Government of Madras.

Marine (~~100~~ 1898 Go. M) Department.

ORDINARY PRINTED.

G.O., No. 316-317

DATED 29th April 1898

G.O.,

Print-Rates

Type 26-12-98

[Despatch Abstract.]

Light-house and Port improvements

Orders directing that the Govt. of India be appealed to for a grant from Imperial funds to admit of the proposed schemes of —— being carried out within the period contemplated

BACK PAPERS.

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

FURTHER PAPERS.

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

Government {1898} of Madras.

MARINE.

Recd. } 1898. *Enclosures*

Regd. } *Spare copies*

G.O., No. 316, 29th April 1898.

APRIL.

Lighthouse and Port improvements

Orders directing that the Government of India be appealed to for a grant from Imperial funds to admit of the proposed schemes of — being carried out within the period contemplated.

GOVERNMENT OF MADRAS.

MARINE DEPARTMENT.

Read—the following papers:—

From Commander H. A. STREET, R.I.M., Presidency Port Officer, Madras, to the Secretary to Government, Marine Department, dated 19th November 1897, No. 1730/403 G.

With reference to G.O., No. 513, Marine, dated 4th June 1897, I have the honour to forward herewith two statements showing the requirements of the ports in the Eastern and Western groups, respectively, for the next five years as far as can be foreseen at the present moment.

2. The item first entered against each port is what is the foremost in point of urgency, and those entered below it are arranged in the order of their urgency. Taking into account the surplus that is anticipated to stand to credit of each group on 31st March 1898, and reserving therefrom a lakh and a half-rupees, respectively, for the Eastern and Western groups (Madras included in the former) on account of lighthouse improvements, sufficient funds should be available for carrying out the works proposed for execution in 1898–99, as specified in the statement accompanying this office letter, No. 1500/402 G., dated 19th November 1897, besides the dredger and the crane for Tuticorin shown in statement A herewith sent. In regard to the other items, I would propose that, as more money becomes available afterwards, the works be taken in hand one by one in the order of their importance.

From Commander H. A. STREET, R.I.M., Presidency Port Officer, Madras, to the Secretary to Government, Marine Department, dated 14th January 1898, No. 1730/18 G.

With reference to Marine Department memorandum No. 716 E., dated 26th November 1897, I have the honour to forward herewith amended statements showing a forecast of the requirements of the next five years.

2. The works have been arranged in the order pointed out in paragraph 1 of the above memorandum.

3. The entries in the remark column explain the necessity of the works and include a history in each case where one exists.

4. I also forward herewith a statement of estimated receipts and expenditure of the next five years.

Enclosures.

Pilotage Funds—Act X of 1889.

—	Madras.	Pamban and Kilakarai.	Cochin.	Mangalore.
	Rs.	Rs.	Rs.	Rs.
Average annual income for 5 years × 5	1,59,590	55,940	15,240	1,640
Deduct— Average annual expenditure on establishment } × 5	1,58,875	10,985	11,135	1,605
,, petty maintenance of all kinds }	715	44,955	4,105	35
Balance available out of income for Major Works ..	50,000	15,743	14,931	— 14
Add— Balance on hand on 1st April 1897	* 50,715	60,698	19,036	21
Total available in five years for Major Works ..				

* The surplus of Madras Pilotage Fund is annually made over to Madras Port Funds.

Landing and Shipping Dues—Act III of 1885.

—	Vizagapatam.	Cocanada.	Masulipatam.	Negapatam.	Mangalore.
	Rs.	Rs.	Rs.	Rs.	Rs.
Average annual income for 5 years × 5	39,445	2,26,405	15,615	60,085	46,200
Deduct— Average annual expenditure on establishment } × 5	5,450	1,18,810	7,005	28,750	3,280
,, petty maintenance of all kinds }	33,995	1,07,595	8,610	31,335	42,920
Balance available out of income for Major Works ..	16,216	3,206	8,675	36,403	31,890
Add— Balance on hand on 1st April 1897	50,211	1,10,801	17,285	67,738	74,810
Total available in 5 years for Major Works ..					

Port Funds, Act X of 1889.

—	* Madras.	Eastern Group.	Western Group.
	Rs.	Rs.	Rs.
Average annual income for 5 years × 5 ..	5,99,165	9,58,360	5,17,815
Deduct— Average annual expenditure on establishment. Average petty maintenance of all kinds. ,, lighthouse establishment and materials. } × 5	4,11,125	8,02,040	4,01,555
Balance available out of income for Major Works.	1,88,040	1,56,320	1,16,260
Add— Balance on hand on 1st April 1897	86,917	2,45,682	3,60,600
Total available in 5 years for Major Works including lighthouse construction ..	2,74,957	4,02,002	4,76,860

* The surplus of Madras is made over each year to the Harbour Trust Board as contribution from Port Funds.

FORECAST of the requirements of the next five years.

Eastern Group.

No.	Port.	Nature of work.	Approximate estimate.	Amount proposed to be spent yearly.	From what funds to be met.	Remarks.
			Rs.	Rs.		
1	Cuddalore ..	A new boiler for the steam dredger.	1,000	1,000	Port Fund ..	The present boiler having quite recently been condemned it is absolutely necessary to obtain a new one; the actual cost will shortly be reported to Government.
2	Tuticorin ..	Passenger shed and platform alongside of which the train would draw up.	2,700	2,700	Port Fund one-third share only.	On the completion of the new pier at Tuticorin, further improvements connected therewith were considered necessary and, in April 1896, a joint inspection was held by the Presidency Port Officer, Executive Engineer of the division, local Port Officer, Assistant Commissioner of Salt and Abkári Revenue, and the Collector of the district, and a detailed report with regard to this work as well as those numbered 16, 17 and 18 submitted to Government (G.O., No. 798, Marine, dated 11th September 1897). This proposed passenger shed was sanctioned (G.O., No. 1130, Revenue, dated 25th February 1897) and estimate called for (G.O., No. 3200 W, of 16th November 1897, and G.O., No. 974, Marine, dated 1st December 1897).
3	Do. ..	Dredger	30,000	28,000	Port Fund ..	A large quantity of silt having settled near the new pier, it was first considered that dredging apparatus might, as a temporary measure, be fitted up and silt removed therewith; but as such apparatus would be unequal to the work on the one hand and, on the other, the Dredger "Wenlock's" draft being too great to permit of her working alongside of the pier, and immediate measures being necessary for the removal of silt from near the pier to protect boat traffic from obstruction, it was pointed out as absolutely necessary to have a dredger for this port of the Priestman type (G.O., No. 524, Marine, dated 11th June 1897). The subject is under correspondence with Public Works Department (G.O., No. 826, Marine, dated 22nd September 1897).
4	Do. ..	A 15-ton crane ..	5,700	5,700	Do. ..	On the completion of the new pier at this port, it was found necessary to have a 15-ton crane fixed on the pier and the purchase of one was sanctioned (G.O., No. 215, Marine, dated 18th July 1895) and orders given to Messrs. Massey & Co., Madras, for the supply of the same in July 1895. The question of strengthening the pier to bear the weight of the crane is under correspondence between the Public Works Department and the contractors (Government memorandum No. 1617 C., of 20th March 1897, and Presidency Port Officer's letter No. 163/171 G., dated 11th May 1897 paragraph 3).
5	Do. ..	Residence for the Port Officer.	13,930	5,000	Do. ..	In 1894 the general question of residences for Port Officers at coast ports was taken up, and after some correspondence with regard to sufficiency of accommodation, &c., construction of residences at the respective ports is obtaining sanction. Residence for the Port Officer, Tuticorin, was sanctioned in G.O., No. 919, Marine, dated 11th November 1897, at an estimated cost of Rs. 13,930. As to emergency of the execution of the same, see Presidency Port Officer's No. 1678/8 G., dated 7th January 1898.
5-A	Porto Novo ..	A new wharf ..	6,000	6,000	Do. ..	A sum of Rs. 1,290 was provided for repairing the present wharf, but the Superintending Engineer, V Circle, has just brought to notice that the present structure is in a very bad state and that it would be better to have a new wharf than to spend money on the old one.
6	Calimere ..	Quarters for light-keepers.	1,690	1,690	Do. ..	In June 1890 the light at Calimere point was exhibited for the first time; and quarters for the lightkeepers were constructed at a cost of about Rs. 2,000. In November 1891 the Negapatam Port Officer recommended that new kutcha buildings might be constructed for the lightkeepers and the old ones used as store rooms. Again, in January 1892, the Port Officer suggested that huts might be constructed on stone basements in consequence of the swampy nature of the soil. In November 1892 the lightkeepers' existing quarters were repaired and three new huts constructed for the families of the men, all at a cost of about Rs. 722. In October 1893 the Public Works Department suggested that a pucka masonry building might be constructed in preference to frequent repairs to existing buildings. Estimates for Rs. 1,644 for permanent buildings were laid before Government, but sanction was declined pending the result of Mr. Ashpitel's deputation by G.O., No. 325, Marine, of 15th August 1894. In 1896 the existing quarters entirely collapsed. Finally an estimate was prepared by Mr. Ashpitel for Rs. 1,350 which was with certain alterations raised to Rs. 1,690 and sanctioned by Government (G.O., No. 1028, Marine, of 14th December 1897).
7	Negapatam ..	Port Officer's residence.	13,900	5,000	Do. ..	See remarks against item No. 5; also paragraph 3 of G.O., No. 1305 W., of 23rd April 1896; G.O., No. 124, Marine, of 13th February 1897; and memorandum No. 1857 C., of 1st April 1897; and No. 4286 C., of 23rd October 1897; and Presidency Port Officer's No. 1678/426 G., of 1st December 1897, explaining the necessity for a residence being built.
8	Do. ..	Improvement to the Port Office.	1,000	1,000	Do. ..	Plan and estimate forwarded to Government with Presidency Port Officer's letter No. 1832/441 G., of 13th December 1897, which fully explain the necessity for the work being carried out.
9	Do. ..	Permanent groynes in lieu of the temporary ones now in existence.	15,000	5,000	Landing and Shipping Dues Fund.	In the interests of the port permanent groynes are considered absolutely necessary in lieu of the existing ones which have proved unsatisfactory.
10	Pámban ..	Two jetties ..	20,000	*	Port Fund ..	In view of some 20,000 pilgrims going across to Rameswaram in one month of the year, besides a large number in other months, the question of want of jetties at this port was considered in 1894, and after some correspondence between the Collector of the district and the Port and Public Works Departments, a proposal for two jetties estimated to cost Rupees 30,000 was placed before Government in 1895 by the Presidency Port Officer suggesting the expenditure being met in the first instance from the Provincial Fund (Madura District Fund not being in a position then to meet it) and afterwards re-paid from a levy of tolls under Madras Act V of 1863 and Act VII of 1871, the introduction of which was also suggested. Government in memo. No. 1960, Marine, dated 22nd August 1895, enquired if a couple of small wooden jetties would not meet the requirements of the port, as it was considered that a loan from the Provincial Fund of such a large sum was not likely to be available to be re-paid after a number of years which would be the case if it had to be re-paid from the pier toll collections as already mentioned. A final proposal was laid before Government in April 1897 (*vide* Presidency Port Officer's letter No. 1739/123 G.) for two iron screw pile jetties estimated to cost Rs. 20,000. Preparation of plan and estimate has been ordered (G.O., No. 848, Marine, of 30th September 1897).
11	Cocanada ..	Improvements to the bar and half cost of dredger.	2,00,000	*	Do. ..	*Vide* correspondence ending with Presidency Port Officer's letter to Government, No. 48/387 G., dated 4th November 1897.
12	Vizagapatam ..	Improvement to the bar including half cost of dredger.	2,00,000	*	Do. ..	*Vide* correspondence ending with Presidency Port Officer's letter to Government, No. 48/387 G., of 4th November 1897.
13	Masulipatam ..	Improvements to bar and river.	25,000	10,000	Landing and Shipping Dues Fund.	The landing and shipping dues committee at this port considered that a dredger was absolutely necessary for the improvement of the port and the matter was laid before Government in December 1894. Government declined to sanction the proposal (G.O., No. 7, Marine, of 10th January 1895). The committee again renewed their application for a dredger in October 1896. It is under consideration to put up a cross bund across the old bar, and the Executive Engineer has been addressed on the subject.
14	Gopalpur ..	Residence for Port Officer.	6,000	6,000	Port Fund ..	See remarks against item No. 5. See G.O., No. 93, Marine, dated 15th February 1896. " " " 1305 W., Public Works, dated 23rd April 1896. Proposals to purchase a house was made in November 1896. See G.O., No. 812, Marine, dated 23rd November 1896, declining to sanction the purchase and directing to renew the application next year. See G.O., No. 522, Marine of 9th June 1897. " " " 606, " of 7th July "
15	Vizagapatam ..	Port Officer's residence.	10,500	9,300	Do. ..	See remarks against item No. 5. " G.O., No. 93, Marine, dated 15th February 1896. " " " 1305 W., Public Works, dated 23rd April 1896. " " " 3278 W., " " 14th November 1896. " " " 833, Marine, dated 1st December 1896.
16	Tuticorin ..	One open shed for goods.	6,700	*	Do. ..	See remarks against item No. 2, "Passenger shed."
17	Do. ..	One closed shed for goods.	10,000	*	Do. ..	
18	Do. ..	Fencing in of foreshore half share of cost.	2,050	*	Do. ..	
19	Negapatam ..	Improvements to jetty.	10,000	2,800	Landing and Shipping Dues Fund.	This proposal originated with the Executive Engineer of the division, who pointed out that there would be a large saving in annual repairs if these improvements were carried out. The report which accompanied the estimate shows this as probable. Plan and estimate for Rs. 2,800 forwarded to Government with Presidency Port Officer's letter No. 540/319 G., of 1st September 1897.
20	Do. ..	Fencing in of foreshore.	4,000	*	Do. ..	This work is considered necessary in the interests of the port.
21	Vizagapatam ..	Improvements to foreshore.	10,000	*	Do. ..	This sum is estimated to meet improvements which may become necessary in continuation of those sanctioned in G.Os., No. 37, Marine of 28th January 1895, and No. 84, Marine, dated 28th January 1897.
		Total, Eastern Group.	5,95,170	89,190		

N.B.—A lakh and a half of the balance at credit of the Eastern Group Port Funds being reserved for general improvements to the existing system of lights, allotments for the items marked * will have to be postponed as more money becomes available.

Forecast of the requirements of the next five years.

Western Group.

Number.	Port.	Nature of work.	Approximate estimate.	Amount proposed to be spent yearly.	From what funds to be met.	Remarks.
			Rs.	Rs.		
1	Cochin ..	Port Officer's residence.	30,700	15,000	Port Fund ..	In June 1894 it was proposed to convert the present Port office into a residence for the Port officer and the bungalow in the marine yard as an office The Executive Engineer, West Coast Division, condemned both buildings and recommended a new building for the Port officer's residence. In the meantime a private building was offered for Rs. 8,000 as best suited for a residence. Anticipating a successful negotiation, estimates were ordered to put the present Port office into thorough repair—G.O., No. 466, Marine, dated 29th June 1896, at a cost of Rs. 1,800. The negotiations failing plan and estimate for a residence were ordered—G.O., No. 584, Marine, of 27th August 1896, but a proposal for a combined residence and office is under consideration—Government Memorandum, Public Works, No. 5247 C. of 4th December 1897.
2	Hangarcotta ..	Lightkeeper's quarters.	1,500	1,500	Do. ..	The work is necessary and urgent. Estimate has been called for and will shortly be placed before Government.
3	Coondapoor ..	Do. ..	1,500	1,500	Do. ..	
4	Malpe ..	Quarters for lightkeepers.	1,500	1,500	Do. ..	
5	Ponani ..	Joining the two existing groynes and filling up the place enclosed.	1,000	1,000	Do. ..	The work is necessary in the interests of the port and figures are approximate.
6	Mangalore ..	Construction of a pier.	2,00,000	* 1,00,000	Landing and Shipping Dues Fund and Port Funds.	At the request of the Landing and Shipping Dues Committee at this port, the Collector recommended in November 1895 the construction of an iron screw pile pier. The Local Fund Engineer of South Canara district expressed as his opinion that the soil was unsuitable for an iron screw pier and recommended instead a 200 feet floating stage. In October 1896, the Presidency Port Officer accordingly recommended a Pantoon pier at a cost of Rs 31,000 to be met out of landing and shipping dues. Government in Marine endorsement, No. 86 E., dated 6th February 1897, referred the question for the opinion of Public Works Department. The Executive Engineer, West Coast Division, showed that there was nothing in the soil to prevent a permanent screw pile pier being built. Estimate has accordingly been called for—G.O., No. 308, Marine, of 30th March 1897. As the Executive Engineer also recommended that a portion of the foreshore be reclaimed before commencing the pier, the Landing and Shipping Dues Committee consented to meet the expenses of the reclamation also; and the preparation of an estimate for the latter work also has been called for—G.O., No. 915, Marine, dated 10th November 1897.
7	Do. ..	Reclamation of foreshore.	50,000	25,000	Landing and Shipping Dues Fund.	
8	Calicut ..	Repairs to the present pier.	8,000	8,000	Port Fund ..	The present pier having been placed under the management of "The Calicut Pier and Warehouse Company" in April 1893, the Local Port officer suggested that the pier should be thoroughly repaired to make it safe for the traffic; from that time the subject was under correspondence between the aforesaid company and the Port and Public Works Departments. In 1894 the necessity for repairs to the pier was brought to the notice of Government—Government Memo. No. 878 of 3rd May 1894 and G.O., No. 236, Marine, of 19th June 1894. Again in 1896 the necessity for complete repairs to the pier at a cost of Rs. 25,000 was reported to Government—G.O., No. 648, Marine, of 23rd September 1896. In January 1897 the Presidency Port Officer recommended that a new pier should be built to the south of the site where the present one is situate and estimate for a new one was ordered by Government—G.O., No. 68, Marine, of 23rd January 1897. In view of the fact that a series of 12 sections of the foreshore had to be taken at intervals of a month which meant that no estimate could be formed for 12 or 15 months to come, the Government decided that the present pier should be repaired and ordered preparation of plan and estimate—G.O., No. 364, Marine, of 22nd April 1897. In December 1897 the pier was taken over from the company by the Government—G.O., No. 755, Marine, of 25th August 1897. Estimate for repairing the present pier amounting to Rs. 8,000 was also forwarded to Government in November 1897 with Presidency Port Officer's letter, No. 206/406 G. of 19th November 1897.
9	Do. ..	Construction of a new pier.	2,00,000	* 1,00,000	Do. ..	
10	Malpe ..	Pier and improvements to foreshore.	4,230	* 4,230	Do. ..	The works are necessary in the interests of the port and to facilitate landing and shipping operations. Estimate has been called for and will shortly be placed before Government.
11	Coondapoor ..	Boat jetty ..	7,000	7,000	Do. ..	The work is necessary in the interests of the port and to facilitate landing and shipping operations.
12	Calicut ..	Beacon on Cootee Reef.	1,500	*	Do. ..	The work is necessary in the interests of the port.
13	Cochin ..	Fencing in Boat-yard.	970	*	Do. ..	The work is necessary for the protection of the boat yard.
14	Calicut ..	Kallai bar improvements.	6,000	1,200	Do. ..	Act No. II of 1890 was declared applicable to the Kallai Bar and tolls at certain rates were levied on articles passing over this bar for export. The collection and control of this fund was with the Revenue Department. In 1895 it was transferred to the Port Department—G.O., No. 197, Marine, dated 4th July 1895. From that time the collections are credited to Port Fund and the Port Department is responsible for keeping the river and the bar open for traffic. In 1895 the bar was opened by the Port Department at a cost of Rs. 1,618. Again in 1896 the bar was opened at a cost of Rs. 1,120.
		Total, Western Group.	5,13,900	2,65,930		
		Grand Total for both groups.	11,09,070	3,55,120		

N.B.—A lakh and a half of the balance at credit of the Western Group Port Fund being reserved for general improvements to the existing system of lights, allotments for the items marked * will have to be postponed as more money becomes available.

Madras,
14th January 1898.

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

APPENDIX A.

Forecast of requirements for Port Works—Eastern Group.

Item No.	Name of port.	Description of work.	Estimated cost.	Annual cost to Port and Marine funds. 1898–99.	1899–1900.	1900–1.	1901–2.	1902–3.	Total.	Remarks.
			Rs.	Rs.	Rs.	Rs.			Rs.	
1	Cuddalore ..	A new boiler for the steam dredger.	·01	·01	..	..	..	..	·01	
2	Tuticorin ..	Passenger shed and platform.	·03	·01	·02	..	..	..	·03	
3	Do. ..	Dredger or extension of pier.	·30	·30	..	..	..	..	·30	
4	Do. ..	A 15-ton crane	·06	·06	..	..	..	..	·06	
5	Do. ..	Residence for Port officer..	·14	·10	02	..	..	..	·12	Balance provided in 1897–98.
5 (*a*)	Porto Novo ..	A new wharf	·06	..	·06	..	..	..	·06	
6	Calimere ..	Quarters for light-keepers.	·02	..	..	..	..	..	..	Funds provided in 1897–98.
7	Negapatam ..	Port officer's quarters ..	·14	·10	·04	..	..	..	·14	
8	Do. ..	Improvements to Port office.	·01	·01	..	..	..	..	·01	
9	Do. ..	Permanent groynes ..	·15	·15	..	..	..	..	·15	
10	Pámban ..	Two jetties	·20	..	·10	·10	..	..	·20	
11	Cocanada ..	Dredger and improvements to bar.	2 00	2·00	..	..	..	..	2.00	
12	Vizagapatam ..	Improvements to the bar, &c.	2·00	..	2·00	..	..	..	2·00	
13	Masulipatam ..	Improvements to bar and river.	·25	·10	·15	..	..	..	.25	
14	Gopalpur ..	Residence for Port officer..	·06	·06	..	..	..	..	·06	
15	Vizagapatam ..	Do. do. ..	·11	·09	..	..	..	..	·09	Balance provided in 1897–98.
16	Tuticorin ..	Open shed for goods ..	·07	·03	·04	..	..	..	·07	
17	Do. ..	Close shed for goods ..	·10	·03	·07	..	..	..	·10	
18	Do. ..	Fencing foreshore ..	·02	·01	·01	..	..	..	·02	
19	Negapatam ..	Improvements to jetty ..	·10	·03	·07	..	..	..	·10	
20	Do. ..	Fencing foreshore ..	·04	..	·04	..	..	..	·04	
21	Vizagapatam ..	Improvements to foreshore.	·10	·10	..	..	..	..	·10	
		Total ..	5·97	3·19	2·62	·10	..	..	5·91	
		Add—Public Works supervision charges at 25 per cent. on all items excepting 1, 3 and 4.		·71	·66	·03	..	..	1·40	
		Total ..		3·90	3·28	·13	..	..	7·31	

Note.—(1) Works for which provision has been made in 1898–99 have been included in the budget for that year.
(2) In the case of item 11, Rs. 50,000 only have been provided in the budget for 1898–99. The balance Rupees 1,50,000 will be provided if India sanctions an additional grant from Imperial funds.

APPENDIX B.

Forecast of requirements for Port works—Western Group.

Item No.	Name of port.	Description of work.	Estimated cost.	Annual cost to Port and Marine funds. 1898–99.	1899–1900.	1900–1.	1901–2.	1902–3.	Total.	Remarks.
			Rs.	Rs.	Rs.	Rs.			Rs.	
1	Cochin ..	Port officer's residence and office.	·30	·15	·15	..	..	..	·30	
2	Hangarkotta ..	Light-keepers' quarters ..	·02	..	..	..	..	..	..	Provided for under light-houses.
3	Coondapoor ..	Do. ..	·02	..	..	..	..	..	..	
4	Malpe ..	Do. ..	·02	..	..	..	..	..	..	
5	Ponnáni ..	Joining the two existing groynes.	·01	·01	..	..	..	..	·01	
6	Mangalore ..	Construction of a pier ..	2·00	..	2·00	..	..	..	2·00	
7	Do. ..	Reclamation of foreshore ..	·50	·25	·25	..	..	..	·50	
8	Calicut ..	Repairs to the existing pier.	·08	·02	..	..	..	..	·02	Balance provided in 1897–98.
9	Do. ..	Construction of a new pier..	2·00	..	..	·05	..	..	·05	Provision has been made for a tramway to the present pier which it is considered will obviate the need for a new pier.
10	Malpe ..	Pier and improvements to foreshore.	·04	..	..	..	..	..	..	Considered unnecessary.
11	Coondapoor ..	Boat jetty	·07	..	·07	..	..	..	·07	
12	Calicut ..	Beacon on Coote reef ..	·02	·01	..	..	..	..	·01	The actual cost being ·01 only, this amount has been provided.
13	Cochin ..	Fencing in boat yard ..	·01	·01	..	..	..	..	·01	
14	Calicut ..	Kullai bar improvements ..	·06	..	·06	..	..	..	·06	
		Total ..	5·15	·45	2·53	·05	..	..	3·03	
		Add—Public Works supervision charges at 25 per cent.		·11	·63	·01	..	..	·75	
		Total ..		·56	3·16	·06	..	..	3·78	

Note.—Works for which provision has been made in 1898–99 have been included in the budget for that year.

APPENDIX C.

Statement showing the Lighthouse works to be carried out by Mr Ashpitel.

Year.	Name of station at which lighthouse is to be constructed.	Estimated cost. Amount.	Estimated cost. Total.
	Eastern group.		
1898-99.	Manápaud	0·47	
	False Point Divi	0·91	1·43
	Masulipatam	0·05	
1899-1900.	Sacramento	1·00	
	Vakalapudi	0·18	1·18
1900-1901.	Tuticorin	0·13	
	Pamban	0·05	
	Negapatam	0·05	
	Cuddalore	0·04	
	Santipilli	1·00	1·39
	Kalingapatam	0·05	
	Bimlipatam	0·01	
	Vizagapatam	0·03	
	Gopalpore	0·03	
	Total	..	4·00
	Western group.		
1898-99.	Coondapoor	0·03	
	Hungarikotta (Barkur)	0·03	
	Malpy	0·04	
	Mulki (Kaph)	0·96	1·27
	Mangalore	0·09	
	Muthum	0·12	
1899-1900.	Tangacherri	0·88	
	Cochin	0·09	0·97
1900-1901.	Sacrifice Rock	0·96	
	Cannanore	0·03	
	Tellicherry	0·03	1·11
	Calicut	0·09	
	Total	..	3·35
	Madras.		
1899-1900.	Seven Pagodas	0·53	
	Madras	0·01	
	Pulicat	0·23	0·10
	Armaghan	0·18	
1900-1901.	Above works	..	0·85
	Total	..	0·95

APPENDIX D.

Statement showing Funds required to carry out Lighthouse and other Special Works—Eastern Group.

—	Opening balance. Port Funds.	Opening balance. Landing and shipping dues.	Opening balance. Pilotage Funds.	Opening balance. Total (2+3+4).	Surplus revenue during the year after meeting all ordinary charges except lighthouse maintenance. Port Funds.	Surplus revenue during the year after meeting all ordinary charges except lighthouse maintenance. Landing and shipping dues.	Surplus revenue during the year after meeting all ordinary charges except lighthouse maintenance. Pilotage Funds.	Surplus revenue during the year after meeting all ordinary charges except lighthouse maintenance. Total (6+7+8).	Total sum available (5+9).	Light-house maintenance.	Balance available for special works (10—11).	Proposed expenditure. Light-house works.	Proposed expenditure. Other works.	Proposed expenditure. Total (13+14).	Grant required (15—12).	Closing balance (12—16).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1898-99	3·01	·31	·18	3·50	·63	·36	·09	1·08	4·58	·20	4·38	1·43	3·90	5·33	·95	..
1899-1900	..	..	..	..	·63	·36	·09	1·08	4·58	·33	·85	1·18	3·28	4·46	3·61	..
1900-1901	..	..	..	..	·63	·36	·09	1·08	1·08	·25	·83	1·39	·13	1·52	·69	..
1901-1902	..	..	..	..	·63	·36	·09	1·08	1·08	·27	·81	..	..	..	..	·81
	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5·25	..

Note.—The opening balances are the latest available figures as shown in the budget estimate for 1898-99.

APPENDIX E.

Statement showing Funds required to carry out Lighthouse and other Special Works—Western Group.

—	Opening balance. Port Funds.	Opening balance. Landing and shipping dues.	Opening balance. Pilotage Funds.	Opening balance. Total (2+3+4).	Surplus revenue during the year after meeting all ordinary charges except lighthouse maintenance. Port Funds.	Surplus revenue during the year after meeting all ordinary charges except lighthouse maintenance. Landing and shipping dues.	Surplus revenue during the year after meeting all ordinary charges except lighthouse maintenance. Pilotage Funds.	Surplus revenue during the year after meeting all ordinary charges except lighthouse maintenance. Total (6+7+8).	Total sum available (5+9).	Light-house maintenance.	Balance available for special works (10—11).	Proposed expenditure. Light-house works.	Proposed expenditure. Other works.	Proposed expenditure. Total (13+14).	Grant required (15—12).	Closing balance (12—16).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1898-99	2·67	·40	·01	3·08	·37	·09	·01	·47	3·55	·07	3·48	1·27	·56	1·83	..	1·65
1899-1900	..	..	..	1·65	·37	·09	·01	·47	2·12	·11	2·01	·97	3·16	4·13	2·12	..
1900-1901	..	..	..	..	·37	·09	·01	·47	·47	·17	·30	1·00	·06	1·06	·76	..
1901-1902	..	..	..	..	·37	·09	·01	·47	·47	·18	·29	·11	..	·11	..	·18
	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2·88	..

Note.—The opening balances are the latest available figures as shown in the budget estimate for 1898-99.

APPENDIX F.

Statement showing Funds required to carry out Lighthouse and other Special Works—Madras Port.

	Opening balance.	Surplus reserve during the year after meeting all ordinary charges except light-house maintenance.	Total sum available (1 + 2).	Light-house maintenance.	Balance available for special works (3 — 4).	Proposed expenditure.			Grant required (8 — 5).	Closing balance (5 — 8).
						Lighthouse works.	Other works.	Total (6 + 7).		
	1	2	3	4	5	6	7	8	9	10
1898–99	·90	·48	1·38	·10	1·28	·10	..	·10	..	1·18
1899–1900	1·18	·48	1·66	·10	1·56	·85	..	·85	..	·71

Note.—The opening balance is the latest available figure as shown in the budget estimate for 1898-99.

Order—No. 316, Marine, dated 29th April 1898.

In accordance with paragraph 2 of G.O., No. 513, Marine, dated 4th June 1897, the Presidency Port Officer submits with his letter of the 14th January 1898 read above a forecast of Port Fund works other than lighthouses required during the next five years in each of the two groups, Eastern and Western, into which the ports have been divided. The works are arranged in order of urgency, and a brief history of each, where such exists, is given in the column of remarks.

2. The total outlay is estimated at Rs. 11,09,070, of which the Eastern group absorbs Rs. 5,95,170, and the Western Rs. 5,13,900.

Exclusive of Public Works supervision charges.

3. His Excellency the Governor in Council observes that it is essential to provide in the first instance for the lighthouses, in connection with which a special establishment is actively engaged in the preparation of plans and estimates, the provision of materials and the execution of work. The longer this establishment is maintained, from paucity of funds or otherwise, the more costly will the scheme of lighthouse improvement become.

4. Mr. Ashpitel has drawn up a programme of operations on the construction and improvement of lighthouses extending over three years, the total cost of which is estimated at Rs. 8,30,000 as shown below :—

	Rs.
Eastern group	4,00,000
Western group	3,35,000
Madras	95,000
Total ...	8,30,000

or an average annual expenditure of Rs. 2,76,000. This outlay must be provided for, but due consideration to the development of the ports in the interests of trade is also essential. Both objects cannot be adequately met within a reasonable time from local resources alone. Application will accordingly be made to the Government of India for assistance.

5. The statements given in appendices (A and B) show the revised programme approved by Government for each group of ports and provide for an expenditure of Rs. 7,31,000 on works in the Eastern group and Rs. 3,78,000 in the Western, or a total of Rs. 11,09,000 as compared with Rs. 11,09,070 (or Rs. 13,86,000 inclusive of Public Works supervision charges) proposed by the Presidency Port Officer. The Government is, however, advised that further modification of details may be necessary. The Chief Engineer will report on this point after he and the Presidency Port Officer have had an opportunity of studying local requirements on the spot. The works will, as far as practicable, be estimated for and carried out in the order of urgency here shown. Statement C shows lighthouse works to be dealt with by the special light-house division.

6. Taking the Eastern group first, it will be seen from statement D that this group will commence with an opening balance of Rs. 3,50,000 and will require additional grants aggregating Rs. 5,25,000 during the years 1898–99 to 1900–1901.

7. In the Western group, statement E, no assistance will be necessary during 1898–99, but Rs. 2,88,000 will be required during the following two years. Credit is taken for augmentation of Port Fund receipts by Rs. 6,000 per annum which will, it is hoped, be realised by enhancing the port dues to the maximum rates allowed by law, as in the case of the Eastern group, which were raised under the orders contained in G.O., No. 261, Marine, dated 19th March 1897, paragraph 11.

8. In Madras, statement F, the available funds will suffice, but the usual annual contribution to the Madras Harbour Trust Board will have to be withheld till the lighthouse works considered necessary in connection with this port, and estimated to cost Rs. 95,000, are paid for.

G.O., No. 261, Marine, dated 19th March 1897.

9. At ports where landing and shipping dues are collected, the expenditure on port improvements will be a first charge on those funds, and it is only after the landing and shipping dues have been exhausted that the aid of Port Funds can be expected.

10. The Government of India will be addressed on the subject, and the Presidency Port Officer will submit the draft of a notification providing for the enhancement of the port dues at the ports of the Western group.

[Here enter No. 317, Marine, dated 29th April 1898.]

(True Extract.)

(Signed) W. B. deWINTON,
Secretary to Government.

To the Presidency Port Officer.
" Public Works Department.
" Revenue Department.
" Financial Department.
" Accountant-General.
" Chairman, Harbour Trust Board.

Exd. Md. Pahilwan.

Government {1898} of Madras.

MARINE.

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

Letter No. 317, 29th April 1898.

APRIL.

Lighthouse and Port Improvements

Appealing to the Government of India for a grant from Imperial funds to admit of the proposed schemes of — being carried out within the period contemplated.

NOTES CONNECTED WITH G.O., Nos. 316, 317, MARINE, DATED 29TH APRIL 1898.

