

G.O., No.

5196

520

DATED

11/2/96.

[Despatch Abstract.]

Fund. Order sanctioning a
modification of grant for
works in VI Arch.

Govt of India requested to withdraw the grant
for meteorological buildings at Kodaikanal

Govt. of {1896} Madras.
PUBLIC WORKS.

Dated February, 11th.

Recd.

Encl.

No. 520 W., 11th February 1896.

FEBRUARY.

Funds

Requesting that a sum of Rs. 6,848 may be withdrawn from the grants for Meteorological buildings at Kodaikanal.

No. 520 W., 11TH FEBRUARY 1896.

PUBLIC WORKS DEPARTMENT.

General.
Account.

LETTER—from

COLONEL D. McNEIL CAMPBELL, R.E.,
Joint Secretary to the Government of Madras,
Public Works Department,

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,
PUBLIC WORKS DEPARTMENT.

SIR,

In continuation of my letter No. 3037 W., dated 28th November 1895, I am directed to state that the estimates for the Meteorological buildings at Kodaikānal have not yet been sanctioned, and to request that a sum of Rs. 6,848, as shown below, may be withdrawn by the Government of India:—

Observatory building	...	...	...	...	...	...	...	RS.
Residence for the Superintendent	...	...	...	...	...	...	...	2,500
								3,000
Establishment	...	...	...	...	...	...	...	5,500
Tools and plant	...	...	...	...	...	...	...	1,265
								83
Total	...	...	...	...	...	...	...	6,848

I have the honour to be,
Sir,
Your most obedient servant,

Colonel, R.E.,
Joint Secy. to Govt., P.W.D.

MADRAS,
11th February 1896.

Exd. T. K. Narayana Aiyangar.
Spare Copies

No. 519 W., 11th FEBRUARY 1896.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

Read—the following paper:—

From W. HUGHES, Esq., Superintending Engineer, VI Circle, to the Chief Engineer, Public Works Department, dated Trichinopoly, 31st January 1896, No. 106 M.D.

I have the honour to request that the following grants in the Madura division may be withdrawn at an early date:—

Item No.		Existing grant.	Modification of allotments applied for.		Modification of allotments proposed.	
			Reduction.	Increase.	Reduction.	Increase.
	IMPERIAL—CIVIL BUILDINGS.	RS.	RS.	RS.	RS.	RS.
	Major—Original.					
1	Observatory building at Kodaikanal ..	5,000	2,500	..	2,500	..
2	Residence for the Superintendent at Kodaikanal ..	3,000	3,000	..	3,000	..
	Minor—Original.					
3	Enlarging the Mudukulattur Post office ..	530	500	..	500	..
	Total ..	..	6,000	..	6,000	..
	PROVINCIAL—CIVIL BUILDINGS.					
	Major—Original.					
4	Constructing Head Assistant Collector's office at Ramnad— Estimate Rs. 17,700, sanctioned in G.O. No. 3172 W., dated 11th December 1894 ..	7,155	2,400	..	2,400	..
5	Constructing a residence for the Head Assistant Collector at Ramnad—Estimate Rs. 11,890, sanctioned in G.O. No. 2626 W., dated 15th October 1894 ..	2,186	1,000	..	1,000	..
6	Constructing a Sub-Registrar's office at Aruppukottai— Estimate Rs. 4,480, sanctioned in G.O. No. 245 W., dated 2nd February 1895 ..	2,480	1,480	..	1,480	..
7	Constructing a Sub-Registrar's office at Peraliyur—Esti- mate Rs. 4,030, sanctioned in G.O. No. 1513 W., dated 21st June 1895 ..	3,000	1,500	..	1,500	..
8	Constructing a Sub-Registrar's office at Tiruppuvanam— Estimate Rs. 4,270, sanctioned in G.O. No. 1711 W., dated 9th July 1894 ..	2,270	1,270	..	1,270	..
	Total ..	..	7,650	..	7,650	..
	INCORPORATED LOCAL FUNDS.					
	Civil Works—Major.					
9	Constructing a bridge across the Varahanadi ..	5,000	5,000	..	5,000	..
	EXCLUDED LOCAL FUNDS.					
	Civil Works—Major.					
10	Constructing a residence with out-houses for the Port Officer at Pamban—Estimate Rs. 6,400, sanctioned in G.O. No. 625 W., dated 6th March 1894 ..	2,320	1,280	..	1,280	..

No. 519 W., 11th FEBRUARY 1896.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

Read—the following paper:—

From W. HUGHES, Esq., Superintending Engineer, VI Circle, to the Chief Engineer, Public Works Department, dated Trichinopoly, 31st January 1896, No. 106 M.D.

I have the honour to request that the following grants in the Madura division may be withdrawn at an early date:—

Item No.		Existing grant.	Modification of allotments applied for.		Modification of allotments proposed.	
			Reduction.	Increase.	Reduction.	Increase.
	IMPERIAL—CIVIL BUILDINGS.	RS.	RS.	RS.	RS.	RS.
	Major—Original.					
1	Observatory building at Kodaikanal ..	5,000	2,500	..	2,500	..
2	Residence for the Superintendent at Kodaikanal ..	3,000	3,000	..	3,000	..
	Minor—Original.					
3	Enlarging the Mudukulattur Post office ..	530	500	..	500	..
	Total ..	..	6,000	..	6,000	..
	PROVINCIAL—CIVIL BUILDINGS.					
	Major—Original.					
4	Constructing Head Assistant Collector's office at Ramnad— Estimate Rs. 17,700, sanctioned in G.O. No. 3172 W., dated 11th December 1894 ..	7,155	2,400	..	2,400	..
5	Constructing a residence for the Head Assistant Collector at Ramnad—Estimate Rs. 11,890, sanctioned in G.O. No. 2626 W., dated 15th October 1894 ..	2,186	1,000	..	1,000	..
6	Constructing a Sub-Registrar's office at Aruppukottai— Estimate Rs. 4,480, sanctioned in G.O. No. 245 W., dated 2nd February 1895 ..	2,480	1,480	..	1,480	..
7	Constructing a Sub-Registrar's office at Peraliyur—Esti- mate Rs. 4,030, sanctioned in G.O. No. 1513 W., dated 21st June 1895 ..	3,000	1,500	..	1,500	..
8	Constructing a Sub-Registrar's office at Tiruppuvanam— Estimate Rs. 4,270, sanctioned in G.O. No. 1711 W., dated 9th July 1894 ..	2,270	1,270	..	1,270	..
	Total ..	..	7,650	..	7,650	..
	INCORPORATED LOCAL FUNDS.					
	Civil Works—Major.					
9	Constructing a bridge across the Varahanadi ..	5,000	5,000	..	5,000	..
	EXCLUDED LOCAL FUNDS.					
	Civil Works—Major.					
10	Constructing a residence with out-houses for the Port Officer at Pamban—Estimate Rs. 6,400, sanctioned in G.O. No. 625 W., dated 6th March 1894 ..	2,320	1,280	..	1,280	..

2. *Items Nos. 1 and 2.*—Surrendered, there being no probability of the estimates being sanctioned soon.

Item No. 3.—Owing to incessant rain and cholera at Mudukulattūr which is an out-of-the-way place, bricks could not be manufactured; hence the surrender.

Items Nos. 4 and 5.—On account of constant rain in Ramnad, the manufacture of bricks has been greatly retarded; surrender is therefore proposed.

Items Nos. 6, 7 and 8.—Surrendered, as the sites have not as yet been handed over by the Revenue Department. The notification for the acquisition of lands required for the Sub-Registrars' offices at Tiruppuvanam and Aruppukóttai have been approved of in G.Os., Nos. 2347 W., dated 23rd September 1895, and 132 W., dated 11th June 1895, respectively. The Collector has been written to on the subject by the Executive Engineer.

Item No. 9.—Surrendered, there being no probability of the estimate which is now under check in this office being sanctioned soon.

Item No. 10.—Surrendered as the work is in suspense, pending sanction to the revised estimate which is under scrutiny in this office.

ORDER—No. 519 W., dated 11th February 1896.

The sum of Rs. 5,500, or Rs. 6,848 inclusive of establishment and tools and plant charges, surrendered from the grants for the undermentioned Meteorological buildings at Kodaikānal, will be withdrawn and surrendered to the Government of India:—

Observatory building	RS.
Residence for the Superintendent	2,500
	3,000
Total	5,500

2. An allotment of Rs. 530 was provided for enlarging Mudukulattūr Post office in the Madura district. The Superintending Engineer surrenders Rs. 500 thereof, as bricks could not be manufactured owing to incessant rain and cholera at the station. The latter sum, viz., Rs. 500, or Rs. 623 inclusive of the percentage charges, will accordingly be resumed and replaced at the disposal of the Director-General of Post Offices.

3. The following sums are withdrawn and credited to the Provincial reserve:—

(a) Constructing Head Assistant Collector's office at Ramnad	RS.
(b) Constructing a residence for the Head Assistant Collector at Ramnad	2,400
(c) Constructing a Sub-Registrar's office at Aruppukóttai	1,000
(d) Constructing a Sub-Registrar's office at Péraiyyūr	1,480
(e) Constructing a Sub-Registrar's office at Tiruppuvanam	1,500
	1,270
Total	7,650

4. The Superintending Engineer surrenders the existing grant of Rs. 5,000, or Rs. 6,225 inclusive of the percentage charges, for constructing a bridge across the Varahanadi in the Madura district, as the estimate for the bridge has not yet been sanctioned. This amount will therefore be replaced at the disposal of the Local and Municipal Department.

5. The sum of Rs. 1,280, or Rs. 1,594 inclusive of the percentage charges, surrendered from the grant for constructing a residence for the Port officer at Pámban, is resumed and held in reserve.

[Here enter No. 520 W., dated 11th February 1896.]

(True Extract.)

Under Secy. to Govt., P.W.D.

To the Superintending Engineer, VI Circle.
 „ Examiner, Public Works Accounts.
 „ Revenue Department.
 „ Local and Municipal Department.
 „ Director-General of Post Offices.
 „ Marine Department.

Exd. T. K. Narayana Aiyangar.

Spare Copies

GENERAL.
ACCOUNT.

Govt. of {1896} Madras.
PUBLIC WORKS.

Dated February, 11th.

Recd.

Encl.

G.O. No. 519 W., 11th Feb. 1896.

FEBRUARY.

Funds

Orders sanctioning a modification of
grants for works in VI Circle.

General
and
No. 579. W of 11 Feb. 1896. PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

30
Read the following

From the S. E. VI Circle, (48 R 106 and 2731 Jan. 96)

*The sum of Rs 5,500
or Rs 6,848 inclusive of
Establishment and
Tools and Plant charges
surrendered from the grants
for the undermentioned
meteorological buildings
at Kodairkanal will
be withdrawn and
surrendered to the
Government of India.
Observatory building Rs 2,500
Residence for the
Superintendent 3,000
Total Rs 5,500*

*2. An allotment of
Rs 530 was provided for
enlarging Muthi Kalathur
Post office in the
Madura*

Madura District. The
 Superintending Engineer
 surrenders Rs 500 thereof
 as bricks could not be
 manufactured owing
 to incessant rain and
 cholera at the station.
 The latter sum, viz Rs 500
 or Rs 623 inclusive of
 the percentage charges
 will accordingly be
 resumed and replaced
 at the disposal of the
 Director General of ^{Post} Military
~~offices~~
 works.

3. The following sums
 are withdrawn and
 credited to the Pro-
 vincial Reserve—

(a) Constg. Head Asst. ^{Rs}
 Collector's office at
 Ramnad 2400

(b) Constg. a residence
 for the Head Asst.
 Collector at Ramnad 1000

(c) Constg. a Sub Registrar's
 office at Arupukota 1480

(d) Constg. a Sub-Registrar's
 office at Perayore 1500

(e) — do — at Tiruppuravanam 1270
 Total Rs 7650

4. The Suptg. Engineer sur-
 renders the existing grant
 of Rs 5000 or Rs 6225 in-
 clusive of the percentage
 charges for constructing
 a bridge across the
 Varahamadi in the
 Madura District as the
 estimate for the bridge
 has not yet been
 sanctioned. This amount
 will therefore be replaced
 at the disposal of the
 Local and Municipal
 department.

5. The sum of Rs 1280
 or Rs 1594 inclusive of
 the percentage charges
 surrendered from the
 grant for constructing
 a residence for the Post
 officer at Ramban is
 resumed and held in
 reserve.

The Suptg. Engr. ^{VI} ~~London~~ ^{1/2/96}
 " Engr. P.W. Accts.
 " Revenue Deptt.
 " Local & Mun. Deptt.
 " Director General of P. Offices ^{CR}
 " Marine Deptt.

DESPATCHED
 12 FEB. 96

H.E.

(HE P. 520 W 2) 11 Feb. 1896

To The Secretary to the Govt. of India, P.W.D.

In continuation of my letter P. 3037 W dated 28th November 1895 I am directed to state that the estimates for the meteorological buildings at Kodaikanal have not yet been sanctioned and to request that a sum of Rs 6,848, as shown below, may be withdrawn by the Government of India.

Observatory building Rs 2,500
Residence for the Superintendent 3,000
Establishment 550
Tools & Plant 1265
83
Total 6,848

I have &c
6/2/96
W

DESPATCHED
24 FEB 96

6.2.96
N.E. 6/2 R 10/2.

Surrender of funds from the grant for the Kodaikanal Observatory Buildings and other works

B.C.

Imps to P. 11

No. 105 m, 1

OFFICE OF THE SUPERINTENDING ENGINEER,

6TH CIRCLE,

Trichinopoly, 31st January 1896.
P.W.D.

FROM
W. Hughes Esquire
THE SUPERINTENDING ENGINEER,
6th CIRCLE.

TO
THE CHIEF ENGINEER,
P.W.D.

SIR,

ENCLOSURES.

I have the honor to request that the following grant in the Madras Division, may be withdrawn at an early date:-

Sl. No.	Existing grant	Modification of allotments applied for		Modification of allotments proposed	
		Reduction	Increase	Reduction	Increase
<u>Imperial - Civil Buildings</u>					
<u>Major Original</u>					
1	Observatory buildings at Kodaikanal	5,000	2,500	"	2,500
2	Residence for the Superintendent at Kodaikanal	3,000	3,000	"	3,000
<u>Minor Original</u>					
3	Enlarging the Mudukulathur Post office	530	500	"	500
		6,000	"	6,000	"

Provincial

Slu. No.	110	Description	Existing Grant	Modification of allotments applied for		Modification of allotments proposed	
				Revenue	Non-revenue	Revenue	Non-revenue
<u>Provincial - Civil Buildings</u>							
<u>Major - Original</u>							
4		Constructing a Chief Head Assistant Collector's Office at Ramnad. Estimate sanctioned in G.O. No. 31725 of 11-12-94 Rs 17,700	7155	2400	"	2400	"
5		Constructing a Residence for the Head Assistant Collector at Ramnad. Estimate sanctioned in G.O. No. 26265 of 15-10-94 Rs 2186	2186	1000	"	1000	"
6		Constructing a Sub-Registrar's Office at Tirupukh. Estimate Rs 4480 sanctioned in G.O. No. 2450 of 2-2-95 Rs 2480	2480	1480	"	1480	"
7		Constructing a Sub-Registrar's Office at Peraiy. Estimate Rs 4030. Sanctioned in G.O. No. 15135 of 21-6-95 Rs 3000	3000	1500	"	1500	"
8		Constructing a Sub-Registrar's Office at Tirupuravani. Estimate Rs 4270 sanctioned in G.O. No. 17115 of 9-7-94 Rs 2270	2270	1270	"	1270	"
			7650	"	7650		
<u>Utilised Local Funds</u>							
<u>Major - Original</u>							
9		Constructing a bridge across the Varambadi	5000	5000	"	5000	
<u>Excluded Local Funds</u>							
<u>Major - Original</u>							
10		Constructing a residence with out houses for the Post Office at Perambur. Estimate Rs 6400 sanctioned in G.O. No. 625 of 6 March 94 Rs 2320	2320	1280	"	1280	"

2. Item No. 142. Surrendered there being no probability of the estimate being sanctioned soon. 20
- Item No. 3. Owing to incessant rain and Cholera at Tirudakulathur which is an out of the way place, bricks could not be manufactured; hence the surrender.
- Item No. 4 & 5. On account of constant rain in Ramnad, the manufacture of bricks has been greatly retarded; Surrendered is therefore proposed.
- Items Nos. 6, 7 & 8. Surrendered as the sites have not as yet been handed over by the Revenue Department. The notification for the acquisition of lands required for the Sub-Registrar's office at Tiruppuravani & Tirupukh have been approved of in G.O. Nos. 23475 of 23-9-95 & 1325 of 11-6-95, respectively. The Collector has been written to on the subject by the Executive Engineer.

P. W. D. 6th CIRCLE.

FROM

THE SUPERINTENDING ENGINEER,

6TH CIRCLE.

