

P. W. CURRENT No. 6371

Govt. of {1894} Madras.

MARINE.

Issued

Recd.

Encl.

G.O., 10th August 1894, No. 318.

AUGUST.

Coast Lights.

Calling for proposals in regard to the removal of the Hope Island light to a spot whence it would completely guard vessels from the Sacramento Shoal and directing that Mr. Ashpitel be deputed on special duty to inspect and report on all the lights along the coast.

No. 1568 w.d. 25-6-94

No. 2233 w.d. 6 September 1894

M

Communicated to Super. Engrs concerned for information, and for guidance with reference to the last para of the G.O.

C.M.B.
28/8

DESPATCHED

-7 SEP. 94

C. A. G. Engrs
all Super. Engrs
except III

C. A. G. Engrs
P. W. Engrs
O.L.S. 313
R 31/9

INDEXED
19/9

10TH AUGUST 1894, No. 318, MARINE.

GOVERNMENT OF MADRAS.
MARINE DEPARTMENT.

READ—again the following papers :—

G.O., dated 8th October 1891, Mis. No. 438, Marine.

Read—the following paper :—

From the Presidency Port Officer, Madras, dated 11th July 1891, No. 1271—267-G.

ABSTRACT.—Submitting proposals for increasing the number of lights on the East Coast.

From the Presidency Port Officer, Madras, dated 15th August 1891, No. 1271—310-G.

ABSTRACT.—Forwarding revised statement of charges in connection with the new lights.

Order—dated 8th October 1891, Mis. No. 438, Marine.

The Presidency Port Officer will be informed that at present, and until the new Provincial contract is settled, the Government cannot entertain the proposals made for reorganising the lights on the East Coast.

(True Extract.)

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

To the Presidency Port Officer.

G.O., dated 8th June 1894, Mis. No. 213, Marine.

Read—the following letter from Commander W. J. POWELL, R.I.M., Presidency Port Officer, to the Chief Secretary to Government, dated Madras, 5th May 1894, No. 1271—169-G. :—

I have the honour to suggest for the consideration of Government the advisability of coming to some definite settlement of the question of the improvement of coast lights. For the past five years correspondence has been continual on this subject without approaching a final settlement. It seems to me that if Mr. Ashpitel could be deputed specially to visit localities at which changes are contemplated, full and complete proposals might be laid before Government before the close of the year.

2. The most important improvement contemplated is in connection with Point Divi, and I have already submitted alternative proposals regarding the matter. On these proposals Government requested information as to the suitability of the old Madras light for Point Divi. On this point a memorandum has been drawn up and sent to Mr. Ashpitel for favour of remarks before submission to Government; but the question, I submit, is one upon which Mr. Ashpitel can better advise Government than this office, as it is entirely a question of relative cost and intensity between the old apparatus and an entirely new one with a lower consumption of oil. The erection of a new lighthouse and raising of the old column are purely engineering questions; as is the transfer of the old Madras column to Point Divi.

3. Pending further discussion of this matter, I would suggest the preparation of plans and estimates by the Public Works Department for the following works :—

(1) Raising the old Point Divi Lighthouse 30 feet with tube for clockwork weight, the upper portion being constructed as a service room to carry a lantern somewhat similar to the present one and about the same weight.

(2) The erection of a new column near high-water mark to the eastward of the present lighthouse, 100 feet high, to carry (a) a 4th-order flash light weighing about 7 tons or (b) 3rd-order flash light weighing about 15 tons.

4. Any settlement of the class of light must to a great extent depend on cost, and however desirable it may be to have the higher-powered light, if funds are not available the cheaper light would be far better than continuing with the present inefficient one. With these estimates before them Government will be in a better position to decide on the merits of the various schemes.

5. The cost of a screw-pile lighthouse has been declared prohibitive—G.O., Marine, No. 129, dated 28th April 1892.

6. In addition to the improvement to Point Divi I would propose the following alterations and improvements for consideration:—

(1) The alteration of Seven Pagodas light from red to white, thereby increasing its mean range by 5 or 6 miles. The elevation of the light being sufficient for a 17 miles range, its mean luminous range as a red light is only 8 to 10 miles; as a white light it would be 14 miles. When the experiments with the Lindberg Trotter occulting apparatus (for which sanction has been asked for in my No. 1693—168-G., of 4th May 1894) are completed, proposals will be submitted for changing the character of this and other fixed lights. Proposals for improving the lantern at Pamban are already before Government.

(2) The substitution of a 4th-order flash light for the present inferior light at Manapad Point; which does not even show over the whole sea horizon, and the color of which is red, the latter defect nullifying the whole advantage gained by the high elevation of the light. A column 20 feet high would probably suffice.

(3) Improvements to Tellicherry light as set forth in my No. 1693—168-G., dated 4th May 1894.

(4) Provision of a sheltered light room at Cannanore.

7. With the future adoption of occulting apparatus, occasional improvements to burners and the provision of a petty harbour light from time to time, I consider that the proposals now made comprise all the requirements of this coast for many years to come.

8. On receipt of the views of Government on the first paragraph of my letter and their sanction to the preparation of estimates, I will furnish full details on any point upon which they may be required, but it seems to me to be useless going into the question of cost until some idea is gained of the cost of the various engineering portions of the scheme.

9. The first change at Seven Pagodas will cost nothing except the price of chimneys. The apparatus for Manapad would cost about £600, the apparatus for Point Divi, 4th order, about £600; apparatus for Point Divi, 3rd order, about £1,300.

Order—dated 8th June 1894, Mis. No. 213, Marine.

Before any orders can be passed in regard to Mr. Ashpitel's suggested deputation, some estimate of the time for which his services will be required should be furnished. The Government is quite in accord with Commander Powell as to the desirability of

	RS.	
1889-90	...	41,081
1890-91	...	34,465
1891-92	...	44,934
1892-93	...	82,141

placing the lights on the coasts of this Presidency on a thoroughly efficient footing, but the expenditure on lights and their appurtenances has already been so heavy that the provision of expensive lights must be effected gradually and with due regard to other claims on Port funds.

2. Mr. Ashpitel's remarks in regard to the Point Divi light will be awaited, and his opinion should also be taken on the other proposals submitted by the Presidency Port Officer. The object to be attained is to have lights which are efficient and sufficient for the localities at which they are placed without waste of power and consequent unnecessary expenditure.

GOVERNMENT OF MADRAS.
MARINE DEPARTMENT.

Read—again the following papers:—

G.O., dated 8th October 1891, Mis. No. 438, Marine.

Read—the following paper:—

From the Presidency Port Officer, Madras, dated 11th July 1891, No. 1271—267-G.

ABSTRACT.—Submitting proposals for increasing the number of lights on the East Coast.

From the Presidency Port Officer, Madras, dated 15th August 1891, No. 1271—310-G.

ABSTRACT.—Forwarding revised statement of charges in connection with the new lights.

Order—dated 8th October 1891, Mis. No. 438, Marine.

The Presidency Port Officer will be informed that at present, and until the new Provincial contract is settled, the Government cannot entertain the proposals made for reorganising the lights on the East Coast.

(True Extract.)

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

To the Presidency Port Officer.

G.O., dated 8th June 1894, Mis. No. 213, Marine.