[SUBJECT.—*Forecast of Port Fund works required during the next five years.*]

From the Presidency Port Officer, dated 14th January 1898, No. 1730/18-G.

The Hon'ble Sir Henry Bliss, K.C.I.E.—

In accordance with paragraph 2 of G.O., No. 513, Marine, dated 4th June 1897, the Presidency Port officer submits a forecast of Port fund works, other than lighthouses, required during the next five years in each of the two groups, Eastern and Western, into which the ports have been divided. The works are arranged for each group in order of urgency, and a brief history of each work, so far as such a history exists, is given in the column of remarks.

2. The total outlay is estimated at Rs. 11,09,070, of which the Eastern group absorbs Rs. 5,95,170 and the Western Rs. 5,13,900.

3. Taking the Eastern group first, it will be seen from statement A that, commencing with an opening balance of Rs. 3,31,395 on the 1st April of this year, and taking into account progressive annual receipts and expenditure, the group will, at the end of the quinquennial period, close with a *credit* balance of Rs. 1,19,035 which may be taken to be the net sum available for lighthouse works.

4. Similarly, in the Western group, while commencing with an opening balance of Rs. 3,38,771 on the 1st April, there will, at the end of the quinquennial period, be a *debit* balance of Rs. 11,809; or supposing the Western group to borrow from the Eastern, the *credit* balance for both groups at the end of the period would be Rs. 1,07,226.

5. These are the results deducible from the programme of the Presidency Port officer, but if the statement be examined in detail, it will be found that many of the works set down for execution have not yet been estimated for and some of them may be considered unnecessary. It is not likely, therefore, that they can be put in hand so soon as he calculates on, though there seems no reason to suppose that they should not all be ready for execution before the close of the quinquennial period. As to whether they can be finished in that period, and the whole amount of money spent before its close is open to doubt.

6. The postponing of works during the earlier years of the quinquennium would mean a corresponding augmentation of the surplus balances available. The more money thus accumulated the less would have to be borrowed for lighthouse construction. The most practical way, therefore, of dealing with the matter seems to be, to go through the works in detail, select for execution in 1898–99, the most urgent and those for which it is possible to prepare estimates within a few months, direct the early preparation of plans and estimates for these works, and fix the allotment that can be spent or assigned. A more reliable forecast of the second year's balance available for lighthouses would thus be obtained. Future years could be dealt with in a similar manner—later on perhaps.

7. The sum required for lighthouses on both coasts is Rs. 8,35,000, to be spent in three years, or an average of Rs. 2,78,333 per annum. It is possible to find the required amount without difficulty for the first year, which opens with a credit balance

of Rs. 6,70,166 and would close, even according to the Presidency Port officer's programme, with a surplus of Rs. 6,28,502. The actual surplus, however, is likely to be much more, for it will be seen that, while the Presidency Port officer calculates on the expenditure of Rs. 1,50,890 on 23 * works, no more than 2 † of these works estimated to cost Rs. 17,300 have yet been provided with sanctioned estimates. There thus seems no immediate necessity for borrowing for lighthouse construction, and it would perhaps be well to defer the operation till the want of money is actually felt.

* *Vide* statement C.

† Item 15—Eastern group—Port officer's residence, Vizagapatam, Rs. 9,300.
Item 8—Western group—Repairs to the Calicut pier, Rs. 8,000.

We need not borrow until we absolutely require the money. But I should like to go up to India now and get its consent to lend when required.

H. W. B[liss].

8. The surplus balances assumed include pilotage funds and landing and shipping dues. The former become merged in Port funds at the end of each year, and the latter, though not available for general expenditure, can be all spent in ports of collection before Port funds proper are trenched upon for works at these ports.

R. Parsons.

W. B. deWinton—1-2-98.

Mr. Ashpitel tells me that Captain Street is away and won't be back for three weeks. I have been through these lists of works with Mr. Ashpitel and have told him what I would retain and what strike out. Please revise statement A in communication with him.

H. W. B[liss]—3-2-98.

Revised Financial forecast.

Years.	Particulars.	As per the Presidency Port officer's programme.	As per sanctioned programme.
		Rs.	Rs.
1898-99	Total balance	7,79,392	7,79,392
	Port fund works	1,50,890	..
	Balance for lighthouse works	6,28,502	..
	Lighthouse works	2,70,000	2,70,000
	Balance carried forward	3,58,502	..
	Surplus	1,09,226	1,09,226
1899-1900	Total balane	4,67,728	..
	Port fund works	98,730	..
	Balance for lighthouse works	3,68,998	..
	Light house works	*2,15,000	2,15,000
	Balance carried forward	1,53,998	..
	Surplus	1,09,226	1,09,226
1900-1901	Total balance	2,63,224	..
	Port fund works	..	..
	Lighthouse works	2,50,000	2,50,000
	Balance on 1st April 1901	† 13,224	..

Note.—The forecast has not been carried beyond 1900-1901 as in this year the lighthouse works are expected to be completed and according to the Presidency Port officer's programme all his *urgent* works will have been provided for.

* This figure excludes a sum of Rs. 95,000 for the light houses at Seven Pagodas, Madras, Pulicat and Armeghon as the expenditure will fall against the Madras port.

Note.—In order to meet this expenditure, the Madras port surpluses shoul be retained and not made over to the Harbour Trust Board at the end of 1897-98 and the following years.

† The surplus balance at the end of three years will be Rs. 13,224, but the demands against this for Port fund works included in the schedule but deferred, amount to Rs. 8,59,450. To carry out these works within a reasonable period, it will be necessary to borrow next year or the year after and the money so borrowed will really be for lighthouse construction as it is owing to the large expenditure on works of this class that Port funds are insufficient for requirements.

R. Parsons—4-2-98.

Chief Assistant—

Can you not give me a concise statement in the following form:—

Amount proposed to be spent on—	Rs. in lakhs.
(1) Lighthouses	7·35
(2) Other works	4·76
Total	12·11
Opening balance at credit of Port funds	5·42
Total probable income in next five years	* 3·03
Total	8·45
Balance required to be raised by loan	3·66

* Exclusive of 1·97 for lighthouse maintenance separately provided.

W. B. deWinton—21-2-98.

Secretary—

The figures have been filled in according to your form with the result that the loan works out to 3·66; but this is not what will actually happen according to the programme approved by Government.

Taking the eastern group, *e.g.*, it will be seen from appendix E to the draft order that a sum of Rs. 2·61 lakhs must be borrowed in 1899-1900, and that a further sum of Rs. 1·85 lakhs must be borrowed in the following year; while, in the western group (appendix F), Rs. ·24 lakh only will be required in 1900-1901. Total = Rs. 4·70 lakhs.

Your statement proceeds on the assumption that the total receipts for five years will be available and can be drawn upon before any loan is raised, but this is not so.

The port of Madras is left out of the calculation as there is no question of a loan here.

R.P.—24-2-98.

Noted.

(*a*) There is a difference in western group figures given in statement C. and appendix B. The former total up to Rs. 5,13,900 and the latter to only Rs. 3,53,000. The difference occurs in item 6 where Rs. 30,000 is substituted for Rs. 3,53,000. The difference occurs in item 9 where Rs. 5,000 is added for some reason in Appendix B, Rs. 2,00,000; also in item 9 where Rs. 5,000 is added for some reason in Appendix B, and in item 12 where Rs. 1,500 in statement C is converted into Rs. 5,000 in appendix B. These differences should be explained.

(*b*) The total amount now sanctioned is, apparently only Rs. 4,76,000 as compared with Rs. 11,09,070 proposed by Presidency Port officer

W.B.deW.—28-2-98.

Secretary—

The following is an explanation of the differences noticed in your note, dated 28th February 1898:—

(*a*) *Appendix B—Item* 6.—The sum of Rs. 30,000 is taken from Mr. Ashpitel's statement, and is intended to cover the cost of a pontoon instead of a screw-pile pier. The alternative is mentioned in the column of remarks of the Presidency Port officer's statement, and has, it is understood, been adopted by Mr. Ashpitel under instructions from the Honourable Member.

Item 9.—Rs. 5,000 only are allowed as against Rs. 2,00,000 proposed by the Presidency Port Officer. The smaller sum is expected to cover the cost of a tramway as an alternative to a new pier as explained in the note attached to the draft order.

Item 12.—Mr. Ashpitel considers the Rs. 1,500 an underestimate and raises the figure to Rs. 5,000 as explained in the note attached to the draft order. It will be seen from appendix B that no allotment is provided for the work which is considered unnecessary.

(*b*) The programme as approved by the Honourable Member works out to Rs. 4,76,000 as shown in the revised statements.

R.P.—3-3-98.

Noted. File can now go up.

W. B. deWinton—4-3-98.

Note to accompany the Draft Order.

Mr. Ashpitel estimates the average annual surplus of the Eastern group at Rs. 84,000. This amount seems too high, and it would be safer to adopt the Presidency Port Officer's figures which bring out a surplus of Rs. 60,000. The details for all groups are as follows:—

—	Eastern group.	Western group.	Madras.
	LAKHS.	LAKHS.	LAKHS.
1. Average income for five years	9·58	5·18	5·99
2. Do. for each year	1·92	1·04	1·20
3. Average (*a*) expenditure for five years excluding all (*d*) extraordinary charges including lighthouse maintenance.	8·02	4·02	4·11
4. Do. (*b*) expenditure for each year	1·60	0·80	0·82
5. Surplus for each year (2–4)	0·32	0·24	0·38
6. *Add* increase of revenue due to enhancement of port dues.	·11	(*c*) ·06	..
7. *Add* charges for lighthouse maintenance which are separately provided for in Mr. Ashpitel's forecast.	·20	·07	·10
9. Total annual surplus balance	0·63	·37	0·48

(*a*) Total estimated—H.W.B. (*b*) Ordinary—H.W.B.
(*c*) As estimated by Mr. Ashpitel. (*d*) On * —H.W.B.

2. Mr. Ashpitel makes no separate provision for special minor works costing Rs. 2,500 and below, under the impression, apparently, that such charges can be met from the ordinary maintenance grants. It is unsafe to assume that this can be done. These works have consequently been restored to the programme.

3. The Presidency Port Officer's programme has been departed from in the following particulars:—

Eastern Group.

Item 1—*New boiler for the steam dredger at Cuddalore, Rs.* 1,000.—This should be provided for under *civil charges, contingencies*, which are estimated on a very liberal scale. No separate provision has therefore been made in the revised programme.

Item 12—*Vizagapatam Harbour Improvements, Rs.* 2,00,000,—A company may be formed to carry out the whole scheme from borrowed money, and in any case it is not likely that the works at this port can be undertaken otherwise than by a special loan. I propose reporting shortly on the question of these improvements.

Items 13 *and* 19 *to* 21—The cost of these works is chargeable to landing and shipping dues. No provision is therefore made from Port funds.

* Total, I think. How can this be "excluding all extraordinary charges"? I presume extraordinary charges are those shown in appendix A and in column 9 of appendix E for the Eastern group and in the corresponding appendices for the other groups. If so, entries 3 and 4 should be as altered by me. Even so, I don't see how you get 8·02. Column 8 of appendix E gives 4·0 and column 9, 4·11, total 8·11, not 8·02; and, if you add interest from column 10 for the last three of the five years, you get ·40 more, total 8·51. Please check the other figures in the same way and let me know if I am not right.

H. W. B[liss].

Western Group.

Item 1—*Port officer's residence at Cochin, Rs.* 30,000.—The estimate is too high. Rs. 15,000 provided under instruction received through Mr. Ashpitel.

Items 2 *to* 4—*Quarters for lightkeepers at Hangarkotta, Coondapoor and Malpe.*—Already provided for by Mr. Ashpitel under lighthouse works.

Item 6—The Presidency Port Officer's provision of Rs. 2,00,000 for a screw pile pier has been altered into one for Rs. 30,000 for a floating pontoon stage.

Item 7—*Reclamation of the foreshore at Mangalore, Rs.* 50,000.—Omitted. Chargeable to landing and shipping dues.

Item 9—*New pier at Calicut—Rs.* 2,00,000.—The provision has been reduced to Rs. 5,000 with the idea that a tramway from the godowns of the native merchants to the existing pier will meet all requirements. Mr. Ashpitel thinks it will.

Item 10—*Pier and improvements to the foreshore at Malpe—Rs.* 4,230.—Omitted under instructions received through Mr. Ashpitel; the works not being required.

Item 12—*Beacon on Coote Reef at Calicut—Rs.* 1,500.—Omitted under instructions received through Mr. Ashpitel. The existing buoy is said to answer sufficiently well. The work is, moreover, Mr. Ashpitel thinks, much underestimated. Rs. 5,000 is entered as estimated cost instead of Rs. 1,500 provided by Presidency Port officer because the latter amount is said to be inadequate.

Item 14—*Improvements to the Kullai bar—Rs.* 6,000.—Omitted. Mr. Ashpitel notes that this work should be carried out from the ordinary maintenance grant. Collections made at the bar, from the merchants interested in keeping it open, should also contribute.

R. Parsons.

W. B. deWinton—4-3-98.

The position seems to me a much more awkward one than I had anticipated. When I first thought of a loan whereby to finish off the lighthouse improvements within a reasonable time, I thought that if we could get such a loan from India we could probably pay it off in three or four years, or so. But it now appears that in the Eastern group it will take us twenty years to pay off the loan we shall want, during the whole of which time we shall not have an anna for any work of any kind other than ordinary maintenance. This is, of course, an impossible position. The ports can't go on for twenty years without the absolute necessity of expenditure on improvements of different kinds, quite apart from ordinary maintenance; and it therefore comes to this:—We must either (1) stop lighthouse construction when we have spent our balances, that is, when we have done not much more than half the work on the East Coast (neglecting all other works altogether), but have nearly or quite completed the West Coast lighthouses; or (2) we must get a *grant* from India, a loan being of no use; or (3) we must take legislative authority to increase the rate of port dues. I don't like (3) at all. Please consult the Presidency Port Officer *personally* and find out what he thinks. If we had any Provincial money to give, we might give it and finish this lighthouse business. But we have not, and there are other works besides lighthouses which really *must* be taken in hand.

H. W. B[liss]—5-3-98.

Draft Order—

In accordance with paragraph 2 of G.O., No. 513, Marine, dated 4th June 1897, the Presidency Port officer submits a forecast of Port Fund works other than lighthouses required during the next five years in each of the two groups, eastern and western, into which the ports have been divided. The works are arranged in order of urgency, and a brief history of each, where such exists, is given in the column of remarks.

2. The total outlay is estimated at Rs. 11,09,070, of which the eastern group absorbs Rs. 5,95,170 and the western, Rs. 5,13,900.

3. His Excellency the Governor in Council observes that it is essential to provide in the first instance for lighthouses, in connection with which a special establishment is actively engaged in the preparation of plans and estimates, the provision of materials and the execution of work. The longer this establishment is maintained, from paucity of funds or otherwise, the more costly will the scheme of lighthouse improvement become.

4. Mr. Ashpitel has drawn up a programme of operations on the construction and improvement of lighthouses extending over three years, the total cost of which is estimated at Rs. 8,20,000 as shown below :—

	Rs.
Eastern group	4,00,000
Western group	3,35,000
Madras	85,000
Total ..	8,20,000

or an average annual expenditure of Rs. 2,73,000. This outlay must be provided for, but due consideration to the development of the ports in the interests of trade is also essential. Both objects cannot be adequately met within a reasonable time from local resources alone. These must, however, be first exhausted, and if possible augmented, before recourse is had to borrowing. The position will therefore be reviewed and a financial forecast framed.

The Government of India can be asked for assistance, by the grant of a loan, or otherwise as may be found necessary.
H. W. B[liss].

5. The statements given in appendices (A and B) show the revised programme approved by Government for each group of ports and provide for an expenditure of Rs. 4,11,000 on works in the eastern group, and Rs. 65,000 in the western, or a total of Rs. 4,76,000 as compared with Rs. 11,09,070, or Rs. 13,86,000 inclusive of Public Works supervision charges proposed by the Presidency Port officer. The works will, as far as practicable, be estimated for and carried out in the order of urgency here shown. Statement C shows lighthouse works to be dealt with by the special lighthouse division.

6. Taking the Eastern group first, it will be seen from Statement E that, commencing with an opening balance of Rs. 2·50 on the 1st April 1898–99 and taking into account the receipts and expenditure of the year for all purposes, lighthouses included, the year will close with a balance of Rs. 13,000, and that it will not be necessary to (borrow till) * 1899–1900 when obtain money from † (a loan) of 2·61 will be required. In the following year a further loan ‡ of 1·85 will be necessary, and the whole loan will be extinguished in 1920–21.

I almost think that appendix E goes too far. I mean that it is not necessary to take every one into our confidence as to the probable state of affairs 10, 15, or 20 years hence, though we want the information for our own purposes and for an appeal *in misericordiam* to India.
H.W.B.

* Other sources until.
† An additional sum.
‡ Sum.

If these sums have to be borrowed, it will not be until 1920–21 that the whole amount can be paid off.

7. In the Western group, Statement F, § no loan will be necessary till 1900–1901, when a sum of Rs. 24,000 will be required. Credit is, however, taken for an augmentation of Port fund receipts by Rs. 6,000 per annum which will, it is hoped, be realised by enhancing the port dues to the maximum rates allowed by law, as in the case of the Eastern group which were raised under the orders contained in G.O., No. 261, Marine, dated 19th March 1897, paragraph 11.

§ Assistance.
H.W.B.

How do the present rates of port dues compare with those formerly in force? The last Act reduced them, didn't it?
H.W.B.

8. In Madras, Statement G, * no loan will be required, but the usual annual contribution to the Madras Harbour Trust Board will have to be withheld till the light house works considered necessary in connection † with this port, and estimated to cost Rs. 85,000 are paid for.

* The available funds will suffice.

† G.O., No. 261, Marine, dated 19th March 1897, paragraph 8.

9. At ports where landing and shipping dues are collected, the port improvement will be a first charge on those funds, and it is only after the landing and shipping dues have been exhausted that the aid of Port funds can be expected. Statement H shows the financial position of the landing and shipping dues funds.

10. The Government of India will be addressed on the subject (of the loan) ‡ and the Presidency Port Officer will submit the draft of a notification providing for the enhancement of the port dues at the ports of the Western group.

‡ We had better not talk of loans for the present, I think. To do so would commit us. However, this draft may not improbably need further alteration when the matter has been more considered. We may decide either to ask for a grant or to try for permission to raise the port dues.
H.W.B.

R. Parsons.

W. B. deWinton—4–3–98.

Secretary—

Item 3 is the average (not total) expenditure. It is taken from the Presidency Port Officer's statement. The object is to arrive at the average annual surplus. Therefore, all extraordinary charges such as those shown in appendices A and B and in column 9 of appendices E and F are excluded. The statement was introduced into the note in order to explain why Mr. Ashpitel's figures, presumably approved by the Honourable Member, were not adopted. The figure 8·02 is, as explained above, taken from the Presidency Port Officer's statement. It is "the average annual expenditure on establishment, petty maintenance of all kinds, lighthouse establishment and materials multiplied by 5. The figures in columns 8 and 9 of appendix E are the extraordinary charges on lighthouses and other works. There is not the direct connection between the two set of figures which the Honourable Member's note assumes.

The other notes are replied to on the papers themselves.

R.P.—9–3–98.

Marine Department.

The Hon'ble Sir Henry Bliss, K.C.I.E.
The Hon'ble Mr. Grose, C.I.E.
His Excellency the Governor.

With reference to Honourable Member's remarks on the note of 4th March 1898 it is pointed out that the figures in paragraph 1 are taken from the Presidency Port Officer's statement from which it will be seen that 8·02 represents the annual average expenditure on establishment, petty maintenance of all kinds, lighthouse establishment and materials, multiplied by 5. It is, therefore, rightly described in the text. The figures were given to show how the Presidency Port Officer's estimated annual surplus in each group was arrived at, as opposed to Mr. Ashpitel's estimate, which is considerably higher. In fact it is a pity Mr. Ashpitel was allowed to interfere in this matter at all. He has only complicated an already difficult subject. It will thus be seen that the figures 8·02 have nothing to do with the figures entered in columns 8 and 9 of appendix E; the one

What misled me was that I thought head 3 was something different from head 4, whereas it now appears that head 3 is only head 4 multiplied by 5. Similarly, head 1 is head 2 multiplied by 5. Both head 1 and head 3 might as well have been omitted.
H.W.B.

being ordinary annual maintenance and establishment charges, and the other special charges and new lighthouse work.

In my opinion we had better harden our hearts and lay the whole case before India at once with an application for a special grant of Rs. 4,80,000 to be paid in 1899–1900 and thereafter as required. Our grounds are simple. For the safety of navigation and prevention of loss of property and life, the coast ought to be properly lighted. But we have not the money to do it, and the whole country should therefore aid a work which benefits the country generally. As an instance of the positive saving that efficient lighting should cause, we may give the case of the steamer laden with Government stores which went ashore on the Sacramento shoal. I forget the particulars, but the Presidency Port Officer knows and can supply them. I believe Government lost over 2 lakhs in this one vessel.

If India won't make us a grant, the expenditure on lighthouses must be restricted as proposed. I am not in favour of charging light dues. If they are to be charged, they must either be imposed only on the shipping using our ports, in which case they would merely be enhanced port dues under another name; or they must also be imposed on all the shipping going up and down the Bay of Bengal to and from Calcutta. But would it be worth while to go to the bother of charging a pie a ton or some such small sum on all that shipping? and, if the game were worth the candle [we only want some Rs. 20,000 a year or so, that is, enough to pay interest and form a sinking fund on Rs. 4,80,000], should we be able to carry legislation imposing any charge whatever on vessels, the *vast* majority of which will never come within sight of the lighthouses on our coast? or, rather, would India undertake such legislation, for it is India that must do so, for the dues would have to be collected at Calcutta? I trow not.

H.W.B.

2. With regard to the general financial position, I have talked the matter over continually with the Presidency Port Officer during our present tour and we both agree that it is quite impossible to carry out the proposed lighthouse programme without a grant-in-aid from Government of India. To do so is to starve every port on the coast for the next twenty years. We, therefore, both recommend that Government of India should be asked for a grant-in-aid equal to the amount we have to borrow, viz., Rs. 4,80,000 or at any rate of half the amount it is proposed to spend, *i.e.*, Rs. 4,15,000.*

3. If this is refused, the only thing to be done is to restrict our expenditure on lighthouses to our means. The Presidency Port Officer deprecates any reduction of the proposed programme, now that special arrangements have been made for carrying it out, but I have ascertained from him that, if such reduction is unavoidable, the following works can be postponed until funds are available:—

Eastern Group.

Tuticorin	0·13	
Negapatam	0·05	
Cuddalore	0·04	
Santopilli	1·00	
Calingapatam	0·05	
Bimilipatam	0·01	
Vizagapatam	0·03	
Gopalpur	0·03	
		1·34

Western Group.

Kundapur	0·03	
Hungarikotta	0·03	
Malpé	0·04	
Muttum	0·12	
Tangacherri	0 88	
Cochin	0·00	
Cannanore	0·03	
Calicut	0·09	
		1·31

Madras.

Seven Pagodas	0·53	
Pulicat	0·23	
		0·76
		3·41

There is no object in postponing these. The Madras Port funds can well afford these works and can't be used else where.
H.W.B.

* The total proposed expenditure is Rs. 8,30,000 and not Rs. 8,20,000 as previously shown, the expenditure at Madras being Rs. 95,000 instead of Rs. 85,000.

This will reduce the amount of loan required from Rs. 4·80 to Rs. *1·39, and it is thought that this might be temporarily debited to Provincial funds and the accounts adjusted as money became available. To obtain this money I consider that light dues should be established on the Madras coast. I understand from the Presidency Port Officer that they are in force on the Burma coast, and in the case of some lights on the Ceylon coast; and there seems no reason why they should not be introduced here, seeing that when these contemplated improvements are carried out, the Madras coast will be the best lighted one in India. If light dues are established, it might be possible to carry out the full programme within a reasonable time without unduly depleting Port funds.

* 4·80
3·41
1·39

No doubt next year or the year after Provincial might be able to find a small sum.
H.W.B.

The Basses. Under an Act of Parliament
H.W.B.

It seems impossible to enhance port dues. They have already been raised for the Eastern group of ports to the maxima allowed by the Act in G.O., No. 351, Marine, dated 12th April 1897, and the forecast of expenditure provides for a similar enhancement at the Western group of ports. The maxima were reduced in the latest Act, but the actual rates charged were much the same, until the above Government order was passed.

It seems to me that light dues levied for the specific purpose of improving the lighting of the coast would be much more favourably received than any further enhancement of port dues.

4. With regard to the forecast of expenditure on port works (appendices A and B) I have visited four of the ports in company with the Presidency Port Officer during the past week, viz., Porto Novo, Negapatam, Tuticorin and Pamban, and I have seen enough to show me that the programme needs considerable revision. At Porto Novo no new wharf is required, the existing one being in sufficiently good repair to last for years. At Negapatam the Port officer's quarters are by no means urgent, while a lot of money must be spent, and soon, on training the river mouth if this much neglected port is not to lose its trade altogether. Everything else here—including items 19 to 21 in appendix A—must give way to this. At Tuticorin a passenger shed is certainly wanted, but it seems to me that it should be entirely paid for out of customs dues, the examination of passengers' effects being its sole object. A dredger is much needed and some improvement of the pier. A 15-ton crane is a luxury which can be deferred for the present, and the residence for the Port officer should be built at once. Items 16 to 18 in the programme are all needed, but will probably cost more than the amounts shown, and the allocation of funds in the remark column is all wrong. The closed shed is to be built instead of one to be handed over to the customs, and its cost should be borne by the latter. The open shed should be built entirely from Port funds (to which pier dues are eventually credited), a fee credited to Port funds being charged for its use. Fencing the

No doubt it would be a very good thing if the Chief Engineer could go round to all the ports and revise the programme. But that would take a long time, whereas we ought to go up to India at once. Indeed, if we are going up to India at all we may as well do so at the same time both on this account and on account of the loan which we must get for the Cocanada dredger. By all means let the programme be revised so far as our present knowledge goes, that is, with reference to these remarks of the Chief Engineer; but on no account let us strive for perfection and delay going up to India until the whole programme has been revised. If we do, we may all (or some of us) be in our graves before anything is done.

H.W.B.

I presume that all these points will be taken up separately, so do not now note on them.
H.W.B.

foreshore should be shared equally by Port funds and customs, it being beneficial to both. At Pamban two landing stages are certainly wanted, but as only one is used at a time, according to the monsoon, it will suffice to provide a floating pontoon stage which can be hauled as required from one landing place to the other, a distance of half a a mile. I think the above will show that an accurate forecast is hardly possible at present without a more careful examination of each port, which I should like to carry out in person. The total figures may be taken as a basis of such a forecast if it is considered necessary to make one, but I think it may just as well wait for more accurate figures.

I thought Mr. Ashpitel had sent in proposals. The requirements for apparatus are between £13,000 and £14,000, I think. H.W.B.—22-3-98.

5. With reference to Honourable Member's remarks in appendix C, I cannot reply very definitely without knowing the amount to be spent in apparatus, but I certainly think that, if the money is forthcoming, the whole programme should be completed easily in three years.

W. B. deWinton—21-3-98.

I agree with the Hon'ble Sir H. Bliss about asking India for a grant, and about not charging light dues.

J. G[rose]—24-3-98.

I agree also.

A. E. H[avelock]—26-3-98.

Secretary—

Revised statements and draft order and letter submitted. The excess for which a loan or grant was required under Mr. Ashpitel's scheme was Rs. 4·70. It is now 8·13. The principal differences are Vizagapatam port improvements, left out by Mr. Ashpitel, Rs. 2·00 and the Mangalore pier for which Mr. Ashpitel provided Rupees 15,000 only. The Presidency Port officer asks for 2·00, and the latter amount has now been adopted. These additions come to 3·85. There is still a difference of Rs. 42,000 distributed amongst various items.

R.P.—1-4-98.

Chief Assistant—

I have initialled the letter to India about the loan, but I think I had better see this again. We must surely ask for the money for lighthouses and not for port improvements, and your figures come to considerably more than I anticipated. I think the limit of our demand should be—

(1) Amount we should have to borrow for lighthouses;

(2) cost of Cocanada dredger, *i.e.*, about 6½ lakhs in all.

W.B.deW.—3-4-98.

Secretary—

The paper is resubmitted.

As regards the grant for Port fund works, it is possible to reduce it considerably by postponing to the 4th and 5th years, many of the works now included in the first three years. This arrangement of bringing all the expenditure into the first three years was put forward by Mr. Ashpitel, presumably under the Honourable Member's instructions, and *now* the Honourable Member is in favour of an immediate application to India which rather militates against a careful revision of the programme. If, however, you can suggest any reductions or postponements which will not entail much delay in the disposal of the application, it is open to you to do so—*vide* Honourable Member's remarks on the note for orders, dated 31st March 1898. Later on, Provincial funds will probably be in a position to aid Port funds, as hinted by the Honourable Member.

I think it had better go up as it is. W.B.deW.—14-4-98.

R.P.—4-4-98.

Statement showing strandings and wrecks on the coast of the Madras Presidency from 1889 to 1897 (both years inclusive).

(Place at which stranded).

Names of vessels stranded.	Dates of stranding.
Ennore.	
S.S. "Canara"	13th April 1889.
Palar Shoal near the Seven Pagodas.	
S.S. "Bleville"	19th June 1889.
Cape Comorin, 14 miles North-east of —.	
S.S. "Nur Jahan"	20th November 1890.
Pulicat Shoal.	
S.S. "Duke of Argyll"	31st May 1891.
" "Rewa"	9th January 1892.
Palks' Straits.	
S.S. "Aska"	27th August 1891.
Calicut.	
S.S. "Ellora"	5th August 1891.
Madras.	
S.S. "Waverley"	21st November 1891.
" "Secundra"	27th November 1896.
Calingapatam, 15 miles South of —.	
S.S. "Sirdhana"	24th December 1894
Hare Island Lighthouse.	
S.S. "Edzermium"	18th February 1896.
Armeghon Shoal.	
S.S. "Umtata"	23rd December 1891.
" "Argus"	22nd February 1896.
" "Baroda"	7th April 1896.
Sacramento Shoal.	
S.S. "Malvern"	29th January 1892.
" "Ratho"	1st February 1894.
" "Lanark" (with cargo, railway materials, etc.)	31st May 1894.
" "Linlithgow"	20th July 1894.
"	28th April 1895.
Barque "Grosvenor"	23rd June 1895.
S.S. "Thisbe"	

Remarks of His Excellency and Honourable Members on draft letter to Government of India, No. 317, Marine, dated 29th April 1898:—

I think I should add that the alternatives of legislating either to raise the port dues in this Presidency, or for the imposition of light dues on vessels passing up and down the West Coast of the Bay of Bengal in a manner similar to that in which they are imposed under Act IX of 1879 on vessels trading on the east side of the Bay, have been considered; and that we are of opinion that it would be an undue burden on trade to raise the port dues, while the proposal to charge vessels passing up and down the west side of the Bay with light dues would meet with so much opposition from the shipping interest generally that it is not advisable to make it.

I should also point out that if we can get our lighthouses built we can maintain them all right.

In England, to the best of my belief, the whole of the expenses connected with lighthouses are met by the Trinity House from the proceeds of * dues levied from shipping. But this arrangement has, I believe, of late caused considerable complaint, it being contended that the Government of the country should also contribute to this object, as it does, I believe, on the continent and elsewhere. Perhaps something may be known about this matter in the office or can be ascertained from the Parliamentary papers in the records (or from the Statesman's Year Book or some other book of reference in the office). It is obvious that we should greatly strengthen our case if we could point out that in every country but England the Central Government paid for lighthouses, in whole or in part. Unfortunately my knowledge of the subject is too vague to go upon. But it is practically certain that some information must be available in the Parliamentary paper ins the records.

* Advances are also made from the consolidated fund, but they must be repaid with interest.

R.P.—20-4-98.

H.W.B.—18-4-98.

Approved, but additions should be made as proposed by the Hon'ble Sir H. Bliss.

J.G.—24-4-98.

A.E.H.—27-4-98.

Second Assistant—

The Honourable Member wants information looked up as to whether in—

(*a*) the British Empire,

(*b*) foreign countries,

the cost of coast lights and lighthouses is provided or aided by the Central Government or whether it is met from dues levied on shipping. He suggests references to Parliamentary papers, *inter alia*.

Please have all these collected, and the matter carefully looked up. It will not take long, as the subject of each paper is on the outside of the paper itself, and only those papers that deal with marine matters need be consulted.

Refer to the nautical almanac in our library, and go over yourself or send Lyons to the Presidency Port office where information may possibly be available. The information is required for incorporation in our draft letter to India on the subject of Imperial aid of Local funds in connection with the scheme of lighthouse improvements.

R.P.—19-4-98.

Second Assistant—

I have been twice to the Presidency Port office and have consulted Mr. Baddeley about this. He has given me a note from which it will be observed that in the United Kingdom sea lights are maintained exclusively from * dues, but in Spain, Portugal, Russia, Italy, France and the United States dues are apparently not levied, the cost of maintaining the lights being borne by the State. This information has been gathered from Urquhart's "Dues and Charges on Shipping in Foreign Ports". As no light dues are charged, Mr. Baddeley says, the inference is that the State bears all charges. This book might be sent up; also Findlay's "Lighthouses of the World"—(please see pages 29 and 30). Mr. Baddeley tells me no other information on the subject is available in the Presidency Port office.

* *Loans* are also granted from Imperial funds.

R.P.

I have also consulted the Parliamentary papers in the General Record office. I have only gone down to 1889 as the indexes from 1878 to 1888 are in the press. In the first report of the Royal Commission on electrical communication with lighthouses, there is a recommendation that a grant of £8,000 be made from Imperial funds, but this does not seem to be much to the point.

The Nautical Almanac is of no use as it deals exclusively with tides, phases of the moon, &c., and has no reference to lighthouses.

The Parliamentary papers in the office refer exclusively to railways, trade, &c.

R. W. Lyons—22-4-98.

Mr. H. D. Baddeley's note.

In the United Kingdom sea lights are maintained exclusively from dues levied by three corporations: the Trinity House for England, the Commissioners of Northern Lights for Scotland, and the Ballast Board of Dublin for Ireland. The Merchant Shipping Act of 1854 gives some powers of general supervision over all lights to the Trinity House subject to the control of the Board of Trade. As there is a surplus income it seems obvious that these lights are self-supporting out of the dues levied, Minor lights are maintained from local funds; but Trinity House, &c., exercise control if necessary—*vide* 6 & 7 William IV, c. 79; Merchant Shipping Act, 1854, 17 & 18 Vic., c. 104; Scotland Lights Act, 38 George III, c. 58; Ireland Lights Act, 23 George, c. 19.