TO

THE CHIEF ENGINEER,

P. W. D.

No. 106m2

Dated 31 } January 1896.
Received 5/2

Enclosures.

Funds.

Surrendering certain
grants in the Madras
Division -

No. 3541W of 24-12-92 ✓

No. 245W of 2-2-93 ✓

" 1711W " 9-7-94 ✓

" 2827W - 7-11-95 ✓

" 3036-7W - 28-11-95 ✓

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not
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Item No. 9. Surrendered there
being no probability of
the estimate which is
now under check in the
office being sanctioned
soon.

Item No. 10. Surrendered as
the work is in suspense
pending sanction of
the revised estimate
which is under scrutiny
in this office.

I have the honor to be
Sir,

Your most obedt. Servant.

W. Hughes.

Superintending Engineer

6th Circle

Dates: 3.2.96

[Handwritten signature]

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following papers :—

From W. AUSTIN, Esq., I.C.S., Chairman, Harbour Trust Board, Madras, to the Secretary to Government, Marine Department, dated 10th January 1896, No. 3846.

I have the honour to submit, for the information of Government, the usual report for the quarter ending 30th September 1895, which has been delayed longer than usual to enable me to forward the accompanying tracings of the Marine Survey of the harbour and roadstead referred to in the concluding portion of paragraph 5 of the report for the quarter ending 30th June, which were received from the Board's Engineer only the day before the Xmas holidays.

2. The Traffic Manager's returns of imports and exports for the half year April—September are also printed herewith, together with statement of cash receipts and charges, and the usual comparative statement.

3. *Foreign Imports* show a substantial increase in nearly all important items with the exception of piece-goods — 1,923 bales and cases, and twist — 1,390 bales; also kerosine oil in cases — 166,393 which is replaced by 2,823 tons more of the bulk oil imported in tank steamers. Coal has during the half year increased by 12,362 tons and iron also shows a large increase 9,261 tons. Steel bars bundles and hoops are 13,546 packages more and hardware + 6,760 packages, wines and spirits + 6,586 packages, and beer + 1,231 cases and 2,033 hogsheads. There is also an item 3,366 tons of timber, a cargo of Norway pine imported for use at the gold mines.

The Madras Railway Company has imported 4,052 tons more timber, + 3,974 packages and + 1,399 tons of stores + 292 tons of coke and — 1,331 tons of coal.

The South Indian Railway shows a steady decline.

4. *Foreign Exports* have been fairly well maintained. The chief items of *increase* are coffee + 1,280 bags, cotton + 9,127 bales, tanned hides + 5,253 bales, and indigo + 3,108 chests, wool + 1,565 bales. On the other hand the following produce shows considerable reduction. Twist — 1,244 bales, seeds — 32,498 bags, ground-nuts — 42,570 bags, jaggery — 10,030 bags, rice — 5,613 bags, tanned goat and sheep skins — 9,490 bales.

5. *Coasting Trade*.—The imports show satisfactory increases in many items which are detailed in the statement. I need only refer to coal + 3,081 tons, gram and peas + 34,403 bags. Kerosine oil in cases + 1,993. Paddy + 11,864 bags, seeds + 4,848 bags, and timber + 2,871 tons. The coasting exports have been fairly well maintained; but ground-nuts show a decline of 14,373 bags, and seeds are — 18,045 bags.

Receipts.				RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
I. Contributions from Port funds	...	...	...	...	...	...	...	...	...	33,900	0	0
II. Beach imports : Dues under section 45	(a) I (i), (ii), (iii)	...	...	97,670	5	6						
Pier do.	do.	do.	...	33,705	13	8						
Beach exports	do.	do.	...	14,162	1	8						
Pier do.	do.	do.	...	24,136	1	1						
Wharfage	do.	do.	II	3,071	15	0						
Craneage	do.	do.	III	21,371	7	7						
Storage	do.	do.	IV	579	10	4						
Demurrage	do.	do.	V	191	4	9						
Dues for entry of vehicles under section 45 (c) VI	...	...	...	8,137	1	6						
Provisions :—Dues on	under section 45 (a) I (i)	...	...	313	13	0						
Rent of properties	...	...	...	354	11	1						
Water : Charge for—delivered at pier head	...	...	...	2,535	0	0						
Penalties under section 84	...	...	...	...								
Sundries	...	...	...	...			2,06,229	5	2			
III. Portorage under section 45 (a) I (iv)—												
Beach	...	...	...	36,627	8	6						
Pier	...	...	...	18,548	12	3						
Miscellaneous	...	...	...	7	13	0						
							55,184	1	9			
										2,61,413	6	11
IV. Interest on Government of India, 3½ per cent. promissory notes	...	...	...	...						7,037	0	6
Amount refunded from construction funds in repayment of advances made from time to time from Revenue account from 1st March to 6th May 1895	...	...	...	...						79,000	0	0
							Total	...	11,34,668	4	1	
Charges.												
I. Interest (under section 30)	...	...	...	...			2,27,607	4	10			
II. Repayment of loan for construction of harbour under section 31	...	...	...	...			1,00,000	0	0			
										3,27,607	4	10
III. Refunds	...	...	...	1,303	14	8						
IV. Fees to trustees	...	...	...	3,180	0	0						
V. Chairman's allowance	...	...	...	2,400	0	0						
							6,883	14	8			
VI. Establishment, &c.—												
1. Secretary's salary	...	...	...	4,800	0	0						
2. Correspondence department	...	...	...	1,781	9	8						
3. Accounts department	...	...	...	3,285	1	10						
4. Cash department	...	...	...	2,453	11	10						
5. Traffic department (shore staff).	...	...	...	15,539	15	1						
6. Preventive service	...	...	...	5,605	0	0						
7. Do. boatmen	...	...	...	606	2	3						
8. Tidal observatory	...	...	...	180	0	0						
9. Exchange compensation allowance	...	...	...	1,758	3	6						
10. Contribution to Government for pensions	...	...	...	405	15	6						
11. Contribution to Provident fund.	...	...	...	34	9	0						
							36,450	4	8			
VII. Contingencies—												
(a) Subject to regular audit—												
Postage	...	...	...	36	0	2						
Receipt stamps	...	...	...	128	12	0						
Telegrams	...	...	...	3	13	0						
Furniture	...	...	...	86	7	9						

Charges—cont.

	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Fees for audit	1,000	0	0						
Law charges	23	4	0						
Stationery and printing ...	1,479	11	1						
Advertisement charges ...	75	0	0						
Uniform for Preventive service, &c.	1,278	14	0						
				4,111	14	0			
(b) Admissible without detailed audit—									
Overtime fees to establishment.	2,150	8	5						
Do. to Preventive service and boatmen ...	1,601	4	11						
Miscellaneous	1,577	9	11						
				5,329	7	3			
VIII. Petty construction and repairs—									
New works	3,825	2	2						
Repairs	2,770	8	6						
Tools and plant									
				6,595	10	8			
IX. Portage—							59,371	3	3
1. Coolies, beach	22,755	12	2						
2. Do. pier	8,918	11	3						
3. Do. custom-house	6,853	6	3						
4. Coasting cargo	686	2	6						
5. Cart hire	413	6	6						
6. Engine charges	2,238	8	9						
7. Steam crane charges ...	1,144	1	9						
8. Refunds	2,965	7	4						
9. Claims for losses and damage of cargo	783	8	4						
10. Provident fund deductions from coolies' wages	607	2	3						
11. Provident fund contributions by the Trust	607	2	3						
				47,973	5	4			
(a) Contingencies subject to regular audit—									
Postage									
Receipt stamps	0	3	0						
Telegrams									
Furniture	70	0	0						
Tarpaulins	1,471	0	0						
Law charges									
Stationery and printing ...	28	2	0						
Advertisement charges ...									
Lighting pier and yards ...	881	0	9						
				2,450	5	9			
(b) Contingencies admissible without detailed audit—									
Miscellaneous				734	1	8			
X. Advances to construction account							51,157	12	9
Total, Expenditure							1,35,000	0	0
Closing balance on the 30th September 1895—							5,73,136	4	10
Government securities (par value Rs. 4,13,900)				4,00,063	14	10			
Cash in the Bank of Madras ...	1,60,646	3	6						
General cash in office	321	12	11						
Advance for contingencies ...	500	0	0						
				1,61,468	0	5			
							5,61,531	15	3
Total							11,34,668	4	1

N.B.—These balances exclude Rs. 500 with the Traffic Manager for meeting daily portage charges and Rs. 15 with the Cashier for meeting charges on account of postage and receipt stamps.

(Signed) L. E. PRITCHARD, Assistant Accountant-General, In charge Outside Audit. (Signed) H. E. HOPE-ROSS, Chief Accountant, Harbour Trust.

COMPARATIVE statement of receipts and charges of the Madras Harbour Trust under Act II of 1886 for half-years ending 30th September 1894 and 1895.

Items.	Actuals from 1st April to 30th September 1894.	Actuals from 1st April to 30th September 1895.	Plus or minus.
REVENUE ACCOUNT.			
Opening balances	RS. 11,68,742	RS. 7,53,318	RS. —4,15,424
Receipts.			
I. Contributions from Port funds	57,607	33,900	— 23,707
II. Beach imports: Dues under sec. 45 (a) I (i), (ii), (iii)	79,157	97,670	+ 18,513
Pier do. do. do.	29,950	33,706	+ 3,756
Beach exports do. do.	16,676	14,162	— 2,514
Pier do. do. do.	27,265	24,136	— 3,129
Wharfage do. II	3,020	3,072	+ 52
Cranage do. III	22,017	21,371	— 646
Storage do. IV	735	580	— 155
Demurrage do. V	247	191	— 56
Dues for entry of vehicles under sec. 45 (c) VI.	6,988	8,137	+ 1,149
Provisions: Dues on—under sec. 45 (a) I (i) ...	331	314	— 17
Rent of properties	340	355	+ 15
Water: Charge for—delivered at pier head ...	2,605	2,535	— 70
Penalties under section 84			
Sundries			
III. Portage under section 45 (a) I (iv)			
Beach	33,910	36,627	+ 2,717
Pier	15,207	18,549	+ 3,342
Miscellaneous	106	8	— 98
IV. Interest on Government of India, 3½ per cent. promissory notes	20,067	7,037	13,030
Amount refunded from Construction Funds in repayment of advances made from time to time from Revenue Account		79,000	+ 79,000
Total Receipts	3,16,228	3,81,350	
Total, including the opening balance	14,84,970	11,34,668	
Charges.			
I. Interest (under section 30)	2,22,912	2,27,607	+ 4,695
II. Repayment of loan for construction of harbour under section 31	1,00,000	1,00,000	
III. Refunds	493	1,304	+ 811
IV. Fees to trustees	3,210	3,180	— 30
V. Chairman's allowances	2,400	2,400	
VI. Establishment—			
1. Secretary's salary	4,800	4,800	
2. Correspondence department	1,822	1,782	— 40
3. Accounts department	3,280	3,285	+ 5
4. Cash department	2,299	2,454	+ 155
5. Traffic department (shore staff)	13,832	15,540	+ 1,708
6. Preventive service	6,106	5,605	— 501
7. Do. boatmen	594	606	+ 12
8. Tidal observatory		180	+ 180
9. Exchange compensation allowance	2,703	1,758	— 945
10. Contribution to Government for Pensions.	419	406	— 13
11. Do. to Provident fund	35	35	
VII. Contingencies—			
(a) Subject to regular audit—			
Postage	41	36	— 5
Receipt stamps	107	129	+ 22
Telegrams	27	4	— 23
Furniture	107	86	— 21
Fees for audit		1,000	+ 1,000
Law charges	31	23	— 8
Stationery and printing	1,257	1,480	+ 223
Advertisement charges	230	75	— 155
Uniform for Preventive service, &c.	1,365	1,279	— 86

Comparative statement of receipts and charges of the Madras Harbour Trust, &c.—cont.

Items.	Actuals from 1st April to 30th Sept. 1894.	Actuals from 1st April to 30th Sept. 1894.	Plus or minus.
	RS.	RS.	RS.
VII. Contingencies—cont.			
(b) Admissible without detailed audit—			
Overtime fees to establishment	2,429	2,151	— 278
Do to Preventive service and boatmen	1,711	1,601	— 110
Miscellaneous	1,574	1,578	+ 4
VIII. Petty construction and repairs—			
New works	6,245	3,825	— 2,420
Repairs	7,036	2,771	— 4,265
Tools and plant	887	—	— 887
IX. Portage—			
1. Coolies, beach	22,129	22,756	+ 627
2. Do. pier	8,205	8,919	+ 714
3. Do. custom-house	4,436	6,853	+ 2,417
4. Coasting cargo	756	686	— 70
5. Cart hire	—	413	+ 413
6. Engine charges	1,069	2,239	+ 1,170
7. Steam crane charges	1,415	1,144	— 271
8. Refunds	1,962	2,965	+ 1,003
9. Claims for losses and damage of cargo	406	783	+ 377
10. Provident Fund deductions from coolies' wages	569	607	+ 38
11. Provident Fund contributions by the Trust.	569	607	+ 38
(a) Contingencies subject to regular audit—			
Postage	—	—	—
Receipt stamps	2	—	— 2
Telegrams	—	—	—
Furniture	—	70	+ 70
Tarpaulins	946	1,471	+ 525
Law charges	—	28	— 28
Stationery and printing	308	—	— 308
Advertisement charges	—	—	—
Lighting pier and yards	955	881	— 74
(b) Contingencies admissible without detailed audit—			
Miscellaneous	1,804	734	— 1,070
X. Advances to construction Account	11,000	1,35,000	+ 1,24,000
Total Expenditure	4,44,483	5,73,136	—
Closing Balance	10,40,487	5,61,532	—
Total, including the Closing Balance	14,84,970	11,34,668	—

(Signed) H. E. HOPE-ROSS,
Chief Accountant, Harbour Trust.

I.—STATEMENT of Goods imported from Foreign Ports.

	Packages.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or decrease.
Apparel and effects.	Packages	1,347	1,068	1,017	985	255	350	+ 95
Alum	Barrels	326	686	910	773	250	361	+ 111
Asphalte, tar and pitch	Casks	4,439	2,329	2,638	2,493	1,148	1,680	+ 532
Acids	Cases	1,854	1,408	1,560	2,151	1,048	541	— 507

I.—Statement of Goods imported from Foreign Ports—cont.

