Public Works (1896) Department.

✓

G.O., No. 2217 W

DATED 30th August '98

2/9/98

[Despatch Abstract.]

Havelock Point

Sanctioning, with remarks, An Estimate of Rs 1550 for Constructing an underground Water tank (in connection with the light house at ~~at~~ in the Kistna Dt:

100/LX

9/B

P. W. 36.
1,000—12-2-99.

Indexed. 31/8

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. 2217 W., 30th August 1898.

AUGUST.

Havelock Point

Sanctioning, with remarks, an estimate of Rs. 1,550 for constructing an underground water-tank in connection with the lighthouse at — in the Kistna district.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following papers:—

From F. W. ASHPITEL, Esq., Superintendent of Works, Lighthouse Division, to the Secretary to Government, Public Works Department (through the Presidency Port Officer, Madras), dated Madras, 20th May 1898, No. 1038.

I have the honour to forward herewith, for favour of sanction, plans and estimates for an underground drinking-water tank and compound wall in connection with the works now going on at Havelock Point.

No. 188 G.

Forwarded for sanction observing that the tank is a necessity.

(Signed) H. A. STREET, Comdr., R.I.M.,
Presidency Port Officer.

23rd May 1898.

From F. W. ASHPITEL, Esq., Superintendent of Works, Lighthouse Division, to the Chief Engineer, Public Works Department, dated Madras, 6th July 1898, No. 1135.

With reference to your No. 2990 C., dated 28th June 1898, I have the honour to return herewith the estimate for a drinking-water tank and compound wall at Havelock point with a data sheet for favour of final orders.

2. The gate opens outwards and it was intended to provide a ramp in rear, *i.e.*, inside the compound, in which case the height of the posts appears to be correct.

3. The foundation of the wall has been increased by 6 inches.

4. The iron tanks now at Point Divi are 8 in number and have a total capacity of about 2,900 gallons. An estimate was originally prepared for a double-tiled water-shed, but the cost would be greater than that of the proposed underground tank. If a temporary shed is erected it will, I think, never be satisfactory as the difficulty in obtaining materials for periodical repairs will be very considerable in such an out-of-the-way place. If a shed is preferred I would suggest corrugated iron on old rails as posts, the roof, if necessary, being made double. A corrugated iron shed will be far preferable to the existing system of leaving the tank exposed to the full force of the sun and, if the sides and ends are left open, there will be a free current of air

The difficulty in sinking a water-tight underground cistern was not lost sight of, and it was only on seeing that the tower wells were practically water-tight that it was finally decided to submit an estimate for an underground tank. The bottom will give the greatest trouble, but I do not think that this difficulty is insuperable as Messrs. Arbuthnot & Co. have agreed to manufacture a small quantity of quick setting cement for this work. The concrete will be plastered with cement mortar, 4 cement to 1 sand; the proportion of cement to sand being taken from Mr. Mansetgh's specification for Chesham water-works when a number of manholes were built below ordinary spring level. These manholes, so far as I recollect, were made water-tight without much difficulty.

5. The rate for cement concrete is Rs. 57 in mass and Rs. 74 for block work. The cement has to be brought from Madras; the concrete from Bezwada, with a transhipment from the canal into the river; the sand from a distance of 20 miles. The data sheet gives particulars. The reason for the difference in price of cement plaster in the two estimates is that one is 4 cement to 1 sand as explained above, and the other 1 cement to 2 sand. This information was omitted by an oversight in the original estimate.

From F. W. ASHPITEL, Esq., Superintendent of Works, Lighthouse Division, to the Chief Engineer, Public Works Department, dated Madras, 6th August 1898, No. 1190.

With reference to your No. 3386 C., dated 29th July 1898, I have the honour to inform you that it will be necessary to supply the Kistna lighthouse (Havelock Point) with water from the river at a distance of about ¾ mile from the site during six months in the year, and for the rest of the year from the canals distant 10 miles, or from the river at a distance of about 20 miles when the canals are closed. The water will be brought to the site by means of a boat and the tank filled by hand. The charge will be met from the annual maintenance grants as is now done at Divi lighthouse.

