

Marine Department.

BUILDINGS AND ROADS.
CIVIL WORKS.

Government { 1897 } of Madras.
PUBLIC WORKS.

<i>Recd.</i>	} 1897.	<i>Enclosures</i>
<i>Regd.</i>		<i>Spare copies</i>

G.O., No. 1442 W., 28th May 1897.

No 562 Mar 27 19 June 1897
Communicated to the
P. P. O. in continuation of G.O.
MAY. *1435 Mar. 27 16 June 1896.*
1437 W.H.

To
The P. P. O.

Mangalore Harbour

Endorsement from Superintending Engineer, IV Circle, forwarding a report on the condition of the — for 1896, communicated to the Marine Department.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following paper :—

Report on the condition of Mangalore Harbour for 1896.

The general appearance of the backwater is the same as last year. The bank of silt still exists in front of the quay wall from the Marine yard to the Custom House; this bank of silt is a great impediment in loading and unloading the smaller vessels which anchor inside the backwater.

2. Native crafts up to 30 tons can come up the backwater and anchor opposite the Customs House. If dredging was carried out so that they could come close up to the quay wall, it would be of great advantage to the trading community; at present the cargo has to be carried through 60 yards of slush from the boat to the quay wall, thus entailing a considerable loss of time and expense.

3. *South end.*—The deep pool at the south of the backwater near Ullal has silted up slightly; it is not used as an anchorage.

4. *Deeper anchorage.*—The larger native vessels which are unable to get up the backwater anchor opposite the Marine yard, when they discharge into smaller boats which convey the cargo up to the Customs House. Boats up to 150 tons anchor here; any boats of greater tonnage remain outside the bar. The average depth of the anchorage is 18 feet.

5. *Bar and passage to sea.*—This is in a somewhat better condition than former years. The depth of water over the bar at low water spring tide is 6 feet. The north and south sand spits at the entrance have increased somewhat, but these are continually changing in shape.

6. The northern or Gurple mouth of the harbour has remained closed as before. The width of the strip along the old opening is 700 feet, it has also been covered with coarse grass and there appears to be no probability of its re-opening.

(Signed) R. S. PATERSON,
Assistant Engineer.

No. 231 S.E.

True copy forwarded to the Superintending Engineer, IV Circle.

CALICUT,
27th April 1897.

(Signed) C. W. WOOD,
Executive Engineer.

No. 249/W.

Copy forwarded to the Chief Engineer, Public Works Department.

7th May 1897.

(Signed) J. HANNAN,
Supg. Engineer, IV Circle.

ORDER—No. 1442 W., dated 28th May 1897.

Communicated to the Marine Department, in continuation of G.O., No. 1634 W., dated 1st June 1896.

(True Extract.)

(Signed) D. McNEIL CAMPBELL, Colonel, R.E.,
Secretary to Government.

To the Marine Department.
„ Superintending Engineer, IV Circle.

Exd. T. K. Narayana Aiyangar.

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following papers :—

Memo. No. 119 D.

Adverting to paragraph 21 of G.O. No. 245, Marine, dated 8th April 1896, the undersigned has the honour to request that Mr. Ashpitel will be so good as to submit any suggestions he may have to offer as to the exact nature of the work which should devolve upon him in regard to lighthouses.

6th May 1896.

(Signed) D. McNEIL CAMPBELL, Col., R.E.,
Chief Engineer.

From F. W. ASHPITEL, Esq., A.M.I.C.E., Executive Engineer, Coimbatore Division, to the Chief Engineer, Public Works Department, dated Ootacamund, 21st May 1896.

With reference to your memo. No. 119 D., dated 6th May 1896, I have the honour to inform you that there are several ways in which the proposed construction and improvement of lighthouses can be carried out, but it is difficult to make suggestions as I do not know what standard of efficiency is aimed at. If the present practice of having lighthouses repaired sometimes by a Port officer and sometimes by the Executive Engineer of the division in which the light is located and manned by keepers who have not been properly trained and whose pay is not sufficient to ensure discipline, I do not think it matters much what my duties are, as, in the absence of control, I can have no responsibility of any shape or form either for designs for new constructions or for improvements to existing lights. Lighthouse work elsewhere is considered to be highly technical, and I do not believe that it will be any more advantageous in the future than it has been in the past for every lighthouse to be converted into a training school in lighthouse matters at the expense of Port funds. As you are aware, Executive Engineers and subordinates are frequently transferred, and if the arrangements sketched in G.O., Marine, No. 245, dated 8th April 1896, are given effect to, the practical result will be that the construction of towers will be left to subordinates (Executive Engineers have not time to give much attention to individual works) and the experience gained at one lighthouse will not be made use of at another. I personally am of opinion that the scheme sketched in the Government Order above referred to will tend to prevent any real efficiency in lighthouse illumination and construction in this Presidency.