	Packages.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or decrease.
Arms and guns	Cases	442	221	250	93	50	33	— 17
Arrack	Casks	884	833	1,031	1,218	479	675	+ 196
Blankets	Bales	119	168	28	55	14	29	+ 15
Beef and pork	Cases	36	—	—	—	—	—	—
Bricks	100	1,021	551	1,550	900	703	129	— 574
Beer	Cases	6,123	8,710	7,013	5,408	2,642	3,973	+ 1,231
	Barrels	1,140	1,707	1,401	1,800	860	564	— 296
	Hogsheads	6,808	8,210	4,310	6,743	2,657	4,690	+ 2,033
Boiler	No.	51	32	48	25	13	17	+ 4
Corks	Bundles	88	72	50	60	17	38	+ 21
Canvas	Bales	121	193	615	148	32	72	+ 40
Candles	Cases	16,637	31,017	27,463	28,458	13,089	22,141	+ 9,052
Colours	"	3,838	3,286	2,998	3,999	919	1,732	+ 813
Confectionery, provisions and oil-man stores	"	23,395	22,129	20,829	16,508	6,489	9,075	+ 2,586
Crockery and glass-ware.	Crates and casks	4,538	3,817	5,300	3,627	1,051	2,976	+ 1,925
Chalk	Barrels	370	140	134	366	50	239	+ 189
	Tons	—	—	—	30	30	—	—
Cement	Casks	14,522	7,369	8,904	10,235	3,662	3,630	— 32
Cast-iron pipes and tubes	Tons	335	1,436	989	1,472	384	748	+ 364
Camphor	Tubs	4,739	4,349	5,765	5,523	2,341	1,814	— 527
Coal	Tons	33,686	49,508	58,179	76,851	43,613	55,975	+ 12,362
Coke	"	578	778	1,018	896	407	623	+ 216
Fuel	"	—	2,953	—	—	—	—	—
Crackers	Cases	470	840	327	—	948	868	— 80
Copper-plates and tiles	No.	4,802	521	7,260	4,096	2,244	4,529	+ 2,285
Corrugated iron	Packages	805	2,512	2,688	3,234	—	3,624	+ 3,624
Dynamite	Cases	13,040	8,035	10,598	9,426	3,378	7,702	+ 4,324
Earthenware	Crates	2,318	1,886	2,168	1,492	846	1,641	+ 795
Fire clay	Casks	2,768	272	312	454	32	65	+ 33
Flour	Bags and barrels	1,317	821	1,251	1,348	861	350	— 511
Flannel	Bales	54	30	64	23	5	21	+ 16
Gunpowder	Packages	6,667	5,987	5,883	3,384	1,476	1,246	— 230
Harmonium	Cases	30	27	24	15	5	5	—
Hardware	Cases and casks	8,234	6,783	8,189	11,532	6,237	12,997	+ 6,760
Hops	Packages	129	64	297	287	128	238	+ 110
Iron	Tons	13,737	17,929	18,627	10,863	4,556	13,817	+ 9,261
Iron safes	No.	296	150	167	56	29	41	+ 12
Kerosine-oil.	Cases	397,862	251,320	342,671	343,365	166,395	2	— 166,393
	Tons	—	3,361	5,455	7,899	3,471	6,294	+ 2,823
Malt	Bags	445	407	22	56	6	—	— 6
Millinery and haberdashery	Cases	1,609	1,566	1,370	1,881	1,036	972	— 64
Matches	"	10,665	9,125	8,927	8,140	3,222	3,316	+ 94
Machinery	Tons	3,099	3,241	4,817	3,603	1,906	1,075	— 831
Nails	Kegs	13,744	10,547	14,022	11,948	3,249	10,889	+ 7,640
Oil and turpentine.	Drums	7,225	15,600	4,581	4,021	2,176	2,037	— 139
Piece-goods.	Cases	70,000	51,551	57,676	78,435	32,782	16,964	— 15,818
	Bales	—	—	—	—	—	13,895	—
Paper	Bales	6,546	5,518	6,038	4,435	2,300	2,652	+ 352
Pianos	No.	153	99	112	49	29	48	+ 19
Printing types	Cases	492	727	346	231	53	162	+ 109
Pig lead	No.	2,198	1,098	2,612	629	167	616	+ 449
Paint	Kegs	7,753	10,257	5,770	8,436	3,419	4,341	+ 922
Rattan	Bundles	3,823	5,669	2,362	4,519	1,137	759	— 378
Rails	No.	—	—	—	—	—	3,998	+ 3,998
Soaps	Cases	1,650	970	2,172	1,050	402	606	+ 207
Salt	"	383	329	153	458	138	184	+ 46
Steel	Cases and casks	864	3,343	794	395	166	48	— 118
Steel bundles and bars	No.	11,261	10,401	10,768	8,905	4,792	13,492	+ 8,700
Steel hoops	Bundles	5,567	1,597	4,930	2,439	1,057	5,903	+ 4,846
Shovels	"	275	499	29	127	30	—	— 30
Sodawater bottles	Crates	1,395	1,768	1,570	2,155	1,030	813	— 217
Sulphur	Casks	752	435	1,128	10	10	356	+ 346
Shot	Kegs	177	56	248	130	108	116	+ 8
Sundries	Packages	48,408	33,606	56,235	53,125	24,513	23,120	— 1,393
Specie	No.	1,229	888	768	612	252	320	+ 68
Sugar	Bags	2,152	1,196	4,198	1,527	—	1,146	+ 1,146
Stationery	Cases	1,242	848	1,333	2,939	981	2,150	+ 1,169
Spelter	Cakes	836	8,786	22,921	4,013	2,628	1,519	— 1,109
Saw	Cases	70	48	79	36	6	23	+ 17

I.—Statement of Goods imported from Foreign Ports—cont.

	Packages.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or decrease.	
Twine and rope ..	Bales and coils ..	438	455	458	862	66	83	+	17
Tin plates ..	Boxes ..	5,608	4,649	6,669	4,389	1,914	2,238	+	324
Tin slabs ..	No. ..	..	..	..	2,496	..	1,516	+	1,516
Tramway material. {	Packages ..	..	..	..	5,370	5,152	1,213	—	3,929
Twist ..	Tons ..	15,079	18,664	24,071	29,432	10,979	9,589	—	1,390
Timber ..	Bales ..	..	..	..	202	..	3,366	+	3,366
	Tons ..	..	..	..	..	..	3,366	+	3,366
Wine and spirits. {	Cases ..	37,877	44,739	36,048	36,519	13,001	19,166	+	6,165
	Casks ..	863	658	514	713	497	868	+	371
	Punchoons ..	369	733	1,058	139	15	65	+	50
Window glasses ..	Cases ..	5,972	12,000	10,425	8,053	2,043	3,893	+	1,850
White and red lead ..	Kegs ..	681	951	737	715	120	466	+	346
Yellow metal ..	Cases ..	3,076	3,361	2,784	3,275	1,352	1,758	+	406
Zinc sheets ..	Packages ..	2,749	1,690	1,761	1,342	627	88	—	539
Horses ..	No. ..	816	959	835	709	137	75	—	58
Ponies ..		70	112	131	208	58	64	+	11
Cows ..		59	15	7	7	1	2	+	1
Dogs ..		13	14	3	45	33	..	—	33
Elephants ..		10	7	6	4	4	..	—	4
Two-wheeled carriages ..		..	8	9	9	1	11	+	10

II.—STATEMENT of Stores imported by the Madras Railway Company.

		Packages.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or decrease.	
Stores	{	Packages	82,105	72,434	47,040	8,915	5,110	9,084	+	3,974
Fuel	..	Tons	3,605	499	156	1,173	..	1,399	+	1,399
Coke	..	"	1,437	544	716	703	703	995	+	292
Coal	..	"	27	300	237	2,948	2,948	1,617	—	1,331
Timber	..	"	2,477	2,083	1,448	1,364	853	4,905	+	4,052
Fire bricks	..	100	115	330	..	75	75	50	—	25
Boiler	..	No.	4	..	..	6	..	8	+	8

III.—STATEMENT of Stores imported by the South Indian Railway Company.

		[Packages.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or decrease.
Stores	.. {	Packages ..	68,282	22,171	28,640	13,933	12,138	3,934	— 8,204
Coke		Tons ..	..	..	992	113	..	225	+ 225
Coal			14	..	..	..	..	..	..
Timber			..	..	..	..	..	..	..
Boiler			..	..	..	..	..	..	..
Fire bricks		No. ..	4	12	10	1	..	..	..
		100 ..	..	..	..	190	160	60	— 100

IV.—STATEMENT of Goods imported from Coast Ports.

	Packages.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or decrease.
Apparel and effects.	Packages ..	451	343	527	520	312	223	— 89
Alum	Barrels ..	10	187	7	149	124	10	— 114
Acids	Cases ..	89	125	269	305	200	46	— 154
Animals	No. ..	..	10	..	9	9	..	— 9
Arms and guns ..	Cases ..	45	12	13	10	6	2	— 4
Boilers	No. ..	2	..	..	..	..	..	— 206
Bricks and tiles ..	100 ..	1,396	57	837	852	328	122	— 151
Coffee	Bags ..	879	595	575	476	336	185	— 11
Candles	Cases ..	..	11	..	1	1	12	— 159
Colours	..	1,225	1,531	1,591	1,244	674	515	— 231
Crockery and glass-ware ..	..	322	466	426	1,233	513	282	— 3,081
Coal	Tons ..	13,249	13,792	22,152	17,556	10,714	13,795	— 23
Coke	..	..	..	..	..	..	..	— 22
Carpets	Bales ..	77	94	99	95	47	24	— 186
Camphor and benjamin ..	Tubs ..	682	1,306	432	1,060	425	403	— 193
Copra	Bags ..	32	..	122	68	67	253	— 1,974
Crackers	Cases ..	..	..	..	2	..	..	— 408
Copper	..	1,667	936	557	10	10	203	— 147
Do.	Tiles and ingots ..	96	421	2,180	3,755	2,903	929	— 1,974
Cutch and lac ..	Packages ..	4,415	3,191	3,554	5,208	2,440	2,032	— 408
Cast iron tubes, pipes ..	Tons ..	..	..	..	61	..	147	— 147
Cocoanuts	No. ..	3	415	2,023	..	..	..	— 1,357
Earthenware	Crates ..	392	2,941	407	271	110	1,467	— 3,678
Do.	Pipes ..	2,626	6,315	950	182	156	3,834	— 1,189
Firewood	Tons ..	..	..	..	..	..	1,189	— 1,189
Flour	Bags and barrels ..	7,248	11,682	12,270	18,641	7,579	9,724	— 2,145
Gunnies	Bales ..	7,930	9,661	9,755	11,341	5,275	3,759	— 1,516
Gram and peas, &c. ..	Bags ..	271,682	380,145	395,249	264,890	142,698	177,101	— 34,403
Garlic	..	2,945	1,215	6,007	7,495	5,508	4,099	— 1,409
Hardware	Cases ..	641	1,197	1,507	2,920	1,610	743	— 867
Horns	Bundles ..	880	980	511	856	516	388	— 128
Hides	Bales ..	6,127	9,539	6,013	6,896	3,368	3,418	— 50
Iron	Tons ..	231	293	155	202	120	75	— 50
Iron-safes	No. ..	31	38	34	18	12	7	— 5
Kerosine-oil	Cases ..	..	..	500	..	..	1,993	— 1,993
Leaves	Bundles ..	6,508	3,742	5,113	4,393	1,611	3,481	— 1,870
Liquor	Cases ..	..	..	2,193	2,071	901	2,222	— 1,321
Machinery	Tons ..	158	79	49	202	191	5	— 186
Millinery and haberdashery ..	Cases ..	208	245	144	371	166	131	— 35
Oil and turpentine	Drums ..	8,340	6,369	5,941	5,829	3,156	3,155	— 1
Paddy	Bags ..	..	75,980	23,737	19,988	4,863	16,727	— 11,864
Piece-goods, {	Cases ..	3,802	4,756	3,499	4,814	2,638	1,081	— 882
Paper	Bales ..	3,128	4,898	5,420	7,962	3,782	4,319	— 537
Paint	Kegs ..	224	693	247	277	100	202	— 102
Pianos	No. ..	15	12	5	8	4	..	— 4
Rice	Bags ..	1,147,048	205,176	110,181	111,384	56,070	52,600	— 3,470
Rose-water	Cases ..	1,434	1,815	1,357	1,594	982	1,627	— 645
Seeds	Bags ..	30,406	25,747	13,916	12,061	7,819	12,067	— 4,848
Skins	Bales ..	6,199	50,502	6,807	7,108	3,527	2,947	— 580
Silk	..	1,051	699	290	488	265	407	— 142
Sandalwood	Bundles ..	143	121	42	265	169	100	— 69
Sugar	Bags ..	1,381	866	1,333	2,686	299	697	— 398
Specie	No. ..	202	190	193	124	9	29	— 20
Sundries	Packages ..	47,533	47,137	48,614	52,303	28,983	22,891	— 6,092
Soap	Cases ..	445	40	147	863	508	546	— 38
Sulphur	Casks ..	471	544	506	295	295	198	— 97
Spice	Packages ..	359	740	640	944	569	427	— 142
Stationery	..	..	..	..	184	..	134	— 134
Soda-water bottles..	Crates ..	..	..	241	1,651	886	29	— 857
Twine and rope ..	Bales and coils ..	839	775	1,063	1,309	463	320	— 143
Tin plates {	Boxes ..	1,807	912	858	1,248	620	340	— 280
Twist	Slabs ..	..	..	..	78	..	148	— 148
Turmeric	Bales ..	1,126	1,147	1,206	1,187	502	720	— 218
Timber	Bags ..	7,224	4,977	5,433	5,185	3,359	3,125	— 234
Tea	Tons ..	15,137	10,595	15,264	14,154	7,152	10,023	— 2,871
Tamarind	Cases ..	1,321	3,411	37	205	57	164	— 107
Yellow metal	Bundles ..	..	..	140	86	84	10	— 74
Horses	Cases ..	6	542	1,078	281	74	36	— 38
Carriages	No. ..	1	15	8	..	..	..	— ..
Tramway materials.	..	..	7	24	14	3	5	— 2
	Tons ..	..	..	..	13	..	..	— ..

VI.—STATEMENT of Goods exported to Coast Ports.

	Packages.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or decrease.	
Beer and ale ..	Cases ..	352	294	305	354	213	91	—	122
	Casks ..	159	94	91	166	28	54	+	26
	Hogsheads ..	7	41	161	107	65	46	—	19
Boiler ..	No. ..	..	..	1	..	..	..	..	..
Cinchona bark ..	Bales ..	395	84	80	..	..	..	..	..
Chillies ..	Bags and bundles ..	2,064	2,907	9,207	2,444	1,835	422	—	1,413
Cigars ..	Cases ..	1,418	1,136	789	732	293	359	+	66
Coffee ..	Bags ..	507	1,449	541	449	152	262	+	110
Cotton ..	Bales ..	5,721	4,245	7,080	5,295	2,957	5,349	+	2,392
Do. twist ..		4,698	6,138	3,220	3,034	1,428	2,619	+	1,191
Coriander ..		..	..	..	..	..	..	..	..
.. omum seeds ..	Bags ..	2,970	7,002	6,894	2,067	1,368	518	—	850
Cement ..	Casks ..	..	8,908	132	195	18	62	+	44
Carpets ..	Bales ..	68	51	41	27	14	9	—	5
Coal ..	Tons ..	275	450	157	480	220	210	—	10
Carriage ..	No. ..	21	47	39	35	11	16	+	5
Deer horns ..	Packages ..	108	151	52	..	..	..	..	..
Explosive ..	Cases ..	2,668	1,331	1,067	46	20	2	—	18
Eggs ..	Pots ..	1,165	1,125	1,198	1,263	412	193	—	219
Firewood ..	Tons ..	2	..	..	..	..	..	..	..
Ground-nuts ..	Bags ..	27,790	17,839	16,116	63,700	40,203	25,830	—	14,373
Gram, peas, &c. ..		521	1,226	233	372	44	112	+	68
Horns, cow and buffalo ..	Tons ..	310	307	166	106	404	126	—	278
Hides ..	Bales and bundles ..	379	526	535	252	119	114	—	5
Hardware ..	Cases and casks ..	..	..	..	800	146	2,022	+	1,876
Indigo ..	Cases and chests ..	165	816	1,162	264	77	29	—	48
Iron ..	Tons ..	2,244	2,611	755	695	352	298	—	54
Old iron ..		..	..	..	165	..	40	+	40
Jaggery ..	Bags ..	258	1,448	336	488	251	146	—	105
Kerosine-oil ..	Cases ..	10,327	659	1,117	11,005	5,746	9,671	+	3,925
Myrabolams ..	Bags ..	1,054	291	1,112	131	31	67	+	36
Miscellaneous ..	Packages ..	50,510	69,584	61,706	18,312	9,806	21,859	+	12,053
Onions ..	Bags and baskets ..	22,442	53,406	47,062	94,737	20,716	18,167	—	2,549
Oil ..	Casks ..	807	637	346	641	459	209	—	250
Piece-goods ..	Bales ..	..	..	..	..	..	..	..	..
	Cases ..	5,615	8,651	6,368	8,852	4,140	4,396 852	+	1,108
Potatoes ..	Bags and baskets ..	23,637	24,388	30,592	20,068	10,788	7,047	—	3,744
Poonac ..	Bags ..	4,770	22,181	9,853	396	350	316	—	34
Pianoes ..	No. ..	23	16	17	11	1	26	+	25
Paddy ..	Bags ..	..	8,806	8,400	4,123	3,423	2,118	—	1,305
Provisions ..	Packages ..	..	..	..	1,565	1,082	1,410	+	328
Rice ..	Bags ..	5,448	31,893	11,083	8,196	3,872	3,834	—	38
Redwood ..	Tons ..	119	693	4	134	8	52	+	44
Seeds, gingelly and castor ..	Bags ..	16,803	2,787	36,799	68,201	38,087	21,892	—	17,195
Skins, sheep and goat, tanned ..	Bales ..	721	1,046	871	1,706	203	229	+	26
Sandalwood ..	Bundles ..	153	256	2,786	373	156	39	—	117
	Cases ..	2,982	3,783	3,045	2,534	1,276	1,255	—	21
Spirits and wines. {	Casks ..	727	716	992	409	268	125	—	183
	Puncheons ..	13	189	214	..	..	..	..	..
Sugar ..	Bags ..	773	1,419	473	1,725	476	1,050	+	574
Specie ..	Boxes ..	236	510	47	75	48	16	—	32
Salt ..	Bags ..	..	..	..	4,001	3,997	20	—	3,977
Tamarind ..	Bundles ..	3,624	8,253	5,090	3,028	1,621	1,827	+	206
Turneric ..	Bags ..	19,258	17,883	38,147	53,374	29,105	24,860	—	4,245
Tea ..	Cases ..	341	62	50	114	40	78	+	38
Wool ..	Bales ..	769	603	463	478	109	638	+	529
Yellow metal ..	Tons ..	53	67	256	31	19	22	+	3
Timber ..		..	..	..	..	..	4	+	4
Bricks ..		..	..	..	..	..	..	..	..

VII.—STATEMENT of Stores, &c., imported by Government.