In Spain, Portugal, Russia, Italy, France and America dues are apparently not levied, the cost of lighting the coast being borne by the State. In America dues are leviable if the nation does not reciprocate with United States. *Austria*, *Turkey*, *Egypt* levy dues.

This information is collected from a work entitled "Dues and Charges on Shipping in Foreign Ports" by G. D. Urquhart published in 1872.

Secretary—

Paragraphs 7 and 8 to draft letter to India submitted for approval. The information is based partly on that supplied by Mr. Baddeley and partly on that contained in the Honourable Member's note.

It is quite clear from the English Merchant Shipping Act of 1894 what the system of England is. That in foreign countries has to be inferred to some extent.

The Honourable Member's statement as to complaints of the English system cannot be verified, as the source of the information is not mentioned.

R.P.—28-4-98. W.B.deW.—29-4-98.

[G.O., Nos. 316, 317, Marine, dated 29th April 1898.]

2a

Marine (1897) Department.

CURRENT No. 1487

From

The Presidency Port Officer,
Madras

Order

No. 1730/403 G

Dated 19 November 1897

Received } 22-11-97
Registered }

Enclosures 2.

Spare copies

SUBJECT.

Forwarding two statements showing the requirements of the ports in the Eastern and Western groups for the next five years.

BACK PAPERS.

No.	Date.
513 Mar	4-6-97

FURTHER PAPERS.

No.	Date.

Reading. No. 1730 / 403 G

1P

PRESIDENCY PORT OFFICE,
Madras, 19 November 1897.

From

Commander H. A. Street, R.I.M.,
PRESIDENCY PORT OFFICER,
Madras,

To

THE SECRETARY TO GOVERNMENT,
MARINE DEPARTMENT,
Chepak.

SIR,

With reference to G.O. Marine, No: 513, dated 4th June 1897, I have the honor to forward herewith two statements shewing the requirements of the ports in the Eastern and Western groups respectively for the next five years as far as can be foreseen at the present moment.

2. The item first entered against each port is what is the foremost in point of urgency; and those entered below it are arranged in the order of their urgency. Taking into account

the

the surplus that is anticipated to stand to credit of each group on 31st March 1898, and reserving therefrom a lakh and a half-rupees respectively for the Eastern and Western groups (Madras included in the former) on account of lighthouse improvements, sufficient funds should be available for carrying out the works proposed for execution in 1898-99 as specified in the Statement accompanying this office letter No 1500/402 G, dated 19th November 1897, besides the Dredger and the Crane for Tuticorin shewn in Statement A herewith sent. In regard to the other items I would propose that as more money becomes available afterwards, the works be taken in hand one by one in the order of their importance.

CP. 1480 Cir'ted

I have the honor to be,
Sir,
Your obdt: servant,

Hatteet
Commander, R.I.M.
Presy. Port Officer

ns

Marine (1898) Department.

CURRENT No. 62 1a

From

The Presidency Port Officer, Madras

Order

No. 17/30/18 G

Dated 14th January 1898

Received 15 " —

Registered —

Enclosures 2

Spare copies

SUBJECT.

Forwarding amended statements shewing a forecast of the requirements of the marine department for the next five years.

8 1.

BACK PAPERS.

No.	Date.
716 E	26-11-97
513 Mar	4-6-97
351 "	12-4-97
261 "	19-3-97
245-6 "	8-4-96
28 29 W	9-10-97 S.C.

FURTHER PAPERS.

No.	Date.

No. 1730 G
18

Heading

Presidency Port Office,

Madras, 14th January 1898.

2P

From

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

To

THE SECRETARY TO GOVERNMENT,
MARINE DEPARTMENT,
CHEPAK.

Sir,

With reference to Marine Department Memorandum No. 716, E, dated 26th November 1897, I have the honor to forward herewith amended Statements shewing a forecast of the requirements of the next five years.

2. The works have been arranged in the order pointed out in para 1 of the above Memorandum.

3. The entries in the Remark column explain the necessity of the works and include a history in each case where one exists.

4. I also forward herewith a Statement of estimated Receipts and Expenditure of the next five years.

I have the honor to be,
Sir,
Your obt: servant,

J. A. Street

Commander, R. I. M.
Prov: Port Officer

Encl: Abstract 6/2/98

A Forecast
of the requirements of the Marine
Department for the next 5 years.

Pilotage Funds. Act X of 1897

	Madras	Pambaw and Kilakarai	Cochin	Mangalore	
Average Annual Income for 5 years ×5	159590	55940	15240	1640	
Deduct Average annual Expenditure on Establishment " Petty maintenance of all kinds } ×5	158875	10985	11135	1605	
Balance available out of Income for Major Works	715	44955.	4105	35	5/44955 8991
Add Balance on hand on 1st April 1897.	50000	15743	14931	-14	5/4140 828
Total available in 5 years for Major works	50715	60698	19036	21	

* The surplus of Madras Pilotage Fund is annually made over to Madras Port Funds.

N. G. Elliott
Commander R.I.M.
Presidency Portoffices

Madras

Landing and Shipping Dues - Act III of 1885

	Vizaga-patam	Cocanada	Masuli-patam	Negapatam	Mangalore	
Average annual Income for 5 years X5	39445	226405	15615	60085	46200	
Deduct						
Average annual Expenditure on Establishts } X5						
" Petty maintenance of all Kinds }	5450	118810	7005	28750	3280	
Balance available out of Income for Major Works	33995	107595	8610	31335	42920	42920 / 8584
Add Balance on hand on 1st April 1897	16216	3206	8675	36403	31890	
Total available in 5 years for Major works	50211	110801	17285	67738	74810	

Madras
18 January 1898

33,995
107595
8,610
31,335
1,81,535
36,307

Commanding R.M.
Presidency Port Officer

Port Funds, Act X of 1889

	* Madras	Eastern Group.	Western Group.
Average annual Income for 5 years × 5	599165	958360	517815
Deduct.			
Average annual Expr. on Estt. " Petty maintenance of all kinds " L.H. Establishments Materials } × 5	411125	802040	401555
Balance available out of Income for Major works	188040	156320	116260
Add- Balance on hand on 1st April 1897.	86917	245682	360600
Total available in 5 years for Major works including Light House construction	274957	402002	476860

* The surplus of Madras each year is made over to the Harbour Trust Board as contribution from Port Funds.

President, Port Office, Madras, 14th January 1898

H. A. Stee
Lt. Cr.
Commander & Ex. Officio
President

Forecast of the requirements of the Eastern Group for the next five years.

No	Port	Nature of Work	approximate estimate	amount proposed to be spent yearly	From what fund to be met	Remarks.
1	Cuddalore	A new boiler for the Steam Dredger	1000 - -	1000 - -	Port Fund	The present boiler having quite recently been condemned it is absolutely necessary to obtain a new one; the actual cost will shortly be reported to Government.
2	Tuticorin	Passenger Shed and platform alongside of which the Steam would draw up.	2700 - -	2700 - -	Port Fund 1/3 Share only.	On the completion of the new pier at Tuticorin, further improvements connected therewith were considered necessary, and in April 1896, a joint inspection was held by the Presidency Port Officer, Executive Engineer of the Division, local Port Officer, Assistant Commissioner of Salt & Abkari Revenue, and the Collector of the district; and a detailed report with regard to this work as well as those numbered 16, 17 & 18 submitted to Government. (G.O. Marine No. 798 dated 11th September 1897). This proposed passenger Shed was sanctioned, (G.O. No. 1130 Revenue dated 25th February 1897) and estimate called for (G.O. No. 3200 W of 16th November 1897 and G.O. Marine 974 dated 18th December 1897).
3	Tuticorin	Dredger	30,000 - -	28,000 - -	Port Fund	A large quantity of silt having settled near the new pier, it was first considered that dredging apparatus might, as a temporary measure,

No.	Port	Nature of Work	Approximate amount proposed to be spent yearly	From what fund to be met	Remarks
					be fitted up and Silt removed therewith; but as such Apparatus would be unequal to the Work on the one hand, and on the other, the Dredger "Wenlock" draft being too great to permit of her working along side of the pier, and immediate measures being necessary for the removal of Silt from near the pier to protect boat traffic from obstruction it was pointed out as absolutely necessary to have a dredger for this port of the Priestman type. (G.O. Marine 524 dated 11th June 1897) The Subject is under correspondence with P.W.D. (G.O. Marine No 826 dated 22nd September 1897).
4	Tuticorin	A 15 Ton Crane	5700 " "	5700 " "	Port Trust. On the completion of the new pier at this port, it was found necessary to have a 15 ton Crane fixed on the pier and the purchase of one was sanctioned (G.O. Mar. No 916 dated 18th July 1895) and orders given to Messrs Mackay & Co., Madras, for the Supply of the Same, in July 1895. The question of Strengthening the pier to bear the weight of the crane is under correspondence between the P.W.D and the Contractors (Government Memo No 1617/C of 20th March 1897 and Proceedings Port Officer's letter No 163/171/C. dated 11th May 1897 para 3). 515
5	Tuticorin	Residence for the Port Officer	13,930 " "	5000 " "	Port Fund. In 1894 the general question of residences for Port Officers at Coast ports was taken up and after some correspondence with the

Forecast of the requirements of the next five years
Eastern Group
Continued

No.	Port	Nature of Work	Approximate Estimate	Amount required to be spent yearly	Reason why work cannot be carried out	Remarks
			53330	12245		
6	Calimere	Quarters for Lightkeepers	1690 -- --	1690 -- --	Port Fund	of accommodation & construction of residences at the respective ports is obtaining Sanction. Residence for the Port Officer Dutchcorin was Sanctioned in G.O. Marine No. 919 dated 11th November 1897 at an estimated cost of Rs. 13780. etc to emergency of the execution of the Sam See Proceg: Port Officer's No. 1678/8 G dated 7 January In June 1890 the light at Calimere point was exhibited for the first time; and quarters for the lightkeepers were constructed at a cost of about Rs 2000/. In November 1891 the Negapatam Port Officer recommended that new kutcha buildings might be constructed for the Ltkeepers and the old ones used as Storerooms Again in January 1892 the Port Officer Suggested that huts might be constructed on Stone basements in consequence of the Swampy nature of the Soil. In November 1892 the Light keeper's existing quarters were repaired and 3 new huts constructed for the families of the men, all at a cost of about Rs 722. In October 1893 the P.W.D Suggested that pucka masonry building might be constructed in preference to frequent repairs to existing buildings Estimates for Rs 1644 for permanent buildings were laid before Government, but Sanction was declined pending the result of Mr Stohpitel's deputation by G.O. Mar: No 325 of 15 August 1894 In 1896 the existing quarters entirely

Forecast of the requirements of the next five years
Eastern Group
Continued

No.	Port	Nature of Work	Approximate Estimate	Amount proposed to be sanctioned	From what funds to be met	Remarks
			61020	50020		
7	Negapatam	Port Officer's residence	13900 " "	5000 " "	Port Fund	Finally an estimate was prepared by Mr Adpitel for Rs 1350 which was with certain alterations passed for Rs 1690 and Sanctioned by Government (G.O. Marine No 1028 of 14th December 1897). See remarks against item No 5. also para 3 of G.O. No 1300 Mof 22 April 1896. G.O. Marine No 124 of 12th February 1897 and Memo No 185/C of 1-4-97 and No 4286C of 22.10.97 and Prevy. Port Officer's No 1675/426 G of 1.12.97 explaining the necessity for a residence being built.
8	Negapatam	Improvement to the Port Office	1000 " "	1000 " "	Port Fund.	Work Crd. 3202 Plan and estimate forwarded to Government with Prevy. Port Officer's letter No 1832/441 G of 13.12.97, which fully explain the necessity for the work being carried out.
9	Negapatam	Permanent Groynes in lieu of the temporary ones now in existence	15000 " "	5000 " "	Landing & Shipping Dues Fund	In the interests of the port permanent Groynes are considered absolutely necessary in lieu of the existing ones which have proved unsatisfactory.
			90,720	61090		

Forecast of the requirements of the next five years.
Eastern Group

No.	Port	Nature of Work	Approximate Estimate	Amount proposed to be spent yearly	Remarks
10	Pamban	2 Jetties	20000		Provincial Fund. In view of some 20000 pilgrims going across to Rameswaram in one month of the year, besides a large number in the months, the question of want of jetties at this port was considered in 1894 and after some correspondence between the Collector of the district and the Port & P.W. Departments, a proposal for 2 jetties estimated to cost Rs 30,000 was placed before Govt: in 1895. by the Presy. Port Officer suggesting the expenditure being met in the first instance from the provincial fund (Madura Dt. Port Fund not being in a position then to meet it) and afterwards repaid from a levy of tolls under Madras Act V of '63 and Act VII of '71, the introduction of which was also suggested. Government in Memo No. 1960 Mar: dated 22d August 1895 enquired if a couple of small wooden jetties would not meet the requirements of the port, as it was considered that a loan from the Provincial Fund of such a large sum was not likely to be available to be repaid after a number of years which would be the case if it had to be repaid from the pier toll Collections as already mentioned. A final proposal was laid before Government in April 1897 (Vide Presy. Port Officer's letter No. 1739/123 G.) for 2 iron Screw pile jetties estimated to cost Rs 20,000. Preparation of plan and estimate has been ordered. (G.O. Marine 878 of 30 September 1897.
11	Cocanada	Improvements to the bar and 1/2 cost of Dredger	200,000		Port Fund. Vide correspondence ending with Presy: Port Officer's letter to Govt: No. 48/38 G. dated 4th November 1897.

Forecast of the requirements of the next five years

Eastern Group

Continued

No.	Port	Nature of Work.	approximate estimate	Amount proposed to be spent yearly	From what fund to be met	Remarks.
12	Vizagapatam	Improvement to the harbour including ½ cost of Dredger	310 000 / 200,000	610 000 / ½	Port Fund.	Vide correspondence ending with Presidency Port Officer's letter to Govt: No. 48/387 G. of 4. 11. 97.
13	Manulipatam	Improvements to bar and river	25,000	10,000	Landing & Shipping Dues Fund	The Landing and Shipping Dues Committee at this port considered that a Dredger was absolutely necessary for the improvement of the port and the matter was laid before Government in December 1894. Government declined to sanction the proposal (Govt. O. Marine No. 7 of 10 January 1895). The Committee again renewed their application for a Dredger in October 1896. It is under consideration to put up a Groyne bund across the old bar; and the Executive Engineer has been addressed on the subject.
14	Gopalpur	Residence for Port Officer	6000	6000	Port Fund	See Remarks against item No. 5 " G. O Marine No. 93 dated 15 February 1896. " " " P. W " 1305 W " " 23 April 1896 Proposals to purchase a house was made in November 1896. See G. O. Marine No. 812 dated 23 November 1896 declining to sanction the purchase and directing to renew the application next year. " " " " " 522 of 9th June 1897 " " " " " 606 " 7 July 1897

5,41,72 — 77,090

Done cast of the require
Eastern Group

No.	Port	Nature of Work	Approximate Estimate	Amount proposed to be Spent yearly	From what funds to be met	Remarks.
15	Vizagapatam	Port Officer's residence	10,500 " "	9,300 " "	Port Fund	See remarks against item No. 5 " G.O. Marine No. 93 dated 15 February 1896 " — " P.W. — " 1205W " — 22 April 1896 " — " — " — 3278 W " — 14 November 1896 " — " Marine — " 838 — " — 1st December 1896
16	Tuticorin	One open Shed for Goods	6700 " "	*	Port Fund	See remarks against Item No. 2 "Passenger Shed"
17	— Do —	One Closed shed for goods	10,000 " "	*	— Do —	
18	— Do —	Fencing in of foreshore 1/2 share of cost	2050 " "	*	— Do —	
19	Negapatam	Improvements to jetty	10,000 " "	2800 " "	Landing & Shipping Dues Fund	This proposal originated with the Executive Engineer of the Division who pointed out that there would be a large Saving in Annual repairs if these improvements were carried out. The report which accompanied the estimate shows this as probable. Plan and Estimate for Rs 2800 forwarded to Government with Presy. Port Officer's letter No. 514 of 319 G of 1st September 97.
20	Negapatam	Fencing in of foreshore	4000 " "	*	L & S Dues Fund	This work is considered necessary in the interests of the port
21	Vizagapatam	Improvements to foreshore	10,000 " "	*	— Do —	This Sum is estimated to meet improvements which may become necessary in continuation of those Sanctioned in G.O. Marine No. 37 of 28-1-97.

N.B. A lakh and a half of the balance at credit of the Eastern Group Port Funds, being received for General improvements to the existing System of lights, allotments for the items marked * will have to be post-poned as more money becomes available.

Presidency Port Office
Madras the January 1898

Patteet
Commander R. I. M.
Presidency Port Officer

P.T.O.

Forecast of the requirements of the next five years
Western Circle

No.	Port	Nature of Work	Approximate Estimate	Amount from Last to be Spent yearly	Grounds & Funds to be met	Remarks
1	Cochin	Port Officer's residence	30,700 - -	15,000 - -	Port Fund	In June 1896 it was proposed to convert the present Port Office into a residence for the Port Officer and the bungalow in the Marine Yard as an office. The Executive Engineer West Coast Division condemned both buildings and recommended a new building for the Port Officers residence. In the meantime a private building was offered for Rs 8000/- as best suited for a residence. Anticipating a Successful negotiations, estimates were ordered to put the present Port Office into thorough repair (G.O. Marine No 1166 dated 29th June 1896) at a cost of Rs 1800/-. The negotiations failing, plan and estimate for a residence were ordered (G.O. Marine No 584 of 27th April 1896) but a proposal for a combined residence and Office is under consideration. (Govt. Memo. P.W. No. 5347 C of 4. 12. 97)
2	Hangarcotta	Lightkeepers Quarters	1500 - -	1500 - -	Port Fund	The work is necessary and urgent. Estimate has been called for and will shortly be placed before Government.
3	Kundapore	Lightkeepers Quarters	1500 - -	1500 - -	Port Fund	The work is necessary and urgent. Estimate has been called for and will shortly be placed before Government.

Forecast of the requirements of the next five years
Western Circuit.
Continued.

No.	Port	Nature of Work.	Approximate Estimate	Amount proposed to be spent yearly	From what Fund to be met	Remarks.
4	Malpe.	Quarters for light keepers	1500 " "	1500 " "	Port Fund	The work is necessary and urgent. Estimate has been called for and will shortly be placed before Government
5	Ponani	Joining the two existing groynes and filling up the place enclosed	1000 " "	1000 " "	Port Fund	The work is necessary in the interests of the port and the figures are approximate
6	Mangalore	Construction of a Pier	200,000 " "	100,000 " " ×	L.H. dues Fund & Port Funds	At the request of the Landing and Shipping Dues Committee at this port, the Collector recommended in November 1895 the construction of an iron Screw pile Pier. The Local Fund Engineer of S. Canara Dt. expressed as his opinion that the Soil was unsuitable for an iron Screw Pier and recommended a 200 ft. floating Stage. In October 1896 the Presy. Port Officer accordingly recommended a Pontoon Pier at a cost of Rs 31,000 to be met out of Landing and Shipping dues. Government in Marine Endorsement No. 866 dated 6th February 1897 referred the question for the opinion of S.E.W. The Executive Engineer West Coast Division showed that there was nothing in the Soil to prevent a permanent Screw pile Pier being built. Estimate has accordingly been called for. (G.O Marine No. 308 of 30th March 1897) As the Executive Engineer also recommended that a portion of the foreshore be reclaimed before commencing the pier, the L.H.S dues Committee consented to meet the expenses of the reclamation also; and the preparation of an estimate for the latter work also has been called for. (G.O. Marine No. 915 dated 10th November 1897).
7	Mangalore	Reclamation of foreshore	50,000 " "	25000 " "	L.S. dues Fund	
			2,85,200	145,500		

Forecast of the requirements of the next five years.
Western Branch

No.	Port	Nature of Work.	Approximate Estimate	Amount proposed to be spent yearly	From what funds to be met	Remarks.
8	Calicut	Repairs to the present pier	8000 " "	8000 " "	Port Fund	The present pier having been placed under the management of "The Calicut Pier and Warehouse Company" in April 1893. the Local Port Officer suggested that the Pier should be thoroughly prepaired to make it Safe for the traffic; from that time the Subject was under correspondence between the aforesaid Company and the Port and Public Works Depts: In 1894 the necessity for repairs to the pier was brought to the notice of Government. (Govt: Memo No. 878 of 3rd May'94 and G.O. Marine 236 of 19. 6. 94) Again in 1896 the necessity for complete repairs to the pier at a cost of Rs 25000/ was reported to Government (G.O. Marine No. 648 of 23rd September 1896). In January 1897 the Presy: Port Officer recommended that a new pier should be built to the South of the Site where the present one is Situate and estimate for a new one was ordered by Government (G.O. Marine No. 68 of 23rd January 1897). In view of the fact that a series of 12 Sections of the foreshore had to be taken at intervals of a month which meant that no estimate could be formed for 12 or 15 months to come, the Government decided that the present pier should be repaired and ordered preparation of plan & Estimate. (G.O. Marine No. 364 of 22nd April 1897) In December 1897 the pier was taken over from the Company by the Government (G.O. Marine No. 903 of 28th August 1897). Estimate for repairing the present pier Amounting to Rs 8000/ was also forwarded to Government in November 1897 with Presy: Port Officer's letter No. 206/406 G of 19 November 1897.
9	Calicut	Construction of a New Pier	200,000 " "	100,000 " "	Port Fund	

Forecast of the requirements of the next five years.
Western Group

No.	Port	Nature of Work	approximate Estimate	Amount proposed to be Spent yearly	From what funds to be met	Remarks
			494 20	253 500		
10	Calpe	Pier and improvements to foreshore	4230 " "	4230 " "	Port Fund	The works are necessary in the interests of the port and to facilitate Landing and Shipping operations. Estimate has been called for and will shortly be placed before Government.
11	Kundapore	Boat Jetty	7000 " "	7000 " "	Port Fund	The work is necessary in the interests of the port and to facilitate Landing and Shipping operations.
12	Calicut	Beacon on Cootee Reef	1500 " "	×	Port Fund	The work is necessary in the interests of the port.
13	Cochin	Tenneyim Boat Yard	970 " "	×	Port Fund	The work is necessary for the protection of the Boat Yard.
14	Calicut	Kallai Bar improvements	6000 " "	1200 " "	Port Fund	Act No II of 1890 was declared applicable to the Kallai Bar and tolls at certain rates were levied on articles passing over this bar for export. The collection and control of this Fund was with
			13 900	265920		

Forecast of the requirements
Western Group

Sl. No.	Port	Nature of Work	Approximate Estimate	Amount proposed to be spent yearly	From what funds to be met	Remarks
		Kallai Bar improvements (contd)	189'00	2,65,730		
		N.B. A lakh and a half of the balance at credit for improvements to the existing System of lights, as more money becomes available.				

Presidency Port Office
Madras 14th January 1898

of the next five years.
Continued

with the Revenue Department. In 1895 it was transferred to the Port Department (G.O. Marine 197 dated 4th July 1895. From that time the collections are credited to Port Fund and the Port Department is responsible for keeping the Rivers and the Bar open for traffic. In 1895 the bar was opened by the Port Deptt: at a cost of Rs 1618/. Again in 1896 the Bar was opened at a cost of Rs 1120/.

of the Western Group Port Fund being reserved for general improvements for the items marked x will have to be postponed

A. Wilcox
Commander R. I. M.
Presidency Port Officer

Marine DEPARTMENT.

C. No. 62

HIS EXCELLENCY THE GOVERNOR.
THE HON'BLE SIR HENRY BLISS, K.C.I.E.
THE HON'BLE MR. GROSE, C.I.E.

SUBJECT.

Port Fund Works
Financial Forecast.

FOR ORDERS.

Note respecting Mr. Mus remarks in this office note of 4-2-98. It is limited at first the figures in Col. 1 are taken from the C.O.D. statement flagged A. from which it will be seen that £.02 represents the annual average expenditure on establishment, petty maintenance of all kinds, lighthouse outfit & materials, multiplied by 5 - Hon. Secretary, supply described in the last. The figures were given to show how the C.O.D. estimated annual charge in each group arrived at, as two figures are much apart to Mr. Corbyn's

[P. W. 43.
500-27-1-98.]

estimate, which is considerably higher. In fact it is a hasty & ill-digested measure & attempted to interfere in this matter at all. Heads of completed & an already difficult block. It will thus be seen that the figures of 1.02 have nothing to do with the figures entered in Cols. 4 & 5 of Appendix E. the net charge and may annual maintenance & establishment charges, & the Non-Recurring charges & the whole of the lighthouse work.

2. With regard to the annual financial position, I have talked the matter over privately with the C.O. During my present tour & we both agree that it is quite impossible to carry out the proposed lighthouse programme without a grant in aid from Govt of India. To do so is to starve every

DEPARTMENT.

C. No.

SUBJECT.

HIS EXCELLENCY THE GOVERNOR.

THE HON'BLE SIR HENRY BLISS, K.C.I.E.

THE HON'BLE MR. GROSE, C.I.E.

2

FOR ORDERS.

Put in the chart in the next 20 years expenditure with recommendation that, India should be asked for a grant in aid equal to the amount we have to borrow, viz Rs 4,50,000 - or alternately half the amount this proposal to Head 7.5

3. If this is agreed, then all we have to do is to restrict our expenditure under lighthouses to the means. The C.O. deprecates any reduction of the proposed programme, under that Head arrangement I have been made by carrying it out.

* Rs 4.15,000

+ The total proposed expenditure is Rs 6,30,000 against Rs 6,20,000 as shown above. The expenditure at present under heads being Rs 95,000 instead of Rs 75,000 -

[P. W. 43. 500-27-1-08.]

t I have ascertained from
ain that, if such addition
s unavoidable, the following
works can be postponed
until funds are available

Centempools.

Tuticorin	0.13	
Negapatam	0.05	
Cuddalore	0.04	
Conjeveram	1.00	
Chingleput	0.05	
Arnikpatam	0.01	
Tripatore	0.03	
Pulicat	0.03	
	~~1.34~~	1.34

Western Group.

Pondicherry	0.03	
Vizagapatam	0.03	
Malpe	0.04	
Mangalore	0.12	
Tanjore	0.06	
Cochin	0.09	
Cannanore	0.03	
Calicut	0.09	
	~~+31~~	1.01

Headers

Travancore	0.53	
Tuticorin	0.23	0.76
		3.41

0.00
2.41
1.59

This would reduce the amount of loan required from Rs 4.00 to Rs 1.59 and it is thought that this might be temporarily debited to Government funds a the accounts adjusted when the loans are called in. To obtain this balance I consider that light houses should be maintained by Government - I understand the Headers Coast - I understand the 0.0.0 that they will in the Travancore Coast. In the Ceylon Coast. there seems no reason why they should not be introduced here. Leaving the Western Coast with the Government - Improvements are carried out. the Headers Coast will be the best lighted one in India: 77 light lines are established. it might be possible to carry out the whole programme within a

necessitate time without undue
delaying Cut finds -
it seems impossible to enforce
Cut dues - they have always
been raised by the customs
tariff, & the increase
proposed by the Act in Q.
almost the Act in Q.
No 35 of 1912 April 91 - the
present Expenditure includes
but a limited enhancement
the Western ports -
A attached Key to Customs
The statement at
the present rates with those
proposed in prec - the increase
the actual per which charged here
under the same, until the above
Q.O. was passed
It seems from that light the
levied in the specific purpose of
improving & helping of the Coast
under mechanical power only
received there any Fishes on
- Enactment of port dues -

Into N70,
Revenue,
Fifteen a
Quarter.

with guilt
suffered to
passe - Richard
in safe
Martin Chatham
to
ship
Main

4. into expenditure for the present
expenditure in Out works.
(Appendix A & B) I have
visited & the Ports in Cornwall
with the G.O. During the last
week I have seen enough
them me that the proposed
needs considerable revision -
as Out to N000 no new interior
opened. the existing machinery
insufficiently worked for Out
purposes - & Inspectors, the
Fleet master are by no means
employed while a lot of money
must be spent on the
the ever month of the
reflected port in
its trade altogether: Everything
the best - including steam (9 to
it in Appendix A. must pre
any further. & Fishery,
a Passenger that is certainly
wanted. but it seems to me that
it should be entirely paid for out
of Customs Dues, the examination

of hearings effects, being it to
the Act. A draft is much
needed. I some improvement of the
law is necessary which can be defended
here. A is to increase
in the present state - the evidence be
taken out there should be limited at
present there is the
more or less chance of
impanne are all needed, but
with limited exit more than
amounts shown - at Lanken
2 landing stages are certainly
needed. It is of more use
at a time, according to the
a floating pontoon.
the handiness of having
landing place to the other. A
distance of half a mile is
I think the utmost there
that an accurate forecast to
hand of wind at present
without a more careful examination
each port. Which I should
like to carry out in person.

the allocation
of funds in the
remarked. One to
all wrong - the
one then that to the
limit instead of
me to be handed
over to the Customs
into out shore
bonds the latter.
the open shed
shed be built
costing from £ to
Funds (to which
Fisheries are
eventually credited)
a fee credited
to Port Funds,
being charged for.
to me - Jersey
the fine there
shd be shared
equally by Port
Funds : Customs
being here to the
- Jersey

4.

a basis of such a precaut if to
it is considered necessary to
make me, but I think it may
not be such heavy business
accurate figures —

5. like especially the reservation.
attend C. I cannot say they
definitely intend burning the amount
to be spent in alterations. But I
certainly think that if the money
is forthcoming the whole programme
should be completed early in 3
years -

16.3.21

NOTES.

Corrects with Gov.
316-17
29.4-98.

Press
Please put in type
& show proof.
J.A.S
12.11.03

For M.R
with proof
A
1911

Marine Department.

Mrs. 316-17 Ma 1729 apr 98

Read the following :—

C. No. 62 of 1898. 1B

From H.O.O.R.No. 1730/18 Subject. dated 14th January 1898

Forecast of Port Fund works required during the next 5 years.

FOR ORDERS. (1)

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

Please ask Capt Sheet to come to see me about this business, together please.

KS 2/2/98 (2)

Mrs Ashpitel tells me that Capt Sheet is away & won't be back for 3 weeks. Have been through these with works with Mrs Ashpitel & have told him what I would retain & what strike out - Please revise statement A in accord with him.

KS 3/2/98

In accordance with para 2 of G.O. 513 Marine dated 4th June 1897, the Presidency Port Officer submits with his letter read above a forecast of Port Fund Works, other than Light houses, required during the next five years in each of the two groups, Eastern and Western, into which the ports have been divided. The works are arranged for each group in order of urgency, and a brief history of each work, so far as such a history exists, is given in the column of remarks.

2. The total outlay is estimated at Rs. 11,09,070, of which the Eastern group absorbs Rs. 5,95,170, and the Western Rs. 5,13,900.

3. Taking the Eastern group first, it will be seen from statement A prepared in the Secretariat that, commencing with an opening balance of Rs.

42—500—22-4-97.

Rs.3,31,395 on the 1st April of this year, and taking into account progressive annual receipts and expenditure, the group will, at the end of the quinquennial period, close with a credit balance of Rs.1,19,035 which may be taken to be the net sum available for Lighthouse works.

4. Similarly, in the Western group, while commencing with an opening balance of Rs.3,38,771 on the 1st April, there will, at the end of the quinquennial period, be a debit balance of Rs.11,809; or supposing the Western group to borrow from the Eastern, the credit balance for both groups at the end of the period would be Rs.1,07,226.

5. These are the results deducible from the programme of the Presidency Port Officer, but if the statement be examined in detail, it will be found that many of the works set down for execution have not yet been estimated for. It is not likely, therefore, that they can be put in hand so soon as he calculates on, though there seems no reason to suppose that they should not all be ready for execution before the close of the quinquennial period. As to whether they can be finished in that period, and the whole amount of money spent before its close is open to doubt.

6. The postponing of works during the earlier years of the quinquennium would mean a corresponding augmentation of the surplus balances available. The more money thus accumulated the less would have to be borrowed for lighthouse construction. The most practical way, therefore, of dealing with the matter seems to be, to go through the works in detail, select for execution in 1898-99 the most urgent and those for which it is possible to prepare estimates within a few months, direct the early preparation of plans and estimates for these works, and fix the allotment that can be spent or assigned. A more reliable forecast of the second year's balance available for lighthouses would thus be obtained. Future years could be dealt with in a similar manner - later on perhaps.

7. The sum required for lighthouses on both coasts is Rs.8,35,000, to be spent in 3 years, or an average of Rs.2,78,333 per annum. It is possible to find the required amount without difficulty for the first year, which opens with a credit balance of Rs. 6,70,166 and would close, even according to the Presidency Port Officer's programme, with a surplus of Rs.6,28,502. The actual surplus, however, is likely to be much more, for it

it will be seen that, while the Presidency Port Officer calculates on the expenditure of Rs. 1,50,890 on 23 works, no more than 2 of these works estimated to cost Rs. 17,300 have yet been provided with sanctioned estimates. There thus seems no immediate necessity for borrowing for lighthouse construction, and it would perhaps be well to defer the operation till the want of money is actually felt.

Vide Statement C.

Item 15. Eastern group. Port Officer's residence, Vizagapatam - Rs. 9,300.

Item 8. Western group. Repairs to the Calicut Pier. Rs. 8,000.

We need not borrow until we absolutely require the money. But I would like to keep it in India now if it can be done when required.

8. The surplus balances assumed in the Secretariat include Pilotage Funds and Landing and Shipping Dues. The former become merged in Port Funds at the end of each year, and the latter, though not available for general expenditure, can be all spent in ports of collection before Port Funds proper are trenched upon for works at those ports.

M. 1.2.98

Financial Forecast 3

Years	Particulars	As per the Presidency Port Officers programme Rs	As per sanctioned programme Rs
1898-99	Total Balance	7.79.392	7.79.392
	Port Fund Works	1.50.890	
	Balance for Light House Works	6.28.502	
	Light House Works	2.70.000	2.70.000
1899-1900	Balance Carried forward	3.58.502	
	Surplus	1.09.226	1.09.226
	Total balance	4.67.728	
	Port Fund Works	98.730	
	Balance for Light House Works	3.68.998	
	Light House Works	*2.15.000	2.15.000
1900-1901	Balance Carried forward	1.53.998	
	Surplus	1.09.226	1.09.226
	Total balance	2.63.224	
	Port Fund Works	-	
	Light House Works	2.50.000	2.50.000
	Balance on 1st April 1901.	@13.224	

Note The forecast has not been carried beyond 1900-1901 as in this year the Light House works are expected to be completed and according to the Presidency Port Officers programme all his urgent works will have been provided for.