2. The estimate for a compound wall was prepared at the request of the Presidency Port Officer, and the wall is designed to exclude from the lighthouse premises pigs and cattle which are turned out on the island by the villagers.

Order—No. 2217 W., dated 30th August 1898.

With his letter, No. 1038, dated 20th May 1898, the Superintendent of Works, Lighthouse division, submits for sanction the following estimates for works connected with the lighthouse at Havelock Point in the Kistna district:—

	RS.
(*a*) Constructing a compound wall with gate pillars and shutters ...	2,100
(*b*) Constructing an underground water-tank	1,550
	3,650

2. Item (*a*), the necessity for which has not been established, will be disallowed.

3. Item (*b*) is sanctioned as supplemental to the estimate of Rs. 1,13,240 for the lighthouse and its subsidiary buildings, sanctioned in G.O., No. 670 W., dated 8th March 1897.

4. The expenditure on the project to end of 1897–98 was Rs. 32,225, and a sum of Rs. 83,000 has been provided for it in the current year's budget.

5. The sanction accorded in paragraph 3 has been registered as Excluded Local, No. 19 W. of 1898–99, and classified as Miscellaneous Public Improvements—Original Works.

(True Extract.)

Under Secretary to Government.

To the Superintendent of Works, Lighthouse Division,
with nine enclosures.
" Examiner, Public Works Accounts.
" Marine Department.

Exd. T. K. Narayana Aiyangar.

The Honourable Sir W. W. Blair K.C.I.E
His Excellency 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. 4481 of 1898, dated 20th May, from the Supt. of Works, L. H. Dn.
Endt. thereon by the P.P.O. No. 188 G d/23rd May 1898.
„ „ 5672 „ 1898, „ 6th July , „ -Do-
„ „ 6600 „ 1898, „ 6th August , , -Do-

ORDER.

No 2217 W dated 30.8.98

19/8/98

A.S.H. 24.8.98

With his letter No. 1038 dated 20th May 1898, the Superintendent of Works Lighthouse Division, submits for sanction the following estimates for works connected with the Lighthouse at Havelock Point in the --- Kistna District.

(a) Constructing a compound wall with gate pillars and shutters..........Rs. 2,100
(b) Constructing an underground water tank......„ 1,550
3,650

2. Item (a), the necessity for which has not been established, will be disallowed.

3. Item (b) is sanctioned, as supplemental to the estimate of Rs. 1,13,240 for the Lighthouse and its subsidiary buildings, sanctioned in G.O. No. 675 W, dated 8th March, 1897.

4. The expenditure on the project to end of 1897-98 was Rs. 32,225, and a sum of Rs. 83,000 has been provided for it in the current years

Flag S

P. W. 4.
500—24-3-98.

HE 20. 8.98 R 25-8-98

year's budget.

5. The sanction accorded in para 3 has been registered as Excluded Local No. 19 W of 1898-99 and classified as Miscellaneous Public Improvements, Original Works.

APW
18-8-98
Dw.

I/B

14/9/98

The Supt. of Works, Lighthouse Dn, with 9 enclosures.
,, Examiner, P.W. Accounts.
,, Marine Department.

2217W

Public Works Department.

Note for the Honourable Sir Henry Bliss, K.C.I.E.

In accordance with the Hon. Member's remarks on the Note for Orders on C. No. 6600, a revised draft order disallowing the proposal to construct a compound wall is submitted for approval.

Flag A.

2. The Order forbidding the preparation of estimates for works costing over Rs.500 without the prior sanction of Government is G.O. No. 2806 W dated 7th October 1892. This G.O., it is submitted, ~~cannot be~~ will, if applied to the estimates to be framed by Mr. Ashpitel, who has been specially deputed to prepare estimates for works considered necessary in connection with Light House Improvements, cause much delay in preparation of estimates. The G.O. has also since been cancelled, *vide* No. 1701 W dated 6th July 1898.