Department.	Description.	Class.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or decrease.
Accountant-General.	Specie, silver	Boxes.	403	582	533	489	277	167	— 110
	" copper	"	5,100	710	780	480	100	..	— 100
	Silver and copper	"	..	..	..	..	..	..	..
	Notes	No.	32	19	30	..	..	..	..
Public Works Department.	Packages	No.	27	1	..	..	..	..	..
	Boilers	"	2	..	..	1	..	..	..
	Coal	Tons.	50	20	..	..	..	..	..
	Coke	"	..	..	..	64	..	..	..
Ordnance	Iron	"	271	9	19	151	..	..	..
	Bricks	"	100	..	..	17	..	..	..
	Stores	Pkgs.	15,148	6,494	10,812	1,875	827	411	— 416
	Iron	Tons.	..	..	..	..	7	..	— 7
Madras Harbour Works.	Coal	"	..	..	1,450	..	145	..	— 145
	Boilers	No.	..	..	..	..	2	..	— 2
	Ammunition.	Boxes.	2,148	..	109	13,465	5,913	73	— 5,840
	Gunpowder.	Barrel.	..	..	..	..	53	..	— 53
Clothing	Stores	Pkgs.	18,017	28,566	21,057	16,390	10,668	4,976	— 5,692
	Bricks	"	100	..	..	50	..	..	— 50
	Cement	Casks.	1,869	..	..	14,000	5,600	9,240	— 3,640
	Stores	Pkgs.	3,869	..	..	40	..	..	— 40
Police	Coal	Tons.	..	..	..	..	..	..	..
	Packages	No.	1,983	2,324	2,176	1,900	426	1,121	— 695
	Police	"	122	167	196	131	123	81	— 42
	Salt Revenue	"	272	291	109	79	74	14	— 60
Post Office	Medical	"	1,119	858	742	2,886	1,613	958	— 655
	Medical	"	1,779	1,007	1,920	1,012	175	102	— 73
	Telegraphs	"	34,768	24,126	9,129	10,770	2,193	3,690	— 1,497
	Stationery	"	732	1,197	1,156	1,115	235	270	— 35
Samps	Commissariat	"	1,961	1,122	1,861	1,611	1,203	1,635	— 433
	Gazette Press	"	8,588	7,420	2,562	3,611	424	987	— 563
	Marine	"	161	149	97	249	242	299	— 57
	Revenue Survey	"	729	880	806	317	192	112	— 80
Agriculture	Government Central Museum	"	297	208	25	37	13	26	— 13
	Inspector of Cattle	"	380	320	140	6	..	3	— 3
	Under Secretary to Government	"	15	10	9	6	3	5	— 2
	Superintendent of Prisons	"	235	504	85	68	31	29	— 2
Revenue Board	Forests	"	1	17	7	16	1	..	— 1
	Presidency College	"	424	33	9	13	9	1	— 8
	School of Arts	"	1,196	10	3	1	1	..	— 1
	Inspector of Cattle	"	28	15	2	4	2	11	— 9
Diseases	Chemical Examiner	"	3	1	1	..	..	..	..
	Medical College	"	9	100	..	..	..	..	..
	Deputy Collectors	"	81	31	36	35	8	8	..
	Astronomer	"	73	31	41	31	..	2	— 2
Presidency Paymaster	Registration	"	9	15	12	..	2	15	— 13
	Director of Public Instruction	"	23	13	20	7	4	11	— 7
	Superintendent, Remount Depot, Hosur	"	2	8	4	..	10	..	— 10
	Resident, Mysore, in Bangalore	"	7	4	1	..	..	1	— 1
Quarter Master General	Registrar of High Court	"	9	139	4	3	1	5	— 4
	Curator, Govt. Gardens, Ooty	"	..	600	214	2	1	10	— 9
	Civil Engineering College	"	..	2	9	4	2	2	..
	Secretary to the Chief Commissioner of Coorg, Bangalore	"	..	3	14	..	2	1	— 1
Revenue Settler	Executive Engineer, Military Works	"	..	1	4	2	..	..	..
	Bricks	"	100	..	..	2,003	7	804	— 797
	Controller, Military Accounts	"	..	..	..	45	..	..	..
	..	"	..	..	..	2	1	3	— 2

VII.—Statement of Stores, &c., imported by Government—cont.

Department.	Description.	Class.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or decrease.
Agent for Govt. Consignments	Bricks	"	100	..	..	501	76	1	— 75
Government Botanical Gardens	"	"	..	..	..	282	278	145	— 133
Secretary for Berar, Hyderabad	"	"	..	7	..	4	..	3	— 3
Collector	"	"	..	..	..	4	..	..	..
Officer Commanding No. 4 Company, Eastern Division, Royal Artillery, Fort	"	"	..	..	..	..	1	..	— 1
Major C. B. Wilkinson, "Queen's Own" Sappers and Miners, Bangalore	"	"	..	..	..	..	..	1	— 1
Commissioner of Paper Currency	"	"	..	..	..	13	..	12	— 12
Officer Commanding 9th Company, Southern Division, Royal Artillery, Fort St. George	"	"	..	..	..	1	..	2	— 2
Officer Commanding 1st Battalion, Cheshire Regiment, Fort	"	"	..	..	..	5	..	3	— 3
Officer in charge, Pensioners, Madras	"	"	..	..	..	3	1	1	..
Officer Commanding "Queen's Own" Sappers and Miners, Bangalore	"	"	..	..	..	1	2	23	— 21
Officer Commanding Southern Division, Royal Artillery, Madras	"	"	..	..	..	1	1	13	— 13
Pay Examiner, Superintendent, Madras Presidency Trading School	"	"	..	..	..	..	..	2	— 2

VIII.—STATEMENT of Stores, &c., exported by Government.

Department.	Description.	Class.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or decrease.
Accountant-General	Specie, silver	Boxes.	411	45	95	..	16	..	— 16
	" copper	"	965	200	163	180	65	20	— 45
	" notes	"	6	13	8	6	3	..	— 3
	" packages	No.	4	1	1	6	1	6	— 5
Bank of Madras	" silver	Boxes.	34	..	84	..	45	..	— 45
	" copper	"	..	62	..	..	..	..	..
	Packages	No.	8,595	5,831	9,257	8,819	3,771	4,843	— 1,072
	and pieces	"	1,784	488	3,203	1,173	873	799	— 74
Public Works Department	Iron	Tons.	..	..	..	..	7	7	— 7
	Packages	"	1,327	1,096	998	1,160	509	714	— 205
	and pieces	"	889	974	955	933	644	264	— 380
	Police	"	591	785	724	960	739	459	— 280
Salt Revenue	Medical	"	1,377	1,610	2,166	1,027	479	352	— 127
	Telegraph	"	8,845	4,330	4,945	3,045	108	706	— 598
	Stationery	"	693	780	623	680	217	279	— 62
	Stamps	"	220	258	236	221	92	115	— 23
Commissariat	..	"	7,971	6,205	5,301	6,030	3,693	3,285	— 408

VIII.—Statement of Stores, &c., exported by Government—*cont.*

Department.	Description.	Class.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or decrease.
Gazette Press ..	Packages and pieces.	Tons.	526	503	478	618	336	289	— 47
Marine ..	"	"	390	366	37	98	79	25	— 54
Revenue Board ..	"	"	77	37	87	105	49	2	— 47
Do. Settlement ..	"	"	51	84	53	35	19	8	— 11
Do. Survey ..	"	"	75	452	223	138	28	33	+ 5
Superintendent of Prisons ..	"	"	69	196	103	58	47	5	— 42
Registration ..	"	"	66	43	17	62	38	44	+ 6
Conservator of Forests ..	"	"	34	33	5	5	1	5	+ 4
Quarter Master General ..	"	"	..	4	..	..	1	..	— 1
Government Central Museum ..	"	"	10	22	13	..	..	2	+ 2
Deputy Collectors ..	"	"	2	9	..	..	..	..	..
Government Astronomer ..	"	"	..	18	13	21	..	1	+ ..
Agriculture ..	"	"	15	8	2	..	8	..	— 8
State Railways ..	"	"	100	..	..	..	..	..	..
Government Botanist ..	"	"	..	..	..	48	..	7	+ ..
Inspector of Cattle Diseases ..	"	"	3	1	..	..	..	..	..
Chemical Examiner ..	"	"	..	1	..	1	..	1	+ ..
Director of Public Instruction ..	"	"	10	6	13	1	1	..	— 1
Registrar of University ..	"	"	13	10	5	5	..	..	..
Collectors ..	"	"	10	..	6	..	..	4	+ ..
Curator of Government Garden, Ooty ..	"	"	11	..	12	..	..	..	..
Engineer, Harbour Trust Board ..	"	"	..	..	2	..	..	..	..
Crown Officer, High Court ..	"	"	14	18	5	..	12	..	— 12
School of Arts ..	"	"	..	..	..	..	..	..	..
Secretary to Government ..	"	"	2	..	..	..	..	..	..
Public Department ..	"	"	..	..	..	..	..	..	..
Registrar-General of Births, Deaths and Marriages ..	"	"	..	..	..	..	..	..	..
Inam Commissioner ..	"	"	1	..	..	..	..	1	+ ..
Consulting Engineer to Government Railways ..	Packages.	No.	20	..	..	..	..	..	..
Civil Engineering College ..	"	"	..	1	..	..	..	..	..
Superintendent, Census Operations ..	"	"	..	4	1	..	..	..	..
Post Office ..	"	"	..	2	2	..	..	..	..
Sanitary Commissioner ..	"	"	..	2	2	..	..	..	..
Registrar of High Court ..	"	"	..	..	..	31	..	18	+ 18
Superintendent, District Jail, Bellary ..	"	"	..	..	..	1	1	..	— 1
Assistant Engineer, Public Works Department, Government Brickfield ..	"	"	..	..	..	52	52	..	— 52
Officer Commanding 6th Regiment, M.L., Madras ..	"	"	..	..	..	17	..	..	..
Superintendent, Jail, Vizagapatam ..	"	"	..	..	..	..	..	2	+ 2
Meteorological Reporter ..	"	"	..	..	..	..	..	11	+ 11
Inspector of Salt ..	"	"	..	..	..	..	..	37	+ 37
Revenue Board, Land Revenue, Forest ..	"	"	..	..	..	..	..	16	+ 16

(Signed) S. HUTCHENCE,
Traffic Manager, Harbour Trust.

To the Secretary, Harbour Trust Board, Madras.

MADRAS HARBOUR WORKS.

Report of progress on the Madras Harbour Works for the quarter ending 30th September 1895.
Accompanying this report are the following plans and statements:—

41. (a) A plan of the harbour to a scale of 200 feet to an inch, showing in red the position and quantity of work done during the quarter. The contours in half fathoms, shown on this plan in black figures and lines inside and outside the harbour, are those of the latest Marine Survey made in 1895. The contour lines in blue are those of the Survey of 1893.

2. The position of the high water marks of 30th September 1895, and that of the previous three months both to the north of the revetment and the south of the harbour, are shown for comparison.

41. (b) A revised plan showing in detail the work done during the quarter at the Pier heads as now constructed, and the positions of the caissons at the Pier heads of the harbour, with a completed eastern entrance, having a width of 515' 6" and deep water alongside each Pier head.

42. (c) A statement comparing the expenditure on different sub-heads, and particulars of cement received and issued.

42. (d) A statement showing work done under different sub-heads and particulars of cement received and issued.

1. (e) Section showing the latest soundings in 1895 outside the South Pier, together with all former soundings along the same survey lines, showing the advance of sand below water-level, extending out to the 7-fathom line, as called for in G.O., No. 584 W., dated 12th March 1895.

3. North Pier Capping.—During the quarter the North Pier capping was extended towards shore by 938' 7" thereby completing a total length of 2,276 lineal feet of the North Pier, measured from the Pier head to the sanctioned design.

4. This length of capping was formed of 39 blocks of concrete built *in situ* averaging 24 feet in length $\times$ 24' width $\times$ 6' deep, and was equal to 5,537½ cubic yards of concrete placed in position in 76 working days.

5. Hard-wood sleepers have been built into the capping throughout its length for a line of rails as soon as the capping reaches shore, and a recess has been left in the capping for the transfer of the bulk-oil discharge pipe, from its temporary position, to the top of the capping.

6. South Pier Head.—The rubble base protection along the South Pier head was completed early in July. The length of base protected with concrete was 171 lineal feet, for which 155½ cubic yards of concrete was deposited below water.

7. Caisson.—The South Pier caisson was raised to its full height of 12 feet above high water and completed. By the 20th of July a lighthouse had been built upon it of mass concrete, identical with the one already completed at the North Pier head.

8. Capping along Pier.—The South Pier capping was commenced on the 25th July and at the close of the quarter, or in 55 working days, 855 lineal feet of the South Pier head and outer straight had been completed to the sanctioned design.

9. Thirty-three large blocks of concrete were made along the Pier which raised the masonry wall to a height of 12 feet above high water, and 5,338 cubic yards of concrete including old blocks were used in forming this capping.

10. Pallavaram Quarries and Concrete-making Machinery.—The total outturn of concrete made for the capping and other works during the quarter was 9,55½ cubic yards; and the outturn of blasted chips, received from the Pallavaram quarries during the quarter amounted to 6,600½ tons.

11. Summary of Progress.—The following statement is the summary of progress made on the harbour works during the quarter under review.

12. Supply of Portland Cement.—The S.S. "Golconda" arrived with 4,050 casks of Portland cement, containing tons 723-4-1-4, and the S.S. "Dunera" brought 600 casks containing tons 107-2-3-12 from London.

13. The S.S. "Manora" arrived with 990 casks, containing tons 176-15-2-24, and the S.S. "Goorkha" with 1,600 casks, containing tons 285-14-1-4 of cement, and a further supply of tons 850 was due on previous indents at the close of the quarter.

14. The balance of cement in store on the 30th September 1895 was 3,715½ casks containing tons 663-9-2-25 of cement.

15. The issue of cement during the quarter ending 30th September was 9,597½ casks containing tons 1,713-16-0-16.

16. Expenditure.—The expenditure upon the works during the quarter was Rs. 1,36,949-6-5 including establishment, &c., and the quarter closed with a balance upon the revised estimate of Rs. 2,76,313 including materials, cement and stores, already upon the works on the 30th September 1895.

17. Protective Works North of Harbour.—No further settlement of stone was perceptible along the revetment above water-level, but the line of revetment throughout is generally low, and will require feeding with stone next year.

18. Sea Bottom within the Harbour.—The depth of water inside the harbour was carefully surveyed in July, August and September 1895, and the soundings were taken along the same survey lines and in the same manner as in all previous surveys.

19. The new chart forwarded with this report shows the soundings of 1895 in feet and inches below DeHavilland's Mean Sea level, and the contour lines at half fathoms are shown in black lines.

20. For comparison the half fathom contour lines of the survey of 1893, which survey was made at the same time of the year, are shown in blue lines.

21. The following is the information to be gathered on comparing the soundings of 1895 with those of 1893.

22. The high water line of 1895 has advanced 30 feet along the southern half of the harbour, while it remains in about the same position north of the Iron Pier, although the line has become irregular in the past two years.

23. The 1 and $1\frac{1}{2}$ fathom contour lines are almost in the same position as in 1893, but the 2 and $2\frac{1}{2}$ fathoms lines have advanced seawards by about 20 feet.

24. The 3 and $3\frac{1}{2}$ fathoms contour lines have become very irregular, but on an average show an advance.

25. The 4 and $4\frac{1}{2}$ fathoms lines have shallowed about two inches to the north of the Iron Pier, while both contours have deepened on the southern half of the harbour. The 4 fathoms line at a distance of 300 to 400 feet from the South Pier is now two feet deeper than it was in 1893, while the $4\frac{1}{2}$ fathoms line at 400 and 900 feet from the South Pier is about one foot deeper.

26. The 5 and $5\frac{1}{2}$ fathoms lines have become irregular and deeper. At 700 feet from the South Pier the $5\frac{1}{2}$ fathoms line has returned to within 25 feet of the position of the 5 fathoms line in 1893 and may be taken to have deepened 2' 9".

27. The sand bank along the South Pier has had the effect of moving the 5 and $5\frac{1}{2}$ fathoms contour lines to about 50 to 60 feet further from the South Pier.

28. The 6 fathoms line has deepened from 6 to 9 inches in the centre of the harbour, but has shallowed near the north and south arms at the commencement of the curves to the outer straights.

29. The $6\frac{1}{2}$ fathoms line has shallowed from 6 inches to 1 foot at the northern half of the harbour and deepened from 1 to $1\frac{1}{2}$ feet on the southern half.

30. The 7 fathoms line has shallowed from 6 to 9 inches.

31. The $7\frac{1}{2}$ fathoms contour line of 1895 has advanced 90 feet nearer to the entrance to the harbour than it was in 1893 which shows a shallowing of 1 foot.

32. The line of soundings across the entrance from caisson to caisson has shallowed from 47 feet below DeHavilland's Mean Sea level in 1893 to 44' 5" in 1895 which shows a reduction in the depth of water at the entrance of 2' 7", which has been the cause of the filling up of the $7\frac{1}{2}$ fathoms line.