* This figure excludes a sum of Rs 95.000 for the Light Houses at Seven Pagodas, Madras, Pulicat and Armagon as the expenditure will fall against the Madras Port. Note. In order to meet this expenditure, the Madras Port surpluses should be retained and not made over to the Harbour Trust Board at the end of 1897-98 and the following years.

@ The surplus balance at the end of 3 years will be Rs 13,224, but the demands against this for Port Fund works included in the schedule but deferred, amount to Rs 8.59.450. To carry out these works within a reasonable period, it will be necessary to borrow next year or the year after and the money so borrowed will really be for Light House Construction as it is owing to the large expenditure on works of this class that Port Funds are insufficient for requirements.

P.S. 4 Feb 98.

DW. C.No.62

Financial forecast
Fish Landwork

I was not able to
complete this subject
before we left on tour -
It is a complicated matter
and one of some urgency,
and might perhaps be
sent on to W. Ltd without
the linked file of
previous papers which
is very bulky.

Mr Ashpitel got
personal orders from the
Sec. on some of the
points and these he
communicated to me
for guidance in working
out the scheme.

C.S.
17. Feb 98.

yes - please send to
W. Mr without the
linked file - 1
EHM
17.2.98

ance	0.63	.37	0.48	

2. Mr. Ashpitel

C.A.W.

Can we not have the
a concise statement
in the following form

	£
Amount proposed to be Rent in (1) Lighthouses	7.35
(2) Other works	4.76
Total	12.11
Less the Agency balance at credit of Fund	5.42
Total borrowing powers in next five years	*3.03
	8.45
Total Balance required to be raised by transmissions in conjunction with the Fund?	3.66

See Provisional note in Dept order

* Exclusive of £1.97 for Electric Lighting Maintenance Separately provided.

21.2.00

W

The figures have been filled in according to your form with the result that the loan works out to 3.66; but this is not what will actually happen according to the programme approved by you.

Taking the Eastern group e.g. it will be seen from Appendix E to the draft order that a sum of 2.61 must be borrowed in 1899-1900, and that a further sum of £1.85 must be borrowed in the following year - which in the Western Group - Appendix F - 2.24 only will be required in 1900-1. Total = 4.70.

Your statement proceeds on the assumption that the total receipts for 5 years will be available, and can be drawn upon before any loan is raised but this is not so.

The part of the draft is left out of the calculation as there is no question of a loan here.

R.S.

24 Feby 00

Net. (a) There is a difference in heating pipes between Appendix C (Flag A) & Appendix B. The former total up to £ 513 500, the latter £ 513 500, the latter £ 3,53,000. The difference accounts for Item 6 where £ 30,000 is substituted for £ 2,000 - also in Item 9 where £ 5000 is added. Miscellaneous in Appendix B. & in Item 12 where £ 1500 in Statement C is entered into £ 5000 in Appendix B. There difference should be explained.

(b) The total amount borrowed is Appendix B of £ 4,76,000 as compared with £ 11,09070 suggested by P.P.O

W

The following is an explanation of the differences noticed in your note of 28-2-98.

(a) Appendix B

Item 6. The sum of Rs 30,000 is taken from Mr. Ashpitel's statement Flag L and is intended to cover the cost of a pontoon, instead of a screw pile, pier. The alternative is mentioned in the column of remarks of the S.E.'s statement, and has, it is understood, been adopted by Mr. Ashpitel under instructions from the H.G.

Item 9. Rs 5000 only are allowed as against Rs 200,000 proposed by the P.P.O. The smaller sum is expected to cover the cost of a tramway as an alternative to a new Pier, as explained in the note attached to the draft order.

Item 12. Mr. Ashpitel considers the Rs 1500 an underestimate, and raises the figure to Rs 5000, as explained in

... both attached to the draft order. It will be seen from Appendix B that no allowance for the work, which is considered unnecessary.

(6) The programme as approved by the H.C. works out to the £76,000 as shown in this present statements.

R.P.
3 Mar 98

Noted: file Can now proceed.

[illegible]
4 Mar 98

Financial forecast and works

The following information is submitted with reference to the H.C.'s letter "To orders" sheet.

Item 3 is the average (sub-total) expenditure taken from the P.P.O's statement Flagged A. The object is to arrive at the average Annual Surplus. Therefore all extraordinary charges such as those shown in Appendices A & B and in Columns 9 of Appendices C & F are excluded. The statement was introduced into the note in order to explain why Mr. Ashpitel's figures, provisionally approved by the Hon. Treasurer, were not adopted.

The figure 8.02 is explained above, taken from the P.P.O's statement Flagged A. It is "the average annual expenditure on Establishment, Petty Maintenance of all kinds, Light House Establishment and Materials" multiplied by 5. The figures in

lance	0.63	.37	0.48	

2. Mr. Ashpitel

Columns 8 & 9 of Appendix E are the extraordinary charges on Light houses and other works. There is not the direct connection between the two sets of figures which the figures note assumes.

The other notes are explained on the papers themselves.

R.S.
7 Mar 98

For orders

Marine Department.

Port Fund Works.

(3) Financial Forecast.

Note to accompany the draft order.

Mr. Ashpitel estimates the average annual surplus of the Eastern group at Rs. 84,000. This amount seems too high, and it would be safer to adopt the Presidency Port Officer's figures which ~~work out as follows~~ bringing out a surplus of Rs. 63,000. The details for all groups are as follows.

	Eastern Group	Western Group	Madras
1. Average income for 5 years.	9.58	5.18	5.99
2. - do - for each year	1.92	1.04	1.20
3. Average total estimated expenditure for 5 years excluding all extraordinary charges, but including Light House maintenance	8.02	4.02	4.11
4. - do - for each year	1.60	0.80	0.82
5. Surplus for each year (2 − 4)	0.32	0.24	0.38
6. Add increase of revenue due to enhancement of Port Dues	.11	.06	"
7. Add charges for light house maintenance which are separately provided for in Mr. Ashpitel's forecast	.20	.07	.10
9. Total annual surplus balance	0.63	.37	0.48

2. Mr. Ashpitel

2. Mr. Ashpitel makes no separate provision for special Minor works costing Rs. 2,500 and below, under the impression, apparently, that such charges can be met from the ordinary maintenance grants. It is unsafe to assume that this can be done. These works have consequently been restored to the programme.

3. The Presidency Port Officer's programme has been departed from in the following particulars.

Eastern Group.

Item 1. New boiler for the steam dredger at Cuddalore. Rs. 1,000. This should be provided for under civil charges, contingencies which are estimated on a very liberal scale. No separate provision has therefore been made in the revised programme.

Item 12. Vizagapatam Harbour Improvements. Rs. 2,00,000. A company may be formed to carry out the whole scheme from borrowed money, and in any case it is not likely that the works at this port can be undertaken otherwise than by a special loan.

Items 13 and 19 to 21. The cost of these works is chargeable to Landing and Shipping Dues. No provision is therefore made from Port Funds.

Western Group.

Item 1. Port Officer's residence at Cochin- Rs. 30,000. The estimate is too high.

Rs. 15,000

Item 6. The G.G.O.D. provision of Rs 2,00,000 for a screw pile pier has been altered into one for Rs 30,000 for a floating pontoon stage.

Rs. 15,000 provided under instruction received through Mr. Ashpitel.

Items 2 to 4. Quarters for Light Keepers at Hangarcotta, Kundapur and Malpe. Already provided for by Mr. Ashpitel under Light House works.

Item 7. Reclamation of the foreshore at Mangalore. Rs. 50,000. Omitted. Chargeable to Landing and Shipping Dues.

Item 9. New pier at Calicut. Rs. 200000 The provision has been reduced to Rs. 5,000 with the idea that a tramway from the godowns of the native merchants to the existing pier will meet all requirements. Mr. Ashpitel thinks it will.

Item 10. Pier and Improvements to the Foreshore at Malpe. Rs. 4,230. Omitted under instructions received through Mr. Ashpitel, the works not being required.

Item 12. Beacon on Coote Reef at Calicut. Rs. 1,500. Omitted under instructions received through Mr. Ashpitel. The existing buoy is said to answer sufficiently well. The work is, moreover, Mr. Ashpitel thinks, much under-estimated.

Rs 5000 is entered as estimated cost instead of Rs 1500 provided by G.G.O. because the latter amt is said to be inadequate.

Item 14. Improvemets to the Kullai Bar. Rs. 6,000. Omitted. Mr. Ashpitel notes

notes that this work should be carried
out from the ordinary maintenance grant.
Collections made at the Bar, from the
merchants interested in keeping it
open, should also contribute.

M. 4.3.98

[4 / 500-14-10-97.]

DEPARTMENT.

Papers to be read in proceedings:—

Again G.O., dated 189 , No.

Again G.O., dated 189 , No.

Current No. of 189 , dated , from

" " 1481 " 1897 , " 22nd Nov. '97 , " the P.P.O.

" " 62 " 1898 , " 14th Jan. '98 , " - do -

ORDER.

In accordance with para 2 of G.O. 513 Marine dated 4th June 1897, the Presidency Port Officer submits with his letter read above a forecast of Port Fund works other than light houses required during the next five years in each of the two groups, Eastern and Western, into which the ports have been divided. The works are arranged in order of urgency, and a brief history of each, where such exists, is given in the column of remarks.

2. The total outlay is estimated at Rs. 11,09,070, of which the Eastern group absorbs Rs. 5,95,170, and the Western, Rs. 5,13,900.

3. His Excellency the Governor in Council observes that it is essential to provide in the first instance for light houses, in connection with which a special establishment is actively

actively engaged in the preparation of plans and estimates, the provision of materials, and the execution of work. The longer this establishment is maintained, from paucity of funds or otherwise, the more costly will the scheme of light house improvement become.

4. Mr. Ashpitel has drawn up a programme of operations on the construction & improvement of lighthouses extending over three years, the total cost of which is estimated at Rs. 8,20,000 as shown below:-

Eastern group	-	4,00,000
Western group	-	3,35,000
Madras	-	85,000
		8,20,000

or an average annual expenditure of Rs. 2,73,000. This outlay must be provided for, but due consideration to the development of the ports in the interests of trade is also essential. Both objects cannot be adequately met within a reasonable time from local resources alone. These must, however, be first exhausted, and if possible the Govt. of India can be asked for assistance, if the grant of augmented, before recourse is had to borrowing. The position will therefore be reviewed and a financial forecast framed.

5. The statements given in appendices (A and B) show the revised programme approved by Government for each group of ports. The works will, as far as practicable, be estimated for and carried out in the order of urgency here shown. Statement C shows light house works to be dealt with by the special Light House Division.

6. Taking the Eastern group first, it will be seen from statement E that, commencing with an opening balance of Rs. 2.53 on the 1st April 1898-99 and taking into account the receipts and expenditure of the year for all purposes, light houses included, the year will close with a balance of Rs. 13,000, and that it will not be necessary to borrow till 1899-1900 when a sum of 2.61 will be required. In the following year a further loan of 1.85 will be necessary. and the whole loan will be extinguished in 1920-21.

7. In the Western group, statement F, no loan will be necessary till 1900-1, when a sum of Rs. 24,000 will be required. Credit is, however, taken for an augmentation of Port Fund receipts by Rs. 6,000 per annum which will, it is hoped, be realised by enhancing the port dues to the maximum rates allowed by law, as in the case of the Eastern group which were raised under the orders contained in G.O. 261 Marine dated 19th March 1897

para

para 11.

8. In Madras, Statement G, ~~no loan will be required~~ the available Cable funds will suffice, but the usual annual contribution to the Madras Harbour Trust Board will be withheld till the light house works considered necessary in connection with this port, and estimated to cost Rs.85,000 are paid for.

G.O. 261 Mar. dated 19th Mar. 97 para 8.

9. At ports where Landing and Shipping Dues are collected, the port improvement will be a first charge on those funds, and it is only after the Landing and Shipping Dues have been exhausted that the aid of Port Funds can be expected. Statement H shows the financial position of the Landing and Shipping Dues Funds.

10. The Government of India will be addressed on the subject ~~of the loan~~, ⊗ and the P.P.O. will submit the draft of a notification providing for the enhancement of Port Dues at the ports of the Western group.

To

The P.P.O.
,, P.W.D.
,, Rev. Dept.
,, Finl. Dept.
,, Accountant General.

⊗ We had better not talk of loans for the present, I think. To do so will commit us. However, this draft may not improbably require further alteration when the matter has been more considered. We may decide either to ask for grant or to try for permission to raise the port dues.

5/3/98

See also memorandum (came in mail) on the opposite.

Marine Department

C. No. 62

1202

3. His Excellency the Governor.
1. The Hon'ble Sir Henry Bliss, K.C.I.E.
2. The Hon'ble Mr. Grose, C.I.E.

SUBJECT.

Port Fund Works.
Financial Forecast.

(4)

FOR ORDERS.

What misled me was that I thought head 3 was something different from head 4, whereas it now appears that head 3 is only head 4 multiplied by 5. Similarly, head 1 is head 2 multiplied by 5. Both head 1 & head 3 might as well have been omitted —

HB

I agree with the Hon'ble Sir H Bliss about asking Indian for a grant, & about not charging light dues

JS
24/2/98

I agree also.

RRH
26.3.98

With reference to the Hon'ble Member's remarks on this office note of 4th March 1898 it is pointed out that the figures in para 1 are taken from the Presidency Port Officer's statement flagged A from which it will be seen that 8.02 represents the annual average expenditure on establishment, petty maintenance of all kinds, Lighthouse establishment and materials, multiplied by 5. It is, therefore, rightly described in the text. The figures were given to show how the Presidency Port Officer's estimated annual surplus in each group was arrived at, as opposed to Mr. Ashpitel's estimate, which is considerably higher. In fact it is a pity Mr. Ashpitel was allowed to interfere in this matter at all. He has only complicated an already difficult subject. It will thus be seen that the

[P. W. 43. 500—27-1-98.]

the figures 8.02 have nothing to do with the figures entered in columns 8 and 9 of Appendix E; the one being ordinary annual maintenance and establishment charges, and the other special charges and new lighthouse work.

2. With regard to the general financial position, I have talked the matter over continually with the -- Presidency Port Officer during our present tour and we both agree that it is quite impossible to carry out the proposed lighthouse programme without a grant in aid from Government of India. To do so is to starve every Port on the coast for the next 20 years. We, therefore, both recommend that Government of India should be asked for a grant in aid equal to the amount we have to borrow, viz, Rs.4,80,000 or at any rate of half the amount it is proposed to spend, i.e. Rs.4,15,000.

3. If this is refused, the only --- thing to be done is to restrict our expenditure on lighthouses to our means. The Presidency Port Officer deprecates any reduction of the proposed programme, now that special arrangements have been made for carrying it out, but I have ascertained -- from him that, if such reduction is unavoidable, the following works can be

be postponed until funds are available.

Eastern Group.	
Tuticorin.....0.13	
Negapatam.....0.05	
Cuddalore.....0.04	
Santipilli.....1.00	
Calingapatam...0.05	
Bimilipatam....0.01	
Vizagapatam....0.03	
Gopalpore.....0.03	1.34
Western Group.	
Kundapur.....0.03	
Hungarikotta...0.03	
Malpe.....0.04	
Muttum.....0.12	
Tangacherri....0.88	
Cochin.....0.09	
Cannanore.....0.03	
Calicut.....0.09	1.31
M a d r a s.	
Seven Pagodas..0.53	
Pulicat.....0.23	0.76
	3.41

This will reduce the amount of loan required from Rs.4.80 to Rs. + 1.39, and it is thought that this -- might be temporarily debited to Provincial funds and the accounts adjusted as money became available. To obtain this money I consider that -- light dues should be established on the Madras coast. I understand from the Presidency Port Officer that -- they are in force on the Burma coast, and, in the case of some lights, on the Ceylon coast, and there seems no reason why they should not be introduced here, seeing that when these contemplated

I may divide we had better harden our hearts & lay the whole case before India at once with an application for a special grant of Rs 4,80,000 to be paid in 1899-00 & thereafter as required. Our grounds are simple — In the interests of safety of navigation & prevention of loss of property & life, the coast ought to be properly lighted — At present there are many & dark parts, & the whole country suffers therefore aid & work which benefits the country generally, as an instance of the kind I may give the case of the Burmah coast, which was taken with fort steamer [illegible] which went ashore on the Saugor Shoals which went ashore on the Saugor Shoals

x The total proposed expenditure is Rs.8,30,000 and not Rs. 8,20,000 as previously shown, the expenditure at Madras being Rs.95,000 instead of Rs.85,000.

shoal — I forget the particulars, but the P.W.D. knows & can supply them. Hitherto Govt. lost over 2 lakhs in this one vessel —

If India won't make me a grant, the expenditure on lighthouses must be restricted as proposed. I see no prospect of charging light dues — If they are to be charged, they must either be imposed only on the shipping using our ports, in which case they will only be enhanced port dues

I see no objection in principle to this. The Madras Portfunds can well afford these works & must be used elsewhere — Hs

4.80
3.41
1.39

I conclude that you & the rest after Roads might be able to find a small sum. Hs

The Bassein Act under an Act of Parliament Hs

contemplated improvements are carried out, the Madras coast will be the best lighted one in India. If light dues are established, it might be possible to carry out the full programme within a reasonable time without unduly depleting Port funds.

It seems impossible to enhance Port dues. They have already been raised for the Eastern group of ports to the maxima allowed by the Act in G.O.No.351 Marine dated 12th April 1897 and the forecast of expenditure provides for a similar enhancement at the Western group of ports. The statement A attached to Flag B compares the present rates with those formerly in force. The maxima were reduced in the latest Act, but the actual rates charged were much the same, until the above G.O. was passed.

It seems to me that light dues levied for the specific purpose of improving the lighting of the coast would be much more favourably received than any further enhancement of port dues.

4. With regard to the forecast of expenditure on port works (appendices A and B) I have visited four of the ports in company with the Presidency Port Officer during the past week, viz, Porto Novo, Negapatam, Tuticorin and Pamban, and I have seen enough to show me that the programme needs considerable revision. At Porto Novo no new wharf is required, the existing one being in sufficiently good repair to last for years. At Negapatam the Port Officer's quarters are by no means urgent, while a lot of money must be spent, and soon, on training the river mouth if this much neglected port is not to lose its trade altogether. Everything else here including items 19 to 21 in Appendix A - must give way to this. At Tuticorin a passenger shed is certainly wanted but it seems to me that it should be entirely paid for out of Customs dues, the examination of passengers' effects being its sole object. A dredger is much needed and some improvement of the pier. A 15 ton crane is a luxury which can be deferred for the present, and the residence for the Port Officer should be built at once. Items 16 to 18 in the programme are all needed, but will probably cost more than the amounts shown, and the allocation of funds in the remark column is all wrong. The close shed is to be built instead of one to be handed over to the customs, and its cost should be borne by the latter. The open shed should be built entirely from Port Funds (to which Pier Dues are eventually credited) a fee credited to Port Funds being charged for its use. Fencing the foreshore should be

I doubt if it would be a very good thing if the C.E. could go round to all the ports & revise the programme. But that would take a long time, whereas we ought to get to work in India at once. Indeed if we are going up to India shall we not go no well do so at the same time both on this account & on account of [illegible] coal which we must get for the Coconada dredger. At all events let the programme be revised to [illegible] current year — that is, with knowledge of facts — that is, with effect to these remarks of the C.E.; after which let us strive both on account of retrenchment & delay [illegible] until the whole programme has been revised — if we do we may all (or most of us) be in our graves before anything is done.

KS

I presume that all these points will be taken up separately, & about 20 months hence.

KS

148 78

be shared equally by Port Funds and Customs, it being beneficial to both. At Lamban 2 landing stages are certainly wanted, but as only one is used at a time, according to the monsoon, it will suffice to provide a floating pontoon stage which can be hauled as required from one landing place to the other, a distance of half a mile. I think the above will show that an accurate forecast is hardly possible at present without a more careful examination of each port, which I should like to carry out in person. The total figures may be taken as a basis of such a forecast if it is considered necessary to make one, but I think it may just as well wait for more accurate figures.

5. With reference to the Honourable Member's remarks in appendix G, I cannot reply very definitely without knowing the amount to be spent in apparatus, but I certainly think that, if the money is forthcoming, the whole programme should be completed easily in three years.

I thought Mrs Architect had sent in proposals. Requirements for apparatus are between £13000 & 14000, I think

22/3/98

21. 3. 98

M.

W

Irish Land Works.
Financial forecast

These papers have just returned from circulation and I have had time to do no more than glance through them.

A copy of the forecast of which each Port Engineer is being made in accordance with your instructions & will be submitted separately.

The present folly with the further death with as soon as possible.

C.S.
28 March 98

(2) Noted

(3) W

W.S.
28. 3. 98

Mr. Mc Neill
I think I had better

MH = 477—583-83 = 486

1688

Although I would have stated the revised forecast ready before you left, but find that is impossible. The forecast requires extensive revision, and as we shall now be responsible for the results to Lord Esthwaite, Mr Ashpitel's lead cannot now be followed in all cases. There be modest new proposals for Voyages & Tan improvements, and endorse only the 30,000 for a pontoon pier at Mevagissey which the S.S. Star that a Scrub fell from can and should be constructed. Again, Mr Ashpitel assumes that Pilotage Funds are distinct from Sale funds - when they are not so - There will be a large increase in the amount of the grant to be asked for.

Kindly say whether the papers can be sent on to Colwich, or should

What he was
I think I had better

477 = 477 − 582-83 = 486

be taken to Retrenchment. They will probably be ready by the day after tomorrow.

R.S.

30 March 98

Revised statements & draft order and letter submitted. The excess for which a loan or grant was required under the Deficits' scheme was Rs 4.70. It is now 8.13. The principal differences are Vizagapatam Port Improvements, left out by the Deficits Rs 2.00, and the Mangalore Pier for which the G. offered Rs 15000 only. The S.S.O. asks for 2.00 and the latter amount has now been adopted. These additions come to 3.85. There is still a difference of Rs 42,000 distributed amongst various items

R.S. 1.4.98

Hon. 21.3.98 H.E. 24-3-98 } R 28/3/98.

Copies taken 4/4/98

No.

Government of Madras.

DEPARTMENT.

Madras, 189 .

OFFICE NOTE.

From

To C.A.G.

I have initialled the Dept notes. What Mr Demp ring to C.G. let please return it time - its packed with mine - intent wrong - I want to make some more remarks upon it

2. I have ~~also~~ initialled the letter to Madras with the Draw. but I think I had better

P. W. 48
500—20-8-97.

The two papers referred to in the attached note are presubmitted.

As regards the grant for Park Land works, it is possible to reduce its endivisibly by postponing to the 4th 5th years many of the works now included in the first 3 years. This arrangement of bourgeoning all the expenditure into the first 3 years was put forward by Mr Ashfield, presumably under the Act's instructions. And now the Act is in favour of an immediate application to Parliament which rather militates against a careful revision of the programme. If, however, you can suggest any reductions or postponements which will not entail much delay in the disposal of the application, it is open to you to do so. Vide Ellis's remarks on the Act for orders of 21-3-98. Later on, Provincial funds will probably be in a position to aid Park Funds, as hinted by the Act. A.S. 4 Apl 98

I think it had better be as it is

A.S. 4/4/98

Mr Ashfield 14 April

× pages 4 + 5.

Let this again be sent. Ashfield to write Mayor Lighthouses. Must be first improvements, & time to express views I anticipated. I think the limit of demand which can be shut here (1) Amt. to be borrowed by light-houses (2) Cost of Arcades & Shelters = about £½ Lakhs -

My movements are:-

4 Tekriberg
5 Mangyche
6 Telkiberg
7 Calcutta
8 Italy.

Send Harper to Italy

Noted

Hy asst

Statement showing Strandings + Wrecks on the Coast of the Madras Presidency from 1889 to 1897-
(both years inclusive)

19

Names of vessels stranded	Place at which Stranded	Dates of Stranding
	Ennore	
S. S. "Canara"		13th April 1889
	Palar Shoal near the Seven Pagodas	
S. S. "Bleville"		19th June 1889
	Cape Comorin 14 miles North east of	
S.S. "Nur Jahan"		20th November 1890
	Pulicat Shoal	
"S.S. "Duke of Argyll"		31st May 1891
S.S. "Rewa"		9th January 1892
	Palk's Straits	
S.S. "Aska"		27th August 1891
	Calicut	
S.S. "Ellora"		5th August 1891
	Madras	
S.S. "Waverley"		21st November 1891
S.S. "Secundra"		27th November 1896
	Calingapatam - 15 miles South of	
S.S. "Sindhana"		24th December 1894
	Hare Island Lighthouse	
S.S. "Edvermium"		18th February 1896
	Armeghon Shoal	
S.S. "Amtata"		23rd December 1891
S.S. "Argus"		22nd February 1896
S.S. "Baroda"		7th April 1896
	Sacramento Shoal	
S.S. "Malvern"		29th January 1892
S.S. "Ratto"		1st February 1894
S.S. "Lanark" (Cargo Railway materials)		31st May 1894
S.S. "Linlithgow"		20th July 1894
Barque "Grosvenor"		28th April 1895
S.S. "Thistle"		23rd June 1895

No. 317 Marine

Government of Madras.

MARINE. **DEPARTMENT.**

To

The Secretary to the
Government of India,
Department of Finance & Commerce

29 April 189 8.

Sir,

I am directed to address you on the subject of the light house and port improvements necessary in this Presidency. The Government of India is already aware from the Proceedings of this Government quoted in the margin, which were forwarded to the Marine Dept with Col. Campbell's endorsement No. 246 Marine dated 8 April 1896 that the question of light house improvement has for some time past been engaged the earnest attention of His Excellency the Governor in Council, and that a special establishment is now actually employed on the designing and execution of these works. Other marine works have now come under review, and a programme of the probable expenditure for the next few years has, under instructions from His Excellency the Governor in Council, been drawn up by the Presidency Port Officer. The demands

× G.O. No: 245 Marine dated 8-4-96

Flag A

Secretariat
BD
18/4/98

[P W. 42 / 500—22-4-97.]

demands have been carefully scrutinised and revised, as far as possible, though it seems probable that further inquiries on the spot which the Chief Engineer has been directed to make in company with the Presidency Port Officer will necessitate modifications in details. There seems, however, no reason to suppose that the total outlay assumed by Government will be altered to any great extent.

2. The total outlay under all heads (Light house & Port Improvements) in both groups of ports-Eastern and Western-will be as follows:-

	Amount available.	Proposed expenditure.	~~Addnl grant~~ required.	Balance.
1st year (1898-99)	7.86	7.16	-	.70
2nd year (1899-1900)	1.91 (.70+1.21)	8.59	6.68	-
3rd year (1900-1901)	1.13	2.58	1.45	-
			8.13	

3. The resources at the disposal of this Government are wholly inadequate to meet this outlay. The question of applying to the Government of India for a loan has been carefully considered, but it is found that the annual surpluses of port funds after providing for current necessary expenditure are so small, even with the addition of existing balances, that they will be wholly inadequate to pay interest on a loan and provide a sinking fund for its extinction. It would, in fact, be necessary to stop all outlay on port improvements for a considerable number of

H. E. the number and date of the Proceedings on the forecast

of years. A position of this kind cannot be accepted. His Excellency the Governor in Council has, therefore, no alternative but to appeal to the Government of India for a grant from Imperial Funds. The amount required will be Rs. 6,68,000 in 1899-1900 and Rs. 1,45,000 in 1900-1.

4. It is with great reluctance that His Excellency in Council makes this request. If Provincial Funds were in a position to come to the aid of Port Funds it would not be preferred, but there is no immediate prospect of any help being forthcoming from this quarter. It will be seen from the Proceedings of this Government No. 316 Marine dated 29-4-98, which form an accompaniment to this letter that local funds of all kinds will be absorbed, and that at ports where landing and shipping dues are collected, these dues will first be exhausted before Port or other funds will be drawn upon.

5. The Government of India will doubtless agree in the opinion that the scheme of light house improvement on which this Government has embarked should be completed as soon as possible not only in the interest of trade and shipping which

which it is designed to protect, but also in the interests of economy; the special establishment employed on the work being a recurring and costly item of expenditure.

6. It seems scarcely necessary that the Government of India should be reminded of the magnitude of the -- interests involved in the scheme now in hand for the better lighting of the coasts of this Presidency. The protection to be thus afforded to trade and navigation will benefit the whole country, and it would thus seem equitable that Imperial funds should aid in the work. Amongst the many wrecks which have occurred on the Sacramento Shoal for example (six in the four years 1892-95) that of the S.S. "Lanark" in May 1894 must have entailed heavy loss on Imperial Funds, the cargo of Railway materials with which the vessel was loaded having been entirely lost. Considerations such as these will, it is hoped, have due weight with the Government of India, and the grants applied for be sanctioned, so as to admit of the proposed scheme of light house improvement being carried out within the period contemplated, and without undue postponement of other essential Port Fund works. Should the aid now sought be denied, His Excellency

Excellency the Governor in Council will be compelled either to break up the special Light House Division, ~~dispense~~ disperse the staff and postpone construction, or to defer indefinitely many port and harbour improvements much needed for the development of trade.

I have etc.

17.4.98

(for Govt see above)

I think I should add that the alternatives of ~~abolishing~~ legislating to raise the ~~the~~ port dues in this Presy, or for the imposition of light dues on vessels passing up & down the W. coast of the Bay of Bengal in a manner similar to that in which they are imposed under Act IX of 1879 on vessels trading on the East side of the Bay, have been considered; and that we are of opinion that it would be an undue burden on trade to raise the Port dues, while the proposal to charge vessels passing up & down the Eastside of the Bay with light dues would meet with so much opposition from the shipping interest generally that it is not advisable to make it.

I should also point out that if we erect new lighthouses we can maintain them all right.

In England, & the last preceding ruling, the whole of the expenses connected with lighthouses are met by the Trinity House from the proceeds of dues levied from shipping. But this arrangement has, I believe, of late caused considerable complaint, it being contended that the Govt of the country should also contribute to this object, as it does, I believe, on the Continent and elsewhere. Perhaps something may be known about this matter in the office or can be ascertained from the Parliamentary papers in the records (or from the Statesman's Year Book or some other book of reference in the office). It is obvious that we should pretty strongly urge our case if we could point out that in many countries but England the Govt paid for lighthouses, in whole or in part. Unfortunately my knowledge of the subject is too vague to enlarge upon. But it is probable certain that information must be available in the Parliamentary Papers in the records.

x Ingoing being made.

S.F. 8.4.98.

H.E. Shipping Statistics are also made from the Coast Lights Fund, but they would be of no use to us in connection with the Inland Navigation

HS 18/4/98

7. I am to add that the alternatives of legislating either to raise the port dues in this Presidency or for the imposition of light dues on vessels passing up and down the west coast of the Bay of Bengal in a manner similar to that in which they are imposed under Act IX of 1879 on vessels trading on the east side of the Bay, have been considered; but H.E. the Governor in Council has arrived at the conclusion that it would be an undue burden on trade to raise the port dues, while the proposal to charge vessels passing up and down the west side of the Bay with light dues would meet with so much opposition from the shipping interests generally that it is not advisable to make it.

8. It is understood that England is the only important Maritime Power that requires its lighthouses to be wholly maintained from the proceeds of light dues, and that in Spain, Portugal, Russia and France, no such dues are levied, the cost of lighthouses being defrayed by the Central Government, while in America, dues are levied only on the vessels of Foreign powers which do not reciprocate with the United States. The arrangements in England have, it is believed, given rise to considerable dissatisfaction, and may, it is considered by His Excellency in Council, be departed from with advantage in the case of the

lighthouses

lighthouses necessary for the safe navigation of the extensive and sometimes dangerous seaboard of the Madras Presidency.

C.F.

W.H.S. 20.11.80

urgent

S. 1.0 2418

The Hon wants information looked up as to whether in
(a) The British Empire
(b) Foreign Countries
the cost of Coast lights and light houses is provided or aided by the Central Govt or whether it is met from dues levied on Shipping - He suggests reference to Parliamentary Papers, inter alia.

Please have all these collected, and the matter carefully looked up. He will not take long, as the subject of each paper is on the outside of the paper itself and only those papers that deal with the matter need be consulted.

Refer to the

Nautical Almanac
in our Library, and
go over yourself to the
Presidency Pub. Office
where information may
possibly be available.
The information is
required for incorporation
in our draft letter to
India on the subject
of Imperial aid of
local funds in
connection with the
Scheme of lighthouse
improvement.

R.S.
19. Apr 98

S.A.W.

I have been twice
to the Presidency Port Office &
have consulted Mr Baddeley
about this. He has given me
a note from which it will
be observed that in the
United Kingdom sea
lights are maintained
exclusively from dues, but
in Spain, Portugal, Italy
& France

France & the United States
dues are apparently not
levied, the cost of main-
taining the lights being
borne by the state. No
information has been
gathered from Urquhart's
Dues & Charges on Shipping
in Foreign Ports. As no
light dues are charged
Mr Baddeley says the
inference is that the
State bears all charges.
I have also asked Mr Work
might be sent up; also
Findlay's Lighthouses of
the World (please see
pages 29 & 30). Mr
Baddeley tells me no
other information on the
subject is available in
the Presidency Port Office.

I have also consulted
the Parliamentary Papers in
the

the General Record
Office. I have only gone down
to 1889 as the indexes from
1874 & to 1888 are in the press.
as far as I have gone
there is no information
about the cost of lighthouses
except the paper flagged A.
& the First Report of
the Royal Commission on
electrical communication
with lighthouses, there is
a recommendation that a
grant of £5000 be
made from Imperial
funds, but this does not
seem the mind & the point:
The Nautical almanac
is of no use as it
deals exclusively with tides
phases of the moon, & &
has no reference to lighthouses
The Parliamentary papers
in the office refer exclu-
sively to Railways, trade
&

Dec
12.4.94

In the United kingdom Sea lights are maintained exclusively from dues levied by their corporations; the Trinity Houses in England, the Commissioners of Northern Lights in Scotland, & the Ballast Board of Dublin in Ireland. The Merchant Shipping act of 1854 gives Lighthouses of general superintendence over all lights in the United Kingdom subject to the control of the Board of Trade. As this is a subject which appears only to affect Seamen I need not enter into it further than to say that Minor lights are maintained from local funds; Vide 6 & 7 Will.m IV c 79. but Municipal authorities control of Liverpool Merchant Shipp.g Act 1854 17 & 18 Vict c 104. Scotland Lights Act 58 George III c 58 Ireland. " 23 do c 19.