2. In Great Britain and elsewhere, as you are probably aware, the lights are maintained by Boards, each of which has its engineering establishment responsible for the construction, maintenance and repair of all buildings and apparatus connected with lighthouses. These men spend their whole time at this work, and the result is constant improvement in design and efficiency accompanied by a constant decrease in cost of maintenance per unit of light. Nearly every maritime country except India has, I believe, Engineers specially employed in looking after the lights, and the result of the policy of the Indian Government will, I fancy, be fully evident when the new

light list appears, if Government has not already been convinced by my recent report. The Lighthouse Engineers in Great Britain, I may remark, are responsible to the Trinity Board for the training of keepers and for all details of the service.

3. The system, I would suggest, is somewhat on the lines of the English system. Government of course take the place of the Board of Trade, and the Marine Department, with an Engineer and staff of subordinates, that of Trinity House and its establishment. There will be no additional expense if this is done, as the ordinary Public Works Department establishment charges, now payable by the Marine Department, will cover the cost of the proposed separate establishment which could also be employed on other Marine works.

4. To carry out the scheme sanctioned in G.O., Marine, No. 245, dated 8th April 1896, in (say) 50 months, I estimate that I should require a staff of three experienced upper subordinates who would live at the sites of proposed towers, and the ordinary office and petty establishment. My idea, in fact, would be to move the skilled supervision and labour from work to work until the whole scheme is completed, so that the experience gained at one would be available at the next. The men will have, it is true, to live at out-of-the-way places, and one difficulty will be to keep them on the work which must be considered as more irksome than ordinary Public Works Department work. From conversations I have had with subordinates on this subject I am convinced that it will be necessary to make it worth their while to stay on this duty, and strongly recommend the grant of deputation allowance; and as the men will be organized as a separate establishment outside the Public Works Department, there would seem to be no objection under the Civil Service Regulations to the grant of the proposed allowances. The establishment would, in fact, be attached to the Marine Department, though under the control of the Chief Engineer, who is also Secretary to Government in the Marine Department. I would start at first any three lighthouses the Presidency Port officer considers to be most urgently required, and would place under each subordinate a small staff of petty establishment which would, under his supervision, carry out the proposed alterations and improvements to other lights in the neighbourhood which do not require constant supervision. The upper subordinates should, in my opinion, be selected Europeans accustomed to large building works as I anticipate that as the work proceeds it will be possible to reduce the cost considerably by improved methods if selected Europeans are employed.

5. As regards my own duties, I should of course be attached to the Marine Department and be responsible for the engineering of the scheme, including the training of light-keepers and all other matters entrusted to me. This training of light-keepers I believe to be of the greatest importance, as it is of no use building good towers and installing costly apparatus unless the keepers are competent to make the best use of them and keep them in good order. I would, in fact, select expectants soon after a tower has been commenced and employ them for a time on construction in order that they may gain experience in building work and the erection of lighthouse apparatus, as well as the use and maintenance of optical apparatus and the management of burners and lamps. If this is done, all petty repairs after a tower has been completed can be carried out by the light-keepers or under their supervision, and one great difficulty in the future maintenance of lighthouses will disappear. The extended course during which a man will be under observation will also make it possible to judge a man's character before he is permanently employed.

6. An advantage of this system of carrying out the scheme in the Marine Department will be the great saving in correspondence between the Engineer and Presidency Port officer and a saving of the whole of the accounts and a large part of the clerical establishment which would be necessary in an ordinary Public Works division, as I presume that the accounts can be kept in the Port office. I see no reason why the engineering work of the Marine Department cannot be carried out within the ordinary Public Works percentage for establishment and at no additional cost to Government, as, whatever scheme is sanctioned, it will be absolutely necessary to have a competent man in charge of each tower during construction, and some one to look after him. It also seems impossible to over-estimate the importance of employing the same staff continuously if efficiency in the construction of lights is to be aimed at.

From F. W. ASHPITEL, Esq., A.M.I.C.E., Executive Engineer, Coimbatore Division, to the Secretary to Government, Marine Department, dated 3rd June 1896.

With reference to your No. 282, dated 23rd May 1896, I have the honour to forward herewith statements showing the probable financial effect of the proposals made in my letter, dated 21st May 1896. The estimated cost of establishment necessarily varies considerably according to the grade of the upper subordinates employed.

2. You will observe that I have allowed in statement No. 1 for three Sub-Engineers, and in statement No. 2 for one Sub-Engineer and two overseers. In the first statement which may be regarded as a maximum, the cost of establishment is Rs. 21,350, and in the second Rs. 41,550 less than the amount available, and the saving will be increased to Rs. 47,550 if no one above the rank of an overseer is employed. In any case there is ample margin available for Presidency allowance and Presidency house-rent should head-quarters be fixed at Madras, and for travelling allowance.

