(1) பக்கங்களின் எண்ணிக்கை 14.

(2) புதுக்கித் திருப்பிய நாள் 7.8.91

(3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம் aly

தமிழ்நாடு ஆவணக் காப்பகம்.

தமிழ்நாடு அரசு

பொதுப்பணி. துறை

அரசாணை எண். மு. கோப்புத் தாள் எண்.	1627W	அச்சகம் பலவகை
நாள் :	19-6-1893	198 .

MSP

மடிக்கவோ கண்டபடி கையாளவோ கூடாது

ஆவண. கா-1—18.006—15-6-87.

19th June 1893, No. 1627 W., Public Works.

1627
-1-

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following paper :—

G.O., dated 5th June 1893, No. 180, Marine.

Read—the following papers :—

From the Presidency Port Officer, Madras, dated 3rd Feb. 1893, No. 690/50 G.

Abstract.—*Forwarding an indent for the new light proposed for Calingapatam.*

From the Chief Engineer for Irrigation, dated 21st February 1893, No. 14 W.

From the Presidency Port Officer, Madras, dated 24th March 1893, No. 690/19.

In continuation of this office No. 690/17, dated 11th January last, I have the honour to inform you that, on further consideration, I think some slight alteration in the present column at Calingapatam will be necessary to ensure the satisfactory working of the light. The alteration I propose is to add from 6 to 8 feet to the height of the column in the form of a service room which will improve the ventilation of the lantern and is an indispensable convenience in a light of this class.

I, therefore, request that the sanction of Government may be accorded to the preparation of the necessary estimate by the Public Works Department. The cost will probably be under Rs. 1,000. A sketch showing the proposed alteration is enclosed for inspection and return.

From the same officer, dated 5th May 1893, No. 690/136 G.

With reference to the letter from Mr. F. W. Ashpitel sent to me with your No. 450, dated 8th March 1893, and herewith returned, I have the honour to submit the following remarks.

2. The light proposed for Calingapatam is not intended solely as a guide to clear the "Satara" reef situated about $\frac{3}{4}$ mile off shore, but as a general coast and port light to enable steamers to make the port and anchorage. It would no doubt be advantageous if the reef could also be marked by day and by night, but the port is a small one and its requirements cannot be met regardless of expense. The question of marking the site of the reef by a buoy will be dealt with in the report of my recent tour.

3. As regards the inefficiency of the present lighthouse and apparatus, I am completely in accord with Mr. Ashpitel.

4. The improvement to the light necessitates—

(*a*) the provision of a new apparatus with a lantern ;

(*b*) alteration of the column to arrange for the necessary service room and ventilation as the existing tower is solid.

The estimate of £578 is merely for the apparatus required from England and a further estimate for additions to, or rebuilding a portion of, the column is required.

5. With regard to Mr. Ashpitel's remarks concerning the range of the light, I would observe that the matter was fully considered by Commander Street when framing the indent. The ranges quoted by Mr. Ashpitel apparently are not based on

elevation as well as intensity. The present column gives a range on elevation of 14 miles, which, from the bridge of a large steamer, would become practically 16 miles, and this range is sufficient.

6. From many years' reports from vessels, it is found that on the coasts of this Presidency (more particularly the east coast), the best of the fourth order lights are seen in ordinary weather 16 miles and from 18 to 20 in very clear weather. This result is obtained with a small two-wick burner, and in the light proposed for Calingapatam a large two-wick burner, similar to that at Hope Island, will be supplied.

7. As regards Mr. Ashpitel's remark that fixed lights are now obsolete, I would state that such is not the case. As recently as 1891, a fixed occulting light was placed on the North Foreland, one of the principal headlands on the English coast, and for the purpose of guiding vessels to anchorages and clear of dangers in narrow channels fixed and fixed occulting lights are frequently used.

8. Commander Street was fully aware of the fact that a very considerable increase in intensity would be obtained by the use of a revolving apparatus in preference to a fixed one, but the construction of the column at Calingapatam precluded the employment of this class of light except on the condition of totally rebuilding a large portion of the column or perhaps erecting a new one.