Spain Portugal & Italy
In France & America dues are abstractedly such as levied, the cost of lighting the Coast being borne by the State. In America dues are levied of the tonnage does not belong with the Crew dues.

Austria Turkey Egypt. Crew dues.

This information is collected from Dues on Shipping in Merchant Vessels a work published by P. O. Hyperchant published in 1872

C Aw

Please see attached note by Mr Lyons to Mr H.D. Baddeley—

Mr Lyons has taken a great deal of trouble about this matter, & has been to the Post & T. Office Secretary & today. I don't think any further information can be got anywhere

The Hansard abstract is only a selection of Tables, & gives no information about light. the cost or maintenance of light Towers—

The Parliamentary Paper mentioned, in which a grant of £000 from Imperial Funds is suggested, shows that such grants cannot be enormous, but whether the grant in that particular case was given there is nothing to show.

Cs 22/4/24

Proceedings :—

W. Forecast. Warning work :-

Saras 7 + 8 to draft letter to India submitted for approval. The information is based partly on that supplied by Mr. Baddeley and partly on that contained in the Hon. Member's note.

It is quite clear from the English Merchant Shipping Act of 1894 what the system of England is. That in foreign countries has to be inferred to some extent.

The H. Mr's statement as to complaints of the English system cannot be verified, as the source of the information is not mentioned.

A.S
28 Apr 95

W.W.S.

Print with Estimate for Port Trust

Print urgent DEPARTMENT.

Papers to be read in Proceedings:—

Again G.O., dated			189 , No.
Again G.O., dated			189 , No.
Current No.	of 189 , dated		, from
" " 1481	" 1897 ,	" 22nd Nov. '97	, " the P.P.O.
" " 62	" 1898 ,	" 14th Jan. '98	, " - do -

~~The Hon'ble Henry Bliss C.S.I.~~
The Hon'ble H.P. Grose C.S.I.
&
The Governor in Council

Forecast of Expenditure for Marine Works

ORDER. No. 316 dated 29th April 1898

In accordance with para 2 of G.O.513, Marine, dated 4th June 1897, the Presidency Port Officer submits with his letter of the 14th January 1898 read above a forecast of Port Fund - Works other than light houses required during the next five years in each of the two groups, Eastern and Western, into which the ports have been divided The works are arranged in order of urgency, and a brief history of each, where such exists, is given in the column of remarks.

2. The total outlay is estimated at Rs. 11,09,070, of which the Eastern group absorbs Rs. 5,95,170, and the Western Rs. 5,13,900.

3. His Excellency the Governor in Council observes that it is essential to provide in the first instance for the light houses, in connection with which

a

What's the use of sending this in an urgent box with another file? am I to keep the other file until I can find time to through this? & why is this marked urgent, that I did not set aside the work for it, RN 11/4/98

The paper was marked 'urgent' because no action can be taken in proceeding a dredger to Cocanada which is urgently required until Judge's

Exclusive of P.W. supervision charges.

decision is known. The Hon. Member also says in his Note on page 4 of Flag A that he shall forward this at once

Lieut Sc. - Not "urgent" means that I am to take this out of turn - I send on it RN 16.4.98

16.4.98

[illegible] 25/28 Govt. C. & W. Again 16.4.98

a special establishment is actively engaged in the preparation of plans and estimates, the provision of materials, and the execution of work. The longer this establishment is maintained, from paucity of funds or otherwise, the more costly will the scheme of light house improvement become.

4. Mr. Ashpitel has drawn up a programme of operations on the construction and improvement of light houses extending over three years, the total cost of which is estimated at Rs. 8,30,000 as shown below:-

Eastern group	-	Rs. 4,00,000
Western group	-	" 3,35,000
Madras	-	" 95,000
		8,30,000

or an average annual expenditure of Rs. 2,76,000. This outlay must be provided for, but due consideration to the development of the ports in the interests of trade is also essential. Both objects cannot be adequately met within a reasonable time from local resources alone. Application will accordingly be made to the Government of India for assistance.

5. The statementsgiven in appendices (A and B) show the revised programme approved by Government for each group of ports and provide for an expenditure of Rs. 7,31,000 on works in the Eastern

Eastern group, and Rs. 3,78,000 in the Western, or a total of Rs. 11,09,000 as compared with Rs. 11,09,070, (or Rs 13,86,000 inclusive of P.W. supervision charges) proposed by the Prsidency Port Officer. The Govt. is however advised that further modification of details may be necessary. The Chief Engineer will report on this point after he and the Presidency Port Officer have had an opportunity of studying ~~uncompass~~ local requirements on the spot. The works will, as far as practicable, be estimated for and carried out in the order of urgency here shown. Statement C shows light house works to be dealt with by the special Light House Division.

6. Taking the Eastern group first, it will be seen from statement F P that this group will commence with an opening balance of Rs. 3,50,000 and will require additional grants aggregating Rs. 5,25,000 during the years 1898-99 to 1900-1.

7. In the Western group, statement E no assistance will be necessary during 1898-99, but Rs. 2,88,000 will be required during the following two years. Credit is taken for augmentation of Port Fund receipts by Rs. 6,000 per annum which

will

will, it is hoped, be realised by enhancing the port dues to the maximum rates allowed by law, as in the case of the Eastern group, which were raised under the orders contained in G.O. 261 Marine dated 19th March 1897 para 11.

8. In Madras, statement G, the available funds will suffice, but the usual annual contribution to the Madras Harbour Trust Board will have to be withheld till the light house works considered necessary in connection with this port, and estimated to cost Rs. 95,000 are paid for.

G.O. 261, Marine, d/19th March 1897.

9. At ports where Landing and Shipping Dues are collected, the port improvements will be a first charge on those funds, and it is only after the Landing and Shipping Dues have been exhausted that the aid of Port Funds can be expected.

10. The Government of India will be addressed on the subject, and the Presidency Port Officer will submit the draft of a notification providing for the enhancement of the Port Dues at the ports of the Western group.

14.4.98

To

The P.P.O.

" P.W.D.

" Rev. Dept.

" Finl. Dept.

" Accountant-General.

Ch A. I. Bd

Forcash

W

A list note d/18.4.98

The Parliamentary papers are not here - I have accordingly written to the address Mr. Lowe. Searched - The Statesman's Year book & other books of reference will be consulted - also our records as far as they go. Meanwhile the drill might go round in circulation.

19.Ap.98

Mar Ch 62

22.4.98

will, it is hoped, be realised by

C.A.B.

B. In my note of yesterday regarding the cost of maintenance of lighthouses, which had to be written hurriedly as there was scarcely time to catch the post, I referred to the accompanying Parliamentary paper, but I now find it among the papers which were collected but were not sent up as being of no use. It is now submitted in case it may be required.

R.R.
23.4.98.

will, it is hoped, be real

C 12827

COMMISSION ON ELECTRICAL COMMUNICATION WITH LIGHTHOUSES, &c.

FIRST REPORT

OF THE

ROYAL COMMISSION

APPOINTED TO INQUIRE WHAT

LIGHTHOUSES AND LIGHT-VESSELS

IT IS DESIRABLE TO CONNECT WITH THE

TELEGRAPHIC SYSTEM

OF THE

UNITED KINGDOM

BY

ELECTRICAL COMMUNICATION.

Presented to both Houses of Parliament by Command of Her Majesty.

LONDON:
PRINTED FOR HER MAJESTY'S STATIONERY OFFICE,
BY EYRE AND SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.

And to be purchased, either directly or through any Bookseller, from
EYRE AND SPOTTISWOODE, East Harding Street, Fleet Street, E.C., and
32, Abingdon Street, Westminster, S.W.; or
JOHN MENZIES & Co., 12, Hanover Street, Edinburgh, and
90, West Nile Street, Glasgow; or
HODGES, FIGGIS, & Co., Limited, 104, Grafton Street, Dublin.

1893.

[C.—6844.] *Price* 1½*d.*

the subject of this Our Commission; and also to call for, have access to, and examine all such books, documents, registers, and records as may afford you the fullest information on the subject; and to inquire of and concerning the premises by all other lawful ways and means whatsoever.

And We do by these presents authorise and empower you, or any three or more of you, to visit and personally inspect such places as you may deem it expedient so to inspect for the more effectual carrying out of the purposes aforesaid.

And We do further by these presents will and ordain that this Our Commission shall continue in full force and virtue, and that you, Our said Commissioners, or any three or more of you, may from time to time proceed in the execution thereof, and of every matter and thing therein contained, although the same be not continued from time to time by adjournment.

And We do further ordain that you, or any three or more of you, have liberty to report your proceedings under this Our Commission from time to time, if you shall judge it expedient so to do.

And Our further will and pleasure is, that you do, with as little delay as possible, report to Us, under your hands and seals, or under the hands and seals of any three or more of you, your opinion upon the matter herein submitted for your consideration.

And for the purpose of aiding you in such matters, We hereby appoint our Trusty and Well-beloved Garnham Roper, Esquire, to be Secretary to this Our Commission.

Given at Our Court at Saint James's the thirteenth day of June, one thousand eight hundred and ninety-two, in the fifty-fifth year of Our Reign.

By Her Majesty's Command,
(Signed) HENRY MATTHEWS.

II.

VICTORIA, R.

Victoria, by the Grace of God, of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith, to—

Our Trusty and Well-beloved William Henry Preece, Esquire, Engineer-in-Chief and Electrician to the General Post Office, Fellow of the Royal Society, Greeting!

Whereas We did, by Warrant under Our Royal Sign Manual, bearing date the thirteenth day of June, one thousand eight hundred and ninety-two, appoint Our Right Trusty and Right Well-beloved Cousin and Councillor, William Henry, Earl of Mount-Edgcumbe, together with the several Gentlemen therein respectively mentioned, or any three or more of them, to be Our Commissioners to inquire and report what Light-houses and Light-vessels it is desirable to connect with the telegraphic system of the United Kingdom by electrical communication, for the purpose of giving information of vessels in distress or casualties at sea to places from which assistance could be sent, and of transmitting storm warnings, having due regard to the practicability of establishing and maintaining such communication without impairing the efficiency of the Light Service, and at a cost bearing a reasonable proportion to the advantages that might be expected to result; and to suggest the manner in which such communication should be established wherever it might be recommended:

And whereas one of Our Commissioners so appointed, namely, Edward Graves, Esquire, has since deceased:

Now know ye, that We, reposing great confidence in you, do by these presents appoint you, the said William Henry Preece, to be one of Our Commissioners for the purpose aforesaid in the room of the said Edward Graves, deceased, in addition to and together with the other Commissioners whom We have already appointed.

Given at Our Court at Saint James's the twenty-sixth day of November one thousand eight hundred and ninety-two, in the fifty-sixth year of Our Reign.

By Her Majesty's Command,
(Signed) H. H. ASQUITH.

We met again in London in October, when we took further evidence and prepared this, our First Report, which was finally adopted at our meeting on the 8th of December.

General.

Speaking generally, the need for electrical communication for the purposes referred to us appears to be greatest in the case of certain *light-vessels* marking outlying shoals beyond reliable range of the shore for sight or sound signalling.

The crews of these vessels, consisting usually of about 7 men, keep a regular look-out night and day, and can therefore be relied upon to give notice of vessels in distress, which is not the case with lighthouses where there are only 2 or 3 keepers, and where consequently a responsible look-out seawards cannot be maintained with the existing staff. On the other hand, in many instances cable communication with these vessels would involve a considerable initial outlay, and although the experiment in the case of the "Sunk" proves that, where the circumstances are favourable, and with the adoption of recent improvements, the difficulty of maintaining communication with such vessels can be overcome, yet, pending further experience, we only recommend immediate action to be taken in 5 cases which appear to be among the most urgent, and where the conditions are comparatively favourable.

We also recommend one *pile-lighthouse* for immediate attention.

With regard to *shore lighthouses*, there are some which occupy such a commanding position, and can be connected with the telegraphic system at such trifling cost, that we have no hesitation in recommending that they be dealt with at once, for, although no constant look-out is or perhaps could be kept in them, we have evidence that the light-keepers may often be able to give valuable notice of wrecks or of vessels in danger, which could not otherwise be communicated without serious loss of time. The number of such lighthouses is not large, because it is probable that the system of communication with the Post Offices, Coastguard-stations, Lloyd's-stations, and Mersey Docks and Harbour Board Signal-stations will shortly leave comparatively few important points on the coast unconnected.

We recommend 19 shore-lighthouses for immediate connexion, as being among the most important, and at the same time involving but little cost.

The case of *lighthouses situated on islands or isolated rocks* appears to present the greatest difficulty. A recent experiment in connexion with the Fastnet failed owing to the difficulty of maintaining the cable, but we have evidence to show that it was carried out under unsatisfactory conditions, and that if a similar attempt were made with improved appliances the difficulty of direct communication could be overcome. We recommend 3 such lighthouses for connexion with a continuous cable.

The experiments lately made at the Needles for establishing electrical communication without a continuous cable may also prove of practical utility. Valuable experience has been gained there, and we recommend that one rock lighthouse should be connected by this system. Even if the experiment should prove a failure the cable would always be available for carrying out the alternative method of direct communication.

In other cases where the distance from the shore is not great, an improved system of distress-signals (distinct from the usual fog-signals) might, both at rock-stations and on light-vessels, prove an effective temporary substitute for the more costly expedient of electrical communication, and we recommend that the Lighthouse Authorities should be invited to consider this matter.

Recommendations.

I. We recommend that the *Goodwin (North Sand Head)*, *Kentish Knock*, *Shipwash*, *Hasborough* and *Scarweather* light-vessels be immediately connected; and, as it has been proved that there is no difficulty in employing the telephone on board light-vessels, we recommend that system for them, and for general use in lighthouses, as being the most economical and most easily worked by men not specially trained.

The *Goodwin* light-vessel is moored off the north end of the Goodwin Sands, and commands a good look-out over the trade route through the Straits of Dover and that portion of the Sands where the casualties are most numerous. In the 10 years preceding June 1891, the number of lives lost amounted to 27, and the number of strandings to 122. We

are informed that it is the intention of the Trinity House to supply this vessel with a powerful fog-signal (siren), whereby the number of casualties may be expected to be reduced. She is $5\frac{1}{2}$ (nautical) miles from the nearest land, and also from the nearest light-vessel, viz., the Gull; therefore her signal-guns are not always heard. If provided *with a telegraphic cable, she would probably have to be replaced by a more efficient* vessel. She lies in 10 fathoms of *water over a rough bottom affording fairly good* holding ground.

The *Kentish Knock* light-vessel lies $1\frac{1}{4}$ miles to the eastward of the sand-bank of that name, and $5\frac{1}{2}$ miles outside the nearest part of the Long Sand. She affords a good central station amongst the off-lying light-vessels at the Thames entrance, and, in conjunction with the Gunfleet lighthouse, commands a look-out with a visual range of 7 miles over the intervening dangers. The passing trade is large and casualties are numerous. This vessel is 18 miles from the nearest land, and, as she is 9 miles from the nearest light-vessel, viz., Long Sand, her signal-guns can only be heard under favourable circumstances. She is well adapted to receive a telegraph cable, and lies in $11\frac{1}{2}$ fathoms of water. The bottom is soft, and affords good holding ground.

The *Shipwash* light-vessel lies off the north end of the sand-bank of that name, a dangerous shoal 8 miles in length, fronting the Suffolk coast between Orfordness and Harwich, at a distance of from 5 to 8 miles from the land. The courses followed by the coasting vessels navigating the neighbourhood converge near the shoal, and, although the vessel has a powerful fog-signal (siren), there were 40 strandings and 46 lives lost on the sands during the 10 years preceding June 1891. The light-vessel is 4 miles out from Orfordness, and her signal-guns are not always heard on shore. She lies in $9\frac{1}{4}$ fathoms of water over rather rough ground, and is well adapted to receive a telegraph cable.

The *Hasborough* light-vessel is moored off the north-west end of the sand of that name, a dangerous bank lying about 8 miles off the Norfolk coast and running parallel to it for a distance of 9 miles. The passing trade concentrated near the position is very large, and casualties in the vicinity are numerous, the number of strandings in the 10 years preceding June 1891 having amounted to 85, and the number of lives lost to 11. As this vessel was supplied with a fog-signal (siren) in 1890, it is to be expected that the number of casualties will in future be lessened; on the other hand she is 8 miles from the land and signal-guns fired to call assistance are not always heard on shore. This light-vessel does not belong to the newest class, and might therefore require to be replaced by a more efficient vessel if the electrical communication which we recommend is carried out. She lies in 15 fathoms of water over a bottom of sand and stones affording a fairly good holding ground.

The *Scarweather* light-vessel lies off the northern shore of the Bristol Channel, southward of Swansea Bay, and outside the Scarweather and Nash Banks, dangerous shoals extending 7 miles from the land. The trade passing the vicinity, converging as the Channel narrows, is very large, and casualties are frequent. The vessel, which possesses a powerful fog-signal (siren), commands a look-out over the most dangerous shoals. Being 8 miles from the nearest land, her signal-guns can only be heard under favourable circumstances. This light-vessel does not belong to the newest class, and will probably have to be replaced by a more efficient one if electrical communication is to be effected. She lies in 14 fathoms of water over a sandy bottom affording good holding ground.

Although we have not included the *East Goodwin* among the light-vessels recommended for immediate connexion, we regard this light as one of the most important on account of the enormous extent of the passing trade, the number of casualties which have occurred within visual range of it during 10 years, and the commanding position which it occupies over the Goodwin Sands, and the shipping in the Straits of Dover. The present vessel has no siren and her light (a green revolving one) is inferior to a white light. The distance from Kingsdown is $7\frac{1}{2}$ miles and the estimated cost of the cable (including 40*l.* for land wire) would be 2,100*l.* Our reasons for not recommending the "East Goodwin" vessel for immediate connexion are that, with the present experience, the maintenance of a cable would be difficult owing to the depth of water in which the vessel rides, viz., 30 fathoms, and that the present vessel would have to be replaced by a much larger one, in order to carry the necessary moorings.

II. We recommend for immediate connexion the *Gunfleet* pile lighthouse, which stands on the south-east part of the extensive Gunfleet Sand and commands a view over a great part of the Sunk and Long Sand Banks. In the 10 years preceding

We are further of opinion that when connexion is established between a light station and a post office which is not constantly open, an alarm bell should be placed in the room of the telegraphist.

We propose to visit other portions of the coast another season, and to take further evidence, especially as regards engineering questions relative to cable communication with rock-lighthouses.

All which we humbly submit for Your Majesty's gracious consideration.

(Signed) MOUNT-EDGCUMBE (*Chairman*).
HENRY L. MULHOLLAND.
EDWARD BIRKBECK.
F. L. M'CLINTOCK.
G. S. NARES.
J. C. LAMB.
JOHN A. KEMPE.
R. C. MUNRO-FERGUSON.
W. H. PREECE.

(Signed) GARNHAM ROPER,
Secretary.

8 December 1892.

Entered 25/3/97

LIGHTHOUSES ABROAD.

AN ACCOUNT showing the DUES received, and EXPENDITURE incurred, in the CONSTRUCTION, REPAIR, and MAINTENANCE of LIGHTHOUSES in BRITISH POSSESSIONS ABROAD, during the Year 1895–96, prepared in pursuance of "The Merchant Shipping Act, 1894" (57 & 58 Vict. c. 60, s. 675).

(PRESENTED PURSUANT TO ACT OF PARLIAMENT.)

Ordered, by The House of Commons, *to be Printed,*
21 *January* 1897.

LONDON:
PRINTED FOR HER MAJESTY'S STATIONERY OFFICE,
BY EYRE AND SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.

And to be purchased, either directly or through any Bookseller, from
EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.,
and 32, ABINGDON STREET, WESTMINSTER, S.W.; or
JOHN MENZIES & Co., 12, HANOVER STREET, EDINBURGH, and
90, WEST NILE STREET, GLASGOW; or
HODGES, FIGGIS, & Co., LIMITED, 104, GRAFTON STREET, DUBLIN.

LIGHTHOUSES ABROAD.

STATEMENT showing the DUES received, and EXPENDITURE incurred, in the CONSTRUCTION, REPAIR, and MAINTENANCE of LIGHTHOUSES in BRITISH POSSESSIONS ABROAD, during the Year 1895–96, prepared in pursuance of "The Merchant Shipping Act, 1894" (57 & 58 Vict. c. 60, s. 675).

BASSES DUES, 1895–96.

RECEIPTS.

	£. s. d.	£. s. d.
Balance on 1st April 1895		10,522 19 3
Interest on Investments		531 13 4
Dues collected as under:	£. s. d.	
Bombay	1,116 18 1	
Burmah	1,221 14 11	
Calcutta	3,583 4 6	
Ceylon	1,090 2 4	
Madras	387 17 3	
Mauritius	4 9 7	
Penang	145 13 10	
Singapore	2,102 3 4	
Ports in the United Kingdom	5,710 12 5	
	15,362 16 3	
Less,—		
Light Dues refunded	119 16 11	
		15,242 19 4
	£.	26,297 11 11

PAYMENTS.

	£. s. d.	£. s. d.
For purchase of 15,000*l.* 2½ per Cent. Stock		15,881 6 –
Maintenance of Great and Little Basses, Minicoy, Dondra Head, and Barberyn Lighthouses		4,759 18 7
Exchequer and Audit Department, for Audit of Accounts, 1893-94		174 – –
		20,815 4 7
Balance on 31st March 1896		5,482 7 4
	£.	26,297 11 11

STATEMENT of BALANCES on 31st March 1896.

		£. s. d.	£. s. d.
In the hands of Her Majesty's Paymaster General (adjusted for outstanding Orders and Transfers)		2,806 2 3	
Ditto	Secretary of State for India	3,083 3 –	
Ditto	Sundry Sub-accountants	95 11 2	
		5,984 16 5	
Less,—	£. s. d.		
Due to Auditor General of Ceylon	489 9 7		
Due to Sundry Sub-accountants	12 19 6		
		502 9 1	
			5,482 7 4

In addition to the above balance there are investments of 20,000*l.* 2¾ per Cent. Consols, and 15,000*l.* 2½ per Cent. Stock.

Cosmo Monkhouse,
Assistant Secretary.

Board of Trade,
12 November 1896.

Exchequer and Audit Department,
Somerset House, London, W.C.

I hereby certify that the Statement of the Account of Dues, under the "Merchant Shipping Act, 1894," rendered by Cosmo Monkhouse, Esq., Assistant Secretary to the Board of Trade, from 1st April 1895 to 31st March 1896, has been signed and passed by me under the 36th Section of the Act 29 & 30 Vict. c. 39. And that the Charge and Discharge on the said Account are as follows:—

	£. s. d.
Charge	26,297 11 11
Discharge	20,815 4 7

and that on the said Account the Accounting Officer is indebted in the sum of Five thousand Four hundr and Eighty-two pounds Seven shillings and Four-pence.

Given under my hand this 1st day of December 1896.

Richard Mills,
Comptroller and Auditor General.

Merchant Shipping Act

LIGHTHOUSES ABROAD.

AN ACCOUNT showing the DUES received, and EXPENDITURE incurred, in the CONSTRUCTION, REPAIR, and MAINTENANCE of LIGHTHOUSES in BRITISH POSSESSIONS ABROAD, during the Year 1895-96, prepared in pursuance of "The Merchant Shipping Act, 1894" (57 & 58 Vict. c. 60, s. 675).

(*Presented pursuant to Act of Parliament.*)

Ordered, by The House of Commons, *to be Printed,*
21 *January* 1897.

[*Price* ½ *d.*]

13. *Under* 1 *oz.*

Statement showing funds required to carry out Lighthouse

Years.	Opening Balance	Surplus Revenue during the year	Total sum available (1+2)	Lighthouse Annuities	Balance available for special works (3-4)	Loan required during the year (11-5)	Total sum available for special works (5+6)
	1	2	3	4	5	6	7
1898-9	45 ✓	0.45	0.90 0.45	0.10	0.80 0.35	✓	0.80 0.35
1899-0	0.70 0.75	0.45	0.70	0.10	0.60	0.15	0.75
1900-1	✓	0.45	0.45	0.12	0.33	✓	0.33
1901-2	0.17						
		for 3 years		32			
		- 22 -		264			
				25 296	for 25 years		
		Average per annum.		12			

Memo of Contributions from [illegible]

Year	Actuals	Remarks
	Rs	
1887-88	25,000	
1888-89	25,000	
1889-90	275000	
1890-91	262000	
1891-92	50,000	
1892-93	65,000	
1893-94	20000	
1894-95	138530	
1895-96	33900	
1896-97	244688 *	* Includes Rs 100,400 the Nominal Value of Dredger "Wenlock"

HARBOUR TRUST
MADRAS 29 JAN 98
SECRETARY'S OFFICE

B

Statement showing funds required to carry out Lighth

Years.	1 Opening Balance	2 Surplus Revenue during the year	3 Total sum available (1+2)	4 Lighthouse maintenance	5 Balance available for special works (3-4)	6 Sum required during the year (11-5)	7 Total sum available for special works
1898-9	~~2·89~~	0·35	3·24	0·07	3·17	✓	3·17
1899-0	1·61	0·35	1·96	0·11	1·85	✓	1·85
1900-1	0·44	0·35	0·79	0·17	0·62	0·38	1·00
1901-2	✓	0·35	0·35	0·18	0·17	✓	0·17
1902-3	✓	0·35	0·35	0·20	0·15	✓	0·15
1903-4	✓	0·35	0·35	0·21	0·14	✓	0·14
1904-5	✓	0·35	0·35	0·22	0·13	✓	0·13
1905-6	0·07		for 7 years	1·16			
			for 18 years	3·96			
			25	5·12	for 25 years		
			Average per annum	0·20			

Statement showing funds required to carry out ...

Years	1 Opening Balance	2 Surplus Revenue during the year	3 Total sum available (1+2)	4 Lighthouse maintenance	5 Balance available for special works (3-4)	6 Loan required during the year (11-5)	7 Total sum available for special works (5+6)
1898-9	2.53	0.84	3.37	0.20	3.17	✓	3.17
1899-0	0.39	✓	1.23	0.23	1.00	2.14	3.14
1900-1	✓	✓	0.84	0.25	0.59	1.75	2.34
1901-2	✓	✓	0.84	0.27	0.57	✓	0.57
1902-3	✓	✓	0.84	0.29	0.55	✓	0.55
1903-4	✓	✓	0.84	0.30	0.54	✓	0.54
1904-5	✓	✓	0.84	0.31	0.53	✓	0.53
1905-6	✓	✓	0.84	0.32	0.52	✓	0.52
1906-7	✓	✓	0.84	0.32	0.52	✓	0.52
1907-8	✓	✓	0.84	0.32	0.52	✓	0.52
1908-9	✓	✓	0.84	0.32	0.52	✓	0.52
1909-0	✓	✓	0.84	0.32	0.52	✓	0.52
1910-1	0.18						

for 17 years 3.45
" 13 " 4.16
25 | 7.61 for 25 years
Average .30 per annum.

N.S. 20 Jan 10

Eastern

Number	Name of Port	Description	Estimated Cost	Annual C		
				1898-9	1899-0	1900-1
1	Cochin	Port officers residence	0.30	0.15	0.15	
2	Hangarkotta	Quarters for light keepers	0.02			
3	Kundapur	ditto	0.02			
4	Malpe	ditto	0.02			
5	Ponani	Joining the two existing jetties	0.01			
6	Mangalore	Constructing a pier	0.30		0.15	
7	Mangalore	Reclamation of foreshore	0.50			
8	Calicut	Repairs to existing pier	0.08	0.08		
9	ditto	Construction of a new pier	200000			
10	Malpe	Pier & improvement to foreshore	0.04			
11	Kundapur	Boat jetty	0.07		0.07	
12	Calicut	Beacon on Coral Reef	0.05			
13	Cochin	Fencing boat yard	0.01			
14	Calicut	Kallai Bar Improvement	0.06			
		Total		0.23	0.37	
		add P.W. charges		0.06	0.07	
		Total		0.29	0.44	

Number	Name of Port	Description	Estimated Cost	Annual Cost & Outlay		
				1898-9	1899-0	1900-1
1	Cuddalore	A new boiler for steam dredger	·01 ~~1000~~			
2	Tuticorin	Passenger shed and platform	·03 ~~3000~~	0.01 ~~003~~		
3	ditto	Dredger or extension of pier	·30 ~~30000~~		0·30	
4	ditto	A 15 ton crane	0.06	0.06		
5	ditto	Residence for Port officer	0.14	0.10		
~~5(a)~~	Porto novo	A new wharf	0.06		0.06	
~~6~~	Calimere	Quarters for light keepers	·02	·02		
~~7~~	Negapatam	Port Officers Quarters	0.14	0.10	0.04	
~~8~~	ditto	Improvement to Port office	0.01			
~~9~~	ditto	Permanent groynes	0.15	0.15		
~~10~~	Pamban	2 jetties	0.20		·10	·10
~~11~~	Cocanada	Dredger and improvement to bar	2.00	0.50	1.00	0.50
12	Vizagapatam	Improvement to bar etc	2.00			
13	Masulipatam	Improvements to bar	0.25			
14	Gopalpore	Residence for Port officer	0.06		0.06	
15	Vizagapatam	Port officers Residence	0.11	0.10	0.01	
16	Tuticorin	open shed for goods	0.07	0.03 ~~07~~		
17	ditto	close shed for goods	0.10	0.03 ~~10~~		
18	ditto	Fencing foreshore	0.02	~~002~~		
19	Negapatam	Improvements to jetty	0.10			
20	ditto	Fencing foreshore	0.04			
21	ditto	Improvements to foreshore.	0.10			
		Total		1.08	1.57	0.70
		Add D P W Charges at 25%		0.27	0.39	0.18
		Total		1.35	1.96	0.88

Table A
I

Average charges for the period 1892-3 to 1896-7 excluding Lighthouse charges and special works.

	Eastern Group	Madras Group	Western Group	Remarks.
	lakhs	lakhs	lakhs	
Port Establishment	0·43	0·26	0·24	
" Maintenance	0·74	0·~~87~~ 60	~~0·74~~ 0·58	Years 1895-96 for Eastern group 1896-97 for Western and 1894-95 and 1896-97 for Madras omitted as abnormal.
" Works	0·01	"	0·01	Year 1896-97 for Eastern group omitted as abnormal
D.P.W. Works	0·15	0·01	0·05	Years 1894-5 and 1895-96 for Eastern and 1896-97 for Western group omitted as abnormal.
Total	1·33	~~0·87~~ 0·91	~~0·88~~ 0·94	

Table II

Average income and expenditure omitting lighthouse charges and special works for period 1892-3 to 1896-7

	Eastern Group	Madras	Western Group	
	lakhs	lakhs	lakhs	
Average income	2·17	1·32	1·23	Includes Rs 11000 Eastern group enhancement of Port dues.
" Expenditure	1·33	0·~~94~~ 97	~~0·88~~ 0·94	& Rs 6000 proposed enhancement for Western group.
Balance.	0·84	0·~~44~~ 0·45	~~0·35~~ 0·35	For all purposes.

R.D. 20 Jan 98

Eastern Group.

Eastern

Port Funds. 1901-2	1902-3	Total.	Remarks.
			Minor work provided for in Statement
			1/3rd share of cost
			no estimate available
			The balance will be spent this year in 1897-8
			Minor work
			Minor work
			~~Inexpensive improvements desirable about pier.~~
			~~Improvement of approaches to Landing & Shipping dues.~~
			To frame work & scheme for general improvement of Port.
			Landing & shipping dues. X
			1/3rd share of cost
			ditto
			1/2 share of cost Minor work.
			Landing & shipping dues
			ditto.
			ditto.
		3·35	lakhs
		4·19	lakhs.

Group. Eastern

Western

Cost to Port Funds			Remarks
1901-2	1902-3	Total	
			} Light house works - Special
			Minor works
			½ cost to be charged to Landing & shipping dues
			Landing & shipping dues
			maybe postponed
			may be postponed
			maybe postponed as existing buoy answers sufficiently well
			minor work
			ordinary maintenance
		0.60	
		0.13	
		0.73	lakhs

Lighthouse and other special works — Group. Eastern

(5+6)	Lighthouse works 8	Other works 9	Interest on Loan at 8½ % 10	Total special charges (8+9+10) 11	Closing balance (7−11) 12	Total Loan at the end of the year 13	Remarks 14
	1.43	1.35	✓	2.78	0.39	✓	
	1.18	1.96	✓	3.14	0.00	2.14	
	1.39	0.88	0.07	2.34	0.00	3.89	
	✓	✓	0.14	0.14	0.43	3.46	
	✓	✓	0.12	0.12	0.43	3.03	
	✓	✓	0.11	0.11	0.43	2.60	
	✓	✓	0.09	0.09	0.44	2.16	
	✓	✓	0.08	0.08	0.44	1.72	
	✓	✓	0.06	0.06	0.46	1.26	
	✓	✓	0.04	0.04	0.48	0.78	
	✓	✓	0.03	0.03	0.49	0.29	
	✓	✓	0.01	0.01	0.51	0.00	

...use and other special works — Group. Western

(6+8)	Light Railways works	Other works	Interest on loan at 3½ %	Total special charges (9+9+10)	Closing balance (7-11)	Total loan at the end of the year.	
9			10	11	12	13	14
	1.27	0.29	✓	1.56	1.61	✓	
	0.97	0.44	✓	1.41	0.44	✓	
	1.00	✓	✓	1.00	✓	0.38	
	0.11	✓	0.01	0.12	0.05	0.33	
	✓	✓	0.01	0.01	0.14	0.19	
	✓	✓	0.01	0.01	0.13	0.06	
	✓	✓	0.00	0.00	0.13	✓	

and other special works — Group Madras.

Lifetime contribution	Other works	Interest on loan at 3½ %	Total special charges (8+9+10)	Closing balance (7−11)	Total loan at the end of the year.	
8	9	10	11	12	13	14
0·10	✓	✓	0·10	0·~~25~~ 70	✓	No income necessary to extend survey surplus revenue
0·75	✓	✓	0·75	✓	0.15	
✓	✓	0·01	0·01	0·32	✓	

Forecast of requirements for five years commencing from 1898-99.