Read—the following letter from Commander W. J. POWELL, R.I.M., Presidency Port Officer, to the Chief Secretary to Government, dated Madras, 5th May 1894, No. 1271—169-G.:—

I have the honour to suggest for the consideration of Government the advisability of coming to some definite settlement of the question of the improvement of coast lights. For the past five years correspondence has been continual on this subject without approaching a final settlement. It seems to me that if Mr. Ashpitel could be deputed specially to visit localities at which changes are contemplated, full and complete proposals might be laid before Government before the close of the year.

2. The most important improvement contemplated is in connection with Point Divi, and I have already submitted alternative proposals regarding the matter. On these proposals Government requested information as to the suitability of the old Madras light for Point Divi. On this point a memorandum has been drawn up and sent to Mr. Ashpitel for favour of remarks before submission to Government; but the question, I submit, is one upon which Mr. Ashpitel can better advise Government than this office, as it is entirely a question of relative cost and intensity between the old apparatus and an entirely new one with a lower consumption of oil. The erection of a new lighthouse and raising of the old column are purely engineering questions; as is the transfer of the old Madras column to Point Divi.

3. Pending further discussion of this matter, I would suggest the preparation of plans and estimates by the Public Works Department for the following works:—

(1) Raising the old Point Divi Lighthouse 30 feet with tube for clockwork weight, the upper portion being constructed as a service room to carry a lantern somewhat similar to the present one and about the same weight.

(2) The erection of a new column near high-water mark to the eastward of the present lighthouse, 100 feet high, to carry (a) a 4th-order flash light weighing about 7 tons or (b) 3rd-order flash light weighing about 15 tons.

4. Any settlement of the class of light must to a great extent depend on cost, and however desirable it may be to have the higher-powered light, if funds are not available the cheaper light would be far better than continuing with the present inefficient one. With these estimates before them Government will be in a better position to decide on the merits of the various schemes.

5. The cost of a screw-pile lighthouse has been declared prohibitive—G.O., Marine, No. 129, dated 28th April 1892.

6. In addition to the improvement to Point Divi I would propose the following alterations and improvements for consideration:—

(1) The alteration of Seven Pagodas light from red to white, thereby increasing its mean range by 5 or 6 miles. The elevation of the light being sufficient for a 17 miles range, its mean luminous range as a red light is only 8 to 10 miles; as a white light it would be 14 miles. When the experiments with the Lindberg Trotter occulting apparatus (for which sanction has been asked for in my No. 1693—168-G., of 4th May 1894) are completed, proposals will be submitted for changing the character of this and other fixed lights. Proposals for improving the lantern at Pamban are already before Government.

(2) The substitution of a 4th-order flash light for the present inferior light at Manapad Point; which does not even show over the whole sea horizon, and the color of which is red, the latter defect nullifying the whole advantage gained by the high elevation of the light. A column 20 feet high would probably suffice.

(3) Improvements to Tellicherry light as set forth in my No. 1693—168-G., dated 4th May 1894.

(4) Provision of a sheltered light room at Cannanore.

7. With the future adoption of occulting apparatus, occasional improvements to burners and the provision of a petty harbour light from time to time, I consider that the proposals now made comprise all the requirements of this coast for many years to come.

8. On receipt of the views of Government on the first paragraph of my letter and their sanction to the preparation of estimates, I will furnish full details on any point upon which they may be required, but it seems to me to be useless going into the question of cost until some idea is gained of the cost of the various engineering portions of the scheme.

9. The first change at Seven Pagodas will cost nothing except the price of chimneys. The apparatus for Manapad would cost about £600, the apparatus for Point Divi, 4th order, about £600; apparatus for Point Divi, 3rd order, about £1,300.

Order—dated 8th June 1894, Mis. No. 213, Marine.

Before any orders can be passed in regard to Mr. Ashpitel's suggested deputation, some estimate of the time for which his services will be required should be furnished. The Government is quite in accord with Commander Powell as to the desirability of

	rs.
1889-90	41,081
1890-91	34,465
1891-92	44,934
1892-93	82,141

placing the lights on the coasts of this Presidency on a thoroughly efficient footing, but the expenditure on lights and their appurtenances has already been so heavy that the provision of expensive lights must be effected gradually and with due regard to other claims on Port funds.

2. Mr. Ashpitel's remarks in regard to the Point Divi light will be awaited, and his opinion should also be taken on the other proposals submitted by the Presidency Port Officer. The object to be attained is to have lights which are efficient and sufficient for the localities at which they are placed without waste of power and consequent unnecessary expenditure.

3. The Public Works Department will be requested to furnish the plans and estimates referred to in paragraph 3 of Commander Powell's letter.

(True Extract.)

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

To the Presidency Port Officer.
„ Public Works Department.

READ—also the following letter from Commander W. J. POWELL, R.I.M., Presidency Port Officer, to the Chief Secretary to Government, dated Madras, 19th July 1894, No. 1271—271-G.:—

With reference to G.O., No. 213, dated 8th June 1894, I have the honour to state that to visit the localities mentioned in my No. 1271—169-G., dated 5th May 1894, would only require Mr. Ashpitel's deputation for about 3 weeks. The present is the most favorable time of the year for visiting Point Divi, which by steamer and rail could be done in 10 days conveniently. Manapad Lighthouse lies about 30 miles from Tuticorin, and if the Pearl-fishery steamer were lent, the inspection could be carried out in 5 days. Seven Pagodas can be inspected in from 2 to 3 days according to the wind.

2. A scheme for improving and increasing the coast lights and harbour lights was submitted by Commander Bean while acting as Presidency Port Officer in 1891 (*vide* correspondence ending with G.O., Marine, Mis. No. 438, dated 8th October 1891); this scheme was, however, dependent on sanction being obtained to an increase to port dues, and has apparently not met with the approval of Government. I, therefore, when recommending certain improvements to lights in my letter, No. 1271—169-G., dated 5th May 1894, did not again bring the matter forward.

3. Since then the *Lanark* laden with Government Railway stores has been wrecked on the Sacramento Shoal, and I therefore think that the question of the location of the Hope Island light (which in my opinion—and in that of many other persons, among them Mr. Douglass and the late Commander Hoskin, R.N., Superintendent of the Marine Survey of India—is decidedly unsatisfactory) should again be considered. The accompanying tracing will shew this. It will be seen on this tracing that the light on Hope Island, as it is now just cuts the shoal on the line marked "heavy breakers"; from the position proposed the light will be visible nine miles to the southward of it.

4. It is, of course, possible by careful attention to the lead to avoid the Sacramento Shoal, but a good light in the vicinity of the shoal would make the approach to Cocanada from the southward much safer and easier.

5. If funds can be provided, I would strongly recommend the transfer of the present Hope Island light to a spot on the mainland near the Sacramento Shoal; a range of 14 miles would be sufficient, and if any natural elevation could be found on the coast line, the cost of erecting a column should not be very great.

6. As regards cost, I would observe that had there been a light on a proper position to guard the Sacramento Shoal, the *Lanark* would probably not have grounded. The value of her cargo—which is unlikely to be salvaged, and, if so, only at great expense—would have more than paid for all the lights proposed by Commander Bean.

