

11,000/. which is its value as it lies in the stores
r (Rs 10,000) plus Rs 1000 the cost of completing
fitting it here. The latter item I consider ought
written off from the first. I think Rs 10,000/. is
high and does not represent its present market
ue even if complete. The whole amount of Rs 24,000
ink will be found to be moderate when compared
h the cost of any other floating Dredge of equal
wer.

The object aimed at in the design of this Barge
as been to make it very strong to withstand the
cking action of a large grab-dredge in working
make it stable and steady in working by giving
considerable width and keeping the heavy
eights as low as possible to make it of small
raught and therefore as useful as possible, and
giving it a high free board to make it safe to
k even in rough water. Its properties as a
ea-going boat have been kept entirely subsidiary
these and the only attempt in that way has
en to make it capable of steering sufficiently
ell when towed.

As the Dredge complete with the framing
ecessary to secure it and distribute its weight will
eigh nearly 20 Tons, an equal amount of ballast
ill be required in the after end of the barge to
eep it on an even keel. It is so arranged that
this ballast should as far as possible consist
a supply of coal and fresh water. Extra weight
ill however be needed. This will consist of stone
nd or other material as may be found convenient.

The Cabins for the Engineers and Crew will be
ed a [illegible] ships. A pas[illegible] feet wide is left

5

between the two Cabins, for the carriage of co
and to receive the grab when the dredge is not a
8. As the dredge is to work in Salt water, t
bottom would quickly become foul, if of iron,
the hull would require to be hauled up ~~and~~ scr
and painted every year at least. As this is a slo
and costly business, it has been thought best
build the hull of a strong iron framing covere
with stout planking sheathed with copper. T
cost is not more than an entire iron hull wou
be, and it will have the advantage of not needi
to be taken out of the water for repairs more tha
once in several years. The cross-frames of the
Barge are of angle iron, as shown in the draw
Longitudinal stiffness is given by four Kelson
of 6"×4" steel beams and a deep stringer of ½" plat
all round, just under the gunwale. The dredge
itself is carried by two box-girders resting on
and attached to the kelsons and extending from sid
to side. Additional intermediate kelsons are
provided under these girders, to better distribut
the concentrated weight of the dredge, over the
forward end of the boat. Four hand-winches
are provided for warping the Barge. ~~Cahains~~ Chains ar
led from these over guide pulleys, two a head and
two astern.

It would mean dismantling and refitting the dredge each time.

9. The space for coals and ballast and the passage
between the Cabins will be floored with some
hard jungle wood laid diagonally as shown. The
portion of the passage floor on which the grab
rests, will be strengthened with an iron plate

500— al Superintenden

lly loaded and in working order, the Barge
ht to draw about 2 feet of water or less.

p 391 W

Submitted to the Chief Engineer, W. Department with reference to para 1 of his fice note N. 1871.C. dated 26 March 1898.

Eccls 2
1 Plan tracing
1 Estimate

x with 157 D
4/5/58

Colonel R.E.
Offg. Supdg. Engineer 5th Circle

14/16 June 1898.

Mar Genl 4 / 1053858

No. 65/L.

PRESIDENCY P. W. WORKSHOPS OFFICE,
Madras, 14th July 1898.

From

H. A. MOSS, Esq.,
GENERAL SUPERINTENDENT,
PUBLIC WORKS WORKSHOPS,

68

To

The Chief Engineer
P. W. D.
Madras

Enclosures.

SIR,

With reference to your office note No 3106 dated 8th July 1898, I have the honour to report that the dredger can raise 600 Tons per working day of 10 hours in free soil, and 2/3rds. of this quantity in sand or stiff soil. The stuff will have to be deposited in barges alongside. No barges are available in the Public Works Workshops.

2 The working-day of a dredger, is always 10 hours. It would interfere with work too much, to make it less. A lot of time is necessarily lost in getting to work, and as this is the same for a short spell of work as for a long, more work is proportionately done in the long working day.