(This statement provides for all works brought forward in the Presidency Port officer's forecast and compares the balance left with the demands for Light House Works)

	1898-99				1899-1900				1900-1901				1901-1902				1902-1903				Balance on 1st April 1903.	Total cost of Light House Works	1/3 of the total cost as yearly expenditure
	Surplus			Expenditure	Surplus			Expenditure	Surplus			Expenditure	Surplus			Expenditure	Surplus			Expenditure			
	on 1st April	During the year	Total		on 1st April	During the year	Total		on 1st April	During the year	Total		on 1st April	During the year	Total		on 1st April	During the year	Total				
Eastern Group	3,31,395	76,562	4,07,957	89,190	3,18,767	76,562	3,95,329	53,230	3,42,099	76,562	4,18,661	7,72,	750	2,45,911	76,562	3,22,473	1,60,000	1,62,473	76,562	2,39,035	1,20,000	1,19,035	4,85,668	1,61,889
Western Group	3,38,771	32,664	3,71,435	61,700	3,09,735	32,664	3,42,399	45,500	2,96,899	32,664	3,29,563	1,46,	700	1,82,863	32,664	2,15,527	1,40,000	75,527	32,664	1,08,191	1,20,000	-11,809	3,49,332	1,16,444
Total	6,70,166	1,09,226	7,79,392	1,50,890	6,28,502	1,09,226	7,37,728	98,730	6,38,998	1,09,226	7,48,224	3,19,	450	4,28,774	1,09,226	5,38,000	3,00,000	2,38,000	1,09,226	3,47,226	2,40,000	1,07,226	8,35,000	2,78,333

Note. 1. The surpluses herein shown include those under Pilotage Funds and Landing and Shipping Dues.

2. The works brought forward in the Presidency Port officer's forecast (excepting those which he considers can be postponed until funds become available) can be completed in two years. (The expenditure on works to be postponed is distributed over the following three years. Please see statement C for details.

3. The total cost of Light House construction and improvements is Rs 8,80,000 (Eastern Group Rs 5,30,668 + Western Group Rs 3,49,332). As the current year's modified grant for Light House Works is Rs 36,0 [illegible]0, or Rs 45000 inclusive of Establishment and Tools and Plant charges, the latter sum has been deducted from the total requirements f [illegible] for the Eastern Group on account of Light House Works.

4. Mr. Ashpitel expects to complete the Light House Works with [illegible] in the next three years. The last column shows the yearly expenditure at this pace of progress.

5. The Presidency Port Officer's forecast does not incl [illegible] lude Lighthouse works. These are estimated to cost Rs 8,35,000 for both groups - as against a surplus of Rs 1,07,226. Considering that the works, other than Lighthouses brought forward are not likely to be ready for execution in the allotted period, there will be a great deal more money available for Lighthouses, annually, during the next 3 years than the Presidency Port officer's forecast shows.

N.P. 31 Jan 98.

B

Forecast of requirements for five years commencing from 1898-99.

(This statement provides for such works as are recommended by the Presidency Port offices for early execution and compares the balance left with the demands for other Port improvements and for Light Houses Works)

	Surplus balance on 1st April 1898 (1)	Cost of works other than Light Houses recommended by the P.W.A. for early execution (2)	Balance (1-2) (3)	Surplus balance for 5 years (1898-99 to 1902-3) - Amount (4)	Total sum available (3+4) (5)	Demands for other Port Works which can be postponed (6)	Demands for Light Houses Works (7)	Total Demands (6+7) (8)
Eastern Group	3,31,395	1,42,420	1,88,975	3,82,810	5,71,785	4,52,750	4,85,668	9,38,418
Western Group	3,38,771	1,07,200	2,31,571	1,63,320	3,94,891	4,06,700	3,49,332	7,56,032
Total	6,70,166	2,49,620	4,20,546	5,46,130	9,66,676	8,59,450	8,35,000	16,94,450

The present statement shows that, after providing for all the urgent works (other than lighthouses) brought forward by the Presidency Port officer, there will be a balance of Rs 9,66,676 available for lighthouses - as against a demand of Rs 8,35,000 - but for the reason given in remark 5 on Statement A the Presidency Port officer's forecast of expenditure is not likely to be realised - the result being that there will be much more money available for lighthouses, annually, than the Presidency Port officer's forecast shows. The Western group can borrow from the Eastern, or vice versa, if necessary.

N. L. Jangle

Abstract of the P. P. A's forecast distributing the expenditure over a period of 5 years.

Item No. of the P. P. A's forecast	Total outlay	Outlay during 1898-99	1899-1900	1900-1901	1901-1902	1902-1903	Remarks.
Eastern Group.							
1	1,000	1,000					※ Port Fund 1/3 share only.
2	2,700	2,700 ※					
3	30,000	28,000	2,000				
4	5,700	5,700					
5	13,930	5,000	8,930				
5(a)	6,000	6,000					
6	1690	1690					
7	13,900	5,000	8,900				
8	1,000	1,000					
9	15,000 ⊕	5,000	10,000				⊕ Landing and Shipping Dues.
10	20,000	"	"	10,000	10,000		
11	2,00,000	"	"	70,000	70,000	60,000	
12	2,00,000	"	"	70,000	70,000	60,000	
13	25,000 ×	10,000	15,000				× Landing and Shipping Dues.
14	6,000	6,000					
15	10,500	9,300	1,200				
16	6,700	"	"	6,700			
17	10,000	"	"	5,000	5,000		
18	2,050	"	"	2,050			
19	10,000 ⊗	2,800	7,200				⊗ Landing and Shipping Dues.
20	4,000 ⊗	"	"	4,000			
21	10,000	"	"	5,000	5,000		
	5,95,170	89,190	53,230	1,72,750	1,60,000	1,20,000	
Western Group.							
1	30,700	15,000	15,700				
2	1,500	1,500					
3	1,500	1,500					
4	1,500	1,500					
5	1,000	1,000					
6	2,00,000 ⅈ	"	"	70,000	70,000	60,000	ⅈ Landing and Shipping Dues
7	50,000 ⅈ	25,000	25,000				
8	8,000	8,000					
9	2,00,000	"	"	70,000	70,000	60,000	
10	4,230	"	"	4,230			
11	7,000	7,000					
12	1,500	"	"	1,500			
13	970	"	"	970			
14	6,000	1,200	4,800				
	5,13,900	61,700	45,500	1,46,700	1,40,000	1,20,000	
	11,09,070	1,50,890	98,730	3,19,450	3,00,000	2,40,000	

final

Appendix A

Forecast of requirements for Port Works — Eastern Group

Item No:	Name of Port	Description of work	Estimated cost	Annual cost 1898-99	1899-1900	1900-1	1901-2	1902-3	Total cost to Port Funds	Remarks
1	Cuddalore	A new boiler for the steam dredger	·01							To be provided for under Civil Charges, Contingencies.
2	Tuticorin	Passenger shed and platform	·03	A ·01					·01	⅓ share of cost chargeable to Port Funds. The balance will be met from Pier Dues
3	—Do—	Dredger or extension of pier	·30		·30				·30	No estimate available.
4	—Do—	A 15 ton crane	·06	·06					·06	
5	—Do—	Residence for Port officer	·14	·10					·10	The balance will be spent in 1897-98.
5(a)	Portonovo	A new wharf	·06		·06				·06	
6	Calimere	Quarters for light Keepers	·02	·02					·02	
7	Negapatam	Port officer's quarters	·14	·10	·04				·14	
8	Do	Improvements to Port office	·01	·01					·01	
9	Do	Permanent groynes	·15	·15					·15	
10	Pamban	2 Jetties	·20		·10	·10			·20	
11	Cocanada	Dredger and improvements to harbour	2·00	·50	1·00	·50			2·00	There are also Landing & Shipping Dues at this port.
12	Vizagapatam	Improvements to harbour	2·00							Do do To form part of scheme for general improvement of Port To be charged to Landing and Shipping Dues, so far as funds permit
13	Masulipatam	Improvements to harbour and river	·25							
14	Gopalpore	Residence for Port officer	·06		·06				·06	
15	Vizagapatam	Port officer's residence	·11	·10	·01				·11	
16	Tuticorin	A new shed for goods	·07	·03					·03	⅓ share of cost chargeable to Port Funds. The balance will be met from Pier Dues.
17	Do	A new shed for goods	·10	·03					·03	Do — Do —
18	Do	Fencing foreshore	·02	·01					·01	½ share of cost chargeable to Port Funds. — Do —
19	Negapatam	Improvements to jetty	·10							chargeable to Landing and Shipping Dues as far as funds permit
20	Do	Fencing foreshore	·04							Do
21	Vizagapatam Do	Improvements to foreshore	·10							Do —
		Total	5·97	1·12	1·57	·60			3·29	
		Add P.W. Supervision charges at 25 %		·28	·39	·15			·82	
		Total		1·40	1·96	·75			4·11	

A. This means that the Head will not be borne on Commercial Port till Rs 3000 on pier for the Head? The Head will be extended 100 feet and will be 30 x 5 over the Railway pier = completion for Rs 3000

R.J. 7 Feb 98

mai

Appendix B

Forecast of requirements for Port Works ——— Western Group.

Item Number	Name of Port	Description of work	Estimated cost	Annual cost to Port Funds						Remarks
				1898-99	1899-0	1900-1	1901-2	1902-3	Total cost	
1	Cochin	Port Officer's residence & office	* .30	.15					.15	* This sum is too large. Rs 15000 should suffice
2	Hangarkotta	Quarters for light keepers	.02							Already provided for under Light Houses.
3	Kundapur	Do	.02							— Do —
4	Malpe	Do	.02							— Do —
5	Ponani	Joining the two existing groynes	.01	.01					.01	Marine Works
6	Mangalore	Constructing a pier	.30		.15				.15	½ cost to be charged to Landing & Shipping Dues.
7	Do	Reclamation of foreshore	.50							Chargeable to Landing & Shipping Dues so far as funds permit
8	Calicut	Repairs to existing pier	.08	.08					.08	
9	Do	Construction of a new pier or tramway	2.00 .05						.05	Pier may be omitted - a ~~May be postponed~~ tramway to the present pier will obviate the need for a new pier (a)
10	Malpe	Pier and improvements to foreshore	.04			.0				May be postponed. (a)
11	Kundapur	Boat jetty	.07		.07				.07	
12	Calicut	Beacon on Coote Reef	.05							Much underestimated. (a) May be postponed as existing buoy and radio [illegible] will be available
13	Cochin	Fencing boat yard	.01	.01					.01	Marine Works
14	Calicut	Kullai Bar Improvements	.06							~~Ordinary maintenance~~
		Total	3.53	.25	.22	.0			.52 ~~.47~~	
		Add P.W. Supervision charges at 25%		.06	.06	.0			.13 ~~.12~~	
		Total		.31	.28				.65 ~~.59~~	

(a) These remarks are based on instructions received through Mr. Ashpitel

C.S. 17 Feb 98

C.S. 17 Feb 98

Appendix H Appendix C

Statement showing the Lighthouse works to be carried out by Mr Ashpitel

Year	Name of station at which lighthouse is to be constructed	Estimated Cost Total Amount	Grand Total
	Eastern Group		
1898-99	Manapaud	0·47	
	Talee Point Divi	0·91	
	Masulipatam	0·05	1·43
1899-0	Sacramento	1·00	
	Vakalapudi	0·18	1·18
1900-1	Tuticorin	0·13	
	Pamban	0·05	
	Negapatam	0·05	
	Cuddalore	0·04	
	Sant-pilli	1·00	
	Kalingapatam	0·05	
	Bimlipatam	0·01	
	Vizagapatam	0·03	
	Gopalpore	0·03	1·39
	Grand Total		4·00

26.

Rewards with the Govt -

The P.W.D. letter says that he proposes to call this the Kistna light, as the site is some 20 miles from Talee Point Divi. The change seems advisable. HS

This will be done
H.S. dated 16.3.98

D

Sec.
The total lighthouse expenditure will be:-

	Cut	Work	Metre	Total
1898-99	1·43	1·27	0	2·70
99-00	1·18	·97	·10	2·25
00-01	1·39	1·11	·75	3·25
				8·20

The above sums include cost of Mr Ashpitel's establishment - But do they represent a proportionate expenditure? Considering that Mr A. this year will have nothing else to do and that a good deal of money will have to be spent on apparatus & the cost of transport of stores &c have been drawn more rapidly. HS 5/3/98
I think India intimated that it expected the work to be completed in 3 years, but at this rate it will take four.

3 or 4 years
Select
Consideration
the cost
Yes
19 Dec 97
Mr Hearn 98

Over

Year	Name of station at which Lighthouse is to be constructed	Estimated cost: Total Amount	Estimated cost: Grand Total
	Western Group.		
1898-9	Kundapur	0·03	
	Hungarikotta (Barkur)	0·03	
	Malpy	0·04	
	Mulki (Kaple)	0·96	
	Mangalore	0·09	
	Muthum	0·12	1·27
1899-0	Tangacherri	0·88	
	Cochin	0·09	0·97
1900-1	Sacrifice rock	0·96	
	Cannanore	0·03	
	Tellicherri	0·03	
	Calicut	0·09	1·11
	Total		3·35
	Madras.		
1899-0	Seven Pagodas	0·53	
	Madras	0·01	
	Pulicat	0·23	0·10
	Armoghan	0·18	
			0·85 ~~0·75~~
1900-1	Above works.		
	Total		~~0·85~~ 0·95

R.S. 17 Feb 98

Appendix D

D

Table I

Average annual charges from Port Funds excluding Light House charges and special works as estimated by the P.P.O

	Eastern Group	Madras	Western Group	Remarks
Port Establishment " Maintenance " Works D.P.W. Works	1·40	72	·73	

Table II

Average annual income and expenditure omitting Light house charges and special works as estimated by the P.P.O

	Eastern Group	Madras	Western Group	Remarks
Average Income	2·03*	1·20	1·10**	*Includes Rs 11000 on account of enhancement of Port Dues
" Expenditure	1·40	·72	·73	**—do— Rs 6,000 —do— do
Balance	·63	·48	·37	

R.S. 17 Feb 98

Maj

Statement showing funds required to carry out a

Aspen

	1 Opening Balance	2 Surplus Revenue during the year	3 Total sums available 1+2	4 Light-houses maintenance	5 Balance available for special works (3-4)	6 Loans required during the year (11—5)	7 Total sums available for special works (5+6)	8 Light-houses works
1898-99	2.53	.63	3.16	.20	2.96	-	2.96	1.43
1899-1900	.13	.63	.76	.23	.53	2.61	3.14	1.18
1900-1	-	.63	.63	.25	.38	1.85	2.23	1.39 4.00
1901-2	-	.63	.63	.27	.36	-	.36	-
1902-3	-	.63	.63	.29	.34	-	.34	-
1903-4	-	.63	.63	.30	.33	-	.33	-
1904-5	-	.63	.63	.31	.32	-	.32	-
1905-6	-	.63	.63	.32	.31	-	.31	-
1906-7	-	.63	.63	.32	.31	-	.31	-
1907-8	-	.63	.63	.32	.31	-	.31	-
1908-9	-	.63	.63	.32	.31	-	.31	-
1909-10	-	.63	.63	.32	.31	-	.31	-
1910-11	-	.63	.63	.32	.31	-	.31	-
1911-2	-	.63	.63	.32	.31	-	.31	-
1912-3	-	.63	.63	.32	.31	-	.31	-
1913-4	-	.63	.63	.32	.31	-	.31	-
1914-5	-	.63	.63	.32	.31	-	.31	-
1915-6	-	.63	.63	.32	.31	-	.31	-
1916-7	-	.63	.63	.32	.31	-	.31	-
1917-8	-	.63	.63	.32	.31	-	.31	-
1918-9	-	.63	.63	.32	.31	-	.31	-
1919-20	-	.63	.63	.32	.31	-	.31	-
1920-21	.07	.63	.63	.32	.31	-	.31	-
1921-22							.31	-

C.S. 17 Feb 98

4.46

hthouses and other special works —

Eastern Group

9 Other works	10 Interest on loans at 3½%	11 Total special charges (8+9+10)	12 Sinking balance (7—11)	13 Total loan at the end of the year	Remarks.
1.40 ~~1.36~~	-	2.83	.13	-	
1.96	-	3.14	-	2.61	
.75 4.11	.09	2.23	-	4.46	
-	.16	.16	.20	4.26	
-	.15	.15	.19	4.07	
-	.14	.14	.19	3.88	
-	.14	.14	.18	3.70	
-	.13	.13	.18	3.52	
-	.12	.12	.19	3.33	
-	.12	.12	.19	3.14	
-	.11	.11	.20	2.94	
-	.10	.10	.21	2.73	
-	.10	.10	.21	2.52	
-	.09	.09	.22	2.30	
-	.08	.08	.23	2.07	
-	.07	.07	.24	1.83	
-	.06	.06	.25	1.58	
-	.06	.06	.25	1.33	
-	.05	.05	.26	1.07	
-	.04	.04	.27	.80	
-	.03	.03	.28	.52	
-	.02	.02	.29	.23	
-	.01	.01	.30	-	

Note
Forecast based on Mr Aschpitz estimates - No spaces worth are provided in col 9 after 1900-1 This leaves an improved estimate

C.S. 17 Feb 98

Appendix F

Statement showing funds required to carry out Lighthouse and other special Works — Western Group

	1	2	3	4	5	6	7	8	9	10	11	12	13
	Opening Balance	Surplus Revenue during the year	Total sums available (1+2)	Lighthouse maintenance	Balance available for special works (3-4)	Sums required during the year (11-5)	Total sums available for special works (5+6)	Lighthouse works	Other works	Interest on loans at 3½%	Total special charges (8+9+10)	Closing balance (7-11)	Total loans at the end of the year
1898-99	2.89	.37	3.26	.07	3.19	-	3.19	1.27	.31	-	1.58	1.61	-
1899-1900	1.61	.37	1.98	.11	1.87	-	1.87	.97	.28	-	1.25	.62	-
1900-1	.62	.37	.99	.17	.82	.24 +18	1.06	1.00	.06	-	1.06	-	.24 +18
1901-2	-	.37	.37	.18	.19	"	.19	.11	-	.01	.12	.07	.17 +4
1902-3	"	.37	.37	.20	.17	-	.17	"	"	.01	.01	.16 +7	.01
1903-4	.06	.37	.37	.21	.16	"	.16	"	"	"	"	.16	"
1904-5	.15												

Regarding Col 9. See remarks on statement E. Same together applies

N. J. Tobgo

N. J. Tobgo

Statement showing funds required to carry

	1 Opening Balance	2 Surplus Revenue during the year	3 Total sum available (1+2)	4 Light-house maintenance	5 Balance available for Spl. works (3-4)	6 Loan required during the year (11-5)	7 Total sum available for Spl. works (5+6)	8 Light-house works
	.90		1.38		1.28		1.28	
1898-99	.38	.48	.86	.10	.76	"	.76	.10
1899-1900	.66	.48	1.14	.10	1.04	"	1.04	.75
1900-1	.29							

K.S.
17. Feb 98.

at Light-house and other special Works

Madras

9 Other works	10 Interest on loan at 3½ %	11 Total Special Charges (8+9+10)	12 Closing Balance (7-11)	13 Total loan at the end of the year
			1.18	
"	"	.10	.66	
"	"	.75	.29	

Appendix H

...t showing the demands under Landing and Shipping dues ...h available funds under those dues.

Demands.

Name of Port	Name of Work	Amount.	Remarks.
Masulipatam	Impts. to bar and river	25,000.	
		25,000	
Negapatam	Impts. to jetty	10,000	
	Fencing foreshore	4,000	
	Impts. to foreshore	10,000	
		24,000	
Mangalore	Pier	15,000. x	x The other moiety of cost has been provided for under Port Fund
	Reclamation of foreshore	50,000	
		65,000	

Available Funds

Name of Port	Balances on 1st April 1898	Average Annual Surplus (current)	Average Surplus for 5 years (current)	Total available balances	Total demands	Amount still required
Masulipatam	3,000	2,000	10,000	13,000	25,000	12,000
Negapatam	11,000	6,000	30,000	41,000	24,000	—
Mangalore	9,000	9,000	45,000	54,000	65,000	11,000
Cocanada	40,000	22,000	110,000	150,000	—	
Vizagapatam	11,000	7,000	35,000	46,000	—	

R.S.
17. Febg 98.

(Revised) 24

Appendix A

Forecast of requirements for Port Works — Eastern Group

24

Item No:	Name of Port	Description of work	Estimated cost	Annual cost to Port & Marine Funds						Remarks (with to be provided)
				1898-99	1899-1900	1900-1	1901-2	1902-3	Total	
1	Cuddalore	A new boiler for the steam dredger	.01	.01	"	"	"	"	.01	This charge is a special one and has been budgetted for
2	Tuticorin	Passenger shed and platform	.03	.01	.02	"	"	"	.03	Pier Dues being included in Port Funds, the full amount is provided
3	Do	Dredger or extension of pier	.30	.30	"	"	"	"	.30	Mr Ashpitel's forecast provided for this expenditure in 1899-1900. The P.W.D. having budgetted for this item in 1898-99, provision has been made accordingly
4	Do	A 15 ton crane	.06	.06	"	"	"	"	.06	
5	Do	Residence for Port officer	.14	.10	.02	"	"	"	.12	Balance provided in 1897-98.
5(a)	Portonovo	A new wharf	.06	"	.06	"	"	"	.06	
6	Calimere	Quarters for light keepers	.02	"	"	"	"	"	"	Funds provided in 1897-98.
7	Negapatam	Port officer's quarters	.14	.10	.04	"	"	"	.14	
8	Do	Improvements to Port office	.01	.01	"	"	"	"	.01	
9	Do	Permanent groynes	.15	.15	"	"	"	"	.15	
10	Pamban	Two jetties	.20	"	.10	.10	"	"	.20	
11	Cocanada	Dredger and improvements to bar	2.00	2.00	"	"	"	"	2.00	This allotment is provided on the understanding that the Govt. of India sanction the special grant from Imperial Funds applied for
12	Vizagapatam	Improvements to the bar & sea	2.00	"	2.00	"	"	"	2.00	To form part of a scheme for general improvements of the Port.
13	Masulipatam	Improvements to bar & river	.25	.10	.15	"	"	"	.25	As Landing & Shipping dues to which the cost of this work is chargeable are included in the available balances shown in the forecast, provision has been made for
14	Gopalpore	Residence for Port officer	.06	.06	"	"	"	"	.06	House to be purchased, not built. No provision is made in 1898-99.
15	Vizagapatam	Do	.11	.09	"	"	"	"	.09	Balance provided in 1897-98.
16	Tuticorin	Open shed for goods	.07	.03	.04	"	"	"	.07	Pier dues being included in Port Funds, full amounts have been provided
17	Do	Close shed for goods	.10	.03	.07	"	"	"	.10	
18	Do	Fencing foreshore	.02	.01	.01	"	"	"	.02	
19	Negapatam	Improvements to jetty	.10	.03	.07	"	"	"	.10	As Landing and Shipping dues to which these works are chargeable are included in the available balances shown in the forecast, provision has been made for these items
20	Do	Fencing foreshore	.04	"	.04	"	"	"	.04	
21	Vizagapatam	Improvements to foreshore	.10	.10	"	"	"	"	.10	
		Total	5.97	3.19	2.62	.10	"	"	5.91	
		Add P.W. Supervision charges at 20% on all items excepting 1.3 & 4		.71	.66	.03	"	"	1.40	
		Total		3.90	3.28	.13	"	"	7.31	

Note (1) Works for which provision has been made in 1898-99 have been included in the budget for that year.

(2) In the case of item 11 Rs 60,000 only have been provided in the budget for 1898-99. The balance Rs 1,50,000 will be provided if India sanctions an additional grant from Imperial Fu

Maj R.S. 1.4.98

(Revised) 25

Appendix B.

Forecast of requirements for Port Works — Western Group.

Item No.	Name of Port	Description of work	Estimated cost	Annual cost to Port and Marine Funds						Remarks.
				1898-99	1899-1900	1900-1	1901-2	1902-3	Total	
1	Cochin	Port officer's residence and office	.30	.15	.15	"	"	"	.30	Mov. Ashpitel's forecast provided for the residence only.
2	Hangarkotta	Light Keepers' quarters	.02	"	"	"	"	"	"	Already provided for under Light houses
3	Kundapur	Do	.02	"	"	"	"	"	"	Do
4	Malpi	Do	.02	"	"	"	"	"	"	Do
5	Ponani	Joining the two existing groynes	.01	.01	"	"	"	"	.01	
6	Mangalore	Construction of a pier	2.00	"	2.00	"	"	"	2.00	Provision made for a screw pile pier as the soil is stated to be suitable and the Govt. has directed an estimate for such a pier to be prepared.
7	Do	Reclamation of foreshore	.50	.25	.25	"	"	"	.50	The Landing & shipping dues to which the work is chargeable having been included in the available balance, provision has been made for this item
8	Calicut	Repairs to the existing pier	.08	.02	"	"	"	"	.02	Balance provided in 1897-98.
9	Do	Construction of a new pier	2.00	"	"	.05	"	"	.05	Pier may be omitted. A tramway to the present pier for which .05 has been provided will obviate the need for a new pier
10	Malpe	Pier and improvements to foreshore	.04	"	"	"	"	"	"	May be omitted.
11	Kundapur	Boat jetty	.07	"	.07	"	"	"	.07	
12	Calicut	Beacon on Coote Reef	.02	.01	"	"	"	"	.01	The actual cost being .01 only, this amount has been provided.
13	Cochin	Fencing in boat yard	.01	.01	"	"	"	"	.01	
14	Calicut	Kullai bar improvements	.06	"	.06	"	"	"	.06	Tolls collected here under Act II of 1890 and credited to Port Funds.
		Total	5.15	.45	2.53	.05	"	"	3.03	
		Add P.W. Supervision charges at 25%		.11	.63	.01	"	"	.75	
		Total		.56	3.16	.06	"	"	3.78	

Note. Works for which provision has been made in 1898-99 have been included in the budget for that year.

Maj R.B.A. Apr 98

Appendix XXI.

(Revised) Statement showing funds required to carry out Light House and other special works — Eastern Group

1	Opening balance: Port Funds 2	Opening balance: Landing & Shipping Dues 3	Opening balance: Pilotage Funds 4	Opening balance: Total 5 (2+3+4)	Surplus revenue during the year after meeting all ordinary charges except Light House maintenance: Port Funds 6	Surplus revenue during the year after meeting all ordinary charges except Light House maintenance: Landing & Shipping Dues 7	Surplus revenue during the year after meeting all ordinary charges except Light House maintenance: Pilotage Funds 8	Surplus revenue during the year after meeting all ordinary charges except Light House maintenance: Total 9 (6+7+8)	Total sum available 10 (5+9)	Light House Maintenance 11	Balance available for special works 12 (10-11)	Proposed expenditure: Light House Works 13	Proposed expenditure: Other Works 14	Proposed expenditure: Total 15 (13+14)	Grant required 16 (15-12)	Closing balance 17 (12-15)
1898-99	3.01	.31	.18	3.50	.63	.36	.09	1.08	4.58	.20	4.38	1.43	3.90	5.33	.95	-
1899-1900	"	"	"	"	.63	.36	.09	1.08	1.08	.23	.85	1.18	3.28	4.46	3.61	-
1900-1901	"	"	"	"	.63	.36	.09	1.08	1.08	.25	.83	1.39	.13	1.52	.69	-
1901-1902	"	"	"	"	.63	.36	.09	1.08	1.08	.27	.81	"	"	"	-	.81
												4.00				
												3.35			5.25	
												7.35				
												.95				
												8.30				

Note. The opening balances are the latest available figures as shown in the budget estimate for 1898-99.

Mar R.B. Cabbold

Appendix D E6

(Revised) Statement showing funds required to carry out Light House and other Special Works —— Western Group

0	Opening Balance				Surplus revenues during the year after meeting all ordinary charges except Light House Maintenance				Total sum available	Light House maintenance	Balance available for special Works	Proposed expenditure			Grant required	Closing Balance
	Port Funds	Landing & Shipping Dues	Pilotage Funds	Total	Port Funds	Landing & Shipping Dues	Pilotage Funds	Total				Light House Works	Other Works	Total		
1	2	3	4	5 (2+3+4)	6	7	8	9 (6+7+8)	10 (5+9)	11	12 (10-11)	13	14	15 (13+14)	16 (15-12)	17 (12-15)
1898-99	2·67	·40	·01	3·08	·37	·09	·01	·47	3·55	·07	3·48	1·27	·56	1·83	..	1·65
1899-1900				1·65	·37	·09	·01	·47	2·12	·11	2·01	·97	3·16	4·13	2·12	"
1900-1901	"	"	"	"	·37	·09	·01	·47	·47	·17	·30	1·00	·06	1·06	·76	"
1901-1902	"	"	"	"	·37	·09	·01	·47	·47	·18	·29	·11	"	·11	"	·18
												3·35				
															2·88	

Note. The opening balances are the latest available figures as shown in the budget estimate for 1898-99.

Recd 15 Feb 98

29 Appendix 8 F

(Revised) Statement showing funds required to carry out Light house and other special works.— Madras Port. 6

	Opening balance	Surplus reserve during the year after meeting all ordinary charges except Light house maintenance	Total sum available (1)+(2)	Light house maintenance	Balance available for special works (3)-(4)	Proposed expenditure			Grant required (8)-(5)	Closing balance (5)-(8)
						Light house works	Other works	Total (6)+(7)		
	1	2	3	4	5	6	7	8	9	10
1898—99	.90	.48	1.38	.10	1.28	.10	..	.10	..	1.18
1899-1900	1.18	.48	1.66	.10	1.56	.85	..	.85	..	.71

Note The opening balance is the latest available figures as shown in the budget estimate for 1898-99.

Maj. R.B. Hall 98

MARINE DEPARTMENT.

NOTES CONNECTED WITH G.O., Nos. 316, 317, MARINE, DATED 29TH APRIL 1898.

[SUBJECT.—*Forecast of Port Fund works required during the next five years.*]

From the Presidency Port Officer, dated 14th January 1898, *No.* 1730/18-*G.*

The Hon'ble Sir Henry Bliss K.C.I.E.—

In accordance with paragraph 2 of G.O., No. 513, Marine, dated 4th June 1897, the Presidency Port officer submits with his letter read above a forecast of Port fund works, other than lighthouses, required during the next five years in each of the two groups, Eastern and Western, into which the ports have been divided. The works are arranged for each group in order of urgency, and a brief history of each work, so far as such a history exists, is given in the column of remarks.

2. The total outlay is estimated at Rs. 11,09,070, of which the Eastern group absorbs Rs. 5,95,170 and the Western Rs. 5,13,900.

3. Taking the Eastern group first, it will be seen from statement A prepared in the Secretariat that, commencing with an opening balance of Rs. 3,31,395 on the 1st April of this year, and taking into account progressive annual receipts and expenditure, the group will, at the end of the quinquennial period, close with a *credit* balance of Rs. 1,19,035 which may be taken to be the net sum available for lighthouse works.

4. Similarly, in the Western group, while commencing with an opening balance of Rs. 3,38,771 on the 1st April, there will, at the end of the quinquennial period, be a *debit* balance of Rs. 11,809; or supposing the Western group to borrow from the Eastern, the *credit* balance for both groups at the end of the period would be Rs. 1,07,226.

5. These are the results deducible from the programme of the Presidency Port officer, but if the statement be examined in detail, it will be found that many of the works set down for execution have not yet been estimated for and some of them may be considered unnecessary. It is not likely, therefore, that they can be put in hand so soon as he calculates on, though there seems no reason to suppose that they should not all be ready for execution before the close of the quinquennial period. As to whether they can be finished in that period, and the whole amount of money spent before its close is open to doubt.

6. The postponing of works during the earlier years of the quinquennium would mean a corresponding augmentation of the surplus balances available. The more money thus accumulated the less would have to be borrowed for lighthouse construction. The most practical way, therefore, of dealing with the matter seems to be, to go through the works in detail, select for execution in 1898–99, the most urgent and those for which it is possible to prepare estimates within a few months, direct the early preparation of plans and estimates for these works, and fix the allotment that can be spent or assigned. A more liable forecast of the second year's balance available for lighthouses would thus be obtained. Future years could be dealt with in a similar manner—later on perhaps.

7. The sum required for lighthouses on both coasts is Rs. 8,35,000, to be spent in three years, or an average of Rs. 2,78,333 per annum. It is possible to find the required amount without difficulty for the first year, which opens with a credit balance of Rs. 6,70,166 and would close, even according to the Presidency Port officer's programme, with a surplus of Rs. 6,28,502. The actual surplus, however, is likely to be much more, for it will be seen that, while the Presidency Port officer calculates on the expenditure of Rs. 1,50,890 on 23 * works, no more than 2 † of these works estimated to cost Rs. 17,300 have yet been provided with sanctioned estimates. There thus seems no immediate necessity for borrowing for lighthouse construction, and it would perhaps be well to defer the operation till the want of money is actually felt.

* *Vide* statement C.

† Item 15—Eastern group—Port officer's residence, Vizagapatam, Rs. 9,300.
Item 8—Western group—Repairs to the Calicut pier, Rs. 8,000.

We need not borrow until we absolutely require the money. But I should like to go up to India now and get its consent to and when required.

H. W. Bliss.

8. The surplus balances assumed in the Secretariat include pilotage funds and landing and shipping dues. The former become merged in Port funds at the end of each year, and the latter, though not available for general expenditure, can be all spent in ports of collection before Port funds proper are trenched upon for works at these ports.

R. Parsons.

W. B. deWinton—1-2-98.

Mr. Ashpitel tells me that Captain Street is away and won't be back for three weeks. I have been through these lists of works with Mr. Ashpitel and have told him what I would retain and what strike out. Please revise statement A in communication with him.

H. W. B[liss]—3-2-98.

Statement A Financial forecast.

Years.	Particulars.	As per the Presidency Port officer's programme.	As per sanctioned programme.
		Rs.	Rs.
1898-99	Total balance	7,79,392	7,79,392
	Port fund works	1,50,890	..
	Balance for lighthouse works	6,28,502	..
	Lighthouse works	2,70,000	2,70,000
	Balance carried forward	3,58,502	..
	Surplus	1,09,226	1,09,226
1899-1900	Total balane	4,67,728	..
	Port fund works	98,730	..
	Balance for lighthouse works	3,68,998	..
	Light house works	*2,15,000	2,15,000
	Balance carried forward	1,53,998	..
	Surplus	1,09,226	1,09,226
1900-1901	Total balance	2,63,224	..
	Port fund works	..	..
	Lighthouse works	2,50,000	2,50,000
	Balance on 1st April 1901	†13,224	..

Note.—The forecast has not been carried beyond 1900-1901 as in this year the lighthouse works are expected to be completed and according to the Presidency Port officer's programme all his *urgent* works will have been provided for.