7. The site which appears most suitable, combining the advantages of well guarding the shoal with nearness to a village, is "Thirtatmundi" village, about 5 miles due north of the shoal. The range of the light from this position will also "cut in" with that of Vakalapudi, and the absence of a light on Hope Island itself would cause no inconvenience, as the position of the present light renders it useless for the purpose it was originally intended for, viz., to guard vessels rounding Gódvári Point, the point having extended to a distance of 7 miles from the lighthouse.

8. The carrying out of this scheme in a modified form would perhaps be practicable without resorting to an increased tax on shipping by borrowing from Provincial funds, but the payment of interest and refund of the loan would leave a very small balance in the Port fund of the Eastern group.

9. The expenditure quoted by Government in G.O., No. 213, dated 8th June 1894, is very largely made up of annually recurring charges for maintenance. The actual charges for new apparatus, except in 1892-93, has not been very heavy, as the enclosed statement will show.

10. The cost of carrying out Commander Bean's scheme, together with the improvements suggested by me in my letter, No. 1271-169-G., dated 5th May 1894, would amount to about Rs. 2,00,000, or Rs. 1,50,000, without the light on Gódávári Point.

11. The increased cost of establishment and stores, &c., would be Rs. 10,200 per annum, or Rs. 6,000 per annum without the Gódávári Point establishment. The following figures show the method of meeting the loan proposed:—

	Per annum.
Interest on Rs. 2,00,000 at 4 per cent. ...	Rs. 8,000
Refund of loan, 10,000 ...	10,000
Establishment, &c. ...	18,000
	10,200
For 20 years ...	28,200
Afterwards ...	10,200

Without Gódávári Point light:—

	Per annum.
Interest on Rs. 1,50,000 at 4 per cent. ...	Rs. 6,000
Refund of loan, 7,500 ...	7,500
Establishment ...	6,000
	19,500
For 20 years ...	19,500
Afterwards ...	6,000

These are maximum amounts, and in actually carrying out the scheme further reductions would be practicable. For example, the item Rs. 5,000 for a column at Vizagapatam could be struck out, as with the natural elevation given by Waltair Point a service room to carry the lantern would suffice.

12. To meet the increased annual charge of Rs. 28,200 per annum or Rs. 19,500, if it cannot be met from the existing Port funds, it would be necessary to levy a special light due of 2 annas and 7 pies per ton in the case of coasting steamers and 6 pies per ton in the case of semi-coasting and foreign vessels, payable once in the year on the first entry in the Eastern group, or 1 anna and 9 pies in the case of the former and 4 pies for the latter without the light on the Gódávári Point. A simpler method of meeting the cost would be to increase existing Port dues at the rate of 8 pies per ton for coasting steamers and 2 pies per ton for semi-coasting and foreign vessels, or to meet the smaller charge at the rate of 4 pies per ton for coasting steamers, 2 pies per ton for semi-coasting and 1 pie per ton for foreign vessels. The latter method seems to me preferable and would bring in about Rs. 20,000 more yearly. In Burma, ships pay $1\frac{1}{2}$ annas per ton.

ENCLOSURE.

Light-house Charges.

	Establishment.	Oil.	Ordinary stores and contingencies.	New lights and appurtenances.	Public Works charges.	Total.
	RS.	RS.	RS.	RS.	RS.	RS.
1889-90	18,189	6,144	2,986	(a) 2,994	10,768	41,081
1890-91	18,802	2,523	(b) 6,280	..	6,860	34,465
1891-92	(c) 20,074	4,294	5,365	(d) 9,737	5,463	44,933
1892-93	20,054	4,850	(e) 7,515	(f) 39,873	9,849	82,141

(a) Cost of two 4th-order dioptric lights for Manapad and Calingapatam.
 (b) Includes Rs. 613, cost of glass plates, and Rs. 2,251, cost of oil tanks.
 (c) Includes Rs. 783, pay and travelling allowance of lighthouse mechanic.
 (d) Cost of new lights for Gopalpur, Cuddalore, Tondi, Malpe and Kundapur.
 (e) Includes Rs. 1,000, bonus to Mr. Ashpitel.
 (f) Cost of new lights for Madras and Hope Island, Rs. 29,341. Fountain lamps for other lighthouses, Rs. 10,532.

ORDER—dated 10th August 1894, No. 318, Marine.

The matter which demands immediate attention is the removal of the Hope Island light to a spot whence it would completely guard vessels from the Sacramento Shoal. The Presidency Port officer will lose no time in submitting, in consultation with Mr. Ashpitel, proposals with this object.

2. In regard to the other suggestions put forward by the Presidency Port Officer, His Excellency the Governor in Council considers it desirable that Mr. Ashpitel should be deputed on special duty from January next with the Presidency Port Officer to inspect all the lights along the coast, go thoroughly into and report on the question of the suitability or otherwise of the position of each light, of the structure from which it is displayed, and also of the light itself for the purpose for which it is required. His enquiries should also extend to the adequacy and competence of, or otherwise, the establishments maintained for each light, the consumption of oil and other stores, &c., and the accommodation for the staff attached to the several lights visited by him. His remarks should be in no way restricted by any orders that may have issued heretofore for his guidance in dealing with questions relating to lighthouses.

3. Mr. Ashpitel will be granted the maximum deputation allowance permissible under regulations. The cost of his deputation will be met from Port funds. The Presidency Port Officer will report in regard to the details of the debit.

4. The Public Works Department will be requested to hold any new work in connection with lights or accommodation for their establishments in abeyance, pending further orders.

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the Presidency Port Officer.
 „ the Public Works Department.
 „ F. W. Ashpitel, Esq.
 „ the Financial Department.
 „ the Accountant-General.

Exd. A. Raitt.

Gobt. of {1894} Madras.

MARINE.

Issued

Recd.

Encl.

G.O., 10th August 1894, No. 318.

AUGUST.

Coast Lights.

Calling for proposals in regard to the removal of the Hope Island light to a spot whence it would completely guard vessels from the Sacramento Shoal and directing that Mr. Ashpitel be deputed on special duty to inspect and report on all the lights along the coast.



10TH AUGUST 1894, No. 318, MARINE.

3

3. The Public Works Department will be requested to furnish the plans and estimates referred to in paragraph 3 of Commander Powell's letter.

(True Extract.)

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

To the Presidency Port Officer.
,, Public Works Department.

READ—also the following letter from Commander W. J. POWELL, R.I.M., Presidency Port Officer, to the Chief Secretary to Government, dated Madras, 19th July 1894, No. 1271—271-G. :—

With reference to G.O., No. 213, dated 8th June 1894, I have the honour to state that to visit the localities mentioned in my No. 1271—169-G., dated 5th May 1894, would only require Mr. Ashpitel's deputation for about 3 weeks. The present is the most favorable time of the year for visiting Point Divi, which by steamer and rail could be done in 10 days conveniently. Manapad Lighthouse lies about 30 miles from Tuticorin, and if the Pearl-fishery steamer were lent, the inspection could be carried out in 5 days. Seven Pagodas can be inspected in from 2 to 3 days according to the wind.

2. A scheme for improving and increasing the coast lights and harbour lights was submitted by Commander Bean while acting as Presidency Port Officer in 1891 (*vide* correspondence ending with G.O., Marine, Mis. No. 438, dated 8th October 1891); this scheme was, however, dependent on sanction being obtained to an increase to port dues, and has apparently not met with the approval of Government. I, therefore, when recommending certain improvements to lights in my letter, No. 1271—169-G., dated 5th May 1894, did not again bring the matter forward.