33. From the above, it will be seen that the depth of water in the harbour has not altered due to the deposit of silt, nor has any change of any importance taken place from the high water line down to the $3\frac{1}{2}$ fathoms line.

34. The movement of sand from the 4 and $4\frac{1}{2}$ fathoms lines into deeper water, together with a similar change between the 5 and 6 fathoms contour lines is an improvement as it has increased the depth of water available at the various moorings.

35. This movement of sand, between the four and six fathom lines, have apparently been the cause of the shallowing of the $6\frac{1}{2}$ and 7 fathoms lines, but this change in no way effects the moorings, while the reverse action may take place in a cyclone.

36. The shallowing of the entrance by 2' 7" and the fact that there is a ridge of sand to be found immediately across entrance, where there is 9 inches less water than there is inside or outside the harbour shows that accretion has taken place.

37. Further soundings outside the harbour show that at a distance of 220' east of the entrance, where there was a depth of 48' 4" in 1893 (and 51 feet in 1889) there is now 45' 4" or 3 feet less water.

38. This change, together with what has taken place in deeper water, would tend to show that the roadstead is shallowing as it has been known to have done in years past, and therefore the time has now arrived when it will be necessary to adopt measures to prevent the further accretion of sand outside the entrance where dredging would be of no avail.

39. In my opinion it is clear that the sand will not travel past the entrance without entering it as was originally surmised it might do.

40. The shallowing of the roadstead cannot be said to be due to the harbour, where deep water is concerned, and it is well known that previous to the construction of the harbour the roadstead varied considerably in depth, and paragraph 16 of Appendix II of G.O., No. 866 of 1869, mentions the shore line far in advance of where it is now.

41. From 1868 the roadstead deepened until about 1882, but since then it has been shallowing, and paragraph 23 of the first harbour committee's report in 1868 before the present harbour was designed, states that the 7-fathoms line at low water was found to be at a distance of 900 yards east of the end of the iron pier.

42. This point is now the position of the harbour entrance where at low water there is now a less depth of water than there was at the same point twenty-seven years ago, or is upon record.

43. In 1882, after the construction of the harbour, 8 fathoms at low water was found throughout and within the harbour entrance, or in shore of the position where the 7-fathoms line used to be in 1868, showing the entrance to have deepened by 6 feet between 1868-82, but in 1895 it is again less by more than one fathom, and there appears every possibility of its shallowing further.

44. For further evidence of the shallowing of the roadstead, the latest soundings outside the south pier, prove that the 9-fathoms line has advanced seawards slightly, which depth is well beyond any influence the harbour may have upon the roadstead. At a point where there was 52'-10" in 1893, there is now 52 feet, and this point would appear to be the limit where the appearance of the shallowing is taking place, as the sea bed changes from one covered with hard mud to a sandy bottom, which continues towards shore, where accretion has taken place.

45. The depth of water immediately to the south of the harbour which must be watched with interest, is that ranging between the 5 and 7 fathoms contour lines, along the survey lines 9A on the chart accompanying this report.

46. The survey of 1895 at this point shows the $5\frac{1}{2}$ fathoms line in 1893 to have shallowed to 4 fathoms, and the 6-fathoms line to have advanced eastwards 90 feet, or shallowed from 6 fathoms in 1893 to 5 fathoms in 1895.

47. The 7-fathoms line of 1893, upon the same survey line, has advanced about 80 feet, or shallowed by 2 feet, while similar changes have taken place at a depth of 7 fathoms, extending as far south as 1,000 feet from the south arm.

48. These facts must therefore direct the attention of the trustees of the harbour, to adopt a means of arresting the further travelling of sand towards the harbour entrance, at a depth of 6 fathoms below water level, and the subject has been treated in a separate report, suggesting the construction of a groyne, to be extended from time to time, if found necessary.

49. The survey of 1895 shows the sand bank, which has formed along the south pier due to the sand washing through the old wall, to extend further along the pier, or to have advanced with the accretion of sand outside of the harbour, but its dimensions in width remain the same.

50. In 1893 when sand was observed to be entering the harbour through the south pier below water level a groyne of rubble stone, capped with concrete blocks, was proposed as a means of arresting the further accretion of sand against the south pier throughout its length, and from entering the harbour.

51. By this means deep water would be secured and a dock formed naturally which would require very little dredging, should a dock be required at Madras in years to come, and the harbour entrance by this means would be prevented from further shallowing.

52. Mention has been made that I admitted that the sand bank was encroaching upon and closed No. 1 mooring to long and deep draught vessels.

53. Past correspondence shows that the No. 1 mooring was early in 1893, made a berth for anything but long and deep vessels by the mooring having been brought into shallower water which closed the berth to that class of vessel, regardless of the sand bank.

54. Now that the new sternfast moorings have been brought still further inshore, I referred to what might occur due to this alteration, and has already happened, when the "S.S. Elax" touched the bottom in No. 5 mooring, due to that berth in 1893 being brought into shallower water. Dredging was then suggested, but no further complaints have been made, and the latest soundings show no change to have taken place in the depth of mooring No. 5.

55. There is ample room in No. 1 mooring for an ordinary vessel of 340 feet in length with a draught of 25 feet at low water to swing clear of the sand bank on the bow mooring without damage. Instead of this berth having shallowed, the survey of 1895 shows it to have deepened at the $4\frac{1}{2}$ and 5 fathoms lines, while the sand bank dies out so suddenly, that there is $4\frac{1}{2}$ fathoms at low water at a distance of 120 feet from the south pier, which leaves a distance of 390 feet clear between the sand bank and the mooring, with 27 feet at low water for an ordinary vessel to swing, should a stern hawser part. This depth is sufficient for any vessel, other than a long and deep draught one, for which the berth is not intended.

56. There is no doubt that additional and deeper berths are required for vessels calling at this port, but these are only obtainable by dredging after certain protective works have been carried out, and these have been included in the harbour improvements scheme now awaiting sanction.

57. *Screw Moorings.*—In September, ten of the special screws sent out in 1880, for the moorings were put down by an easier and cheaper method, to that for which they were designed, which due to wave motion and the necessary floating plant proved so costly. This new system has enabled the moorings being put down when there was a considerable sea on, and in half the time, and permits of the moorings being raised and utilized elsewhere, if required. Each screw is 4 feet in diameter and attached to a 2½ inch chain which takes the place of the usual pile, so objectionable where dredging may be necessary for improvements in future. The moorings used at Madras present no difficulty in this direction are undoubtedly the best, and by the easy way they are now sunk to any depth, with any amount of swell, will make this abandoned design of mooring become the mooring of the future, as sand, shells and clay to any depth presents no difficulty and no screwing is necessary.

58. The moorings completed in the quarter were the sternfast buoys of Berths Nos. 2, 3, 4 and 5, and one bow mooring for No. 5 berth. Each buoy is attached to two screws, which were all sunk through hard sand and clay to 21 feet below bed level, which is as deep as the design of mooring will permit of, while with the old system this depth could not be reached.

59. As these moorings are so uniformly sunk, and only two links are left above the present sea bottom, they will be a ready and satisfactory proof of any change in the depth of the harbour, and should dredging be carried out, they will not project above bed level to the danger of vessels as the screw pile moorings have been known to do.

MADRAS,
17th December 1895.

(Signed) A. LEE-POGSON,
Engineer, Harbour Trust Board.

MADRAS HARBOUR WORKS.

STATEMENT showing progress during quarter ending 30th September 1895 as shown on accompanying Lithographed Plan No. 41.

		Sub-head of works.							Total expenditure during quarter.
		Column.	A	B	C	D	E	F	
1	Total quantity blasted chips received on works .. Tons.	..	..	..	..	6,666½	..	..	..
2	Concrete blocks made <i>in situ</i> , capping .. No.	..	39	33	..	..	..	..	..
3	Total outturn of concrete .. C.yds.	..	5,537½	5,338	155½	..	9,552	..	..
4	Advance or progress of completed work .. Ry. ft.	..	9387"	855	..	..	..	..	..
5	Rubble base protected with concrete ..	..	..	171	..	..	..	..	..
6	Broad gauge line, per yard, laid new ..	..	..	..	..	..	..	..	..
7	Do. do. taken up ..	..	939	855	..	..	..	1,794	..
8	Approximate expenditure under sub-head of works .. Rs.	..	8,825	9,381	2,061	8,757	94,127	..	1,23,151

		Tons.	Cwt.	Qrs.	lb.	Quantity due on indents.	Tons.	Cwt.	Qrs.	lb.
7,213	Casks of cement received on works during quarter ending 30th June 1895, containing ..	1,288	0	0	24	..	..	850	0	0
9,597½	Casks of cement issued for works during quarter ending 30th June 1895, containing ..	1,713	16	1	16	..	..	..	..	..
3,715½	Casks of cement, balance in store at the end of quarter ending 30th June 1895, containing ..	663	9	2	25	..	..	..	..	..

MADRAS,
18th December 1895.

(Signed) A. LEE-POGSON,
Engineer, Harbour Trust Board.

COMPARISON of expenditure to date with sanctioned estimate for the quarter ending 30th September 1895.

As per estimate sanctioned in Secretary of State's despatch, No. 41, dated 24th September 1895.
Tide (L.O., No. 2817 W., dated 6th November 1895.

As per estimate sanctioned in Secretary of State's despatch, No. 41, dated 24th September 1895.
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Comparison of expenditure to date with sanctioned estimate for the quarter ending 30th September 1895—*cont.*

As per estimate sanctioned in Secretary of State's despatch, No. 41, dated 24th September 1895. File G.O., No. 2817 W., dated 6th November 1895.												Arrears not paid.	Value of work done up to date, columns 11 and 12.
As executed.													
Sub-head of work.	Quantity.	Rate.	Per.	Cost.	Total.	Quantity.	Rate.	Expenditure.		Up to date.			
	2	3	4	5	6	7	8	Total up to end of last quarter.	During the quarter.	11	12	13	
South Pier.													
19. Ordinary rubble deposited from boats	175,078	2 9 0	Ton.	4,49,062	RS.	173,659	2 9 4	RS. A. P. 4,44,126 1 4	..	RS. A. P. 4,44,126 1 4	RS. A. P. 4,925 14 8	RS. A. P. 4,49,062 0 0	
20. Large rubble deposited from breakwater	8,615	1 12 0	"	15,076		8,615	1 12 0	15,075 13 0	..	15,075 13 0	..	15,075 13 0	
21. Concrete blocks for building	45,066	11 3 1	C. yd.	5,04,510		43,341½	11 10 3	5,04,510 0 0	..	5,04,510 0 0	..	5,04,510 0 0	
22. Setting blocks at commencement	2,556	3 1 6	"	7,942		2,556	3 1 6	7,911 13 3	..	7,911 13 3	..	7,911 13 3	
23. Setting blocks from 2,550 to 3,700 feet	30,160	3 7 11	"	1,05,461		30,160	3 7 11	1,05,461 0 0	..	1,05,461 0 0	..	1,05,461 0 0	
24. Setting blocks at pier head	12,350	11 1 3	"	1,36,845		12,350	11 0 10	1,36,476 5 8	..	1,36,476 5 8	..	1,36,476 5 8	
25. Concrete in mass for filling	602	7 9 1	"	4,555		602	7 9 1	4,554 14 4	..	4,554 14 4	..	4,554 14 4	
26. Concrete in cylindrical pier head	2,355	15 0 0	"	35,325		..	..	35,323 3 0	..	35,323 3 0	1 13 0	35,325 0 0	
27. Concrete in filling in between coarsed block-work and caisson	791	15 0 0	"	11,865		790½	15 0 4	11,865 0 0	..	11,865 0 0	..	11,865 0 0	
28. Wave-breaker concrete blocks	47,231	11 1 6	"	5,24,070		42,589½	12 4 7	5,23,203 11 0	..	5,23,203 11 0	..	5,23,203 11 0	
29. Depositing concrete blocks	47,714	1 5 8	"	64,708		41,073	1 9 0	64,260 3 9	..	64,260 3 9	..	64,260 3 9	
30. Concrete in protection to rubble base	1,700	13 4 11	"	22,620		1,328½	13 14 2	15,961 13 2	2,498 6 4	18,460 3 6	..	18,460 3 6	
31. Cramps, iron	259	11 7 7	Each.	2,972		220	13 8 1	2,972 0 0	..	2,972 0 0	..	2,972 0 0	
32. Concrete capping	16,247	15 12 9	C. yd.	2,56,687		6,007	14 13 2	30,975 13 1	54,709 7 9	85,685 4 10	3,376 4 11	89,061 9 9	
33. Iron caisson	1	..	"	18,000		..	..	18,000 0 0	..	18,000 0 0	..	18,000 0 0	
34. Preparing base for and setting cylindrical pier head	..	..	"	38,896		..	..	38,399 10 11	..	38,399 10 11	..	38,399 10 11	
Total for South Pier	..	..	..	..	21,98,554	..	..	19,59,077 6 6	57,207 14 1	20,16,285 4 7	8,304 0 7	20,24,589 5 2	
Extending the Rubble Revetment protecting the foreshore North of Harbour.													
35. Rubble stone revetment.	70,600	2 1 0	Ton.	1,45,613	..	91,051	1 8 8	1,40,093 13 2	..	1,40,093 13 2	..	1,40,093 13 2	
36. Railway lines	..	..	..	9,849	..	..	..	11,665 7 10	..	11,665 7 10	..	11,665 7 10	
	..	..	..	..	1,55,462	..	..	1,51,759 5 0	..	1,51,759 5 0	..	1,51,759 5 0	

37. Tools and plant	..	..	..	..	6,11,541	..	..	6,11,541 9 10	..	6,11,541 9 10	..	6,11,541 9 10	REMARKS.—Expenditure up to 31st March 1895 from commencement of works during current official year from 1st April 1895 to 30th September 1895	Total outlay to 30th September 1895
38. Contingencies	..	..	..	..	2,47,970	..	..	2,27,009 13 11	531 2 10	2,27,541 0 9	180 15 2	2,27,721 15 11		
39. Establishment	..	..	..	..	6,73,445	..	..	6,31,213 2 4	17,857 4 3	6,49,070 6 7	5,153 5 1	6,54,223 11 8		
40. Materials at site (concrete blocks in yards)	..	..	..	..	..	..	..	28,891 8 0	13,817 2 2	15,074 5 10	4,242 13 1	19,317 2 11		
41. Advances to work-people	..	..	..	..	..	..	..	34 3 2	..	34 3 2	..	34 3 2	Total of revised estimate sanctioned in Secretary of State's despatch plus expenditure before 31st December 1894	Total sanctioned cost for completion of works
Total of estimate and value of work done	..	..	..	..	..	..	..	60,95,158 11 7	1,08,599 1 8	62,03,757 13 3	28,435 7 9	62,32,193 5 0		
Deduct probable recoveries due to sales of tools and plant	..	..	..	..	..	..	..	— 29,799 11 9	28,350 4 9	— 1,449 7 0	..	— 1,449 7 0		
Total	..	..	..	..	..	..	..	60,65,358 15 10	1,36,949 6 5	62,02,308 6 3	28,435 7 9	62,30,743 14 0		
Total of revised estimate sanctioned in Secretary of State's despatch plus expenditure before 31st December 1894	..	..	..	..	1,27,52,508	..	..	1,26,19,849 14 8	1,36,949 6 5	1,27,56,799 15 1	28,435 7 9	1,27,85,234 12 10	Deduct total expenditure as per column 11	Total amount available for completing works after quarter ending 30th September 1895
Total sanctioned cost for completion of works	..	..	..	..	1,27,52,508	..	..	1,27,52,508	..	1,27,52,508	..	1,27,52,508		
Add recovery on tools and plant	..	..	..	..	2,80,664	..	..	2,80,664	..	2,80,664	..	2,80,664		
Deduct total expenditure as per column 11	..	..	..	..	..	..	..	..	..	..	..	..		
Total amount available for completing works after quarter ending 30th September 1895	..	..	..	..	..	..	..	..	..	..	..	..		

REMARKS.—Expenditure up to 31st March 1895 from commencement of works during current official year from 1st April 1895 to 30th September 1895

RS. A. P.

1,25,11,921 5 7

2,44,877 15 6

Grant for 1895-96, Rs.

1,25,11,921 5 7

2,44,877 15 6

Grant for 1895-96, Rs.

1,25,11,921 5 7

2,44,877 15 6

Grant for 1895-96, Rs.

1,25,11,921 5 7

2,44,877 15 6

Grant for 1895-96, Rs.

MADRAS,
30th November 1895.

(Signed) G. MOOTHOSAWMY NAIDU,
Accountant, M. H. Works Office.

(Signed) A. LEE-POGSON,
Engineer, Harbour Trust Board.

From the Chairman, Harbour Trust Board, Madras, dated 20th January 1896, No. 3922.