* This figure excludes a sum of Rs. 95,000 for the light houses at Seven Pagodas, Madras, Pulicat and Armeghon as the expenditure will fall against the Madras port.

Note.—In order to meet this expenditure, the Madras port surpluses should be retained and not made over to the Harbour Trust Board at the end of 1897-98 and the following years.

† The surplus balance at the end of three years will be Rs. 13,224, but the demands against this for Port fund works included in the schedule but deferred, amount to Rs. 8,59,450. To carry out these works within a reasonable period, it will be necessary to borrow next year or the year after and the money so borrowed will really be for lighthouse construction as it is owing to the large expenditure on works of this class that Port funds are insufficient for requirements.

R. Parsons—4-2-98.

D.W.—

I was not able to complete this subject before Secretary left on tour. It is a complicated matter and one of some urgency, and might perhaps be sent on to Secretary but without the linked file of previous papers which is very bulky.

Mr. Ashpitel got personal orders from the Honourable Member on some of the points, and these he communicated to me for guidance in working out the scheme.

R. PARSONS—17-2-98.

Yes: please send to Secretary, but without the linked file.

S. B. MURRAY—17-2-98.

C.A.W.—

Can you not give med concise statement in the following form :—

	Rs.
Amount proposed to be spent on—	
(1) Lighthouses	7·35
(2) Other works	4·76
Total ..	12·11
Opening balance at credit of Port funds	5·42
Total probable income in next five years	*3·03
Total ..	8·45
Balance required to be earned by man commencing with the year ..	3·66

See also pencil note in draft order.

*Exclusive of 1·97 for lighthouse maintenance separately provided.

W. B. DEWINTON—21-2-98.

W.—

The figures have been filled in according to your form with the result that the loan works out to 3·66; but this is not what will actually happen according to the programme approved by Government.

Taking the eastern group, *e.g.*, it will be seen from appendix E to the draft order that a sum of 2·61 must be borrowed in 1899–1900, and that a further sum of Rs. 1·85 must be borrowed in the following year which, in the western group (appendix F 24 only), will be required in 1900–1901. Total = 4·70.

Your statement proceeds on the assumption that the total receipts for five years will be available and can be drawn upon before any loan is raised, but this is not so.

The port of Madras is left out of the calculation as there is no question of a loan here.

R.P.—24-2-98.

Noted.—

(*a*) There is a difference in western group figures given in statement C. (flag A) and appendix B. The former total up to Rs. 5,13,900 and the latter to only Rs. 3,53,000. The difference occurs in item 6 where Rs. 30,000 is substituted for Rs. 3,53,000. The difference occurs in item 9 where Rs. 5,000 is added for some reason in Appendix B, and in item 12 where Rs. 1,500 in statement C is converted into Rs. 5,000 in appendix B. These differences should be explained.

(*b*) The total amount now sanctioned is, apparently only Rs. 4,76,000 as compared with Rs. 11,09,070 proposed by Presidency Port officer.

W.B.DEW.—28-2-98.

W.—

The following is an explanation of the differences noticed in your note, dated 28th February 1898 :—

(*a*) *Appendix B—Item* 6.—The sum of Rs. 30,000 is taken from Mr. Ashpitel's statement, flag L, and is intended to cover the cost of a portion instead of a screw-pile pier. The alternative is mentioned in the column of remarks of the Presidency Port officer's statement, and has, it is understood, been adopted by Mr. Ashpitel under instructions from the Honourable Member.

Item 9.—Rs. 5,000 only are allowed as against Rs. 2,00,000 proposed by the Presidency Port Officer. The smaller sum is expected to cover the cost of a tramway as an alternative to a new pier as explained in the note attached to the draft order.

Item 12.—Mr. Ashpitel considers the Rs. 1,500 are underestimate and raises the figure to Rs. 5,000 as explained in the note attached to the draft order. It will be seen from appendix B that no allotment is provided for the work which is considered unnecessary.

(*b*) The programme as approved by the Honourable Member works out to Rs. 4,76,000 as shown in the revised statements.

R.P.—3-3-98.

Noted. File can now go up.

W. B. DEWINTON—4-3-98.

Note to accompany the Draft Order.

Mr. Ashpitel estimates the average annual surplus of the Eastern group at Rs. 84,000. This amount seems too high, and it would be safer to adopt the Presidency Port Officer's figures which bring out a surplus of Rs. 60,000. The details for all groups are as follows:—

	Eastern group.	Western group.	Madras.
	LAKHS.	LAKHS.	LAKHS.
1. Average income for five years	9·58	5·18	5·99
2. Do. for each year	1·92	1·04	1·20
3. Average (*a*) expenditure for five years on extraordinary charges including lighthouse maintenance.	8·02	4·02	4·11
4. Do. (*b*) expenditure for each year	1·60	0·80	0·82
5. Surplus for each year (2—4)	0·32	0·24	0·38
6. *Add* increase of revenue due to enhancement of port dues.	·11	(*c*) ·06	..
7. *Add* charges for lighthouse maintenance which are separately provided for in Mr. Ashpitel's forecast.	·20	·07	·10
9. Total annual surplus balance	0·63	·37	0·48

(*a*) Total estimated—H.W.B. (*b*) Ordinary—H W.B.

(*c*) As estimated by Mr. Ashpital.

2. Mr. Ashpitel makes no separate provision for special minor works costing Rs. 2,500 and below, under the impression, apparently, that such charges can be met from the ordinary maintenance grants. It is unsafe to assume that this can be done. These works have consequently been restored to the programme.

3. The Presidency Port Officer's programme has been departed from in the following particulars:—

Eastern Group.

Item 1—*New boiler for the steam dredger at Cuddalore*, *Rs.* 1,000.—This should be provided for under *civil charges*, *contingencies*, which are estimated on a very liberal scale. No separate provision has therefore been made in the revised programme.

Item 12—*Vizagapatam Harbour Improvements*, *Rs.* 2,00,000,—A company may be formed to carry out the whole scheme from borrowed money, and in any case it is not likely that the works at this port can be undertaken otherwise than by a special loan. I propose reporting shortly on the question of these improvements.

Items 13 *and* 19 *to* 21—The cost of these works is chargeable to landing and shipping dues. No provision is therefore made from Port funds.

Western Group.

Item 1—*Port officer's residence at Cochin, Rs.* 30,000.—The estimate is too high. Rs. 15,000 provided under instruction received through Mr. Ashpitel.

Items 2 *to* 4—*Quarters for lightkeepers at Hangarkotta, Coondapoor and Malpe.*—Already provided for by Mr. Ashpitel under lighthouse works.

Item 6—The Presidency Port Officer's provision of Rs. 2,00,000 for a screw pile pier has been altered into one for Rs. 30,000 for a floating pontoon stage.

Item 7—*Reclamation of the foreshore at Mangalore, Rs.* 50,000.—Omitted. Chargeable to landing and shipping dues.

Item 9—*New pier at Calicut—Rs.* 2,00,000.—The provision has been reduced to Rs. 5,000 with the idea that a tramway from the godowns of the native merchants to the existing pier will meet all requirements. Mr. Ashpitel thinks it well.

Item 10—*Pier and improvements to the foreshore at Malpe—Rs.* 4,230.—Omitted under instructions received through Mr. Ashpitel; the works not being required.

Rs. 5,000 is entered as estimated cost instead of Rs. 1,500 provided by Presidency Port officer because the latter amount is said to be inadequate.

W. B. DEW.

Item 12—*Beacon on Coote Reef at Calicut—Rs.* 1,500.—Omitted under instructions received through Mr. Ashpitel. The existing buoy is said to answer sufficiently well. The work is, moreover, Mr. Ashpitel thinks, much underestimated.

Item 14—*Improvements to the Kullai bar—Rs.* 6,000.—Omitted. Mr. Ashpitel notes that this work should be carried out from the ordinary maintenance grant. Collections made at the bar, from the merchants interested in keeping it open, should also contribute.

W. B. DEWINTON—4-3-98.

R. PARSONS.

Total, I think. How can this be "excluding all extraordinary charges"? I presume extraordinary charges are those shown in appendix A and in column 9 of appendix E for the Eastern group and in the corresponding appendices for the other groups. If so, entries 3 and 4 should be as altered in red ink. Even so, I don't see how you get 8·02. Column 8 of appendix E gives 4·0 and column 9 4·11, total 8·11, not 8·02; and, if you add interest from column 10 for the last three of the five years, you get ·40 more, total 8·51. Please check the other figures in the same way and let me know if I am not right.

H. W. BLISS.

The position seems to me a much more awkward one than I had anticipated. When I first thought of a loan whereby to finish off the lighthouse improvements within a reasonable time, I thought that if we could get such a loan from India we could probably pay it off in three or four years, or so. But it now appears that in the Eastern group it will take us twenty years to pay off the loan we shall want, during the whole of which time we shall not have an anna for any work of any kind other than ordinary maintenance. This is, of course, an impossible position. The ports can't go on for twenty years without the absolute necessity of expenditure on improvements of differents kinds, quite apart from ordinary maintenance; and it therefore comes to this:—We must either (1) stop lighthouse construction when we have spent our balances, that is, when we have done not much more than half the work on the East Coast (neglecting all other works altogether), but have nearly or quite completed the West Coast lighthouses; or (2) we must get a *grant* from India, a loan being of no use; or (3) we must take legislative authority to increase the rate of port dues. I don't like (3) at all. Please consult the Presidency Port Officer *personally* and find out what he thinks. If we had any Provincial money to give, we might give it and finish this lighthouse business. But we have not, and there are other works besides lighthouses which really *must* be taken in hand.

H. W. B[LISS]—5-3-98.

Secretary—

Item 3 is the average (not total) expenditure. It is taken from the Presidency Port Officer's statement. The object is to arrive at the average annual surplus. Therefore, all extraordinary charges such as those shown in appendices A and B and in column 9 of appendices E and F are excluded. The statement was introduced into the note in order to explain why Mr. Ashpitel's figures, presumably approved by the Honourable Member, were not adopted. The figure 8·02 is, as explained above, taken from the Presidency Port Officer's statement. It is "the average annual expenditure on establishment, petty maintenance of all kinds, lighthouse establishment and materials multiplied by 5. The figures in columns 8 and 9 of appendix E are the extraordinary charges on lighthouses and other works. There is not the direct connection between the two set of figures which the Honourable Member's note assumes.

The other notes are replied to on the papers themselves.

R.P.—9-3-98.

Draft Order—

In accordance with paragraph 2 of G.O., No. 513, Marine, dated 4th June 1897, the Presidency Port officer submits ~~with his letter of the 14th January 1898 read above~~ a forecast of Port Fund works other than lighthouses required during the next five years in each of the two groups, eastern and western, into which the ports have been divided. The works are arranged in order of urgency, and a brief history of each, where such exists, is given in the column of remarks.

2. The total outlay is estimated at Rs. 11,09,070, of which the eastern group absorbs Rs. 5,95,170 and the western, Rs. 5,13,900.

3. His Excellency the Governor in Council observes that it is essential to provide in the first instance for lighthouses, in connection with which a special establishment is actively engaged in the preparation of plans and estimates, the provision of materials and the execution of work. The longer this establishment is maintained, from paucity of funds or otherwise the more costly will the scheme of lighthouse improvement become.

4. Mr. Ashpitel has drawn up a programme of operations on the construction and improvement of lighthouses extending over three years, the total cost of which is estimated at Rs. 8,20,000 as shown below :—

	Rs.
Eastern group	4,00,000
Western group	3,35,000
Madras	85,000
Total ..	8,20,000

or an average annual expenditure of Rs. 2,73,000. This outlay must be provided for, but due consideration to the development of the ports in the interests of trade is also essential. Both objects cannot be adequately met within a reasonable time from local resources alone. These must, however, be first exhausted, and if possible augmented, before the Government of India can be asked for assistance, by the grant of a loan, or otherwise as may be found necessary. The position will therefore be reviewed and a financial forecast framed.

5. The statements given in appendices (A and B) show the revised programme approved by Government for each group of ports providing for an expenditure of Rs. ~~7,31,000~~ on works in the eastern group, and Rs. ~~3,78,000~~ in the western, or a total of Rs. ~~11,09,000~~ as compared with Rs. 11,09,070, or Rs. 13,86,000 inclusive of Public Works supervision charges proposed by the Presidency Port officer. The works will, as far as practicable, be estimated for and carried out in the order of urgency here shown. Statement C shows lighthouse works to be dealt with by the special lighthouse division.

6. Taking the Eastern group first, it will be seen from Statement E that, commencing with an opening balance of Rs. 3·50 on the 1st April 1898–99 and taking into account the receipts and expenditure of the year for all purposes, lighthouses included, the year will close with a deficit of Rs. 95,000, and that it will not be necessary to obtain money from other sources until 1899–1900 when an additional sum of 2·61 will be required. In the following year a further sum of 1·85 will be necessary. If these sums have to be borrowed, it will not be until 1920–21 that the whole amount can be paid off.

I almost think that appendix E goes too far. I mean that it is not necessary to take every one into our confidence as to the probable state of affairs 10, 15, or 20 years hence, though we want the information for our own purposes and for an appeal *in misericordia* to India.

H.W.B.

7. In the Western group, Statement F, no assistance will be necessary till 1900–1901, when a sum of Rs. 24,000 will be required. Credit is, however, taken for an augmentation of Port fund receipts by Rs. 6,000 per annum which will, it is hoped, be realised by enhancing the port dues to the maximum rates allowed by law, as in the case of the Eastern group which were raised under the orders contained in G.O., No. 261, Marine, dated 19th March 1897, paragraph 11.

How do the present rates of port dues compare with those formerly in force? The last Act reduced them, didn't it?

H.W.B.

8. In Madras, Statement G, the available funds will suffice, but the usual annual contribution to the Madras Harbour Trust Board will have to be withheld till the light house works considered necessary in connection * with this port, and estimated to cost Rs. 95,000 are paid for.

* G.O., No. 261, Marine, dated 19th March 1897, paragraph 8.

9. At ports where landing and shipping dues are collected, the port improvement will be a first charge on those funds, and it is only after the landing and shipping dues have been exhausted that the aid of Port funds can be expected. Statement H shows the financial position of the landing and shipping dues funds.

10. The Government of India will be addressed on the subject † and the Presidency Port Officer will submit the draft of a notification providing for the enhancement of the port dues at the ports of the Western group.

† We had better not talk of loans for the present, I think. To do so would commit us. However, this draft may not improbably need further alteration when the matter has been more considered. We may decide either to ask for a grant or to try for permission to raise the port dues.

H.W.B.

R. Parsons.

W. B. drWinton—4–3–98.

See also some notes (some in pencil) on the appendices.

H. W. B[liss].

—A.

Marine Department.

The Hon'ble Sir Henry Bliss, K.C.I.E.
The Hon'ble Mr. Grose, C.I.E.
His Excellency the Governor.

With reference to Honourable Member's remarks on this office-note of 4th March 1898 it is pointed out that the figures in paragraph 1 are taken from the Presidency Port Officer's statement from which it will be seen that 8·02 represents the annual average expenditure on establishment, petty maintenance of all kinds, lighthouse establishment and materials, multiplied by 5. It is, therefore, rightly described in the text. The figures were given to show how the

What misled me was that I thought head 3 was something different from head 4, whereas it now appears that head 3 is only head 4 multiplied by 5. Similarly, head 1 is head 2 multiplied by 5. Both head 1 and head 3 might as well have been omitted.

H.W.B.

Presideney Port Officer's estimated annual surplus in each group was arrived at, as opposed to Mr. Ashpitel's estimate, which is considerably higher. In fact it is a pity Mr. Ashpitel was allowed to interfere in this matter at all. He has only complicated an already difficult subject. It will thus be seen that the figures 8·02 have nothing to do with the figures entered in columns 8 and 9 of appendix E; the one being ordinary annual maintenance and establishment charges, and the other special charges and new lighthouse work.

In my opinion we had better sharden our hearts and lay the whole case before India at once with an application for a special grant of Rs. 4,80,000 to be paid in 1899–1900 and thereafter as required. Our grounds are simple. For the safety of navigation and prevention of loss of property and life, the coast ought to be properly lighted. But we have not the money to do it, and the whole country should therefore aid a work which benefits the country generally. As an instance of the positive saving that efficient lighting should cause, we may give the case of the steamer laden with Government stores which went ashore on the Sacramento shoal. I forget the particulars, but the Presidency Port Officer knows and can supply them. I believe Government lost over 2 lakhs in this one vessel.

If India won't make us a grant, the expenditure on lighthouses must be restricted as proposed. I am not in favour of charging light dues. If they are to be charged, they must either be imposed only on the shipping using our ports, in which case they would merely be enhanced port dues under another name; or they must also be imposed on all the shipping going up and down the Bay of Bengal to and from Calcutta. But would it be worth while to go to the bother of charging a pie a ton or some such small sum on all that shipping? and, if the game were worth the candle [we only want some Rs. 20,000 a year or so, that is, enough to pay interest and form a sinking fund on Rs. 4,80,000], should we be able to carry legislation imposing any charge whatever on vessels, the *vast* majority of which will never come within sight of the lighthouses on our coast? or, rather, would India undertake such legislation, for it is India that must do so, for the dues would have to be collected at Calcutta? I rove not.

H.B.

2. With regard to the general financial position, I have talked the matter over continually with the Presidency Port Officer during our present tour and we both agree that it is quite impossible to carry out the proposed lighthouse programme without a grant-in-aid from Government of India. To do so is to starve every port on the coast for the next twenty years. We, therefore, both recommend that Government of India should be asked for a grant-in-aid equal to the amount we have to borrow, viz. Rs. 4,80,000 or at any rate of half the amount it is proposed to spend, *i.e.*, Rs. 4,15,000.*

* The total proposed expenditure is Rs. 8,30,000 and not Rs. 8,20,000 as previously shown, the expenditure at Madras being Rs. 95,000 instead of Rs. 85,000.

3. If this is refused, the only thing to be done is to restrict our expenditure on lighthouses to our means. The Presidency Port Officer deprecates any reduction of the proposed programme, now that special arrangements have been made for carrying it out, but I have ascertained from him that, if such reduction is unavoidable, the following works can be postponed until funds are available:—

Eastern Group.

Tuticorin	0·13
Negapatam	0·05
Cuddalore	0·04
Santopilli	1·00
Calingapatam	0·05
Bimilipatam	0·01
Vizagapatam	0·03
Gopalpur	0·03
	1·34

Western Group.

Kundapur	0·03	
Hungarikotta	0·03	
Malpé	0·04	
Muttum	0·12	
Tangacherri	0·88	
Cochin	0·00	
Cannanore	0·03	
Calicut	0·09	
		1·31

Madras.

Seven Pagodas	0·53	
Pulicat	0·23	
		0·76
		3·41

There is no object in postponing these. The Madras Port funds can well afford these works and can't be used else where.
H.B.

This will reduce the amount of loan required from Rs. 4·80 to Rs. *1·39, and it is thought that this might be temporarily debited to Provincial funds and the accounts adjusted as money became available. To obtain this money I consider that light dues should be established on the Madras coast. I understand from the Presidency Port Officer that they are in force on the Burma coast, and, in the case of some lights, on the Ceylon coast and there seemsno reason why they should not be introduced here, seeing that when these contemplated improvements are carried out, the Madras coast will be the best lighted one in India. If light dues are established, it might be possible to carry out the full programme within a reasonable time without unduly depleting Port funds.

* 4·80
3·41
1·39

No doubt next year or fue year after Provincial might be able to find a small sum.
H.B.

The Basses under an Act of Parliament.
H.B.

It seems impossible to enhance port dues. They have already been raised for the Eastern group of ports to the maxima allowed by the Act in G.O., No. 351, Marine, dated 12th April 1897, and the forecast of expenditure provides for a similar enhancement at the Western group of ports. The statement A attached compares the present rates with those formerly in force. The maxima were reduced in the latest Act, but the actual rates charged were much the same, until the above Government order was passed.

It seems to me that light dues levied for the specific purpose of improving the lighting of the coast would be much more favourably received than any further enhancement of port dues.

4. With regard to the forecast of expenditure on port works (appendiees A and B) I have visited four of the ports in company with the Presidency Port Officer during the past week, viz., Porto Novo, Negapatam, Tuticorin and Pamban, and I have seen enough to show me that the programme needs considerable revision. At Porto Novo no new wharf is required, the existing one being in sufficiently good repair to last for years. At Negapatam the Port officer's quarters are by no means urgent, while a lot of money must be spent, and soon, on training the river mouth if this much neglected port is not to lose its trade altogether. Everything else here—including items 19 to 21 in appendix A—must give way to this. At Tuticorin a passenger shed is certainly wanted, but it seems to me that it should be

No doubt it would be a very good thing if the Chief Engineer could go round to all the ports and revise the programme. But that would take a long time, whereas we ought to go up to India at once. Indeed, if we are going up to India at all we may as well do so at the same time both on this account and on account of the loan which we must get for the Cocanada dredger. By all means let the programme be revised so far as our present knowledge goes, that is, with reference to these remarks of the Chief Engineer; but on no account let us strive for perfection and delay going up to India until the whole programme has been revised. If we do, we may all (or some of us) be in our graves before anything is done.
H.B.

entirely paid for out of customs dues, the examination of passengers' effects being its sole object. A dredger is much needed and some improvement of the pier. A 15-ton crane is a luxury which can be deferred for the present, and the residence for the Port officer should be built at once. Items 16 to 18 in the programme are all needed, but will probably cost more than the amounts shown, and the allocation of funds in the remark column is all wrong. The close shed is to be built instead of one to be handed over to the customs, and its cost should be borne by the latter. The open shed should be built entirely from Port funds (to which pier dues are eventually credited), a fee credited to Port funds being charged for its use. Fencing the foreshore should be shared equally by Port funds and customs, it being beneficial to both. At Pamban two landing stages are certainly wanted, but as only one is used at a time, according to the monsoon, it will suffice to provide a floating pontoon stage which can be hauled as required from one landing place to the other, a distance of half a a mile. I think the above will show that an accurate forecast is hardly possible at present without a more careful examination of each port, which I should like to carry out in person. The total figures may be taken as a basis of such a forecast if it is considered necessary to make one, but I think it may just as well wait for more accurate figures.

I presume that all these points will be taken up separately, so do not now note on them.
H.W.B.

5. With reference to Honourable Member's remarks in appendix C, I cannot reply very definitely without knowing the amount to be spent in apparatus, but I certainly think that, if the money is forthcoming, the whole programme should be completed easily in three years.

I thought Mr. Ashpitel had sent in proposals. The requirements for apparatus are between £13,000 and £14,000, I think.
H.W.B.—22-3-98.

W. B. deWinton—21-3-98.

I agree with the Hon'ble Sir H. Bliss about asking India for a grant, and about not charging light dues.

J. G[rose]—24-3-98.

I agree also.

A. E. H[avelock]—26-3-98.

To Secretary—

Port Fund works, Financial forecast

These papers have just returned from circulation, and I have had time to do no more than glance through them.

2. A copy of the forecast of west coast ports is being made in accordance with your instructions and will be submitted separately.

3. The present file will be further dealt with as soon as possible.

R. Parsons—28-3-98.
2. Noted.
3. Yes.

W. B. deWinton—28-3-98.

Secretary—

I thought I would have had the revised forecast statements ready before you left, but find this is impossible. The forecast requires extensive revision, and as we shall now be responsible for the results to some extent. Mr. Ashpitel's lead cannot now be followed in all cases. Thus he makes no provision for Vizagapatam improvements, and enters only Rs. 30,000 for a pontoon pier at Mangalore, which the Presidency Port officer says that a screw pile pier can, and should, be constructed. Again, Mr. Ashpitel assumes that Pilotage funds are distinct from Port funds, when they are really not. There will be a large increase in the amount of the grant to be asked for.

Kindly say whether the papers can be sent on to Calicut, or should be taken to Ootacamund. They will probably be ready by the day after to-morrow.

R. PARSON—30-3-98.

Send to Calicut.

W. B. DEWINTON—30-3-98.

Secretary—

Revised statements and draft order and letter submitted. The excess for which a loan or grant was required under Mr. Ashpitel's scheme was Rs. 4·70. It is now 8·13. The principal differences are Vizagapatam port improvements, left out by Mr. Ashpitel, Rs. 2·00 and the Mangalore pier for which Mr. Ashpitel provided Rupees 15,000 only. The Presidency Port officer asks for 2·00, and the latter amount has now been adopted. These additions come to 3·85. There is still a difference of Rs. 42,000 distributed amongst various items.

R.P.—1-4-98.

C.A.W.—

I have initialled the letter to India about the loan, but I think I had better see this again. We must therefore ask for the money for lighthouses and not for port improvements, and from figures come to considerably more than I anticipated. I think the limit of our demand should be—

(1) Amount we should have to borrow for lighthouses;
(2) cost of Cocanada dredger = about 6½ lakhs.

W.B.DEW.—3-4-98.

Secretary—

The paper is resubmitted.

As regards the grant for Port fund works, it is possible to reduce it considerably by postponing to the 4th and 5th years many of the works now included in the first three years. This arrangement of bringing all the expenditure into the first three years was put forward by Mr. Ashpitel, presumably under the Honourable Member's instructions, and *now* the Honourable Member is in favour of an immediate application to India which rather militates against a careful revision of the programme. If, however, you can suggest any reductions or postponements which will not entail much delay in the disposal of the application, it is open to you to do so—*vide* Honourable Member's remarks on the note* for orders, dated 31st March 1898. Later on, Provincial funds will probably be in a position to aid Port funds, as limited by the Honourable Member.

I think it had better go up as it is.
W.B.DEW.—14-4-98.

* Pages 4 and 5.

R.P.—4-4-98.

STATEMENT showing strandings and wrecks on the coast of the Madras Presidency from 1889 to 1897 (both years inclusive).

(Place at which stranded).

Ennore.

Names of vessels stranded.	Dates of stranding.
S.S. "Canara"	13th April 1889.
Palar Shoal near the Seven Pagodas.	
S.S. "Bleville"	19th June 1889.
Cape Comorin; 14 miles North-east of —.	
S.S. "Nur Jahan"	20th November 1890.

Pulicat Shoal.

S.S. "Duke of Argyll" .. .. 31st May 1891.
„ "Rewa" .. .. 9th January 1892.

Palks' Straits.

S.S. "Aska" .. .. 27th August 1891.

Calicut.

S.S. "Ellora" .. .. 5th August 1891.

Madras.

S.S. "Waverley" .. .. 21st November 1891.
„ "Secundra" .. .. 27th November 1896.

Calingapatam, 15 miles South of —.

S.S. "Sirdhana" .. .. 24th December 1894.

Hare Island Lighthouse.

S.S. "Edzermium" .. .. 18th February 1896.

Armeghon Shoal.

S.S. "Umtata" .. .. 23rd December 1891.
„ "Argus" .. .. 22nd February 1896.
„ "Baroda" .. .. 7th April 1896.

Sacramento Shoal.

S.S. "Malvern" .. .. 29th January 1892.
„ "Ratho" .. .. 1st February 1894.
„ "Lanark" .. .. 31st May 1894.
„ "Linlithgow" .. .. 20th July 1894.
Barque "Grosvenor" .. .. 28th April 1895.
S.S. "Thisbe" .. .. 23rd June 1895.

From W. B. deWINTON, Esq., Secretary to Government, Public Works department, to the Secretary to the Government of India, Finance and Commerce department, dated 29th April 1898, No. 317, Marine.

Remarks of His Excellency and Honourable Members on draft letter to Government of India.

I am directed to address you on the subject of the lighthouse and port improvements necessary in this Presidency. The Government of India is already aware from the Proceedings of this Government quoted in the margin which were forwarded to the Marine department with Colonel Campbell's endorsement No. 246, dated 8th April 1896, that the question of lighthouse improvement has for some time past engaged the earnest attention of His Excellency the Governor in Council, and that a special establishment is now actually employed on the designing and execution of the works. Other marine works have now come under review, and a programme of the probable expenditure for the next few years has, under instructions from His Excellency the Governor in Council, been drawn up by the Presidency Port Officer. The demands have been carefully scrutinised and revised, as far as possible, though it seems probable that further inquiries on the spot which the Chief Engineer has been directed to make in company with the Presidency Port Officer will necessitate modifications in details. There seems, however, no reason to suppose that the total outlay assumed by Government will be altered to any great extent.

Approved, but additions should be made as proposed by the Hon'ble Sir H. Bliss.
J.G.—24-4-98.
A.E.H.—27-4-98.

G.O., No. 245, Marine, dated 8th April 1896.

See note at end.
H.B.—18-4-98.

2. The total outlay under all heads (lighthouse and Port improvements) in both groups of ports-Eastern and Western—will be as follows:—

—	Amount available.	Proposed expenditure.	Deficit.	Balance.
	Rs.	Rs.	Rs.	Rs.
1st year (1898-1899)	7·86	7·16	..	·70
2nd „ (1899-1900)	1·91 (·70 + 1·21)	8·59	6·68	..
3rd „ (1900-1901)	1·13	2·58	1·45	..
	..	..	8·13	..

Print this at end (page 14) below Hon'ble Mr. Bliss's note 18/4/98

I think I should add that the alternatives of legislating either to raise the port dues in this Presidency, or for the imposition of light dues on vessels passing up and down the West Coast of the Bay of Bengal in a manner similar to that in which they are imposed under Act IX of 1879 on vessels trading on the east side of the Bay, have been considered; and that we are of opinion that it would be an undue burden on trade to raise the port dues, while the proposal to charge vessels passing up and down the west side of the Bay with light dues would meet with so much ~~of position~~ from the shipping interest generally that it is not advisable to make it.

I should also point out that if we can get our lighthouses built we can maintain them all right.

In England, to the best of my belief, the whole of the expenses connected with lighthouses are met by the Trinity House from the proceeds of * dues levied from shipping. But this arrangement has, I believe, of late caused considerable complaint, it being contended that the Government of the country should also contribute to this object, as it does, I believe, on the continent and elsewhere. Perhaps something may be known about this matter in the office or can be ascertained from the Parliamentary papers in the records (or from the Statesman's Year Book or some other book of reference in the office). It is obvious that we should greatly strengthen our case if we could point out that in every country but England the Central Government paid for lighthouses, in whole or in part. Unfortunately my knowledge of the † subject is too vague to go upon. But it is practically certain that some information must be available in the Parliamentary papers in the records.

* Advances are also made from the consolidated fund, but they must be repaid with interest.
R.P.—20-4-98.

† ~~Inquiry being made.~~
R.P.—19-4-98.

H.W.B.—18-4-98.

~~S.A.W.—~~

The Honourable Member wants information looked up as to whether in—

(*a*) the British Empire,

(*b*) foreign countries, the cost of coast lights and lighthouses is provided or aided by the Central Government or whether it is met from dues levied on shipping. He suggests references to Parliamentary papers, *inter alia*.

Please have all these collected, and the matter carefully looked up. It will not take long, as the subject of each paper is on the outside of the paper itself, and only those papers that deal with marine matters need be consulted.

Refer to the nautical almanac in our library, and go over yourself or send Lyons to the Presidency Port office where information may possibly be available. The information is required for incorporation in our draft letter to India on the subject of Imperial aid of Local funds in connection with the scheme of lighthouse improvements.

R.P.—19-4-98.

~~S.A.W.—~~

I have been twice to the Presidency Port office and have consulted Mr. Baddeley about this. He has given me a note from which it will be observed that in the United Kingdom sea lights are maintained exclusively from ‡ dues, but in Spain, Portugal, Russia, Italy, France and the United States dues are apparently not levied, the wit of maintaining the lights being borne by the State. This information has been gathered from Urquhart's dues and charges on shipping in foreign ports. As no light dues are charged, Mr. Baddeley says, the inference is that the State bears all charges. This book might be sent up; also Findlay's lighthouses of the world—(please see pages 29 and 30). Mr. Baddeley tells me no other information on the subject is available in the Presidency Port office.

‡ *Loans* are also granted from Imperial funds.

I have also consulted the Parliamentary papers in the General Record office. I have only gone down to 1889 as the indexes from 1878 to 1888 are in the press. As far as I have gone there is no information about the cost of lighthouses except the paper. In the first report of the Royal Commission on electrical communication with lighthouses, there is a recommendation that a grant of £8,000 be made from Imperial funds, but this does not seem to be much to the point.

The Nautical Almanac is of no use as it deals exclusively with tides phases of the moon, &c., and has no reference to lighthouses.

The Parliamentary papers in the office refer exclusively to railways, trade, &c.

R.S.—22–4–98.

In the United Kingdom sea lights are maintained exclusively from dues levied by three corporations: the Trinity House for England, the Commissioners of Northern Lights for Scotland, and the Ballast Board of Dublin for Ireland. The Merchant Shipping Act of 1854 gives some powers of general supervision over all lights to the Trinity House subject to the control of the Board of Trade. As there is a surplus income it seems obvious that these lights are self-supporting out of the dues levied. Minor lights are maintained from local funds; but Trinity House, &c., exercise control if necessary—*vide* 6 & 7 William IV, c. 79; Merchant Shipping Act, 1854, 17 & 18 Vic., c. 104; Scotland Lights Act, 38 George III, c. 58; Ireland Lights Act, 23 George, c. 19.

In Spain, Portugal, Russia, Italy and France and America dues are apparently not levied, the cost of lighting the coast being borne by the State. In America dues are leviable if the nature does not reciprocate with United States. *Austria*, *Turkey*, *Egypt* levy dues.

This information is collected from a work entitled "Dues and Charges on Shipping in Foreign Ports" by G. D. Urguhant published in 1872.

H.D.B.

C.A.W.—

Please see attached notes by Mr. Lyons and Mr. H. D. Baddeley.

I don't think any further information can be got anywhere.

The Nautical Almanac is only a collection of tables and gives no information about the cost or maintenance of lighthouses.

The Parliamentary paper sent herewith, in which a grant of £8,000 from Imperial funds is suggested, shows that such grants cannot be uncommon, but whether the grant in that particular case was given, there is nothing to show.

C. S. Simpson—22–4–98.

Paragraphs 7 and 8 to draft letter to India submitted for approval. The information is based partly on that supplied by Mr. Baddeley and partly on that contained in the Honourable Member's note.

It is quite clear from the English Merchant Shipping Act of 1894 what the system of England is. That in foreign countries has to be inferred to some extent.

The Honourable Member's statement as to complaints of the English system cannot be verified, as the source of the information is not mentioned.

R.P.—28–4–98.

W.B.deW.—29–4–98.