Flag B.

Flag C.

KS 19/8/98

APW
18-8-98
Dw.

H.M. 18.8.98 20.8.98 H.E. 20.8.98 25.8.98

Dw

Could you kindly tell me whether the name underlined in pencil in para 4 of Mr Ashpitel's letter No. 1135 of 6.7.98 is

Mansergh's

or

Manscrgh's.

The name is not clear in the original, & I cannot find ~~the name~~ it in any book of reference.

RAR
8.9.98.

MANSERGH'S

I should say

AKR
8.9.98.

What is this wanted for?

AKR
8.9.

Dw The papers are being printed.

A

(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. 4481 of 1898, dated 23rd May 1898, from the P.P.G

" " 5672 " 1898, " 1st July 1898, " the S.W. Lt.-H. Dn

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

ORDER.

The undermentioned estimates, aggregating Rs 3.900, as altered by the Chief Engineer, for works connected with the Light-house at Havelock Point, in the Kistna district, are sanctioned as supplemental to the estimate of Rs 1.13.240 sanctioned in G.O. No 670W, dated 8th March, 1897:—

		Rs
(a)	Constg a compound wall with gate pillars and shutters —	2.350
(b)	Constg an underground water tank —	1.550
	Total	3.900

2 The Supt of Works will report whether the expenditure on these works can be met from the allotment of Rs 83.000 made ~~to~~ for the light house in the Excluded Local Fund Budget for 1898-99.

3 Attention is drawn to the — Chief

I don't understand how it is proposed to fill the water tank — As to the compound wall, I can't see the need of it. It seems to be only one of Capt. Street's many devices for spending money unnecessarily.

Rs
19/7/98

Please see portion of Report & flag W of the tank estimate, marked in red pencil. The tank will be filled by hand. A compound wall is generally necessary for light house buildings, to keep them free from straying animals. Whether this is the case in the isolated position of Havelock Point I don't know & have therefore accepted the opinion of officers with local knowledge.

21.7.98

A

B

A. I want to make enquiry about this. Who is going

H.C

Again 9 H. la 18.7.98 Rec 20.7.98

Chief Engineer's note read above.

4. The sanction accorded in para 1 has been registered as Excluded Local No. W of 1898-99, and classified as Miscellaneous Public Improvements, Original Works.

AKR
16-7-98.

Cn

18.7

W

P.K.S.

Note. The estimates are dealt with in the technical note flagged B, and the note by the Chief Engineer.

2. The sanctioned estimate for the lighthouse amounts to Rs 1.13.240, against which an outlay of Rs 32.225 ~~has been~~ was incurred to end of 1897-98. The balance of estimate comes to Rs 81.015 for which a grant of Rs 83.000 has been provided in 1898-99. There is thus an excess provision of Rs 1.985 and it is proposed to ask the Supt of Works to report whether the works now sanctioned, which cost Rs 3.900, can be executed from the allotment to the Light House. The balance of reserve under Port Funds amounts to Rs 2.267 and is required to meet small demands that are constantly coming in.

AKR
16.7.98.

Cn

W

P.K.S

to pay! Surely, if water has to be got from more than a furlong's distance, conveyance by hand will be ruinous.

B. Please enquire – I did not know there was any population or cattle near of the place.

KS
22/7/98

To

The S.W. Lt. H. Dn. with [illegible]
Exam. P.W. Accts
Marine Dept

The necessity for the drinking water tank is explained in the Report attached to the estimate – after correspondence with the [illegible]! believe it to be the best arrangement possible. The compound wall is asked by the T.O. –

18.7.98

Public Works (1898) Department.

CURRENT No. 6600

The Hon. Sir Henry Bliss K.C.I.E.

From The Supdt of works,
Light house Dn. Madras.

No. 1190

Dated 6th August 1898

Received
Registered 8-8-98

Enclosures

Spare copies

For **Orders**

Submitted, with reference to the Hon: Member's notes on the draft G.O. flagged H. The Supdt L.H. Dn. does not say what the annual charge for water supply is, but as the Establishment charges budgetted for such charges is only Rs 200x, it cannot be much.