3. The pay of the Executive Engineer has been entered as Rs. 850 per mensem, as in the ordinary course of events I presume that I shall receive promotion about April next.

4. The statements have been prepared on the assumption that those who are employed on this duty will receive the pay and allowances which they would have received in the Public Works Department, and, in addition, a deputation allowance of one-fifth of their pay in accordance with Civil Service Regulations, article 98. In return each man will have to engage not to take furlough for a term of years.

5. In the statements no credit is taken for the training of light-keepers and other similar duties which, it may be presumed, will form part of the duties of the proposed establishment; neither is provision made for petty works establishment, the cost of which will be met from the ordinary percentage for establishment allowed in estimates.

6. The upper subordinates I would prefer might be selected from the following:—Conductor C. Smith, R.E., Sub-Engineer, 3rd grade, Sergeants G. E. Brand and E. Price, Overseers, 1st grade, and Mr. C. J. W. Plummer, Overseer, 2nd grade, provided that they volunteer for duty in the Marine Department. I should like one senior man, as I anticipate considerable difficulty in putting in foundations at certain towers, but would rather have three overseers who volunteer than any number of unwilling seniors.

7. The establishment will not be required at once as I require certain information regarding lanterns and apparatus for which I have written to manufacturers in Europe. All that can be done is to select sites, and possibly carry out certain preliminary works.

ORDER—No. 2156 W., dated 27th July 1896.

The papers recorded above relate to the arrangements to be made for giving effect to the scheme of lighthouse improvement, approved generally in G.O. No. 245, Marine, dated 8th April 1896.

2. His Excellency the Governor in Council considers that the details will best be worked out under the personal supervision of Mr. Ashpitel, acting in close concert with the Presidency Port officer as head of the Marine Department, and corresponding with the Chief Engineer, Public Works Department, through the Presidency Port officer.

3. Mr. Ashpitel will accordingly, on relief of the charge of the Coimbatore division, be placed on special duty; and will, after the requisite preliminaries have been settled, plans and estimates prepared, and construction is about to commence, organize a separate Lighthouse division on the scale proposed in his letter, dated 3rd June 1896. It will be necessary in the first instance to fix the exact sites for new constructions, and for this purpose Mr. Ashpitel should visit the localities, accompanied either by the Presidency Port officer or the local Port officer, as may be decided by the head

No. 2156 W., 27TH JULY 1896.

of the Marine Department. The Superintending Engineer of the circle concerned will place at Mr. Ashpitel's disposal an upper subordinate to take levels and make borings, &c., and Mr. Ashpitel will be authorized, while engaged on this particular work, to engage a clerk and three peons on the proposed rates of pay. The draftsmen may be added when required, and the upper subordinates will be made available by the Chief Engineer when their services are shown to be necessary.

4. The head-quarters of the new division will be fixed at Madras, and when the work of actual construction commences, His Excellency the Governor in Council will, in consideration of the importance of the charge, recommend to the Government of India the grant to Mr. Ashpitel of the position and local allowance of a Superintendent of Works.

5. The officers and upper subordinates selected for this duty will be expected to devote continuous attention to it, and will thus not be liable to transfer; and save sick leave, if necessary, will be granted no leave of any kind during the continuance of the work.

6. The question of raising the requisite funds for carrying out the scheme will be settled in the Financial Department as soon as possible, as desired in paragraph 8 of G.O. No. 245, Marine, dated 8th April 1896, and in order that the requisite annual provision may be made, Mr. Ashpitel will now frame a financial forecast of the amount required during the current official, and future years.

(True Extract.)

(Signed) D. McNEIL CAMPBELL, Colonel, R.E.,
Joint Secretary to Government.

To F. W. Ashpitel, Esq., A.M.I.C.E.

„ Superintending Engineers.
„ the Consulting Architect to Government.
„ the Marine Department.

„ the Financial Department, with copy of note by the Honourable
Mr. Bliss, C.I.E., dated 15th June 1896, concurred in
by His Excellency the Governor.

Govt. of {1896} Madras.
PUBLIC WORKS.

Encl.

G.O. No. 2156 W., 27th July 1896.

JULY.

Lighthouse Improvement

Directing that Mr. F. W. Ashpitel be placed on special duty on relief of the charge of the Coimbatore division, in view to the details being worked out and a separate division organized for giving effect to the scheme of — already approved, and requesting the Financial Department to settle the question of raising the requisite funds for carrying out the scheme as soon as possible.

Communicated to the
Presidency Post Office.

(sd) D. Mc. V. C.

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The Presidency Post Office.
Chairman Harbor Trust
Board

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PUBLIC WORKS DEPARTMENT.

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