3. Since then the *Lanark* laden with Government Railway stores has been wrecked on the Sacramento Shoal, and I therefore think that the question of the location of the Hope Island light (which in my opinion—and in that of many other persons, among them Mr. Douglass and the late Commander Hoskin, R.N., Superintendent of the Marine Survey of India—is decidedly unsatisfactory) should again be considered. The accompanying tracing will shew this. It will be seen on this tracing that the light on Hope Island, as it is now just cuts the shoal on the line marked "heavy breakers"; from the position proposed the light will be visible nine miles to the southward of it.

4. It is, of course, possible by careful attention to the lead to avoid the Sacramento Shoal, but a good light in the vicinity of the shoal would make the approach to Cocanada from the southward much safer and easier.

5. If funds can be provided, I would strongly recommend the transfer of the present Hope Island light to a spot on the mainland near the Sacramento Shoal; a range of 14 miles would be sufficient, and if any natural elevation could be found on the coast line, the cost of erecting a column should not be very great.

6. As regards cost, I would observe that had there been a light on a proper position to guard the Sacramento Shoal, the *Lanark* would probably not have grounded. The value of her cargo—which is unlikely to be salvaged, and, if so, only at great expense—would have more than paid for all the lights proposed by Commander Bean.

7. The site which appears most suitable, combining the advantages of well guarding the shoal with nearness to a village, is "Thirtatmundi" village, about 5 miles due north of the shoal. The range of the light from this position will also "cut in" with that of Vakalapudi, and the absence of a light on Hope Island itself would cause no inconvenience, as the position of the present light renders it useless for the purpose it was originally intended for, viz., to guard vessels rounding Gódávri Point, the point having extended to a distance of 7 miles from the lighthouse.

8. The carrying out of this scheme in a modified form would perhaps be practicable without resorting to an increased tax on shipping by borrowing from Provincial funds, but the payment of interest and refund of the loan would leave a very small balance in the Port fund of the Eastern group.

9. The expenditure quoted by Government in G.O., No. 213, dated 8th June 1894, is very largely made up of annually recurring charges for maintenance. The actual charges for new apparatus, except in 1892-93, has not been very heavy, as the enclosed statement will show.

10. The cost of carrying out Commander Bean's scheme, together with the improvements suggested by me in my letter, No. 1271-169-G., dated 5th May 1894, would amount to about Rs. 2,00,000, or Rs. 1,50,000, without the light on Gódvári Point.

11. The increased cost of establishment and stores, &c., would be Rs. 10,200 per annum, or Rs. 6,000 per annum without the Gódvári Point establishment. The following figures show the method of meeting the loan proposed:—

	Per annum.
Interest on Rs. 2,00,000 at 4 per cent. ...	Rs. 8,000
Refund of loan, 10,000 ...	10,000
Establishment, &c. ...	18,000
	10,200
For 20 years ...	28,200
Afterwards ...	10,200

Without Gódvári Point light:—

	Per annum.
Interest on Rs. 1,50,000 at 4 per cent. ...	Rs. 6,000
Refund of loan, 7,500 ...	7,500
Establishment ...	6,000
	19,500
For 20 years ...	19,500
Afterwards ...	6,000

These are maximum amounts, and in actually carrying out the scheme further reductions would be practicable. For example, the item Rs. 5,000 for a column at Vizagapatam could be struck out, as with the natural elevation given by Waltair Point a service room to carry the lantern would suffice.

12. To meet the increased annual charge of Rs. 28,200 per annum or Rs. 19,500, if it cannot be met from the existing Port funds, it would be necessary to levy a special light due of 2 annas and 7 pies per ton in the case of coasting steamers and 6 pies per ton in the case of semi-coasting and foreign vessels, payable once in the year on the first entry in the Eastern group, or 1 anna and 9 pies in the case of the former and 4 pies for the latter without the light on the Gódvári Point. A simpler method of meeting the cost would be to increase existing Port dues at the rate of 8 pies per ton for coasting steamers and 2 pies per ton for semi-coasting and foreign vessels, or to meet the smaller charge at the rate of 4 pies per ton for coasting steamers, 2 pies per ton for semi-coasting and 1 pie per ton for foreign vessels. The latter method seems to me preferable and would bring in about Rs. 20,000 more yearly. In Burma, ships pay $1\frac{1}{2}$ annas per ton.

ENCLOSURE.

Light-house Charges.

	Establishment.	Oil.	Ordinary stores and contingencies.	New lights and appurtenances.	Public Works charges.	Total.
	RS.	RS.	RS.	RS.	RS.	RS.
1889-90	18,189	6,144	2,986	(a) 2,994	10,768	41,081
1890-91	18,802	2,523	(b) 6,280	..	6,860	34,465
1891-92	(c) 20,074	4,294	5,365	(d) 9,737	5,463	44,933
1892-93	20,054	4,850	(e) 7,515	(f) 39,873	9,849	82,141

(a) Cost of two 4th-order dioptric lights for Manapad and Calingapatam.

(b) Includes Rs. 613, cost of glass plates, and Rs. 2,251, cost of oil tanks.

(c) Includes Rs. 783, pay and travelling allowance of lighthouse mechanic.

(d) Cost of new lights for Gopalpur, Cuddalore, Tondi, Malpe and Kundapur.

(e) Includes Rs. 1,000, bonus to Mr. Ashpitel.

(f) Cost of new lights for Madras and Hope Island, Rs. 29,341. Fountain lamps for other lighthouses, Rs. 10,532.

ORDER—dated 10th August 1894, No. 318, Marine.

The matter which demands immediate attention is the removal of the Hope Island light to a spot whence it would completely guard vessels from the Sacramento Shoal. The Presidency Port officer will lose no time in submitting, in consultation with Mr. Ashpitel, proposals with this object.

2. In regard to the other suggestions put forward by the Presidency Port Officer, His Excellency the Governor in Council considers it desirable that Mr. Ashpitel should be deputed on special duty from January next with the Presidency Port Officer to inspect all the lights along the coast, go thoroughly into and report on the question of the suitability or otherwise of the position of each light, of the structure from which it is displayed, and also of the light itself for the purpose for which it is required. His enquiries should also extend to the adequacy and competence of, or otherwise, the establishments maintained for each light, the consumption of oil and other stores, &c., and the accommodation for the staff attached to the several lights visited by him. His remarks should be in no way restricted by any orders that may have issued heretofore for his guidance in dealing with questions relating to lighthouses.

3. Mr. Ashpitel will be granted the maximum deputation allowance permissible under regulations. The cost of his deputation will be met from Port funds. The Presidency Port Officer will report in regard to the details of the debit.

4. The Public Works Department will be requested to hold any new work in connection with lights or accommodation for their establishments in abeyance, pending further orders.

(True Extract.)

A. B. G. Miller Capt. R.R.

Chief Secretary.

To the Presidency Port Officer.
 " the Public Works Department.
 " F. W. Ashpitel, Esq.
 " the Financial Department.
 " the Accountant-General.

Exd. A. Raitt.

102

Gobt. of {1894} Madras.
MARINE.

MEMORANDUM.

For G. No. 22334.6.9.94

Requested for reference the undermentioned papers:—

Six additional copies of G.O. Marine Dept. No 318 of 10-8-94

P. W. SECRETARIAT,

Chennai, 8-7-1895.