AKR
9.8.98

11.8.98

x vide page 20 of Budget
Flag B.

Very good as to the tank – as to the wall, I think they must do without it – [illegible] there an order, by the way.

O.L.5278

H.M. 11.8.98 R 15.8.98

SUBJECT.

Underground water tank –

Informing how the — is to be filled in and furnishing explanation in regard to the necessity for the proposed compound wall.

HC

BACK PAPERS.

No.	Date.
3386 C	29-7-98
2990 C	28-6-98

FURTHER PAPERS.

No.	Date.

that Estm exceeding Rs 500 are not to be prepared without Govt. order – If so, Mr. Ashpitel shd. not have prepared either of these Estes.

12/8/98

OFFICE OF THE SUPT. OF WORKS, LIGHT-HOUSE DIVN.,
Egmore, Madras,

No. 1190

Dated 6th August 1898.

From

F. W. ASHPITEL, ESQ.,
SUPERINTENDENT OF WORKS,
LIGHT-HOUSE DIVISION,
Madras,

To

THE Chief Engineer,
Public Works Department.

SIR,

With reference to your No. 3386 C dated 29th July 1898 I have the honor to inform you that it will be necessary to supply the Kistna lighthouse (Havelock Point) with water from the river at a distance of about 3/4 mile from the site during 6 months in the year and for the rest of the year from the canals distant 10 miles or from the river at a distance of about 20 miles when the canals are closed. The water will be brought to the site by means of a boat and the tank filled by hand. The charge will be met from the Annual Maintenance grants as is now done at Divi Lighthouse

The

(2) The estimate for a compound wall was prepared at the request of the Presidency Port Officer and the wall is designed to exclude from the light house premises pigs and cattle which are turned out on the island by the villagers.

I have the honor to be,
Sir,
Your most obed.t servt,

Superintendent of Works,
Light House Division.

C/11.98

---

foundations by 6 inches as ordered by W & the panel wall from 4½" to 9 inches.

The excess will be as under.

	Dec.	Incr.
Excavation ——	" –	3.
Concrete ——	" –	163.
Earthwork raising	15 –	"
Brickwork ——	" –	138
Cement plaster	32 –	"
	47 –	304.
Contingencies %.	7 –	"
	54	304
		– 54
Total excess Rs		250

Permission is requested to ink in these figures &c. from the sanctioning order if E W's note is put up.

T/

15.7.98

Yes, and then G O can be drafted in correspondence branch.

ASK
15.7.98.

Sdw/ The corrections have been inked in.

16.7.98

Note by Chief Eng.r

The original estimate submitted by the Supt. of Works, Lighthouse Divn, for a drinking water tank and compound wall at Havelock Point has been raised in this office from Rs 2,100 to Rs 2,350 by increasing the depth of the foundations of the wall by 6" and the thickness of the upper part of the wall from 4½ to 9".

2. With these alterations, the estimate is ~~submitted~~ recommended for the sanction of Govt.

ASK
15.7.98.

15.7.98

(2) The estimate for
prepared at the request o,
and the wall is desig
light house premises p
turned out on the isla

C 15.98

Chs 56 7 2

Dw

Submitted with reference to W's own.

I think you subsequently ~~wrote~~ wrote to W to the effect that the thickness of the wall need not be increased —

C
13-7-98

T

Estimate for increasing thickness of wall to 9" and sanction estimate with a note to that effect.

ASK
14-7-98.

Dw/ The estimate has been corrected in pencil & the amount ^increased^ from Rs 2100 to Rs 2350

The above corrections provide for increasing the depth of founda-

---

W

Compou
hou

Chs 5672

ness of the
, been increased
to 9" as asked by you, but I hardly think it is necessary.

2. On the inside, the wall is only of 4½" thickness for 2 ft in height, see Site Plan; while outside the compound, this portion of the wall forms a light top to the 18" of wall below, which is 9" thick.