9. An ordinary fixed light with no distinctive feature would lead to vessels from Rangoon bound to Calingapatam mistaking the Calingapatam light for Santipilly or *vice versâ*—a mistake which would, in the latter case in all probability, lead to the total loss of a vessel. The occulting shutter provides for giving the light the necessary distinctive character. The present light being red, affords a means of distinction, but the light is only suitable for a harbour light; coast lights dependent on colored media for identification are always unsatisfactory unless provided with very high lamp power, which implies unnecessary expenditure of oil. It was under these circumstances that a fixed white occulting light was decided on—a change involving slight structural alteration in the column and a considerable saving in first cost.

The position of the port and the number of vessels visiting it do not justify incurring the extra expense involved by providing a light column from which to exhibit a flashing or revolving light; but I so far agree with Mr. Ashpitel that, when establishing any new light on the coast for the purposes of general navigation, I would recommend as a rule a revolving light at headlands and shoal promontories which form "turning" points.

Another advantage in an occulting light is as a means of making the anchorage, the fixed periods admitting of taking more careful and reliable bearings than when the light is continually in motion. Briefly, given a suitable column and an anchorage free from dangers, I would give the preference to the revolving light as a means of obtaining economy and efficiency combined.

10. It must be borne in mind that the majority of the coast lights in this Presidency are required partly to enable a vessel to take up a convenient berth at night in an anchorage as well as to identify the port, and for the former purpose a fixed light is more convenient; therefore, however desirable it may be to increase the intensity of new lights, the existing ones should not be altered so long as they meet the requirements of the coasting traffic, of which class the greater number of vessels using the lights is composed.

11. Referring to the concluding portion of para. 4 of Mr. Ashpitel's letter, I would remark that the question of an improved light at Point Divi has already formed the subject of correspondence with Government (*vide* this office No. 1271/267 G., dated 11th July 1891). The proposals then submitted were, however, of too costly a nature, and, as the introduction of a new system of illumination was being carried out on Mr. Douglass' recommendation with the anticipated result of an improvement in the light, the question has not been revived. Point Divi is undoubtedly one of the points on the coast at which the establishment of a good revolving or flashing light is desirable. The apparatus in use at the old lighthouse in Madras is of fair power and, though of an obsolete type, would answer for the promontory above mentioned were there a building suitable for its accommodation and if the reflectors could be fitted with burners adapted to mineral oil in lieu of cocoanut; the extra cost of the latter kind of oil would in about ten years amount to the price of the lenticular

1627

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portion of a new third order apparatus. The present lighthouse is most unfavorably situated, being about two miles from the edge of the most seaward portion of the promontory, and I should strongly deprecate any expenditure in altering a building which is distinctly in a wrong position.

12. Any change at Point Divi should be, first, either the establishment of a light similar to the new light provided for Madras for which a new and properly constructed lighthouse must be provided, or, second, if a more economical scheme be required, the provision of a fourth order revolving light with large two-wick burner and an improved lantern. The latter scheme would require slight alteration of the interior of the column to provide for a weight shaft, but I would strongly recommend that a new lighthouse and a better apparatus be sanctioned and the light placed as near the sea as possible.

13. The old light at Point Divi, I am of opinion, should be retained in store for use as a harbour light. In the near future a light will be required at the head of one of the Madras breakwaters and this light would be quite fit for this purpose and could be used with red chimneys if a colored distinction was required.

14. The disposal of the old Madras light received the attention of this office in 1891; at that time there seemed to be no prospect of utilizing it, and the only column on the coast suitable in size and strength for the reception of this heavy and cumbrous apparatus was at Cochin; even there internal alterations would be necessary, and, furthermore, the present light is thoroughly satisfactory since the introduction of the new burners (Douglass). In my recent tour, the inefficiency of the light at Manapad (an important headland to vessels making Tuticorin by way of Cape Comorin) was brought to my notice and has also formed the subject of report by the Port officer, Tuticorin. It is deficient in power and in arc of visibility, and, having in view the probable establishment of a daily service of steamers between Colombo and Tuticorin, the time has now arrived for the establishment of a good light on this headland. It is to this point that I would suggest the transfer of the old Madras light, *provided that arrangements can be made for its use with heavy mineral* oil. A column will be required, but, as the headland stands well above the sea, a height of 30 to 40 feet will provide the necessary "drop" for the clock work weights. As all other lights on the coast will be *fixed*, the unavoidable irregularity in the movement of the light will not lead to mistakes similar to that made by the master of the *Umtata*.