(G.O. 316–17 marked 29–4–98)

NOTES CONNECTED WITH G.O., Nos. 316, 317, MARINE, DATED 29TH APRIL 1898.

[SUBJECT.—*Forecast of Port Fund works required during the next five years.*]

From the Presidency Port Officer, dated 14*th January* 1898, *No.* 1730/18-*G.*

The Hon'ble Sir Henry Bliss K.C.I.E.—

In accordance with paragraph 2 of G.O., No. 513, Marine, dated 4th June 1897, the Presidency Port officer submits a forecast of Port fund works, other than lighthouses, required during the next five years in each of the two groups, Eastern and Western, into which the ports have been divided. The works are arranged for each group in order of urgency, and a brief history of each work, so far as such a history exists, is given in the column of remarks.

2. The total outlay is estimated at Rs. 11,09,070, of which the Eastern group absorbs Rs. 5,95,170 and the Western Rs. 5,13,900.

3. Taking the Eastern group first, it will be seen from statement A that, commencing with an opening balance of Rs. 3,31,395 on the 1st April of this year, and taking into account progressive annual receipts and expenditure, the group will, at the end of the quinquennial period, close with a *credit* balance of Rs. 1,19,035 which may be taken to be the net sum available for lighthouse works.

4. Similarly, in the Western group, while commencing with an opening balance of Rs. 3,38,771 on the 1st April, there will, at the end of the quinquennial period, be a *debit* balance of Rs. 11,809; or supposing the Western group to borrow from the Eastern, the *credit* balance for both groups at the end of the period would be Rs. 1,07,226.

5. These are the results deducible from the programme of the Presidency Port officer, but if the statement be examined in detail, it will be found that many of the works set down for execution have not yet been estimated for and some of them may be considered unnecessary. It is not likely, therefore, that they can be put in hand so soon as he calculates on, though there seems no reason to suppose that they should not all be ready for execution before the close of the quinquennial period. As to whether they can be finished in that period, and the whole amount of money spent before its close is open to doubt.

6. The postponing of works during the earlier years of the quinquennium would mean a corresponding augmentation of the surplus balances available. The more money thus accumulated the less would have to be borrowed for lighthouse construction. The most practical way, therefore, of dealing with the matter seems to be, to go through the works in detail, select for execution in 1898–99, the most urgent and those for which it is possible to prepare estimates within a few months, direct the early preparation of plans and estimates for these works, and fix the allotment that can be spent or assigned. A more reliable forecast of the second year's balance available for lighthouses would thus be obtained. Future years could be dealt with in a similar manner—later on perhaps.

7. The sum required for lighthouses on both coasts is Rs. 8,35,000, to be spent in three years, or an average of Rs. 2,78,333 per annum. It is possible to find the required amount without difficulty for the first year, which opens with a credit balance of Rs. 6,70,166 and would close, even according to the Presidency Port officer's programme, with a surplus of Rs. 6,28,502. The actual surplus, however, is likely to be much more, for it will be seen that, while the Presidency Port officer calculates on the expenditure of Rs. 1,50,890 on 23 * works, no more than 2 † of these works estimated to cost Rs. 17,300 have yet been provided with sanctioned estimates. There thus seems no immediate necessity for borrowing for lighthouse construction, and it would perhaps be well to defer the operation till the want of money is actually felt.

* *Vide* statement C.

† Item 15—Eastern group—Port officer's residence, Vizagapatam, Rs. 9,300.
Item 8—Western group—Repairs to the Calicut pier, Rs. 8,000.

We need not borrow until we absolutely require the money. But I should like to go up to India now and get its consent to lend when required.

H. W. B[liss].

8. The surplus balances assumed include pilotage funds and landing and shipping dues. The former become merged in Port funds at the end of each year, and the latter, though not available for general expenditure, can be all spent in ports of collection before Port funds proper are trenched upon for works at these ports.

R. Parsons.

W. B. deWinton—1-2-98.

Mr. Ashpitel tells me that Captain Street is away and won't be back for three weeks. I have been through these lists of works with Mr. Ashpitel and have told him what I would retain and what strike out. Please revise statement A in communication with him.

H. W. B[liss]—3-2-98.

Revised Financial forecast.

Years.	Particulars.	As per the Presidency Port officer's programme.	As per sanctioned programme.
		Rs.	Rs.
1898-99	Total balance	7,79,392	7,79,392
	Port fund works	1,50,890	..
	Balance for lighthouse works	6,28,502	..
	Lighthouse works	2,70,000	2,70,000
	Balance carried forward	3,58,502	..
	Surplus	1,09,226	1,09,226
1899-1900 ..	Total balane	4,67,728	..
	Port fund works	98,730	..
	Balance for lighthouse works	3,68,998	..
	Light house works	*2,15,000	2,15,000
	Balance carried forward	1,53,998	..
	Surplus	1,09,226	1,09,226
1900-1901 ..	Total balance	2,63,224	..
	Port fund works	..	..
	Lighthouse works	2,50,000	2,50,000
	Balance on 1st April 1901	† 13,224	..

Note.—The forecast has not been carried beyond 1900-1901 as in this year the lighthouse works are expected to be completed and according to the Presidency Port officer's programme all his *urgent* works will have been provided for.

* This figure excludes a sum of Rs. 95,000 for the light houses at Seven Pagodas, Madras, Pulicat and Armeghon as the expenditure will fall against the Madras port.

Note.—In order to meet this expenditure, the Madras port surpluses should be retained and not made over to the Harbour Trust Board at the end of 1897-98 and the following years.

† The surplus balance at the end of three years will be Rs. 13,224, but the demands against this for Port fund works included in the schedule but deferred, amount to Rs. 8,59,450. To carry out these works within a reasonable period, it will be necessary to borrow next year or the year after and the money so borrowed will really be for lighthouse construction as it is owing to the large expenditure on works of this class that Port funds are insufficient for requirements.

R. Parsons—4-2-98.

316-17 Mar

Chief Assistant—

Can you not give me a concise statement in the following form :—

Amount proposed to be spent on—	Rs. IN LAKHS.
(1) Lighthouses	7·35
(2) Other works	4·76
Total ..	12·11
Opening balance at credit of Port funds	5·42
Total probable income in next five years	* 3·03
Total ..	8·45
Balance required to be raised by loan	3·66

~~Commencing with the year~~

* Exclusive of 1·97 for lighthouse maintenance separately provided.

W. B. DEWINTON—21-2-98.

Secretary—

The figures have been filled in according to your form with the result that the loan works out to 3·66; but this is not what will actually happen according to the programme approved by Government.

Taking the eastern group, *e.g.*, it will be seen from appendix E to the draft order that a sum of Rs. 2·61 lakhs must be borrowed in 1899–1900, and that a further sum of Rs. 1·85 lakhs must be borrowed in the following year; while, in the western group (appendix F,) Rs. ·24 lakh only will be required in 1900–1901. Total = Rs. 4·70 lakhs.

Your statement proceeds on the assumption that the total receipts for five years will be available and can be drawn upon before any loan is raised, but this is not so.

The port of Madras is left out of the calculation as there is no question of a loan here.

R.P.—24-2-98.

Noted.

(*a*) There is a difference in western group figures given in statement C. and appendix B. The former total up to Rs. 5,13,900 and the latter to only Rs. 3,53,000. The difference occurs in item 6 where Rs. 30,000 is substituted for Rs. 2,00,000; also in item 9 where Rs. 5,000 is added for some reason in Appendix B, and in item 12 where Rs. 1,500 in statement C is converted into Rs. 5,000 in appendix B. These differences should be explained.

(*b*) The total amount now sanctioned is, apparently only Rs. 4,76,000 as compared with Rs. 11,09,070 proposed by Presidency Port officer.

W.B.DEW.—28-2-98.

Secretary—

The following is an explanation of the differences noticed in your note, dated 28th February 1898 :—

(*a*) *Appendix B—Item* 6.—The sum of Rs. 30,000 is taken from Mr. Ashpitel's statement, and is intended to cover the cost of a pontoon instead of a screw-pile pier. The alternative is mentioned in the column of remarks of the Presidency Port officer's statement, and has, it is understood, been adopted by Mr. Ashpitel under instructions from the Honourable Member.

Item 9.—Rs. 5,000 only are allowed as against Rs. 2,00,000 proposed by the Presidency Port Officer. The smaller sum is expected to cover the cost of a tramway as an alternative to a new pier as explained in the note attached to the draft order.

Item 12.—Mr. Ashpitel considers the Rs. 1,500 an underestimate and raises the figure to Rs. 5,000 as explained in the note attached to the draft order. It will be seen from appendix B that no allotment is provided for the work which is considered unnecessary.

(*b*) The programme as approved by the Honourable Member works out to Rs. 4,76,000 as shown in the revised statements.

R.P.—3-3-98.

Noted. File can now go up.

W. B. DE WINTON—4-3-98.

Note to accompany the Draft Order.

Mr. Ashpitel estimates the average annual surplus of the Eastern group at Rs. 84,000. This amount seems too high, and it would be safer to adopt the Presidency Port Officer's figures which bring out a surplus of Rs. 60,000. The details for all groups are as follows:—

—	Eastern group.	Western group.	Madras.
	LAKHS.	LAKHS.	LAKHS.
1. Average income for five years	9·58	5·18	5·99
2. Do. for each year	1·92	1·04	1·20
3. Average (*a*) expenditure for five years excluding all extraordinary charges including lighthouse maintenance.	8·02	4·02	4·11
4. Do. (*b*) expenditure for each year	1·60	0·80	0·82
5. Surplus for each year (2—4)	0·32	0·24	0·38
6. *Add* increase of revenue due to enhancement of port dues.	·11	(*c*) ·06	..
7. *Add* charges for lighthouse maintenance which are separately provided for in Mr. Ashpitel's forecast.	·20	·07	·10
9. Total annual surplus balance	0·63	·37	0·48

(*a*) Total estimated—H.W.B.
(*b*) Ordinary—H.W.B.
(*c*) As estimated by Mr. Ashpitel.
(*d*) On * —H.W.B.

* Total, I think. How can this be "excluding all extraordinary charges"? I presume extraordinary charges are those shown in appendix A and in column 9 of appendix E for the Eastern group and in the corresponding appendices for the other groups. If so, entries 3 and 4 should be as altered by me. Even so, I don't see how you get 8·02. Column 8 of appendix E gives 4·0 and column 9, 4·11, total 8·11, not 8·02; and, if you add interest from column 10 for the last three of the five years, you get ·40 more, total 8·51. Please check the other figures in the same way and let me know if I am not right.

H. W. B[LISS].

2. Mr. Ashpitel makes no separate provision for special minor works costing Rs. 2,500 and below, under the impression, apparently, that such charges can be met from the ordinary maintenance grants. It is unsafe to assume that this can be done. These works have consequently been restored to the programme.

3. The Presidency Port Officer's programme has been departed from in the following particulars:—

Eastern Group.

Item 1—*New boiler for the steam dredger at Cuddalore*, *Rs.* 1,000.—This should be provided for under *civil charges*, *contingencies*, which are estimated on a very liberal scale. No separate provision has therefore been made in the revised programme.

Item 12—*Vizagapatam Harbour Improvements*, *Rs.* 2,00,000.—A company may be formed to carry out the whole scheme from borrowed money, and in any case it is not likely that the works at this port can be undertaken otherwise than by a special loan. I propose reporting shortly on the question of these improvements.

Items 13 *and* 19 *to* 21—The cost of these works is chargeable to landing and shipping dues. No provision is therefore made from Port funds.

Western Group.

Item 1—*Port officer's residence at Cochin, Rs.* 30,000.—The estimate is too high. Rs. 15,000 provided under instruction received through Mr. Ashpitel.

Items 2 *to* 4—*Quarters for lightkeepers at Hangarkotta, Coondapoor and Malpe.*—Already provided for by Mr. Ashpitel under lighthouse works.

Item 6—The Presidency Port Officer's provision of Rs. 2,00,000 for a screw pile pier has been altered into one for Rs. 30,000 for a floating pontoon stage.

Item 7—*Reclamation of the foreshore at Mangalore, Rs.* 50,000.—Omitted. Chargeable to landing and shipping dues.

Item 9—*New pier at Calicut—Rs.* 2,00,000.—The provision has been reduced to Rs. 5,000 with the idea that a tramway from the godowns of the native merchants to the existing pier will meet all requirements. Mr. Ashpitel thinks it will.

Item 10—*Pier and improvements to the foreshore at Malpe—Rs.* 4,230.—Omitted under instructions received through Mr. Ashpitel; the works not being required.

Item 12—*Beacon on Coote Reef at Calicut—Rs.* 1,500.—Omitted under instructions received through Mr. Ashpitel. The existing buoy is said to answer sufficiently well. The work is, moreover, Mr. Ashpitel thinks, much underestimated. Rs. 5,000 is entered as estimated cost instead of Rs. 1,500 provided by Presidency Port officer because the latter amount is said to be inadequate.

Item 14—*Improvements to the Kullai bar—Rs.* 6,000.—Omitted. Mr. Ashpitel notes that this work should be carried out from the ordinary maintenance grant. Collections made at the bar, from the merchants interested in keeping it open, should also contribute.

R. Parsons.

W. B. deWinton—4-3-98.

The position seems to me a much more awkward one than I had anticipated. When I first thought of a loan whereby to finish off the lighthouse improvements within a reasonable time, I thought that if we could get such a loan from India we could probably pay it off in three or four years, or so. But it now appears that in the Eastern group it will take us twenty years to pay off the loan we shall want, during the whole of which time we shall not have an anna for any work of any kind other than ordinary maintenance. This is, of course, an impossible position. The ports can't go on for twenty years without the absolute necessity of expenditure on improvements of different kinds, quite apart from ordinary maintenance; and it therefore comes to this:—We must either (1) stop lighthouse construction when we have spent our balances, that is, when we have done not much more than half the work on the East Coast (neglecting all other works altogether), but have nearly or quite completed the West Coast lighthouses; or (2) we must get a *grant* from India, a loan being of no use; or (3) we must take legislative authority to increase the rate of port dues. I don't like (3) at all. Please consult the Presidency Port Officer *personally* and find out what he thinks. If we had any Provincial money to give, we might give it and finish this lighthouse business. But we have not, and there are other works besides lighthouses which really *must* be taken in hand.

H. W. B[liss]—5-3-98.

Draft Order—

In accordance with paragraph 2 of G.O., No. 513, Marine, dated 4th June 1897, the Presidency Port officer submits a forecast of Port Fund works other than lighthouses required during the next five years in each of the two groups, eastern and western, into which the ports have been divided. The works are arranged in order of urgency, and a brief history of each, where such exists, is given in the column of remarks.

2. The total outlay is estimated at Rs. 11,09,070, of which the eastern group absorbs Rs. 5,95,170 and the western, Rs. 5,13,900.

3. His Excellency the Governor in Council observes that it is essential to provide in the first instance for lighthouses, in connection with which a special establishment is actively engaged in the preparation of plans and estimates, the provision of materials and the execution of work. The longer this establishment is maintained, from paucity of funds or otherwise, the more costly will the scheme of lighthouse improvement become.

4. Mr. Ashpitel has drawn up a programme of operations on the construction and improvement of lighthouses extending over three years, the total cost of which is estimated at Rs. 8,20,000 as shown below :—

	RS.
Eastern group	4,00,000
Western group	3,35,000
Madras	85,000
Total ..	8,20,000

or an average annual expenditure of Rs. 2,73,000. This outlay must be provided for, but due consideration to the devolopment of the ports in the interests of trade is also essential. Both objects cannot be adequately met within a reasonable time from local resources alone. These must, however, be first exhausted, and if possible augmented, before resource is had to borrowing. The position will therefore be reviewed and a financial forecast framed.

The Government of India can be asked for assistance, by the grant of a loan, or otherwise as may be found necessary.

H. W. B[LISS].

5. The statements given in appendices (A and B) show the revised programme approved by Government for each group of ports and provide for an expenditure of Rs. 4,11,000 on works in the eastern group, and Rs. 65,000 in the western, or a total of Rs. 4,76,000 as compared with Rs. 11,09,070, or Rs. 13,86,000 inclusive of Public Works supervision charges proposed by the Presidency Port officer. The works will, as far as practicable, be estimated for and carried out in the order of urgency here shown. Statement C shows lighthouse works to be dealt with by the special lighthouse division.

6. Taking the Eastern group first, it will be seen from Statement E that, commencing with an opening balance of Rs. 2·50 on the 1st April 1898–99 and taking into account the receipts and expenditure of the year for all purposes, lighthouses included, the year will close with a balance of Rs. 13,000, and that it will not be necessary to (borrow till) * 1899–1900 when obtain money from † (a loan) of 2·61 will be required. In the following year a further loan ‡ of 1·85 will be necessary, and the whole loan will be extinguished in 1920–21.

I almost think that appendix E goes too far. I mean that it is not necessary to take every one into our confidence as to the probable state of affairs 10, 15, or 20 years hence, though we want the information for our own purposes and for an appeal *in misericordiam* to India.

H.W.B.

* Other sources until.
† An additional sum.
‡ Sum.

If these sums have to be borrowed, it will not be until 1920–21 that the whole amount can be paid off.

7. In the Western group, Statement F, no loan will be necessary till 1900–1901, when a sum of Rs. 24,000 will be required. Credit is, however, taken for an augmentation of Port fund receipts by Rs. 6,000 per annum which will, it is hoped, be realised by enhancing the port dues to the maximum rates allowed by law, as in the case of the Eastern group which were raised under the orders contained in G.O., No. 261, Marine, dated 19th March 1897, paragraph 11.

Assistance.

H.W.B.

How do the present rates of port dues compare with those formerly in force? The last Act reduced them, didn't it?

H.W.B.

8. In Madras, Statement G, no loan will be required, but the usual annual contribution to the Madras Harbour Trust Board will have to be withheld till the light house works considered necessary in connection † with this port, and estimated to cost Rs. 85,000 are paid for.

† The available funds will suffice.

† G.O., No. 261, Marine, dated 19th March 1897, paragraph 8.

9. At ports where landing and shipping dues are collected, the port improvement will be a first charge on those funds, and it is only after the landing and shipping dues have been exhausted that the aid of Port funds can be expected. Statement H shows the financial position of the landing and shipping dues funds.

10. The Government of India will be addressed on the subject (of the loan) †† and the Presidency Port Officer will submit the draft of a notification providing for the enhancement of the port dues at the ports of the Western group.

†† We had better not talk of loans for the present, I think. To do so would commit us. However, this draft may not improbably need further alteration when the matter has been more considered. We may decide either to ask for a grant or to try for permission to raise the port dues.

H.W.B.

R. Parsons.

W. B. DeWinton—4-3-98.

Secretary—

Item 3 is the average (not total) expenditure. It is taken from the Presidency Port Officer's statement. The object is to arrive at the average annual surplus. Therefore, all extraordinary charges such as those shown in appendices A and B and in column 9 of appendices E and F are excluded. The statement was introduced into the note in order to explain why Mr. Ashpitel's figures, presumably approved by the Honourable Member, were not adopted. The figure 8·02 is, as explained above, taken from the Presidency Port Officer's statement. It is "the average annual expenditure on establishment, petty maintenance of all kinds, lighthouse establishment and materials multiplied by 5. The figures in columns 8 and 9 of appendix E are the extraordinary charges on lighthouses and other works. There is not the direct connection between the two set of figures which the Honourable Member's note assumes.

The other notes are replied to on the papers themselves.

R.P.—9-5-98.

Marine Department.

The Hon'ble Sir Henry Bliss, K.C.I.E.
The Hon'ble Mr. Grose, C.I.E.
His Excellency the Governor.

With reference to Honourable Member's remarks on the note of 4th March 1898 it is pointed out that the figures in paragraph 1 are taken from the Presidency Port Officer's statement from which it will be seen that 8·02 represents the annual average expenditure on establishment, petty maintenance of all kinds, lighthouse establishment and materials, multiplied by 5. It is, therefore, rightly described in the text. The figures were given to show how the

What misled me was that I thought head 3 was something different from head 4, whereas it now appears that head 3 is only head 4 multiplied by 5. Similarly, head 1 is head 2 multiplied by 5. Both head 1 and head 3 might as well have been omitted.

H.W.B.

Presidency Port Officer's estimated annual surplus in each group was arrived at, as opposed to Mr. Ashpitel's estimate, which is considerably higher. In fact it is a pity Mr. Ashpitel was allowed to interfere in this matter at all. He has only complicated an already difficult subject. It will thus be seen that the figures 8·02 have nothing to do with the figures entered in columns 8 and 9 of appendix E; the one being ordinary annual maintenance and establishment charges, and the other special charges and new lighthouse work.

In my opinion we had better harden our hearts and lay the whole case before India at once with an application for a special grant of Rs. 4,80,000 to be paid in 1899–1900 and thereafter as required. Our grounds are simple. For the safety of navigation and prevention of loss of property and life, the coast ought to be properly lighted. But we have not the money to do it, and the whole country should therefore aid a work which benefits the country generally. As an instance of the positive saving that efficient lighting should cause, we may give the case of the steamer laden with Government stores which went ashore on the Sacramento shoal. I forget the particulars, but the Presidency Port Officer knows and can supply them. I believe Government lost over 2 lakhs in this one vessel.

If India won't make us a grant, the expenditure on lighthouses must be restricted as proposed. I am not in favour of charging light dues. If they are to be charged, they must either be imposed only on the shipping using our ports, in which case they would merely be enhanced port dues under another name; or they must also be imposed on all the shipping going up and down the Bay of Bengal to and from Calcutta. But would it be worth while to go to the bother of charging a pie a ton or some such small sum on all that shipping? and, if the game were worth the candle [we only want some Rs. 20,000 a year or so, that is, enough to pay interest and form a sinking fund on Rs. 4,80,000], should we be able to carry legislation imposing any charge whatever on vessels, the *vast* majority of which will never come within sight of the lighthouses on our coast? or, rather, would India undertake such legislation, for it is India that must do so, for the dues would have to be collected at Calcutta? I trow not.

H.W.B.

* The total proposed expenditure is Rs. 8,30,000 and not Rs. 8,20,000 as previously shown, the expenditure at Madras being Rs. 95,000 instead of Rs. 85,000.

2. With regard to the general financial position, I have talked the matter over continually with the Presidency Port Officer during our present tour and we both agree that it is quite impossible to carry out the proposed lighthouse programme without a grant-in-aid from Government of India. To do so is to starve every port on the coast for the next twenty years. We, therefore, both recommend that Government of India should be asked for a grant-in-aid equal to the amount we have to borrow, viz., Rs. 4,80,000 or at any rate of half the amount it is proposed to spend, *i.e.*, Rs. 4,15,000.*

3. If this is refused, the only thing to be done is to restrict our expenditure on lighthouses to our means. The Presidency Port Officer deprecates any reduction of the proposed programme, now that special arrangements have been made for carrying it out, but I have ascertained from him that, if such reduction is unavoidable, the following works can be postponed until funds are available:—

Eastern Group.

Tuticorin	0·13	
Negapatam	0·05	
Cuddalore	0·04	
Santopilli	1·00	
Calingapatam	0·05	
Bimilipatam	0·01	
Vizagapatam	0·03	
Gopalpur	0·03	
		1·34

Western Group.

Kundapur	0·03	
Hungarikotta	0·03	
Malpé	0·04	
Muttum	0·12	
Tangacherri	0 88	
Cochin	0·00	
Cannanore	0·03	
Calicut	0·09	
		1·31

Madras.

Seven Pagodas	0·53	
Pulicat	0·23	
		0·76
		3·41

There is no object in postponing these. The Madras Port funds can well afford these works and can't be used elsewhere.

H.W.B.

This will reduce the amount of loan required from Rs. 4·80 to Rs. *1·39, and it is thought that this might be temporarily debited to Provincial funds and the accounts adjusted as money became available. To obtain this money I consider that light dues should be established on the Madras coast. I understand from the Presidency Port Officer that they are in force on the Burma coast, and in the case of some lights on the Ceylon coast; and there seems no reason why they should not be introduced here, seeing that when these contemplated improvements are carried out, the Madras coast will be the best lighted one in India. If light dues are established, it might be possible to carry out the full programme within a reasonable time without unduly depleting Port funds.

* 4·80
3·41
1·39

No doubt next year or the year after Provincial might be able to find a small sum.
H.W.B.

The Basses. Under an Act of Parliament
H.W.B.

It seems impossible to enhance port dues. They have already been raised for the Eastern group of ports to the maxima allowed by the Act in G.O., No. 351, Marine, dated 12th April 1897, and the forecast of expenditure provides for a similar enhancement at the Western group of ports. The maxima were reduced in the latest Act, but the actual rates charged were much the same, until the above Government order was passed.

It seems to me that light dues levied for the specific purpose of improving the lighting of the coast would be much more favourably received than any further enhancement of port dues.

4. With regard to the forecast of expenditure on port works (appendices A and B) I have visited four of the ports in company with the Presidency Port Officer during the past week, viz., Porto Novo, Negapatam, Tuticorin and Pamban, and I have seen enough to show me that the programme needs considerable revision. At Porto Novo no new wharf is required, the existing one being in sufficiently good repair to last for years. At Negapatam the Port officer's quarters are by no means urgent, while a lot of money must be spent, and soon, on training the river mouth if this much neglected port is not to lose its trade altogether. Everything else here—including items 19 to 21 in appendix A—must give way to this. At Tuticorin a passenger shed is certainly wanted, but it seems to me that it should be entirely paid for out of customs dues, the examination of passengers' effects being its sole object. A dredger is much needed and some improvement of the pier. A 15-ton crane is a luxury which can be deferred for the present, and the residence for the Port officer should be built at once. Items 16 to 18 in the programme are all needed, but will probably cost more than the amounts shown, and the allocation of funds in the remark column is all wrong. The closed shed is to be built instead of one to be handed over to the customs, and its cost should be borne by the latter. The open shed should be built entirely from Port funds (to which pier dues are eventually credited), a fee credited to Port funds being charged for its use. Fencing the foreshore should be shared equally by Port funds and customs, it being beneficial to

No doubt it would be a very good thing if the Chief Engineer could go round to all the ports and revise the programme. But that would take a long time, whereas we ought to go up to India at once. Indeed, if we are going up to India at all we may as well do so at the same time both on this account and on account of the loan which we must get for the Cocanada dredger. By all means let the programme be revised so far as our present knowledge goes, that is, with reference to these remarks of the Chief Engineer; but on no account let us strive for perfection and delay going up to India until the whole programme has been revised. If we do, we may all (or some of us) be in our graves before anything is done.
H.W.B.

I presume that all these points will be taken up separately, so do not now note on them.
H.W.B.

both. At Pamban two landing stages are certainly wanted, but as only one is used at a time, according to the monsoon, it will suffice to provide a floating pontoon stage which can be hauled as required from one landing place to the other, a distance of half a a mile. I think the above will show that an accurate forecast is hardly possible at present without a more careful examination of each port, which I should like to carry out in person. The total figures may be taken as a basis of such a forecast if it is considered necessary to make one, but I think it may just as well wait for more accurate figures.

I thought Mr. Ashpitel had sent in proposals The requirements for apparatus are between £13,000 and £14,000, I think.
H.W.B.—22-3-98.

5. With reference to Honourable Member's remarks in appendix C, I cannot reply very definitely without knowing the amount to be spent in apparatus, but I certainly think that, if the money is forthcoming, the whole programme should be completed easily in three years.

W. B. deWinton—21-3-98.

I agree with the Hon'ble Sir H. Bliss about asking India for a grant, and about not charging light dues.

J. G[rose]—24-3-98.

I agree also.

A. E. H[avelock]—26-3-98.

Secretary—

Revised statements and draft order and letter submitted. The excess for which a loan or grant was required under Mr. Ashpitel's scheme was Rs. 4·70. It is now 8·13. The principal differences are Vizagapatam port improvements, left out by Mr. Ashpitel, Rs. 2·00 and the Mangalore pier for which Mr. Ashpitel provided Rupees 15,000 only. The Presidency Port officer asks for 2·00, and the latter amount has now been adopted. These additions come to 3·85. There is still a difference of Rs. 42,000 distributed amongst various items.

R.P.—1-4-98.

Chief Assistant—

I have initialled the letter to India about the loan, but I think I had better see this again. We must surely ask for the money for lighthouses and not for port improvements, and your figures come to considerably more than I anticipated. I think the limit of our demand should be—

(1) Amount we should have to borrow for lighthouses;

(2) cost of Cocanada dredger, *i.e.*, about 6½ lakhs in all.

W.B.deW.—3-4-98.

Secretary—

The paper is resubmitted.

As regards the grant for Port fund works, it is possible to reduce it considerably by postponing to the 4th and 5th years, many of the works now included in the first three years. This arrangement of bringing all the expenditure into the first three years was put forward by Mr. Ashpitel, presumably under the Honourable Member's instructions, and *now* the Honourable Member is in favour of an immediate application to India which rather militates against a careful revision of the programme. If, however, you can suggest any reductions or postponements which will not entail much delay in the disposal of the application, it is open to you to do so—*vide* Honourable Member's remarks on the note for orders, dated 31st March 1898. Later on, Provincial funds will probably be in a position to aid Port funds, as hinted by the Honourable Member.

I think it had better go up as it is.
W.B.deW.—14-4-98.

R.P.—4-4-98.

Statement showing strandings and wrecks on the coast of the Madras Presidency from 1889 to 1897 (both years inclusive).

Names of vessels stranded.	Dates of stranding.
(Place at which stranded).	
Ennore.	
S.S. "Canara"	13th April 1889.
Palar Shoal near the Seven Pagodas.	
S.S. "Bleville"	19th June 1889.
Cape Comorin, 14 miles North-east of —.	
S.S. "Nur Jahan"	20th November 1890.
Pulicat Shoal.	
S.S. "Duke of Argyll"	31st May 1891.
" "Rewa"	9th January 1892.
Palks' Straits.	
S.S. "Aska"	27th August 1891.
Calicut.	
S.S. "Ellora"	5th August 1891.
Madras.	
S.S. "Waverley"	21st November 1891.
" "Secundra"	27th November 1896.
Calingapatam, 15 miles South of —.	
S.S. "Sirdhana"	24th December 1894.
Hare Island Lighthouse.	
S.S. "Edzermium"	18th February 1896.
Armeghon Shoal.	
S.S. "Umtata"	23rd December 1891.
" "Argus"	22nd February 1896.
" "Baroda"	7th April 1896.
Sacramento Shoal.	
S.S. "Malvern"	29th January 1892.
" "Ratho"	1st February 1894.
" "Lanark" (with cargo, railway materials), etc.	31st May 1894.
" "Linlithgow"	20th July 1894.
Barque "Grosvenor"	28th April 1895.
S.S. "Thisbe,"	23rd June 1895.

Remarks of His Excellency and Honourable Members ~~thereon~~ on draft letter to Government of India, No. 317, Marine, dated 29th April 1898:—

I think I should add that the alternatives of legislating either to raise the port dues in this Presidency, or for the imposition of light dues on vessels passing up and down the West Coast of the Bay of Bengal in a manner similar to that in which they are imposed under Act IX of 1879 on vessels trading on the east side of the Bay, have been considered; and that we are of opinion that it would be an undue burden on trade to raise the port dues, while the proposal to charge vessels passing up and down the west side of the Bay with light dues would meet with so much opposition from the shipping interest generally that it is not advisable to make it.

I should also point out that if we can get our lighthouses built we can maintain them all right.

In England, to the best of my belief, the whole of the expenses connected with lighthouses are met by the Trinity House from the proceeds of * dues levied from shipping. But this arrangement has, I believe, of late caused considerable complaint, it being contended that the Government of the country should also contribute to this object, as it does, I believe, on the continent and elsewhere. Perhaps something may be known about this matter in the office or can be ascertained from the Parliamentary

* Advances are also made from the consolidated fund, but they must be repaid with interest.

R.P.—20-4-98.

papers in the records (or from the Statesman's Year Book or some other book of reference in the office). It is obvious that we should greatly strengthen our case if we could point out that in every country but England the Central Government paid for light-houses, in whole or in part. Unfortunately my knowledge of the subject is too vague to go upon. But it is practically certain that some information must be available in the Parliamentary papers in the records.

H.W.B.—18-4-98.

Approved, but additions should be made as proposed by the Hon'ble Sir H. Bliss.

J.G.—24-4-98.
A.E.H.—27-4-98.

Second Assistant—

The Honourable Member wants information looked up as to whether in—

(*a*) the British Empire,

(*b*) foreign countries,

the cost of coast lights and lighthouses is provided or aided by the Central Government or whether it is met from dues levied on shipping. He suggests references to Parliamentary papers, *inter alia*.

Please have all these collected, and the matter carefully looked up. It will not take long, as the subject of each paper is on the outside of the paper itself, and only those papers that deal with marine matters need be consulted.

Refer to the nautical almanac in our library, and go over yourself or send Lyons to the Presidency Port office where information may possibly be available. The information is required for incorporation in our draft letter to India on the subject of Imperial aid of Local funds in connection with the scheme of lighthouse improvements.

R.P.—19-4-98.

Second Assistant—

I have been twice to the Presidency Port office and have consulted Mr. Baddeley about this. He has given me a note from which it will be observed that in the United Kingdom sea lights are maintained exclusively from * dues, but in Spain, Portugal, Russia, Italy, France and the United States dues are apparently not levied, the cost of maintaining the lights being borne by the State. This information has been gathered from Urquhart's "Dues and Charges on Shipping in Foreign Ports". As no light dues are charged, Mr. Baddeley says, the inference is that the State bears all charges. This book might be sent up; also Findlay's "Lighthouses of the World"—(please see pages 29 and 30). Mr. Baddeley tells me no other information on the subject is available in the Presidency Port office.

* *Loans* are also granted from Imperial funds.
R.P.

I have also consulted the Parliamentary papers in the General Record office. I have only gone down to 1889 as the indexes from 1878 to 1888 are in the press. In the first report of the Royal Commission on electrical communication with lighthouses, there is a recommendation that a grant of £8,000 be made from Imperial funds, but this does not seem to be much to the point.

The Nautical Almanac is of no use as it deals exclusively with tides, phases of the moon, &c., and has no reference to lighthouses.

The Parliamentary papers in the office refer exclusively to railways, trade, &c.

R. W. Lyons—22-4-98.

Mr H. D. Baddeley's note

In the United Kingdom sea lights are maintained exclusively from dues levied by three corporations: the Trinity House for England, the Commissioners of Northern Lights for Scotland, and the Ballast Board of Dublin for Ireland. The Merchant Shipping Act of 1854 gives some powers of general supervision over all lights to the

In smaller type