ASK
15-7-98.

Note by Chief Engr

The original estimate submitted by the Supt of Works, Lighthouse Divn, for a drinking water tank and compound wall at Handock Point has been raised in this office from Rs 2,100 to Rs 2,350 by increasing the ^depth of the^ foundations of the wall by 6" and the thickness of the upper part of the wall from 4½ ^to^ 9".

2. With these alterations, the estimate is ~~submitted~~ ^recommended^ for the sanction
Govt.

ASK
15-7-98.

15-7-98

(2) The estimate 4

prepared at the request

and the wall is des

light house premises

turned out on the is

W
Compound Wall, Div Light-house

In mentioning yesterday that the half brick thickness of this wall is insufficient to stand wind pressure, I forgot for the moment that the wall ~~was~~ is to be plastered with Portland cement. This increases its tensile strength enormously, the wall being practically encased by a material with a very high resistance to tension.

2. The ½ brick thickness is sufficient, and such cement plastering seems suitable in exposed situations near the sea for brick walls ~~founded~~ liable to deteriorate from exposure to sea air.

ASK
10.7.98.

Note by Chief Engr

The original estimate submitted by the Supt. of Works, Lighthouse Divn, for a drinking water tank and compound wall at Hanstock Point has been raised in this office from Rs 2,100 to Rs 2,250 by increasing the depth of the foundations of the wall by 6" and the thickness of the upper part of the wall from 4½" to 1' 9".

2. With these alterations, the estimate is recommended ~~submitted~~ for the sanction of Govt.

ASK
15.7.98.

16.7.98

(2) The estimate f

prepared at the request

and the wall is desc

light house premises

turned out on the is

A 4½" wall will hardly withstand the wind pressure but I much doubt its withstanding the pressure of a cow or buffalo! Better make it 9".

12.7.98

Noted
ASK
14.7.98.

Note by Chief Engr.

The original estimate submitted by the Supdt. of Works, Lighthouse Divn., for a drinking water tank and compound wall at Amelock Point has been raised in this office from Rs 2,100 to Rs 2,350 by increasing the depth of the foundations of the wall by 6" and the thickness of the upper part of the wall from 4½" to 9".*

2. With these alterations, the estimate is ~~submitted~~ recommended for the sanction of Govt.

ASK
15.7.98.

* See separate note

15.7.98

C/ No. 3386C d/ 29-7-98

Public Works Department.

Memorandum.

Letter from the Superintendent of Works, L.H. Division, No. 1038, dated 20th May 1898.

- do - - do - No. 1135, dated 6th July 1898.

With reference to the proposal to construct an underground water tank in connection with the Lighthouse at Havelock Point in the Kistna District, the undersigned is directed to inquire how it is proposed to fill the tank. If it is to be filled by hand, information is requested as to how the charge is to be met. ~~If water has to be got from more than a few yards distance, conveyance by hand will surely be ruinous.~~

2. No explanation has been furnished in regard to the necessity for the proposed compound wall. It should be explained whether there is any population or cattle whose access to the Lighthouse has to be prevented.

26.7.98

~~A~~.W.

Mais

Secretary DW

To

The Superintendent of Works,

Lighthouse Division.

2/8/98

5/8/98

Public Works (1898) Department.

CURRENT No. 5672

From The Supdt. of works
Light House Dn.
Madras

Order

W

For orders

The data may be passed.

2. The underground water tank is quite capable of being made watertight. Light roofs on the coast will not stand the lifting force of the wind.

3. On looking at the plans again, I see the compound wall is only 4½" thick. My recent calculations (returned by you yesterday) shew this is too thin to resist wind pressure in exposed situations. Thickness might be increased to 9"

A.E.K.
9.7.98.

Estimates may be submitted for sanction. Make wall 9"

11.7.98

Madras

~~O.L. 223~~ O.L.S. 235 B 2d/7

No. 1135

Dated 6th July 1898.

Received
Registered } 7.7.98

Enclosures ~~5~~ 9 (2 plans)

Spare copies

SUBJECT.