15. In para. 5 of his letter under report Mr. Ashpitel proposes to postpone the fitting of any occulting apparatus until the result of certain experiments by a foreign Government is ascertained. I would observe that the provision of a good light at Calingapatam is required *now*, and I have explained the unsuitability of a fixed light without any distinctive feature in para. 9 of this report. The occulting system has been brought to great perfection in England and there is much risk in adopting a new kind of apparatus in an out-of-the-way spot far from workshops and mechanics.

16. In conclusion and with reference to para. 7 of Mr. Ashpitel's letter, I would summarise as follows:—

(1) A new lantern and light is indispensable at Calingapatam.

(2) It is required as soon as possible and must be distinctive.

(3) The revolving light recommended by Mr. Ashpitel involves a complete reconstruction of the Calingapatam light column.

(4) There is an objection to the transfer of the old Madras light to Point Divi which is the doubtful economy owing to unsuitability of the column at Point Divi in its present state and its position.

(5) That any form of improvement at Point Divi should preferably take the shape of a new column nearer the point and a high powered light.

I would, therefore, request that either the light for Calingapatam, as proposed by Commander Street, may be sanctioned, or that early assent may be accorded to the preparation of estimates for the reconstruction of the Calingapatam column, making it suitable for the exhibition of a revolving light of the fourth order, in which case the indent will be duly amended and resubmitted

17. The subject of lighthouse establishment and illumination will be dealt with fully in the report of my recent tour. The distribution of old lights according to present proposals and previous correspondence would be as follows :—

(1) Old Calingapatam light to Cocanada as harbour light.

(2) Old Hope Island light to Coondapoor.

(3) Old Madras light to Manapad if sanctioned and burners can be adapted for mineral oil.

(4) Manapad light to Tellicherry where a new light is much needed.

(5) Old Point Divi light (if a new one is sanctioned) to be kept in reserve for issue as Madras harbour light.

(6) Old Coondapoor light and steel mast to be kept in store for issue at any minor port where a light may be subsequently required.

18. Should Government approve the cheaper form of improvement to Point Divi suggested by me, it would necessitate the temporary extinction of the light, in which case the Coondapoor light could be brought into use, supplementing the inferior power of the light by the frequent exhibition of blue lights.

Order—dated 5th June 1893, No. 180, Marine.

In the circumstances stated in the Presidency Port Officer's third letter read above, the indent submitted with his first letter will be forwarded to the Home Government for compliance, and the Public Works Department will be requested to issue the necessary orders for the preparation of plans and estimates for the alteration in the present lighthouse column at Calingapatam proposed in his second letter.

2. The first, second and sixth proposals in para. 17 of Commander Powell's third letter will also be approved, but as regards the third and fourth proposals the Presidency Port Officer will be requested to explain why the present Madras light should be suitable for Manapad and not for anywhere else, and it should be ascertained and reported whether this light can be adapted to mineral oil. With reference to the fifth proposal, the Presidency Port Officer will obtain and submit to Government an estimate for a new column as well as for a new light for Point Divi, and in this connection the cost of transferring the old column and the old light at Madras to Point Divi should also be considered and stated.

(True Extract.)

(Signed) J. F. PRICE,
Chief Secretary.

ORDER—dated 19th June 1893, No. 1627 W., Public Works.

Communicated to the Superintending Engineer, I Circle, for submission of plans and estimates for the proposed alterations in the lighthouse column at Calingapatam; also to other officers concerned for information.

(True Extract.)

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

To the Superintending Engineer, I Circle, with plan.
" " " II "
" " " IV "
" " " VI "
" Marine Department, with one enclosure returned.
Copy to the Chief Engineer for Irrigation
Exd. C. A. Munisawmy.
Spare Copies

1627/3

BUILDINGS AND ROADS.
CIVIL WORKS.

Gobt. of {1893} Madras.
PUBLIC WORKS.

Dated June, 19th.