ORDER—No. 529 W., dated 11th February 1896.

Ordered that the report be forwarded for the information of the Secretary of State and the Government of India.

2. The facts brought to light by the latest marine survey made in 1895 as compared with the survey of 1893 show that important movements of sand are taking place both inside and outside the harbour which will have to be watched. There is a shallowing of the entrance of the harbour by 2' 7", and this has continued, though to a less extent, inside the harbour where the 7-fathom line has shallowed from 6 to 9 inches. It has thus become apparent that the sand will not, as was originally surmised, travel past the eastern entrance without entering the harbour. To arrest the further advance of sand towards the harbour entrance, the Harbour Works Engineer has, in a separate report, suggested the construction of a groyne on the south side and parallel to the south harbour wall. The late Chief Engineer has, however, expressed grave doubts as to the utility for the purpose in view of a groyne in such a position, and an alternative proposal for a groyne run out at right angles from the south wall at the point where it takes a bend to the east and north has been suggested by Government. The question is one on which the highest engineering opinion is desirable, and it will accordingly be remitted to the Consulting Engineer in London through the Right Honourable the Secretary of State.

3. Such information as may be on record in the Secretariat as to the variations in the depth of the roadstead will be furnished to the Harbour Trust Board, and the Presidency Port Officer will also supply any information on the subject which may be available in his office.

4. The measures necessary to prevent further ingress of sand through the south wall have also received attention in the Proceedings of Government on the scheme of harbour improvements, and the requisite works ordered to be carried out at once. The question of dredging inside the harbour will have to be attended to as soon after as practicable.

[Here enter No. 530 W., dated 11th February 1896.]

(True Extract.)

(Signed) D. McNEIL CAMPBELL, Colonel, R.E.,
Joint Secy. to Govt., P.W.D.

To the Chairman, Harbour Trust Board.
„ Presidency Port Officer.

ENDORSEMENT—No. 530 W., dated 11th February 1896.

Copy of the above, with three plans showing the progress of the work and the results of the latest marine survey made in 1895, forwarded to the Government of India.

(By order.)

(Signed) D. McNEIL CAMPBELL Colonel, R.E.,
Joint Secy. to Govt., P.W.D.

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1896} Madras.

PUBLIC WORKS.

Dated February, 11th.

Recd.

Encl.

G.O., Nos. 529, 530 W., 11th Feb.
1896.

FEBRUARY.

Madras Harbour Works.

Forwarding copy of Proceedings reviewing the progress report of the — for quarter ending 30th September 1895.

No. ²/₅₂₉ W., 11th FEBRUARY 1896.

PUBLIC WORKS DEPARTMENT.

LETTER—to

THE RIGHT HONOURABLE THE SECRETARY OF STATE FOR INDIA.

MY LORD,

We have the honour to forward, for your Lordship's information, the accompanying copy of our Proceedings, No. 529 W., dated 11th February 1896, reviewing the progress report of the Madras Harbour Works for the quarter ending 30th September 1895, and would invite special attention to the question of the movement of sand disclosed by the marine survey made in 1895, as compared with that of 1893. The requisite measures to arrest the accretion both inside the harbour and at the entrance require, in our opinion, careful consideration from the highest engineering authority, and we desire that the matter be remitted to the Consulting Engineer in London for his advice. A copy of our Proceedings on the scheme of improvements brought forward in connection with the harbour will follow, together with the report of the Committee specially appointed to consider the matter. It will be seen that the measures requisite to prevent further ingress of sand through the south wall are to be carried out at once, and that dredging inside the harbour will be attended to as soon after as possible. This matter was, at the instance of Sir A. Rendel, brought specially to our notice in your Lordship's despatch No. 5, Public Works, dated 5th December 1895.

2. The contours in half fathoms shown on the plan of the harbour will, it is hoped, afford the information called for by your Lordship's predecessor in his despatch No. 2, Public Works, dated 7th February 1895.

We have the honour to be,

My Lord,

Your Lordship's most obedient, humble servants,

(Signed) WENLOCK.

(„) H. W. BLISS.

(„) J. GROSE.

FORT ST. GEORGE,
11th February 1896.

Exd. T. K. Narayana Aiyangar.

GOVT. OF MADRAS.

PUBLIC WORKS DEPARTMENT.

(Copy.)

LETTER to the Right Honourable
the Secretary of State for
India.

No. $\frac{2}{529}$ W., dated 11th Feb. 1896.

FORWARDING, with remarks, copy of Proceedings reviewing the progress report of the Madras Harbour Works for quarter ending 30th September 1895.

MARINE DEPARTMENT.

FROM

THE CHAIRMAN,
HARBOUR TRUST BOARD,
MADRAS.

TO

THE SECRETARY TO GOVERNMENT,
Marine Department.

DATED 10th January 1896.

DESPATCHED 11th " "

RECEIVED

ENCLOSURES Tracing of Marine Survey of Harbour and Roadstead, and tracing showing progress made during the quarter upon Harbour Construction.

No. 3846.

SUBJECT.

MADRAS HARBOUR.

Submitting Report for the quarter ending
30th September 1895.

Marine Current

Recd: 14.1.96

In duplicate

cc: 3 Tracing

No. 2431 W. 22-9-86

" 601 - 28-10-86 main s.c.

" 695 - 8-1-87

" 2362-30-19-9-94

" 8 - 5 - 19-9-94
2362

" 3248-90-18-12-94

" 11 - 5 - 18-12-94
3248

" 345 - 9-1-95

" 5840 - 12-3-95

" 2614-50-24-10-95

" 1305 - 11-1-96

MARINE DEPARTMENT:

FROM

THE CHAIRMAN,

HARBOUR TRUST BOARD,

MADRAS.

TO

THE SECRETARY TO GOVERNMENT,

Marine Department.

DATED 10th January 1896.

DESPATCHED 11th " "

RECEIVED

ENCLOSURES Tracing of Marine Survey of Harbour and Roadstead, and tracing showing progress made during the quarter upon Harbour Construction.

No. 3846.

SUBJECT.

MADRAS HARBOUR.

Submitting Report for the quarter ending 30th September 1895.

2

MADRAS HARBOUR TRUST,
SECRETARY'S OFFICE,
10th January, 1896.

No. 3846.

From

WARE AUSTIN, ESQ., I.C.S.,
CHAIRMAN, HARBOUR TRUST BOARD,
MADRAS.

To

THE SECRETARY TO GOVERNMENT,
Marine Department.

SIR,

I have the honour to submit, for the information of Government, the usual report for the quarter ending 30th September 1895, which has been delayed longer than usual to enable me to forward the accompanying tracings of the Marine Survey of the Harbour and Roadstead referred to in the concluding portion of para. 5 of the report for the quarter ending 30th June, which were received from the Board's Engineer only the day before the Xmas Holidays.

2. The Traffic Manager's returns of Imports and Exports for the half year April—September are also printed herewith, together with statement of cash receipts and charges, and the usual comparative statement.

3. *Foreign Imports* show a substantial increase in nearly all important items with the exception of Piece Goods — 1,923 bales and cases, and Twist — 1,390 bales; also Kerosine oil in cases — 166,393 which is replaced by 2,823 tons more of the bulk oil imported in tank Steamers. Coal has during the half year increased by 12,352 tons, and iron also shows a large increase 9,261 tons. Steel bars bundles and hoops are 13,546 packages more and Hardware + 6,760 packages, Wines and Spirits + 6,586 packages, and Beer + 1,231 cases and 2,033 hogsheads. There is also an item 3,366 tons of timber, a cargo of Norway pine imported for use at the Gold Mines.

The M. R. C. has imported 4,052 tons more timber, + 3,974 packages and + 1,399 tons of stores + 292 tons of coke and — 1,331 tons of coal.

The S. I. R. shows a steady decline.

4. *Foreign Exports* have been fairly well maintained. The chief items of increase are Coffee + 1,280 bags, Cotton + 9127 bales, Tanned Hides + 5,253 bales, and Indigo + 3,108 chests, Wool + 1,565 bales. On the other hand the following produce shows considerable reduction. Twist—1,244 bales, Seeds—32,498 bags, Ground Nuts—42,570 bags, Jaggery—10,030 bags, Rice—5,613 bags, Tanned Goat and Sheep Skins—9,490 bales.

5. *Coasting Trade*.—The imports show satisfactory increases in many items which are detailed in the statement. I need only refer to Coal + 3,081 tons, Gram and Peas + 34,403 bags. Kerosine oil in cases + 1,993. Paddy + 11,864 bags, Seeds + 4,848 bags, and Timber + 2,871 tons. The coasting exports have been fairly well maintained; but ground nuts show a decline of 14,373 bags, and seeds are — 18,045 bags.

6. *Harbour Dues* received have aggregated Rs. 2,61,413 for the half year, including Rs. 55,184 on account of Portage; the details of both receipts and charges are given in the comparative statement printed at page 5, and call for no special comment.

Brought forward...

RS.	A.	P.	RS.	A.	P.
43,334	3	4	3,27,607	4	10

VII CONTINGENCIES—

(a) Subject to Regular Audit. —		RS.	A.	P.
Postage ...	...	36	0	2
Receipt Stamps ...	...	128	12	0
Telegrams ...	...	3	13	0
Furniture ...	...	86	7	9
Fees for Audit ...	...	1,000	0	0
Law Charges ...	...	23	4	0
Stationery and Printing ...	...	1,479	11	1
Advertisement Charges ...	...	75	0	0
Uniform for Preventive Service, &c. ...	...	1,278	14	0

4.112 14 0

(b) *Admissible without Detailed Audit.*—

Overtime Fees to Establishment	...	2,150	8	5
Do. Preventive Service and Boatmen...	...	1,601	4	11
Miscellaneous	...	1,577	9	11

5,329 7 3

VIII. *Petty Construction and Repairs.*—

New Works...	...	...	...	3 825	2	2
Repairs ...	...	...	...	2,770	8	6
Tools and Plant	...	...	...	...	...	...

 6.595×10^{-8} IX. *Porterage.*—

59,371 3 3

1.	Coolies, Beach	...	...	...	22,755	12	2
2.	Do. Pier	...	...	...	8,918	11	3
3.	Do. Custom House	...	...	...	6,853	6	3
4.	Coasting Cargo	...	...	...	686	2	6
5.	Cart Hire	...	...	...	413	6	6
6.	Engine Charges	...	...	...	2,238	8	9
7.	Steam Crane Charges	...	...	...	1,144	1	9
8.	Refunds	...	...	...	2,965	7	4
9.	Claims for Losses and Damage of Cargo				783	8	4
10.	Provident Fund Deductions from						
	Coolies' wages...				607	2	3
11.	Do. Contributions by the						
	Trust...				607	2	3

47,973.5 4

(a) CONTINGENCIES—*Subject to Regular Audit—*

Postage	...	...	...	...	...
Receipt Stamps	...	...	...	0	3 0
Telegrams	...	...	...	...	...
Furniture	...	...	...	70	0 0
Tarpaulins	...	...	...	1,471	0 0
Law Charges	...	...	...	...	...
Stationery and Printing	...	...	...	28	2 0
Advertisement Charges	...	...	...	...	...
Lighting Pier and Yards	...	...	...	881	0 9

2,450 5 9

(b) CONTINGENCIES—*Admissible without Detailed Audit—*

Miscellaneous	...	...	...	...	734	1	8	51,157	12	9
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8. Advances to Construction Account

Total, Expenditure	...	...	...	...	5,73,136	4 10
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Closing Balance on the 30th September 1895—

Government Securities (Par value 4,13,900)	...	...	4,00,063	14	10
Cash in the Bank of Madras	...	1,60,646	3	6	
General Cash in Office	...	321	12	11	
Advance for Contingencies	...	500	0	0	

1,61,468 0 5

5,61,531 15 3

Total Rupees

11,34,668 4 1

N. B.—These balances exclude Rs. 500 with the Traffic Manager for meeting daily Portorage charges and Rs. 15 with the Cashier for meeting charges on account of Postage and Receipt stamps.

L. E. PRITCHARD,

Assistant Accountant-General.

In charge Outside Audit.

H. E. HOPE-ROSS,

Chief Accountant, Harbor Trust.

Strongly recommend, 100% 21 Nov.

Comparative Statement of Receipt and Charges of the Madras Harbuer Trust, under Act II of 1886 for half-years ending 30th September 1894 and 1895.

ITEMS.	Actuals from 1st April to 30th Sept. 1894.	Actuals from 1st April to 30th Sept. 1895.	Plus or Minus.	REMARKS.
REVENUE ACCOUNT.				
OPENING BALANCES.				
Receipts.				
I. Contributions from Port Funds	RS. 11,68,742	RS. 7,53,318	RS. 4,15,424	
II. Beach Imports : dues under Sections 45 (a) I (i)	57,607	33,900	23,707	
(ii) (iii)...	79,157	97,670	18,513	
Pier do. do. do.	29,950	33,706	3,756	
Beach Exports do. do. do.	16,676	14,162	2,514	
Pier do. do. do.	27,265	24,136	3,129	
Wharfage do. II	3,020	3,072	52	
Cranage do. III	22,017	21,371	646	
Storage do. IV	735	580	155	
Demurrage do. V	247	191	56	
Dues for entry of Vehicles under Section 45 (c) VI	6,988	8,197	1,149	
Provisions :—Dues on under Section 45 (a) I (i)	331	314	17	
Rent of Properties	340	355	15	
Water : charge for—delivered at pier head	2,605	2,535	70	
Penalties under Section 84				
Sundries				
III. Porterage under Section 45 (a) I (iv)				
Beach	33,910	36,627	2,717	
Pier	15,207	18,549	3,342	
Miscellaneous	106	8	98	
IV. Interest on Government of India, 3½ per cent. Pro. Notes	20,067	7,037	13,030	
Amount refunded from Construction Funds in repayment of advances made from time to time from Revenue Account		79,000	79,000	
Total Receipts...	3,16,228	3,81,350		
Total including the Opening Balance...	14,84,970	11,34,668		
Charges.				
I. Interest (under Section 30)...	2,22,912	2,27,607	4,695	
II. Repayment of Loan for Construction of Harbour under Sec. 31	1,00,000	1,00,000		
III. Refunds	493	1,304	811	
IV. Fees to Trustees	3,210	3,180	30	
V. Chairman's Allowances	2,400	2,400		
VI. Establishment—				
1. Secretary's Salary	4,800	4,800		
2. Correspondence Department	1,822	1,782	40	
3. Accounts Department	3,280	3,285	5	
4. Cash Department	2,299	2,454	155	
5. Traffic Department (Shore Staff)	13,832	15,540	1,708	
6. Preventive Service	6,106	5,605	501	
7. Preventive Service Boatmen	594	606	12	
8. Tidal Observatory		180	180	
9. Exchange Compensation Allowance	2,703	1,758	945	
10. Contribution to Government for Pensions	419	406	13	
11. Do. to Provident Fund...	35	85		
VII. CONTINGENCIES.				
(a)—Subject to Regular Audit.—				
Postage	41	36	5	
Receipt Stamps	107	129	22	
Telegrams	27	4	23	
Furniture	107	86	21	
Fees for Audit		1,000	1,000	
Law Charges	31	23	8	
Stationery and Printing	1,257	1,480	223	
Advertisement Charges	230	75	155	
Uniform for Preventive Service, &c.	1,365	1,279	86	
(b)—Admissible without detailed Audit.—				
Overtime Fees to Establishment	2,429	2,151	278	
Do. Preventive Service and Boatmen	1,711	1,601	110	
Miscellaneous	1,574	1,578	4	
VIII. Petty Construction and Repairs.—				
New Works	6,245	3,825	2,420	
Repairs	7,036	2,771	4,265	
Tools and Plant	887		887	
IX. Porterage.—				
1. Coolies, Beach	22,129	22,756	627	
2. Do. Pier	8,205	8,919	714	
3. Do. Custom House	4,436	6,853	2,417	
4. Coasting Cargo	756	686	70	
5. Cart Hire		413	413	
6. Engine Charges	1,069	2,239	1,170	
7. Steam Crane Charges	1,415	1,144	271	
8. Refunds	1,962	2,965	1,003	
9. Claims for Losses and Damage of Cargo	406	783	377	
10. Provident Fund Deductions from Coolies' wages	569	607	38	
11. Do. Contributions by the Trust	569	607	38	
(a) Contingencies, Subject to Regular Audit.—				
Postage				
Receipt Stamps	2		2	
Telegrams				
Furniture		70	70	
Tarpaulins	946	1,471	525	
Law Charges				
Stationery and Printing	308	28	280	
Advertisement Charges				
Lighting Pier and Yards	955	881	74	
(b) Contingencies, Admissible without Detailed Audit.—				
Miscellaneous...	1,804	734	1,070	
X. Advances to Construction Account	11,000	1,35,000	1,24,000	
Total Expenditure...	4,44,483	5,73,136		
Closing Balance...	10,40,487	5,61,532		
Total including the Closing Balance...	14,84,970	11,34,668		