Forwarding for issue of final orders the estimate for a drinking water tank and compound wall at Havelock point with a data sheet.

BACK PAPERS.

No.	Date.
2990C	28-6-98

FURTHER PAPERS.

No.	Date.

OFFICE OF THE SUPT. OF WORKS, LIGHT-HOUSE DIVN.,
Egmore, Madras,

No. 1135 Dated 6th July 1898.

38

From

F. W. ASHPITEL, Esq.,
SUPERINTENDENT OF WORKS,
LIGHT-HOUSE DIVISION,
Madras,

To

THE Chief Engineer,
Public Works Department.

SIR,

With reference to your No. 2990C dated 28th June 1898 I have the honor to return herewith the estimate for a drinking water tank and compound wall at Havelock point with a data sheet for favour of final orders.

(2) The gate opens outwards and it was intended to provide a ramp in rear i.e. inside the compound, in which case the height of the posts appears to be correct.

(3) The foundation of the wall has been increased by 6".

The

(4) The iron tanks now at Point Divi are 8* in number and have a total capacity of about 2900 gallons. An estimate was originally prepared for a double tiled water shed but the cost would be greater than that of the proposed underground tank. If a temporary shed is erected it will, I think, never be satisfactory as the difficulty in obtaining materials for periodical repairs will be very considerable in such an out of the way place. If a shed is preferred I would suggest corrugated iron on old rails as posts, the roof, if necessary, being made double. A corrugated iron shed ~~would~~ will be far preferable to the existing system of having the tank exposed to the full force of the sun and, if the sides and ends are left open, there ~~would~~ will be a free current of air.

× 3½
2.

5 × 5 × 3
4 × 4 × 4

The difficulty in sinking a water tight underground cistern was not lost sight of and it

CR.

It was only on seeing that the tower wells were practically water tight that it was finally decided to submit an estimate for an underground tank. The bottom will give the greatest trouble but I do not think that this difficulty is insuperable as Messrs Arbuthnot & Co have agreed to manufacture a small quantity of quick setting cement for this work. The concrete will be plastered with cement mortar 4 cement to 1 sand; the proportion of cement to sand being taken from Mr Mansergh's specification for ~~Chisham~~ Chesham water works when a number of manholes were built below ordinary spring level. These manholes, so far as I recollect, were made watertight without much difficulty.

(5) The rate for cement concrete is Rs 57 in mass and Rs 74 for block work. The cement has to be brought from Madras, the concrete from Bezwada, with a transhipment from the Canal into the river; the sand from a distance of 20 miles. The data sheet gives particulars. The reason for

for the difference in price of cement plaster in the two estimates is that one is 4 cement to 1 sand as explained above and the other 1 cement to 2 sand. This information was omitted by an oversight in the original estimate.

I have the honor to be,
Sir,
Your most obedt. Servt.,

Superintendent of Works
Light-House Division

1.7.98.

Chw — G No 6600

What is the annual maintce grant for this L. House?

11/8

There are no means of ascertaining this in the office. The Budget exhibits the charges under main heads. e.g. "ob", "Stores", "other charges" for each group of ports — vide p.20

P.W. DEPARTMENT.

Proceedings :—

189 , No.
189 , No.
May 1898, from The P. P. G.

The undermentioned estimates, aggregating Rs 3.650, for works connected with the light-house at Havelock Point in the Kistna district are sanctioned as supplemental to the estimate of Rs 1.13.240 sanctioned in G.O. No 670W dated 8th March 1897:—

(a) Constg a compound wall with gate pillars and shutters —	Rs 2.100
(b) Constg an underground water tank —	„ 1.550
Total	Rs 3.650

2 This sanction has been registered as Excluded Local No W of 1898-99 and classified as Miscellaneous Public Improvements. Original Works.

AEK
16-6-98.

P.K.S.

W

See [illegible]

To
The S. W. L. H. Dn
. Examr P.W. Accts
. Marine Dept

P. W. 4.
500—24-3-98.

P.T.G.