Recd. *Encl.*

G.O., 19th June 1893, No. 1627 W.

JUNE.

Lighthouses

Proceedings, Marine Department, on correspondence relative to alterations in the lighthouse column at Calingapatam and distribution of certain old lights, communicated to the Superintending Engineer, I Circle, with instructions; also to other officers concerned for information.

[G/53]

Marine Department.

1627/4

PROCEEDINGS OF THE MADRAS GOVERNMENT.

G.O., dated 5th June 1893, No. 180, Marine

10

READ the following papers:—

1 Letter from the Presidency Port Officer, Madras, d/ 3d February 1893, No: $\frac{690}{50}$ G, forwarding an Indent for the new light proposed for Calingapatam.

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2 Letter from the Chief Engineer for Irrigation dated 21st February 1893, No: 14 W.

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3 Letter from the Presidency Port Officer, Madras, d/ 24th March 1893, No: $\frac{690}{19}$.

In continuation of this Office No: $\frac{690}{7}$ d/ 11th January last, I have the honor to inform you that on further consideration I think some slight alteration in the present column at Calingapatam will be necessary to ensure the satisfactory working of the light. The alteration I propose is to add from 6 to 8 feet to the height of the column in the form of a service room which will improve the Ventilation of the lantern, and is an indispensable convenience in a light of this class.

I therefore request that the sanction of Government may be accorded to the preparation of the

the necessary estimate by the Public Works Department. The cost will probably be under Rs 1000. A sketch showing the proposed alteration is enclosed for inspection and return.

Letter from the same officer d/ 5th May 1893 No. $\frac{690}{136}$ G.

7.7

Order d/ 5th June 1893, No. 180,

In the circumstances stated in the Presidency Port Officer's third letter read above, the indent submitted with his first letter will be forwarded to the Home Government for compliance, and the Public Works Department will be requested to issue the necessary orders for the preparation of plans and estimates for the alteration in the present light house column at Calingapatam, proposed in his second letter.

2. The first, second and sixth proposals in paragraph 17 of Commander Powell's third letter will also be approved but as regards the third and fourth proposals the Presidency Port Officer will be requested to explain why the present Madras light should be suitable for Manapad and not for anywhere else and it should be ascertained and reported whether this light can be adapted to mineral oil. With reference to the fifth proposal the Presidency Port Officer will obtain and submit to Government an estimate for a new column as well as for a new light for Point Divi and in this connection the cost of transferring the old column and the

the old light at Madras to Point Divi should also be considered and stated.

16(2)

(True Extract)

H. M. Sennetts.
Under Secretary, P. W. D.,
for Chief Secretary.

To The Public Works Department (with C. No. 345 in original with sketch to be returned)
Presidency Port Officer.

P. W. CURRENT No. 5416

[G./15]

Govt. of {18 } Madras.

To

the Public Works Depts

Recd: 13. 6. 93
Encls 2 (three,

Proceedings, dated 5 June 1893
No. 180

Subject.

Directing that the indent for a 4th order Occulting light for the port of Calingapatam be forwarded to the Home Govt. for compliance and that P W Depts issue orders for the preparation of plan & Estimates for alteration in the present light-house column

168

B of R
[illegible]

No 1627 W a/ 19th June 1893.
A

Communicated to the Supdg Engr I circle for submission of plans & estimates for the proposed alterations in the light house column at Calingapatam; also to other officers concerned for information.

[illegible] 16.6.93

[illegible] 17.6

27/7/94

Copy to the chief Engr for Irrigation

S. E I circle with plan
S. E II — „ —
S. E IV — „ —
S. E VI — „ —

29/1/95

Marine Dept with one Encls returned
P.P. officer's letter to be printed &

1627/7

17.2.10 ✓

C No. 5416

Govt. of {1893} Madras.
PUBLIC WORKS.

Dated

Recd.

Encl.

G.O., 19 June 1893 No. 1627W.

Lighthouses

Proceedings, Marine
dept, on correspondence
relating to alterations
in the light house
column at Calingapatam
distribution of certain
old lights, commund to
the S.E. I Circle with
instructions, also to
other officers concerned
for information

1/X

J. C. 20/1/1

J.C. 30/6