H. E. HOPE-ROSS,
Chief Accountant, Harbour Trust.

I. STATEMENT OF GOODS IMPORTED FROM FOREIGN PORTS.

	Packages.	1891-92.	1892-93.	1893-94	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or Decrease.
Apparel and Effects ...	Packages...	1,347	1,068	1,017	985	255	350	+ 95
Alum ...	Barrels ...	326	686	910	773	250	361	+ 111
Asphalte, Tar, & Pitch.	Casks ...	4,439	2,329	2,638	2,493	1,148	1,680	+ 532
Acids ...	Cases ...	1,854	1,408	1,560	2,151	1,048	541	- 507
Arms and Guns	" ...	442	221	250	93	50	33	- 17
Arrack ...	Casks ...	884	833	1,031	1,218	479	675	+ 196
Blankets...	Bales ...	119	168	28	55	14	29	+ 15
Beef and Pork	Cases ...	36	...	...	...	...	...	...
Bricks	100 ...	1,021	551	1,550	900	703	129	- 574
Beer	Cases ...	6,123	8,710	7,013	5,408	2,642	3,873	+ 1,231
	Barrels ...	1,140	1,707	1,401	1,800	860	564	- 296
	Hogsheads	6,808	8,210	4,310	6,743	2,657	4,690	+ 2,033
Boiler ...	No. ...	51	32	48	25	13	17	+ 4
Corks ...	Bundles ...	88	72	50	60	17	38	+ 21
Canvas ...	Bales ...	121	193	615	148	32	72	+ 40
Candles ...	Cases ...	13,637	31,017	27,463	23,458	13,089	22,141	+ 9,052
Colours ...	" ...	3,838	3,286	2,998	3,999	919	1,782	+ 813
Confectionery Provi- sions and Oilmanstores	" ..	23,395	22,129	20,829	16,508	6,489	9,075	+ 2,586
Crockery & Glassware.	Crates	...	...	...	...	...	...	...
Chalk	& Casks .	4,538	3,817	5,300	3,627	1,051	2,976	+ 1,925
	Barrels ...	370	140	184	366	50	239	+ 189
	Tons ..	...	...	...	30	30	...	- 30
Cement	Casks ...	14,522	7,369	8,904	10,235	3,662	3,630	- 32
Cast Iron Pipes and Tubes	Tons ...	335	1,436	989	1,472	384	748	+ 364
Camphor	Tubs ...	4,739	4,349	5,765	5,523	2,341	1,814	- 527
Coal ...	Tons ...	33,686	49,508	58,179	76,851	43,613	55,975	+ 12,362
Coke ...	" ...	578	778	1,018	896	407	623	+ 216
Fuel ...	" ...	...	2,953	...	...	...	...	...
Crackers...	Cases ...	470	840	327	975	948	868	- 80
Copper Plates and Tiles	No. ...	4,802	521	7,260	4,096	2,244	4,529	+ 2,285
Corrugated Iron	Packages...	805	2,512	2,638	3,234	...	3,624	+ 3,624
Dynamite	Cases ...	13,040	8,035	10,598	9,426	3,378	7,702	+ 4,324
Earthenware	Crates ...	2,313	1,836	2,168	1,492	846	1,641	+ 795
Fire Clay	Casks ...	2,768	272	312	454	32	65	+ 33
Flour ...	Bags and Barrels ...	1,317	821	1,251	1,348	861	350	- 511
Flannel	Bales ...	54	30	64	23	5	21	+ 16
Gunpowder	Packages...	6,667	5,987	5,883	3,384	1,476	1,246	- 230
Harmonium	Cases ...	30	27	24	15	5	5	...
Hardware	Cases	...	...	...	...	...	...	...
Hops	& Casks..	8,234	6,783	8,189	11,532	6,237	12,997	+ 6,760
	Packages	129	64	297	287	128	238	+ 110
Iron	Tons ...	13,737	17,929	18,627	10,863	4,556	13,817	+ 9,261
Iron Safes	No. ...	296	150	167	56	29	41	+ 12
Kerosine Oil	Cases ...	397,862	251,326	342,671	343,365	166,395	2	-166,393
	Tons ...	...	3,361	5,455	7,899	3,471	6,294	+ 2,823
Malt	Bags ...	445	407	22	56	6	...	- 6

I. STATEMENT OF GOODS IMPORTED FROM FOREIGN PORTS—contd.

	Packages.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or Decrease.
Millinery and Haberdashery ... Cases	...	1,609	1,566	1,370	1,881	1,036	972	- 64
Matches ...	...	10,665	9,125	8,927	8,140	3,222	3,316	+ 94
Machinery ... Tons	...	3,099	3,241	4,817	3,653	1,906	1,075	- 831
Nails ... Kegs	...	13,744	10,547	14,022	11,948	3,249	10,889	+ 7,640
Oil and Turpentine. Drums	...	7,225	15,500	4,581	4,021	2,176	2,037	- 139
Piece Goods ... { Cases. Bales }	...	70,000	51,551	57,676	78,435	32,782	{ 16,964 13,895 }	- 1,923
Paper ... Bales	...	6,546	5,518	6,038	4,435	2,300	2,652	+ 352
Pianos ... No.	...	153	99	112	49	29	48	+ 19
Printing Types ... Cases	...	492	727	346	231	53	162	+ 109
Pig Lead ... No.	...	2,198	1,098	2,612	629	167	616	+ 449
Paint ... Kegs	...	7,758	10,257	5,770	8,436	3,419	4,341	+ 922
Rattan ... Bundles	...	3,823	5,669	2,362	4,519	1,137	759	- 378
Rails ... No.	...	...	...	...	...	...	3,998	+ 3,998
Soaps ... Cases	...	1,650	970	2,172	1,050	402	609	+ 207
Salt ...	...	383	329	153	458	138	184	+ 46
Steel ... Cases & Casks	...	864	3,343	794	395	166	48	- 118
Steel Bundles and Bars ... No.	...	11,261	10,401	10,768	8,905	4,792	13,492	+ 8,700
Steel Hoops ... Bundles	...	5,567	1,597	4,930	2,439	1,057	5,903	+ 4,846
Shovels ...	...	275	499	29	127	30	...	- 30
Sodawater Bottles ... Crates	...	1,395	1,768	1,570	2,155	1,030	813	- 217
Sulphur ... Casks	...	752	435	1,128	10	10	356	+ 346
Shot ... Kegs	...	177	56	248	130	108	116	+ 8
Sundries ... Packages	...	48,408	33,606	56,235	53,125	24,513	23,120	- 1,393
Specie ... No.	...	1,229	888	768	612	252	320	+ 68
Sugar ... Bags	...	2,152	1,196	4,198	1,527	...	1,146	+ 1,146
Stationery ... Cases	...	1,242	848	1,333	2,939	981	2,150	+ 1,169
Spelter ... Cakes	...	836	8,786	22,921	4,013	2,628	1,519	- 1,109
Saw ... Cases	...	70	48	79	36	6	23	+ 17
Twine and Rope ... Bales & Coils	...	438	455	458	862	66	83	+ 17
Tin Plates ... Boxes	...	5,608	4,649	6,669	4,389	1,914	2,238	+ 324
Tin Slabs ... No.	...	...	...	...	2,496	...	1,516	+ 1,516
Tramway Materials { Packages Tons }	...	...	...	...	5,370	5,152	1,213	- 3,939
Twist ... Bales	...	15,079	18,664	24,071	29,432	10,979	9,589	- 1,390
Timber ... Tons	...	...	...	...	...	...	3,366	+ 3,366
Wine and Spirits { Cases Casks }	...	37,877	44,739	36,048	36,519	13,001	19,166	+ 6,165
Window Glasses ... Puncheons	...	863	658	514	713	497	868	+ 371
White and Red Lead ... Cases	...	369	733	1,058	139	15	65	+ 50
Yellow Metal ... Cases	...	5,972	12,000	10,425	8,053	2,043	3,893	+ 1,850
Zinc Sheets ... Kegs	...	681	951	737	715	120	466	+ 346
Horses ... No.	...	816	959	835	709	137	75	- 58
Ponies ...	...	70	112	131	208	53	64	+ 11
Cows ...	...	59	15	7	7	1	2	+ 1
Dogs ...	...	13	14	3	45	33	...	- 33
Elephants ...	...	10	7	6	4	4	...	- 4
Two-wheeled Carriage ...	...	...	8	9	9	1	11	+ 10

II.

STATEMENT OF STORES
IMPORTED BY THE MADRAS RAILWAY COMPANY.

	Packages.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or Decrease.
Stores { Packages Tons }	...	82,105 3,605	72,434 499	47,040 156	8,915 1,173	5,110 ...	9,084 1,399	+ 3,974 + 1,399
Fuel ...	...	...	...	...	...	...	...	...
Coke ...	...	1,437	544	716	703	703	995	+ 292
Coal ...	...	27	300	237	2,943	2,948	1,617	- 1,331
Timber ...	...	2,477	2,083	1,448	1,364	853	4,905	+ 4,052
Fire Brick ... 100	...	115	330	...	75	75	50	- 25
Boiler ... No.	...	4	...	...	6	...	8	+ 8

III.

STATEMENT OF STORES
IMPORTED BY THE SOUTH INDIAN RAILWAY COMPANY.

	Packages.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or Decrease.
Stores { Packages Tons }	...	68,282 ...	22,171 ...	28,640 992	13,933 113	12,138 ...	3,934 225	+ 8,204 + 225
Coke ...	...	14	...	...	...	...	...	...
Coal ...	...	...	...	...	...	...	...	...
Timber ...	...	...	...	...	...	...	...	...
Boiler ... No.	...	4	12	10	1	...	...	...
Fire Bricks ... 100	...	...	...	...	190	160	60	- 100

IV.

STATEMENT OF GOODS IMPORTED FROM COAST PORTS.

	Packages.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or Decrease.
Apparel and Effects. Packages	...	451	343	527	520	312	223	- 89
Alum ... Barrels	...	10	187	7	149	124	10	- 114
Acids ... Cases	...	89	125	269	305	200	46	- 154
Animals ... No.	...	...	10	...	9	9	...	- 9
Arms and Guns ... Cases	...	45	12	13	10	6	2	- 4
Boilers ... No.	...	2	...	...	...	...	...	...
Bricks and Tiles ... 100	...	1,396	57	837	852	328	122	- 206
Coffee ... Bags	...	379	595	575	476	336	185	- 151
Candles ... Cases	...	...	...	11	1	1	12	+ 11
Colours ...	...	1,225	1,531	1,591	1,244	674	515	- 159
Crockery and Glass-ware ...	...	322	466	426	1,233	513	282	- 231
Coal ... Tons	...	13,249	13,792	22,152	17,556	10,714	13,795	+ 3,081
Coke ...	...	...	...	...	...	...	...	...
Carpets ... Bales	...	77	94	99	95	...	...	...
Camphor and Benja-min ... Tubs	...	682	1,306	432	1,060	425	403	- 22
Copra ... Bags	...	32	...	122	68	67	253	+ 186
Crackers ... Cases	...	...	...	...	2	...	...	...
Copper ...	...	1,667	986	557	10	10	203	+ 193
Do. ... Tiles & Ingots...	...	96	421	2,180	3,755	2,903	929	- 1,974
Cutch and Lac ... Packages	...	4,415	3,191	3,554	5,208	2,440	2,032	- 408
Cast Iron Tubes, Pipes	...	...	...	...	61	...	147	+ 147
Cocoanuts ... No.	...	3	415	2,023	...	...	...	...

IV. STATEMENT OF GOODS IMPORTED FROM COAST PORTS.—(contd.)

	Packages.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or Decrease.
Earthenware	Crates	892	2,941	407	271	110	1,467	+ 1,357
Do.	Pipes	2,626	6,315	950	182	156	3,834	+ 3,678
Firewood	Tons	...	...	...	...	...	1,189	+ 1,189
Flour	Bags & Barrels.	7,248	11,682	12,270	18,641	7,579	9,724	+ 2,145
Gunnies	Bales	7,930	9,661	9,755	11,341	5,275	3,759	- 1,516
Gram and Peas, &c.	Bags	271,682	380,145	395,249	264,890	142,698	177,101	+ 34,403
Garlic	"	2,945	1,215	6,007	7,495	5,508	4,099	- 1,409
Hardware	Cases	641	1,197	1,507	2,920	1,610	743	- 867
Horns	Bundles	880	980	511	856	516	383	- 128
Hides	Bales	6,127	9,539	6,013	6,896	3,868	2,418	+ 50
Iron	Tons	231	293	155	202	120	75	- 50
Iron Safes	No.	31	38	34	18	12	7	- 5
Kerosine Oil	Cases	...	...	500	...	...	1,993	+ 1,993
Leaves	Bundles	6,508	3,742	5,113	4,393	1,611	3,481	+ 1,870
Liquor	Cases	...	...	2,193	2,071	901	2,222	+ 1,321
Machinery	Tons	158	79	49	202	191	5	- 186
Millinery and Haberdashery	Cases	208	245	144	371	166	131	- 35
Oil and Turpentine.	Drums	8,340	6,369	5,941	5,829	3,156	3,155	- 1
Paddy	Bags	...	75,980	23,737	19,988	4,865	16,727	+ 11,864
Piece-goods	{ Cases Bales }	3,802	4,756	3,499	4,814	2,638	{ 1,081 675 }	+ 882
Paper	Bales	3,128	4,898	5,420	7,962	3,782	4,319	+ 537
Paint	Kegs	224	693	247	277	100	202	+ 102
Pianos	No.	15	12	5	8	4	...	- 4
Rice	Bags	1,147,048	205,176	110,181	111,384	56,070	52,600	- 3,470
Rose Water	Cases	1,434	1,815	1,357	1,594	982	1,627	+ 645
Seeds	Bags	30,406	25,747	13,916	12,061	7,819	12,667	+ 4,848
Skins	Bales	6,199	50,502	6,807	7,108	3,527	2,947	- 580
Silk	"	1,051	699	290	488	265	407	+ 142
Sandalwood	Bundles	143	121	42	265	169	100	- 69
Sugar	Bags	1,381	866	1,333	2,686	299	697	+ 398
Specie	No.	202	190	193	124	9	29	+ 20
Sundries	Packages	47,533	47,137	48,614	52,303	28,983	22,891	- 6,092
Soap	Cases	445	40	147	863	508	546	+ 38
Sulphur	Casks	471	544	506	295	295	198	- 97
Spice	Packages	359	740	640	944	569	427	- 142
Stationery	"	...	...	...	184	...	134	+ 134
Soda water Bottles.	Crates	...	...	241	1,651	886	29	- 857
Twine and Rope	Bales and Coils	839	775	1,063	1,309	463	320	- 143
Tin Plates	{ Boxes Slabs }	1,807	912	858	1,248	620	340	- 280
Twist	Bales	1,126	1,147	1,206	1,137	502	720	+ 218
Turmeric	Bags	7,224	4,977	5,433	5,185	3,359	3,125	- 234
Timber	Tons	15,137	10,595	15,264	14,154	7,152	10,023	+ 2,871
Tea	Cases	1,321	3,411	37	205	57	164	+ 107
Tamarind	Bundles	...	...	140	86	84	10	- 74
Yellow Metal	Cases	6	542	1,078	281	74	36	- 38
Horses...	No.	1	15	8	...	...	...	...
Carriages	No.	...	7	24	14	3	5	+ 2
Tramway Materials.	Tons	...	...	...	13	...	...	...