Note. The estimates have been dealt with in the accompanying technical note. The Presidency Port Officer in forwarding the estimates for sanction, observes that the proposed tank is a necessity.

P.K.S

W

H.C.

Sanction estimate for

Wr's approval

ACK

14-6-98.

Public Works Department.

Current No. 4481

Letter No. 188 G

Dated 23rd May 1898

From the Presidency Port Officer.

NOTE BY TECHNICAL SECTION.

Name of work Light house with subsidiary buildings at Havelock point Kistna District.

The Supdt. of Works, Light House submits for the sanction of Govt. plans and estimates for an underground drinking water tank and a compound wall in connection with the Light house and subsidiary buildings, now in progress at Havelock point, (formerly called False point Devi) in the Kistna Dist.

An estimate amounting to Rs 1,13,240 was sanctioned for the w in G.O. No. 690 W dated 8th March 9 in which no provision was ma for a compound wall & an underground water tank. The estimate now submitted therefore provid for the following works.

(a) Compound wall with gate pillars & shutters —— Rs 2

(b) Underground water tank 1,5

Total Rupees 3,

P. W. 60
28-9-97.

Item (a) The compound wall which encloses the light house buildings, as shewn on site plan, it will be 50 ft. long and fitted with a gate shutter 9 feet wide. The wall will be 4 feet high above ground level to top of coping and will be built of brickwork in chunam on foundations 1'6" in depth of which the lower one foot will be laid with concrete in lime mortar & the upper 6 inches of brick in mortar. The surface of the compound wall both interior and exterior will be plastered with cement.

The wall will be built in pilasters of 10 feet centres, projecting 2¼ inches on either face of the wall and will be pierced 1'6" above ground surface at intervals, as shewn on plan. The gate pillars will be 1'10½ feet square & raised 5½ feet to which will be fastened the shutters, which will be of teakwood.

Item (b) The sanctioned estimate provided for iron water tanks without any roof covering. The Presidency Port Officer after his inspection of the works has requested that a shed be constructed over these iron tanks. The construction of these tanks it is reported, would be expensive owing to the nature of the soil & that the tanks themselves [illegible] before. It is

W/

(1) Yes, but through an oversight I forgot to point out that the gate pillars have to be increased 18" in height to work the shutters.

It will only be 2½' high above proposed ground level. It is apparently intended to raise the level of compound 18 inches — to bring it above H.T.L. ½ this to 10.

Nature of subsoil not stated.

(2) The foundns. are too light. Add 6" to the concrete = 18" in all

The merit of this proposal seems to me very open to question. I presume the [illegible] L.H. Dn. be satisfied himself that he can sink a fresh water well, and make it watertight, several feet below tide level; but I think he will find it a more difficult process than he anticipates. As apparently the iron tanks are already on the spot, it would be better to sink them in the ground and cover them with a roof of palmyra leaves supported on casuarina poles, than to go to the expense of the proposed cistern.

It is therefore proposed to abandon the idea of using the iron tanks & to construct an underground cistern to contain a capacity of about 3700 gallons, sufficient for 10 persons at 5 gallons per head per day for 2½ months. One cistern is only provided for and when cleaning is found necessary the water could be stored, as a temporary measure, in the iron tanks now at site. The supply for the remaining months, it is reported, could be obtained from the Kistna river near the light house also from the canal or river higher up in case of canal closure.

The underground tank will be 8½ feet in diar. and 10 feet in depth to rise of dome. The dome will be built in slips of 9½ inches or 3'2" the whole rise, giving a total capacity for the cistern 588 cft. or 366 gallons or say 3700 gallons of fresh water.

The floor of the tank will be of cement concrete 2½ feet in depth & the steining of the well or tank built of cement concrete blocks & the surface plastered with ½" cement.

Lump sum provisions have been made for a pump at Rs manhole cover Rs 25. Sinking

Sinking well including earth Rs 200, + baling water Rs 50.

Many of the rates cannot be checked. They appear to be experimental ones, as great difficulty is stated to be experienced for want of water & labourers.