To

The Head Clerk in charge of the Public Works

Dept.

30-500-37-94.

50-8-7-95-

Chunabhai
Second Assistant

of the Dept. completely guard vessels from the Sacramento Strait and directing that Mr. Asbpitel be deputed on special duty to inspect and report on all the lights along the coast.



Go

Handwritten signature

Furnished

*G. Clarke
Head Clerk*

9-7-95

RE

SD 10-7-95-

no 2233wb-9-94

Vertical handwritten text on the left edge of the paper

Govt. of {1894} Madras.

MARINE.

Issued

Recd.

Encl.

G.O., 10th August 1894, No. 318.

AUGUST.

Coast Lights.

Calling for proposals in regard to the removal of the Hope Island light to a spot whence it would completely guard vessels from the Sacramento Shoal and directing that Mr. Ashpitel be deputed on special duty to inspect and report on all the lights along the coast.



1894
10TH AUGUST 1894, No. 318, MARINE.

GOVERNMENT OF MADRAS.
MARINE DEPARTMENT.

READ—again the following papers :—

G.O., dated 8th October 1891, Mis. No. 438, Marine.

Read—the following paper :—

From the Presidency Port Officer, Madras, dated 11th July 1891, No. 1271—267-G.

ABSTRACT.—Submitting proposals for increasing the number of lights on the East Coast.

From the Presidency Port Officer, Madras, dated 15th August 1891, No. 1271—310-G.

ABSTRACT.—Forwarding revised statement of charges in connection with the new lights.

Order—dated 8th October 1891, Mis. No. 438, Marine.

The Presidency Port Officer will be informed that at present, and until the new Provincial contract is settled, the Government cannot entertain the proposals made for reorganising the lights on the East Coast.

(True Extract.)

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

To the Presidency Port Officer.

G.O., dated 8th June 1894, Mis. No. 213, Marine.

Read—the following letter from Commander W. J. POWELL, R.I.M., Presidency Port Officer, to the Chief Secretary to Government, dated Madras, 5th May 1894, No. 1271—169-G. :—

I have the honour to suggest for the consideration of Government the advisability of coming to some definite settlement of the question of the improvement of coast lights. For the past five years correspondence has been continual on this subject without approaching a final settlement. It seems to me that if Mr. Ashpitel could be deputed specially to visit localities at which changes are contemplated, full and complete proposals might be laid before Government before the close of the year.

2. The most important improvement contemplated is in connection with Point Divi, and I have already submitted alternative proposals regarding the matter. On these proposals Government requested information as to the suitability of the old Madras light for Point Divi. On this point a memorandum has been drawn up and sent to Mr. Ashpitel for favour of remarks before submission to Government; but the question, I submit, is one upon which Mr. Ashpitel can better advise Government than this office, as it is entirely a question of relative cost and intensity between the old apparatus and an entirely new one with a lower consumption of oil. The erection of a new lighthouse and raising of the old column are purely engineering questions; as is the transfer of the old Madras column to Point Divi.

3. Pending further discussion of this matter, I would suggest the preparation of plans and estimates by the Public Works Department for the following works :—

(1) Raising the old Point Divi Lighthouse 30 feet with tube for clockwork weight, the upper portion being constructed as a service room to carry a lantern somewhat similar to the present one and about the same weight.

(2) The erection of a new column near high-water mark to the eastward of the present lighthouse, 100 feet high, to carry (a) a 4th-order flash light weighing about 7 tons or (b) 3rd-order flash light weighing about 15 tons.

4. Any settlement of the class of light must to a great extent depend on cost, and however desirable it may be to have the higher-powered light, if funds are not available the cheaper light would be far better than continuing with the present inefficient one. With these estimates before them Government will be in a better position to decide on the merits of the various schemes.

5. The cost of a screw-pile lighthouse has been declared prohibitive—G.O., Marine, No. 129, dated 28th April 1892.

6. In addition to the improvement to Point Divi I would propose the following alterations and improvements for consideration:—

(1) The alteration of Seven Pagodas light from red to white, thereby increasing its mean range by 5 or 6 miles. The elevation of the light being sufficient for a 17 miles range, its mean luminous range as a red light is only 8 to 10 miles; as a white light it would be 14 miles. When the experiments with the Lindberg Trotter occulting apparatus (for which sanction has been asked for in my No. 1693—168-G., of 4th May 1894) are completed, proposals will be submitted for changing the character of this and other fixed lights. Proposals for improving the lantern at Pamban are already before Government.

(2) The substitution of a 4th-order flash light for the present inferior light at Manapad Point; which does not even show over the whole sea horizon, and the color of which is red, the latter defect nullifying the whole advantage gained by the high elevation of the light. A column 20 feet high would probably suffice.

(3) Improvements to Tellicherry light as set forth in my No. 1693—168-G., dated 4th May 1894.

(4) Provision of a sheltered light room at Cannanore.

7. With the future adoption of occulting apparatus, occasional improvements to burners and the provision of a petty harbour light from time to time, I consider that the proposals now made comprise all the requirements of this coast for many years to come.

8. On receipt of the views of Government on the first paragraph of my letter and their sanction to the preparation of estimates, I will furnish full details on any point upon which they may be required, but it seems to me to be useless going into the question of cost until some idea is gained of the cost of the various engineering portions of the scheme.

9. The first change at Seven Pagodas will cost nothing except the price of chimneys. The apparatus for Manapad would cost about £600, the apparatus for Point Divi, 4th order, about £600; apparatus for Point Divi, 3rd order, about £1,300.

Order—dated 8th June 1894, Mis. No. 213, Marine.

Before any orders can be passed in regard to Mr. Ashpitel's suggested deputation, some estimate of the time for which his services will be required should be furnished. The Government is quite in accord with Commander Powell as to the desirability of

	rs.
1889-90	41,081
1890-91	34,465
1891-92	44,934
1892-93	82,141

placing the lights on the coasts of this Presidency on a thoroughly efficient footing, but the expenditure on lights and their appurtenances has already been so heavy that the provision of expensive lights must be effected gradually and with due regard to other claims on Port funds.

2. Mr. Ashpitel's remarks in regard to the Point Divi light will be awaited, and his opinion should also be taken on the other proposals submitted by the Presidency Port Officer. The object to be attained is to have lights which are efficient and sufficient for the localities at which they are placed without waste of power and consequent unnecessary expenditure.

3. The Public Works Department will be requested to furnish the plans and estimates referred to in paragraph 3 of Commander Powell's letter.

(True Extract.)

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

To the Presidency Port Officer.
„ Public Works Department.

READ—also the following letter from Commander W. J. POWELL, R.I.M., Presidency Port Officer, to the Chief Secretary to Government, dated Madras, 19th July 1894, No. 1271—271-G.:—

With reference to G.O., No. 213, dated 8th June 1894, I have the honour to state that to visit the localities mentioned in my No. 1271—169-G., dated 5th May 1894, would only require Mr. Ashpitel's deputation for about 3 weeks. The present is the most favorable time of the year for visiting Point Divi, which by steamer and rail could be done in 10 days conveniently. Manapad Lighthouse lies about 30 miles from Tuticorin, and if the Pearl-fishery steamer were lent, the inspection could be carried out in 5 days. Seven Pagodas can be inspected in from 2 to 3 days according to the wind.