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

H Moss
~~General Superintendent,~~
Executive Engineer,
. W. Workshops

500—17-9-97.

No. 3106 C d/ 8-7-98
316 Mn d/ 29-4-98
1871 C / A d/ 26-3-98
826 Mn d/ 22-9-97
524 Mn d/ 11-6-97.
830 Mn d/ 30-11-96

P. W. Current No: 5941

From

THE GENERAL SUPERINTENDENT,
PUBLIC WORKS WORKSHOPS,
Madras,

To

The Chief Engineer
P.W.D
Madras

No. 65/6.

Dated 14 }
Despatched 14 } July 1898.
Received 15 }

No. OF ENCLOSURES.

Subject.

Reports that the "Priestman" Dredger at present lying in these Workshops, can raise 600 Tons of stuff per working day of 10 hours in free soil, & 2/3rds of that quantity in sandy or stiff soil &c &c

Please see orders already issued in 5-7-98

25-7-98

W
Await orders
AGK 27-7-98.
DW

L.S 247

3106 C

Marine (1898) Department.

CURRENT No. 1843

4

Order

From

The Presidency Port officer
Madras

No. 163/289 G

Dated 25 August 1898
Received 29-8-98
Enclosures 1 Plan, 1 Report & 1 Estimate
4* (* 1 Plan)
Spare copies

SUBJECT.

Reporting that the Dredger in store at the Public Works Workshops appears to be well suited for the requirements of the Port of Tuticorin

O.L.S 367

BACK PAPERS.		FURTHER PAPERS.	
No.	Date.	No.	Date.
243 Mar	31-3-98		
3384 C	29-7-98		
826 M	22-9-97		
524 M	11-6-97		
830 M	30-11-96		

Removed ~~Kept~~
restored to Marine
records. Jns
22-9-58

KS 247

No. 163/289 G

Presidency Port Office,

Head

Madras, 25th August 1898.

71

From

Commander W. Aves, R. I. M.,
Ag Presidency Port Officer,
Madras,

To

THE SECRETARY TO GOVERNMENT,
MARINE DEPARTMENT,
CHEPAK.

Sir,

With respect to Public Works Department Memorandum, No 3384, C, dated 29th July 1898 (enclosures herewith returned) I have the honour to report that the Dredger in store at the Public Works Workshops appears to be well suited for the requirements of the Port of Tuticorin. An extra allotment must, however, be made for, anchors and chains.

or packet post.

The amount provided in the budget is Rs 28,000. Vide page 19 of G.O. 243 Mar of 31st March/98

2. No boats suitable for spoil are

are available at Tuticorin. They could, however, be built locally but I think they would be better constructed at the Public Works Workshops and the draft could be fixed with greater certainty.

3. I would suggest the construction of 3 barges to carry the greatest possible quantity of spoil, on a draft of 1½ ft.

4. In regard to the disposal of the spoil, the question has not yet been settled, but the best and most profitable method would appear to be to utilize the same in reclaiming more foreshore in extension of that already reclaimed. In the meantime the construction of the barges and the completing and fitting of the dredger might be proceeded with.

5. A small cooking place hould be provided in the dredge

I have the honour to b
Sir,
Your obdt. servant
J H Aves
Commander, R. I. M
Ag: Presy: Port Office

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4.

the spoil
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In
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an

called for, is a copy
with No. 157 D of 2.5.98,
& the D.O.'s office will
be able to put up
the papers for you –
I understand
that there are also
papers in the Marine
Dept about a
Dredger for Intercomi-
appointing the
estimate must be
sanctioned for execution
when funds are
available –

24/6/98

Papers with C No. 808 9-98
28 June 98

W
Submitted. There is a
budget provision of Rs 28000
for a dredger at Intercomi. vide
p. 19 of the budget with G.O.
243. Marine of 31 Mar 98.
[illegible]

P. W. Dept

Note by the Chief Engineer, P.W.D.

Submitted to Government with the recommendation that the estimate be sanctioned. Copper sheathing to the hull is essential for working in salt water.

12-5-98
C.W.