The estimates have been countersigned by the Presidency Port Officer, but not the plans. They should be approved in the Marine Dept. before sanction.

AEK
14-6-98.

13.6.98.

W.

Burnt bricks are not procurable at Diu, and the Well is therefore proposed to be built of cement concrete blocks.

2. The soil in which the compound wall is to be built is probably sand or sandy earth, & the foundations are somewhat light. But beyond the occasional storms of wind, no pressure will be brought to bear on them.

AEK
14-6-98.

The locality is very remote, & high rates are a necessity

The rate for cement concrete blocks is extraordinarily high, and to be supported by data. Why is cement (3) plastering 1/2" thick valued at Rs 12/- in one estimate and Rs 7/- in the other?

Estimate &c should be returned for further consideration in the light of the above remarks.

14-6-98

P.W.D.

No. 2990 C d/ 28/6/98

Memo.

With reference to letter from the Supdt. of Works N. D. Division No. 1038 dated 20th May 1898, the undersigned has the honour to return the plans and estimate for an underground drinking water tank & compound wall at Havelock Point, for further consideration & revision in the light of the following remarks:—

(1) It is intended to raise the level of the compound by 18 inches to bring it above H.T.L., & this being

B PWD

DW

5/7/98

&c, it seems necessary to increase the height of the gate pillars by 18 inches to admit of the shutters being worked. A ramp in front of the gate also appears needed.

(2) The foundations of the wall are somewhat ~~too~~ light, and 6 inches might ~~be stated~~ be added to the depth of concrete.

(3) The merit of the proposal to abandon the use of iron tanks, & to construct an underground cistern in lieu, appears open to question. It is presumed that the Supt. of Works has satisfied himself that he can sink a fresh water well & make it watertight several feet below tide level, but the undersigned thinks that Mr Ashpitel will find it a more difficult process than he anticipates. As apparently the iron tanks are already on the spot, it would be better to sink them in the ground & cover them with a roof of ~~[illegible]~~ palmyra leaves supported on Casuarina poles, thus to save the expense of the proposed cistern.

(4) The rate for cement-concrete blocks is extraordinarily high, & should be supported by data. It should

be explained why cement plastering 1/2" thick, is entered at Rs 12 in one estimate, & Rs 7 in the other.

AOK
27.6.98.

CR

To the Supdt of Works
L. H. D.
with plans &
estimates (8)
24/6/98

P.W. 63.

Public Works (1898) Department.

CURRENT No. 4481

From The Supdt of Works
Light House Dn
Madras

Order

No. 1038

Dated 20th May 98
Received }
Registered } 25.5.98
Enclosures 2 ~~Reports 2 estimates &~~
(2 plans)
Spare copies

SUBJECT.

Submitting for favour of sanction plans & estimates for an under ground drinking water tank & compound wall at False Point Dn

I/ For sanction
CR
25.5.98

BACK PAPERS.

No.	Date.
670W	8-2-97

FURTHER PAPERS.

No.	Date.

---

21 MAY 98

OFFICE OF THE SUPT. OF WORKS, LIGHT-HOUSE DIVN.,
Egmore, Madras,

No. 1038

Dated 20th May 1898.

From

F. W. ASHPITEL, Esq.,
SUPERINTENDENT OF WORKS,
LIGHT-HOUSE DIVISION,
Madras,

To

THE Secretary to Government
Public Works Department
Thro' The Presidency Port officer, Madras.

SIR,

I have the honor to forward herewith for favour of sanction plans and estimates for an underground drinking water tank and compound wall in connection with the works now going on at ~~False~~ Havelock Point. ~~Dist~~ &ca.

I have the honor to be,
Sir,
Your most obedt. Servant,

F. W. Ashpitel

Superintendent of works
Light house Division

P. J. C

17.5.98.

8

No. 188 G

Forwarded for sanction observing that the tank is a necessity.—

Madras
Presidy Divn Office
23 May 1858

H. Abbott
Commdr & S.M
Presidy Divn