2. A scheme for improving and increasing the coast lights and harbour lights was submitted by Commander Bean while acting as Presidency Port Officer in 1891 (*vide* correspondence ending with G.O., Marine, Mis. No. 438, dated 8th October 1891); this scheme was, however, dependent on sanction being obtained to an increase to port dues, and has apparently not met with the approval of Government. I, therefore, when recommending certain improvements to lights in my letter, No. 1271—169-G., dated 5th May 1894, did not again bring the matter forward.

3. Since then the *Lanark* laden with Government Railway stores has been wrecked on the Sacramento Shoal, and I therefore think that the question of the location of the Hope Island light (which in my opinion—and in that of many other persons, among them Mr. Douglass and the late Commander Hoskin, R.N., Superintendent of the Marine Survey of India—is decidedly unsatisfactory) should again be considered. The accompanying tracing will shew this. It will be seen on this tracing that the light on Hope Island, as it is now just cuts the shoal on the line marked "heavy breakers"; from the position proposed the light will be visible nine miles to the southward of it.

4. It is, of course, possible by careful attention to the lead to avoid the Sacramento Shoal, but a good light in the vicinity of the shoal would make the approach to Cocanada from the southward much safer and easier.

5. If funds can be provided, I would strongly recommend the transfer of the present Hope Island light to a spot on the mainland near the Sacramento Shoal; a range of 14 miles would be sufficient, and if any natural elevation could be found on the coast line, the cost of erecting a column should not be very great.

6. As regards cost, I would observe that had there been a light on a proper position to guard the Sacramento Shoal, the *Lanark* would probably not have grounded. The value of her cargo—which is unlikely to be salvaged, and, if so, only at great expense—would have more than paid for all the lights proposed by Commander Bean.

7. The site which appears most suitable, combining the advantages of well guarding the shoal with nearness to a village, is "Thirtatmundi" village, about 5 miles due north of the shoal. The range of the light from this position will also "cut in" with that of Vakalapudi, and the absence of a light on Hope Island itself would cause no inconvenience, as the position of the present light renders it useless for the purpose it was originally intended for, viz., to guard vessels rounding Gódávri Point, the point having extended to a distance of 7 miles from the lighthouse.

8. The carrying out of this scheme in a modified form would perhaps be practicable without resorting to an increased tax on shipping by borrowing from Provincial funds, but the payment of interest and refund of the loan would leave a very small balance in the Port fund of the Eastern group.

9. The expenditure quoted by Government in G.O., No. 213, dated 8th June 1894, is very largely made up of annually recurring charges for maintenance. The actual charges for new apparatus, except in 1892-93, has not been very heavy, as the enclosed statement will show.

10. The cost of carrying out Commander Bean's scheme, together with the improvements suggested by me in my letter, No. 1271-169-G., dated 5th May 1894, would amount to about Rs. 2,00,000, or Rs. 1,50,000, without the light on Gódvári Point.

11. The increased cost of establishment and stores, &c., would be Rs. 10,200 per annum, or Rs. 6,000 per annum without the Gódvári Point establishment. The following figures show the method of meeting the loan proposed :—

	Per annum.
	RS.
Interest on Rs. 2,00,000 at 4 per cent. ...	8,000
Refund of loan, 10,000 ...	10,000
	18,000
Establishment, &c. ...	10,200
	28,200
For 20 years ...	28,200
Afterwards ...	10,200

Without Gódvári Point light :—

	Per annum.
	RS.
Interest on Rs. 1,50,000 at 4 per cent. ...	6,000
Refund of loan, 7,500 ...	7,500
Establishment ...	6,000
	19,500
For 20 years ...	19,500
Afterwards ...	6,000

These are maximum amounts, and in actually carrying out the scheme further reductions would be practicable. For example, the item Rs. 5,000 for a column at Vizagapatam could be struck out, as with the natural elevation given by Waltair Point a service room to carry the lantern would suffice.

12. To meet the increased annual charge of Rs. 28,200 per annum or Rs. 19,500, if it cannot be met from the existing Port funds, it would be necessary to levy a special light due of 2 annas and 7 pies per ton in the case of coasting steamers and 6 pies per ton in the case of semi-coasting and foreign vessels, payable in the year on the first entry in the Eastern group, or 1 anna and 9 pies in the former and 4 pies for the latter without the light on the simpler method of meeting the cost would be to increase existir of 8 pies per ton for coasting steamers and 2 pies per ton for semi-vessels, or to meet the smaller charge at the rate of 4 pies per ton for 2 pies per ton for semi-coasting and 1 pie per ton for foreign vessels. The latter method seems to me preferable and would bring in about Rs. 20,000 more yearly. In Burma, ships pay $1\frac{1}{2}$ annas per ton.

ENCLOSURE.
Light-house Charges.

	Establishment.	Oil.	Ordinary stores and contingencies.	New lights and appurtenances.	Public Works charges.	Total.
	RS.	RS.	RS.	RS.	RS.	RS.
1889-90	18,189	6,144	2,986	(a) 2,994	10,768	41,081
1890-91	18,802	2,523	(b) 6,280	..	6,860	34,465
1891-92	(c) 20,074	4,294	5,365	(d) 9,737	5,463	44,933
1892-93	20,054	4,850	(e) 7,515	(f) 39,873	9,849	82,141

(a) Cost of two 4th-order dioptric lights for Manapad and Calingapatam.

(b) Includes Rs. 613, cost of glass plates, and Rs. 2,261, cost of oil tanks.

(c) Includes Rs. 783, pay and travelling allowance of lighthouse mechanic.

(d) Cost of new lights for Gopalpur, Cuddalore, Tondi, Malpe and Kundapur.

(e) Includes Rs. 1,000, bonus to Mr. Ashpitel.

(f) Cost of new lights for Madras and Hope Island, Rs. 29,341. Fountain lamps for other lighthouses, Rs. 10,532.

ORDER—dated 10th August 1894, No. 318, Marine.

The matter which demands immediate attention is the removal of the Hope Island light to a spot whence it would completely guard vessels from the Sacramento Shoal. The Presidency Port officer will lose no time in submitting, in consultation with Mr. Ashpitel, proposals with this object.

2. In regard to the other suggestions put forward by the Presidency Port Officer, His Excellency the Governor in Council considers it desirable that Mr. Ashpitel should be deputed on special duty from January next with the Presidency Port Officer to inspect all the lights along the coast, go thoroughly into and report on the question of the suitability or otherwise of the position of each light, of the structure from which it is displayed, and also of the light itself for the purpose for which it is required. His enquiries should also extend to the adequacy and competence of, or otherwise, the establishments maintained for each light, the consumption of oil and other stores, &c., and the accommodation for the staff attached to the several lights visited by him. His remarks should be in no way restricted by any orders that may have issued heretofore for his guidance in dealing with questions relating to lighthouses.

3. Mr. Ashpitel will be granted the maximum deputation allowance permissible under regulations. The cost of his deputation will be met from Port funds. The Presidency Port Officer will report in regard to the details of the debit.

4. The Public Works Department will be requested to hold any new work in connection with lights or accommodation for their establishments in abeyance, pending further orders.

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the Presidency Port Officer.
„ the Public Works Department.
„ F. W. Ashpitel, Esq.
„ the Financial Department.
„ the Assistant-General.

Calling for proposals of the Hope Island light to completely guard vessels and directing that Mr.

Ed. A. Raitt.

Govt. of {1894} Madras.

MARINE.

Issued

Recd.

Encl.

G.O., 10th August 1894, No. 318.

AUGUST.

Coast Lights.

Calling for proposals in regard to the removal of the Hope Island light to a spot whence it would completely guard vessels from the Sacramento Shoal and directing that Mr. Ashpitel be deputed on special duty to inspect and report on all the lights along the coast.



Govt. of {1894} Madras.

MARINE.

Issued

Recd.

Encl.

G.O., 10th August 1894, No. 318.

AUGUST.

Coast Lights.

Calling for proposals in regard to the removal of the Hope Island light to a spot whence it would completely guard vessels from the Sacramento Shoal and directing that Mr. Ashpitel be deputed on special duty to inspect and report on all the lights along the coast.



10TH AUGUST 1894, No. 318, MARINE.

GOVERNMENT OF MADRAS.
MARINE DEPARTMENT.

READ—again the following papers :—

G.O., dated 8th October 1891, Mis. No. 438, Marine.

Read—the following paper :—

From the Presidency Port Officer, Madras, dated 11th July 1891, No. 1271—
267-G.

ABSTRACT.—Submitting proposals for increasing the number of lights on the East Coast.

From the Presidency Port Officer, Madras, dated 15th August 1891, No. 1271—
310-G.

ABSTRACT.—Forwarding revised statement of charges in connection with the new lights.

Order—dated 8th October 1891, Mis. No. 438, Marine.

The Presidency Port Officer will be informed that at present, and until the new Provincial contract is settled, the Government cannot entertain the proposals made for reorganising the lights on the East Coast.

(True Extract.)

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

To the Presidency Port Officer.

G.O., dated 8th June 1894, Mis. No. 213, Marine.

Read—the following letter from Commander W. J. POWELL, R.I.M., Presidency Port Officer, to the Chief Secretary to Government, dated Madras, 5th May 1894, No. 1271—169-G. :—

I have the honour to suggest for the consideration of Government the advisability of coming to some definite settlement of the question of the improvement of coast lights. For the past five years correspondence has been continual on this subject without approaching a final settlement. It seems to me that if Mr. Ashpitel could be deputed specially to visit localities at which changes are contemplated, full and complete proposals might be laid before Government before the close of the year.

2. The most important improvement contemplated is in connection with Point Divi, and I have already submitted alternative proposals regarding the matter. On these proposals Government requested information as to the suitability of the old Madras light for Point Divi. On this point a memorandum has been drawn up and sent to Mr. Ashpitel for favour of remarks before submission to Government; but the question, I submit, is one upon which Mr. Ashpitel can better advise Government than this office, as it is entirely a question of relative cost and intensity between the old apparatus and an entirely new one with a lower consumption of oil. The erection of a new lighthouse and raising of the old column are purely engineering questions; as is the transfer of the old Madras column to Point Divi.

3. Pending further discussion of this matter, I would suggest the preparation of plans and estimates by the Public Works Department for the following works :—

(1) Raising the old Point Divi Lighthouse 30 feet with tube for clockwork weight, the upper portion being constructed as a service room to carry a lantern somewhat similar to the present one and about the same weight.

(2) The erection of a new column near high-water mark to the eastward of the present lighthouse, 100 feet high, to carry (a) a 4th-order flash light weighing about 7 tons or (b) 3rd-order flash light weighing about 15 tons.

4. Any settlement of the class of light must to a great extent depend on cost, and however desirable it may be to have the higher-powered light, if funds are not available the cheaper light would be far better than continuing with the present inefficient one. With these estimates before them Government will be in a better position to decide on the merits of the various schemes.

5. The cost of a screw-pile lighthouse has been declared prohibitive—G.O., Marine, No. 129, dated 28th April 1892.

6. In addition to the improvement to Point Divi I would propose the following alterations and improvements for consideration:—

(1) The alteration of Seven Pagodas Light from red to white, thereby increasing its mean range by 5 or 6 miles. The elevation of the light being sufficient for a 17 miles range, its mean luminous range as a red light is only 8 to 10 miles; as a white light it would be 14 miles. When the experiments with the Lindberg Trotter occulting apparatus (for which sanction has been asked for in my No. 1693—168-G., of 4th May 1894) are completed, proposals will be submitted for changing the character of this and other fixed lights. Proposals for improving the lantern at Pamban are already before Government.

(2) The substitution of a 4th-order flash light for the present inferior light at Manapad Point; which does not even show over the whole sea horizon, and the color elevation of the light. A column 20 feet high would probably suffice.

(3) Improvements to Tellicherry light as set forth in my No. 1693—168-G., dated 4th May 1894.

(4) Provision of a sheltered light room at Cannanore.

7. With the future adoption of occulting apparatus, occasional improvements to burners and the provision of a petty harbour light from time to time, I consider that the proposals now made comprise all the requirements of this coast for many years to come.

8. On receipt of the views of Government on the first paragraph of my letter and their sanction to the preparation of estimates, I will furnish full details on any point upon which they may be required, but it seems to me to be useless going into the question of cost until some idea is gained of the cost of the various engineering portions of the scheme.

9. The first change at Seven Pagodas will cost nothing except the price of chimneys. The apparatus for Manapad would cost about £600, the apparatus for Point Divi, 4th order, about £600; apparatus for Point Divi, 3rd order, about £1,300.

Order—dated 8th June 1894, Mis. No. 213, Marine.

Before any orders can be passed in regard to Mr. Ashpitel's suggested deputation, some estimate of the time for which his services will be required should be furnished. The Government is quite in accord with Commander Powell as to the desirability of

	RS.
1889-90	41,081
1890-91	34,465
1891-92	44,934
1892-93	82,141

placing the lights on the coasts of this Presidency on a thoroughly efficient footing, but the expenditure on lights and their appurtenances has already been so heavy that the provision of expensive lights must be effected gradually and with due regard to other claims on Port funds.

2. Mr. Ashpitel's remarks in regard to the Point Divi light will be awaited, and his opinion should also be taken on the other proposals submitted by the Presidency Port Officer. The object to be attained is to have lights which are efficient and sufficient for the localities at which they are placed without waste of power and consequent unnecessary expenditure.

3. The Public Works Department will be requested to furnish the plans and estimates referred to in paragraph 3 of Commander Powell's letter.

(True Extract.)

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

To the Presidency Port Officer.

„ Public Works Department.

READ—also the following letter from Commander W. J. POWELL, R.I.M., Presidency Port Officer, to the Chief Secretary to Government, dated Madras, 19th July 1894, No. 1271—271-G.:—

With reference to G.O., No. 213, dated 8th June 1894, I have the honour to state that to visit the localities mentioned in my No. 1271—169-G., dated 5th May 1894, would only require Mr. Ashpitel's deputation for about 3 weeks. The present is the most favorable time of the year for visiting Point Divi, which by steamer and rail could be done in 10 days conveniently. Manapad Lighthouse lies about 30 miles from Tuticorin, and if the Pearl-fishery steamer were lent, the inspection could be carried out in 5 days. Seven Pagodas can be inspected in from 2 to 3 days according to the wind.

2. A scheme for improving and increasing the coast lights and harbour lights was submitted by Commander Bean while acting as Presidency Port Officer in 1891 (*vide* correspondence ending with G.O., Marine, Mis. No. 438, dated 8th October 1891); this scheme was, however, dependent on sanction being obtained to an increase to port dues, and has apparently not met with the approval of Government. I, therefore, when recommending certain improvements to lights in my letter, No. 1271—169-G., dated 5th May 1894, did not again bring the matter forward.

3. Since then the *Lanark* laden with Government Railway stores has been wrecked on the Sacramento Shoal, and I therefore think that the question of the location of the Hope Island light (which in my opinion—and in that of many other persons, among them Mr. Douglass and the late Commander Hoskin, R.N., Superintendent of the Marine Survey of India—is decidedly unsatisfactory) should again be considered. The accompanying tracing will shew this. It will be seen on this tracing that the light on Hope Island, as it is now just cuts the shoal on the line marked "heavy breakers"; from the position proposed the light will be visible nine miles to the southward of it.

4. It is, of course, possible by careful attention to the lead to avoid the Sacramento Shoal, but a good light in the vicinity of the shoal would make the approach to Cocanada from the southward much safer and easier.

5. If funds can be provided, I would strongly recommend the transfer of the present Hope Island light to a spot on the mainland near the Sacramento Shoal; a range of 14 miles would be sufficient, and if any natural elevation could be found on the coast line, the cost of erecting a column should not be very great.

6. As regards cost, I would observe that had there been a light on a proper position to guard the Sacramento Shoal, the *Lanark* would probably not have grounded. The value of her cargo—which is unlikely to be salvaged, and, if so, only at great expense—would have more than paid for all the lights proposed by Commander Bean.

7. The site which appears most suitable, combining the advantages of well guarding the shoal with nearness to a village, is "Thirtatmundi" village, about 5 miles due north of the shoal. The range of the light from this position will also "cut in" with that of Vakalapudi, and the absence of a light on Hope Island itself would cause no inconvenience, as the position of the present light renders it useless for the purpose it was originally intended for, viz., to guard vessels rounding Gódvári Point, the point having extended to a distance of 7 miles from the lighthouse.

8. The carrying out of this scheme in a modified form would perhaps be practicable without resorting to an increased tax on shipping by borrowing from Provincial funds, but the payment of interest and refund of the loan would leave a very small balance in the Port fund of the Eastern group.

9. The expenditure quoted by Government in G.O., No. 213, dated 8th June 1894, is very largely made up of annually recurring charges for maintenance. The actual charges for new apparatus, except in 1892-93, has not been very heavy, as the enclosed statement will show.

10. The cost of carrying out Commander Bean's scheme, together with the improvements suggested by me in my letter, No. 1271-169-G., dated 5th May 1894, would amount to about Rs. 2,00,000, or Rs. 1,50,000, without the light on Gódávri Point.

11. The increased cost of establishment and stores, &c., would be Rs. 10,200 per annum, or Rs. 6,000 per annum without the Gódávri Point establishment. The following figures show the method of meeting the loan proposed:—

	Per annum.
Interest on Rs. 2,00,000 at 4 per cent. ...	Rs. 8,000
Refund of loan, 10,000 ...	10,000

Establishment, &c. ...	18,000
... ..	10,200
For 20 years ...	28,200
Afterwards ...	10,200

Without Gódávri Point light:—

	Per annum.
Interest on Rs. 1,50,000 at 4 per cent. ...	Rs. 6,000
Refund of loan, 7,500 ...	7,500
Establishment ...	6,000
For 20 years ...	19,500
Afterwards ...	6,000

These are maximum amounts, and in actually carrying out the scheme further reductions would be practicable. For example, the item Rs. 5,000 for a column at Vizagapatam could be struck out, as with the natural elevation given by Waltair Point a service room to carry the lantern would suffice.

12. To meet the increased annual charge of Rs. 28,200 per annum or Rs. 19,500, if it cannot be met from the existing Port funds, it would be necessary to levy a special light due of 2 annas and 7 pies per ton in the case of coasting steamers and 6 pies per ton in the case of semi-coasting and foreign vessels, payable once in the year on the first entry in the Eastern group, or 1 anna and 9 pies in the case of the former and 4 pies for the latter without the light on the Gódávri Point. A simpler method of meeting the cost would be to increase existing Port dues at the rate of 8 pies per ton for coasting steamers and 2 pies per ton for semi-coasting and foreign vessels, or to meet the smaller charge at the rate of 4 pies per ton for coasting steamers, 2 pies per ton for semi-coasting and 1 pie per ton for foreign vessels. The latter method seems to me preferable and would bring in about Rs. 20,000 more yearly. In Burma, ships pay $1\frac{1}{2}$ annas per ton.

ENCLOSURE.

Light-house Charges.

	Establishment.	Oil.	Ordinary stores and contingencies.	New lights and appurtenances.	Public Works charges.	Total.
	RS.	RS.	RS.	RS.	RS.	RS.
1889-90	18,189	6,144	2,986	(a) 2,994	10,768	41,081
1890-91	18,802	2,523	(b) 6,280	..	6,860	34,465
1891-92	(c) 20,074	4,294	5,365	(d) 9,737	5,463	44,933
1892-93	20,054	4,850	(e) 7,515	(f) 39,873	9,849	82,141

(a) Cost of two 4th-order dioptric lights for Manapad and Calingapatam.

(b) Includes Rs. 613, cost of glass plates, and Rs. 2,251, cost of oil tanks.

(c) Includes Rs. 783, pay and travelling allowance of lighthouse mechanic.

(d) Cost of new lights for Gopalpur, Cuddalore, Tondi, Malpe and Kundapur.

(e) Includes Rs. 1,000, bonus to Mr. Ashpitel.

(f) Includes Rs. 1,000, bonus to Mr. Ashpitel. Fountain lamps for other lighthouses, Rs. 10,532.

ORDER—dated 10th August 1894, No. 318, Marine.

The matter which demands immediate attention is the removal of the Hope Island light to a spot whence it would completely guard vessels from the Sacramento Shoal. The Presidency Port officer will lose no time in submitting, in consultation with Mr. Ashpitel, proposals with this object.

2. In regard to the other suggestions put forward by the Presidency Port Officer, His Excellency the Governor in Council considers it desirable that Mr. Ashpitel should be deputed on special duty from January next with the Presidency Port Officer to inspect all the lights along the coast, go thoroughly into and report on the question of the suitability or otherwise of the position of each light, of the structure from which it is displayed, and also of the light itself for the purpose for which it is required. His enquiries should also extend to the adequacy and competence of, or otherwise, the establishments maintained for each light, the consumption of oil and other stores, &c., and the accommodation for the staff attached to the several lights visited by him. His remarks should be in no way restricted by any orders that may have issued heretofore for his guidance in dealing with questions relating to lighthouses.

3. Mr. Ashpitel will be granted the maximum deputation allowance permissible under regulations. The cost of his deputation will be met from Port funds. The Presidency Port Officer will report in regard to the details of the debit.

4. The Public Works Department will be requested to hold any new work in connection with lights or accommodation for their establishments in abeyance, pending further orders.

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the Presidency Port Officer.
" the Public Works Department.
" F. W. Ashpitel, Esq.
" the Financial Department.
" the Accountant-General.

Edw. A. Raitt.