V. STATEMENT OF GOODS EXPORTED TO FOREIGN PORTS.

	Packages.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or Decrease.
Bone-Meal	Bags	...	...	...	5,448	3,701	5,397	+ 1,696
Beer and Ale	{ Cases Casks Hogsheads }	18 60 3	2 7 ...	13	...	...	3	+ 3
Cinchona Bark	Bales	471	529	411	123	114	...	- 114
Chillies	Bags & Bundles.	2,760	9	816	883	528	595	+ 67
Cigars	Cases	1,249	556	643	613	357	377	+ 20
Coffee	Bags	23,764	34,613	17,737	27,864	9,128	10,408	+ 1,280
Cotton	Bales	48,202	26,140	56,768	39,607	24,763	33,890	+ 9,127
Cotton Twist	"	4,229	5,266	1,946	1,664	1,358	114	- 1,244
Coriander and Omum Seeds	Bags	8,218	1,814	7,377	10,473	6,726	3,505	- 3,221
Carpets	Bales	418	288	391	239	85	212	+ 127
Coal	Tons	905	313	599	152	152	260	+ 108
Deer Horns	Packages	1,574	1,549	767	1,477	682	606	- 76
Explosive	Cases	21	1	...	2	1	...	- 1
Firewood	Tons	...	...	...	...	...	...	...
Four-wheeled Carriages	No.	8	5	8	2	...	6	+ 6
Ground Nuts	Bags	93,132	26,209	188,211	110,328	106,680	64,110	- 42,570
Gram, Peas, &c.	"	519	161	1,662	489	207	75	- 132
Horns, Cow and Buffalo	Tons	62	29	1,026	71	61	9	- 52
Hides, Tanned	Bales & Bundles.	21,848	21,812	11,149	18,519	8,650	13,903	+ 5,253
Hardware	Cases & Casks.	...	...	...	522	232	429	+ 197
Indigo	Cases & Chests.	14,622	29,933	25,008	27,416	7,013	10,121	+ 3,108
Iron	Tons	2	11	17	3	2	14	+ 12
Jaggery	Bags	28,985	56,672	52,668	17,809	17,809	7,779	- 10,030
Myrabolams	Bags	235	91	563	237	1	1	...
Miscellaneous	Packages	37,808	28,547	36,531	17,763	8,839	14,670	+ 5,831
Onions	Bags & Baskets	21,964	5,617	17,517	16,094	2,761	5,622	+ 2,861
Oil	Casks	434	56	208	451	72	30	- 42
Provisions	Packages	...	...	...	4,417	1,772	2,828	+ 1,056
Piece-goods	{ Bales Cases }	6,205	4,857	7,305	7,788	4,560	{ 3,506 1,281 }	+ 227
Potatoes	Bags & Baskets.	2,437	282	1,716	1,648	1,661	842	- 819
Poonac	Bags	33,880	16,127	31,311	47,253	25,154	41,404	+ 16,250
Pianos	No.	41	10	15	5	4	5	+ 1
Paddy	Bags	...	5	22	...	22	...	- 22
Rice	"	1,138	3,229	16,915	44,694	6,102	489	- 5,613
Redwood	Tons	699	1,654	733	1,113	423	650	+ 227
Salt	"	...	...	...	7	...	4	+ 4
Seeds, Gingelly and Castor	Bags	1,313	12,654	14,777	90,571	40,176	10,898	- 29,278
Skins, Sheep and Goat, Tanned	Bales	32,194	34,063	31,535	38,649	30,815	21,325	- 9,490
Sandalwood	Bundles	1,534	330	699	288	243	548	+ 305

V. STATEMENT OF GOODS EXPORTED TO FOREIGN PORTS.—(contd.)

	Packages.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or Decrease.
Spirits and Wine	Cases ...	332	41	67	22	14	136	+ 122
	Casks ...	977	65	40	9	9	15	+ 6
	Puncheons ...	...	...	...	...	...	...	...
Sugar	Bags ...	599	161	1,197	1,762	1,250	3,520	+ 2,270
Specie	Boxes ...	94	48	29	104	53	18	- 35
Tamarind	Bundles ...	6,445	5,331	3,076	1,737	2,547	1,779	- 768
Turmeric	Bags ...	2,159	941	1,562	3,651	2,600	2,529	- 71
Tea	Cases ...	2,265	1,769	1,649	2,156	1,294	1,238	- 56
Timber	Tons ...	...	...	...	...	...	7	+ 7
Wool	Bales ...	1,021	1,470	1,532	2,049	3	1,568	+ 1,565
Yellow Metal	Tons ...	107	100	417	7	6½	...	- 6½
Horses	No. ...	...	...	...	24	24	...	- 24
Ponies	" ...	...	...	...	9	9	...	- 9
Elephant	" ...	...	...	...	2	2	...	- 2
Lion	" ...	...	...	...	1	1	...	- 1
Tiger	" ...	...	...	...	1	1	...	- 1
Leopards	" ...	...	...	...	6	6	...	- 6
Bear	" ...	...	...	...	1	1	...	- 1
Sheep	" ...	...	...	...	79	24	...	- 24

VI. STATEMENT OF GOODS EXPORTED TO COAST PORTS.

	Packages.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or Decrease.
Beer and Ale	Cases ...	352	294	305	354	213	91	- 122
	Casks ...	159	94	91	166	28	54	+ 26
	Hogsheads ...	7	41	161	107	65	46	- 19
Boiler	No. ...	...	...	1	...	...	...	...
Cinchona Bark	Bales ...	395	84	80	...	...	...	...
Chillies	Bags & Bundles	2,064	2,907	9,207	2,444	1,835	422	- 1,413
Cigars	Cases ...	1,418	1,136	789	732	293	359	+ 66
Coffee	Bags ...	507	1,449	541	449	152	262	+ 110
Cotton	Bales ...	5,721	4,245	7,080	5,295	2,957	5,349	+ 2,392
Cotton Twist	" ...	4,698	6,138	3,220	3,034	1,423	2,619	+ 1,191
Coriander and Omum	Bags ...	2,970	7,002	6,894	2,067	1,368	518	- 850
Cement	Casks ...	...	8,908	132	195	18	62	+ 44
Carpets	Bales ...	68	51	41	27	14	9	- 5
Coal	Tons ...	275	450	157	480	220	210	- 10
Carriage	No. ...	21	47	39	25	11	16	+ 5
Deer Horns	Packages ...	108	151	52	...	...	...	...
Explosive	Cases ...	2,668	1,331	1,067	46	20	2	- 18
Eggs	Pots ...	1,165	1,125	1,198	1,263	412	193	- 219
Firewood	Tons ...	2	...	...	...	...	...	...
Groundnuts	Bags ...	27,790	17,839	16,116	63,700	40,203	25,830	- 14,373
Gram, Peas, &c.	" ...	521	1,226	233	372	44	112	+ 68
Horns, Cow and Buffalo	Tons ...	310	307	166	106	404	126	- 278

STATEMENT OF GOODS EXPORTED TO COAST PORTS—Contd.

	Packages.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or Decrease.
Hides	Bales & Bundles	379	526	535	252	119	114	- 5
Hardware	Cases & Casks	...	...	...	800	146	2,022	+ 1,876
Indigo	Cases & Chests..	165	816	1,162	264	77	29	- 48
Iron	Tons	2,244	2,611	755	695	352	298	- 54
Old Iron	"	...	...	...	165	...	40	+ 40
Jaggery	Bags	258	1,448	336	488	251	146	- 105
Kerosine Oil	Cases	10,327	659	1,117	11,005	5,746	9,671	+ 3,925
Myrabolams	Bags	1,054	291	1,112	131	31	67	+ 36
Miscellaneous	Packages	50,510	69,584	61,706	18,312	9,806	21,859	+ 12,053
Onions	Bags & Baskets	22,442	53,406	47,062	94,737	20,716	18,167	- 2,549
Oil	Casks	807	637	346	641	459	209	- 250
Piece-goods	{ Bales ... }	5,615	8,651	6,365	8,852	4,140	{ 4,396 }	+ 1,108
Potatoes	Bags & Baskets	23,637	24,388	30,592	20,068	10,788	{ 852 }	- 3,741
Poonac	Bags	4,770	22,181	9,853	396	350	7,047	- 34
Pianos	No. ...	23	16	17	11	1	26	+ 25
Paddy	Bags	...	8,806	8,400	4,123	3,423	2,118	- 1,305
Provisions	Packages	...	...	...	1,565	1,082	1,410	+ 328
Rice	Bags	5,448	31,893	11,083	8,196	3,872	3,834	- 38
Redwood	Tons	119	693	4	134	8	52	+ 44
Seeds, Gingelly and Castor	Bags	16,803	2,787	36,799	68,201	38,087	21,892	- 17,195
Skins, Sheep & Goat, Tanned	Bales	721	1,046	871	1,706	203	229	+ 26
Sandalwood	Bundles	153	256	2,786	373	156	39	- 117
Spirits and wines	{ Cases ... }	2,982	3,783	3,045	2,534	1,276	1,255	- 21
	{ Casks ... }	727	716	992	409	258	125	- 133
	{ Puncheons ... }	13	189	214	...	...	...	...
Sugar	Bags	773	1,419	473	1,725	476	1,050	+ 574
Specie	Boxes	236	510	47	75	48	16	- 32
Salt	Bags	...	...	...	4,001	3,997	20	- 3,977
Tamarind	Bundles	3,624	8,253	5,090	3,028	1,621	1,827	+ 206
Turmeric	Bags	19,258	17,883	38,147	53,374	29,105	24,860	- 4,245
Tea	Cases	341	62	50	114	40	78	+ 38
Wool	Bales	769	603	463	478	109	638	+ 529
Yellow Metal	Tons	53	67	256	31	19	22	+ 3
Timber	"	...	...	...	...	...	4	+ 4
Bricks	"	...	...	...	...	...	...	...

VIII. STATEMENT OF STORES, &c., EXPORTED BY GOVERNMENT.

Department.	Description.	Class.	1891-92	1892-93	1893-94	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.	Increase or Decrease
Accountant- General	Specie Silver.	Boxes.	411	45	95	...	16	...	16
	" Copper.	"	965	200	163	180	65	20	45
	" Notes...	"	6	13	8	6	3	...	3
	" Packages	No.	4	1	1	5	1	6	5
Bank of Madras...	" Silver...	Boxes.	34	...	84	...	45	...	45
" "	" Copper.	"	...	62	...	...	...	...	...
Ordnance	Packages & Pieces.	No.	8,595	5,831	9,257	8,819	3,771	4,843	+ 1,072
Public Works De- partment	" "	"	1,784	488	3,203	1,173	873	799	- 74
Clothing	Iron " "	Tons.	...	...	998	1,160	509	7	7
Police	Packages & Pieces.	"	1,327	1,096	955	933	644	714	+ 205
Salt Revenue	" "	"	889	974	724	960	739	264	- 380
Medical	" "	"	591	785	724	960	739	459	- 280
Telegraph	" "	"	1,377	1,610	2,166	1,027	479	352	- 127
Stationery	" "	"	8,845	4,330	4,945	3,045	108	706	+ 598
Stamps	" "	"	693	780	4,623	680	217	279	+ 62
Commissariat	" "	"	220	298	236	221	92	115	+ 23
Gazette Press	" "	"	7,971	6,205	5,301	6,030	3,693	3,285	- 408
Marine	" "	"	526	503	478	618	336	289	- 47
Revenue Board	" "	"	390	366	37	98	79	25	- 54
Revenue Settlement	" "	"	77	37	87	105	49	2	- 47
Revenue Survey...	" "	"	51	84	53	35	19	8	- 11
Superintendent of Prisons	" "	"	75	452	223	138	28	33	+ 5
Registration	" "	"	69	196	103	58	47	5	- 42
Conservator of Forests	" "	"	66	43	17	62	38	44	+ 6
Quarter-Master General	" "	"	34	33	5	5	1	5	+ 4
Government Cen- tral Museum	" "	"	...	4	...	...	1	...	- 1
Deputy Collectors.	" "	"	13	22	13	...	...	2	+ 2
Government Astro- nomer	" "	"	2	9	...	...	...	...	...
Agriculture	" "	"	...	18	13	21	...	1	+ 1
State Railways	" "	"	15	8	2	...	8	...	- 8
Govt. Botanist	" "	"	100	...	...	...	...	...	...
Inspector of Cattle Diseases	" "	"	...	...	...	48	...	7	+ 7
Chemical Examiner.	" "	"	3	1	...	...	...	...	...
Director of Public Instruction	" "	"	...	1	...	1	...	1	+ 1
Registrar of Uni- versity	" "	"	10	6	13	1	1	...	- 1
Collectors	" "	"	13	10	5	5	...	...	...
Curator of Govern- ment Garden, Ooty	" "	"	10	...	6	...	...	4	+ 4
Engineer, H. T. Board	" "	"	11	...	12	...	...	...	...
Crown Officer, High Court	" "	"	...	...	2	...	...	...	...
School of Arts	" "	"	14	18	5	...	12	...	- 12
Secretary to Gov- ernment, Public Department	" "	"	...	...	...	...	...	...	...
Registrar-General of Births, Deaths and Marriages	" "	"	2	...	...	...	...	...	...
Inam Commissioner	" "	"	...	...	...	...	...	1	+ 1

STATEMENT OF STORES, &c., EXPORTED BY GOVERNMENT (Contd.)

Department.	Description.	Class.	1891-92.	1892-93.	1893-94.	1894-95.	Half-year ending 30th Sept. 1894.	Half-year ending 30th Sept. 1895.
Consulting Engineer to Government Railways.	Packages	No.	20	...	...	...	...	...
Civil Engineering College	"	"	...	1	...	...	...	...
Superintendent, Census Operations.	"	"	...	4	1	...	...	...
Post Office	"	"	...	2	2	...	...	...
Sanitary Commissioner.	"	"	...	2	2	...	...	...
Registrar of High Court	"	"	...	...	...	31	...	18 +
Supt., District Jail, Bellary	"	"	...	...	...	1	1	-
Asst. Engr., D.P.W. Govt. Brick field	"	"	...	...	...	52	52	- 52
O. C., 6th Regt. M. L., Madras	"	"	...	...	...	17	...	...
Supt., Jail, Vizagapatam.	"	"	...	...	...	...	...	2 + 2
Metecrological Reporter.	"	"	...	...	...	...	...	11 + 11
Inspector of Salt...	"	"	...	...	...	...	...	37 + 37
Revenue Board, L. R., Forest.	"	"	...	...	...	...	...	16 + 16

To,

THE SECRETARY,
Harbour Trust Board, Madras.

S. HUTCHENCE,
Traffic Manager,
Harbour Trust.

MADRAS HARBOUR WORKS.

Report of Progress on the Madras Harbour Works for the Quarter ending 30th September 1895.

Accompanying this report are the following plans and statements:—

41 (a) A plan of the Harbour to a scale of 200 feet to an inch, showing in red the position and quantity of work done during the quarter. The Contours in half fathoms, shown on this plan in black figures and lines inside and outside the Harbour, are those of the latest Marine Survey made in 1895. The Contour lines in blue are those of the Survey of 1893.

2. The position of the High Water Marks of 30th September 1895, and that of the previous three months both to the North of the revetment and the South of the Harbour, are shown for comparison.

41 (b). A revised plan showing in detail the work done during the quarter at the Pier Heads as now constructed, and the positions of the Caissons at the Pier Heads of the Harbour, with a completed Eastern Entrance, having a width of 515' 6" and deep water alongside each Pier Head.

42 (c). A statement comparing the expenditure on different Sub-heads, and particulars of cement received and issued.

42 (d). A statement showing work done under different Sub-heads and particulars of cement received, and issued.

1 (e). Section showing the latest Soundings, in 1895, outside the South Pier, together with all former soundings along the same Survey lines, showing the advance of sand below water level, extending out to the 7 fathom line, as called for in G. O. No. 584 W. dated 12th March 1895.

3. **North Pier Capping.**—During the quarter the North Pier capping was extended towards shore by 938' 7" thereby completing a total length of 2276 lineal feet of the North Pier, measured from the Pier Head; to the Sanctioned Design.

4. This length of capping was formed of 39 Blocks of concrete built in Situ, averaging 24 feet in length $\times$ 24' width $\times$ 6' deep, and was equal to $5537\frac{1}{2}$ cubic yards of concrete placed in position in 76 working days.

5. Hard wood Sleepers have been built into the capping throughout its length for a line of rails as soon as the capping reaches shore, and a recess has been left in the capping for the transfer of the bulk-oil discharge pipe, from its temporary position, to the top of the capping.

6. **South Pier Head.**—The Rubble Base Protection along the South Pier Head was completed early in July. The length of base protected with concrete was 171 lineal feet, for which $155\frac{1}{2}$ cubic yards of concrete was deposited below water.

7. **Caisson.**—The South Pier Caisson was raised to its full height of 12 feet above High Water and completed. By the 20th of July a Lighthouse had been built upon it of mass concrete, identical with the one already completed at the North Pier Head.

8. **Capping along Pier.**—The South Pier capping was commenced on the 25th July and at the close of the quarter, or in 55 working days, 855 lineal feet of the South Pier Head and outer straight had been completed to the Sanctioned Design.

9. Thirty-three large blocks of concrete were made along the Pier which raised the masonry wall to a height of 12 feet above High Water, and 5,338 cubic yards of concrete including old blocks, were used in forming this capping.

10. **Pallavaram Quarries and Concrete-making Machinery.**—The total out-turn of concrete made for the capping and other works during the quarter was 9,552 cubic yards; and the out-turn of blasted chips, received from the Pallavaram Quarries during the quarter amounted to 6,666½ tons.

11. **Summary of Progress.**—The following statement is the summary of progress made on the Harbour Works during the quarter under review.

12. **Supply of Portland Cement.**—The S.S. "Golconda" arrived with 4,050 Casks of Portland Cement, containing Tons 723-4-1-4, and the S.S. "Dunera" brought 600 Casks, containing Tons 107-2-3-12 from London.

13. The S.S. "Manora" arrived with 990 Casks, containing Tons 176-15-2-24, and the S.S. "Goorkha" with 1,600 Casks, containing Tons 285-14-1-4 of Cement, and a further supply of Tons 850 was due on previous Indents at the close of the quarter.

14. The balance of Cement in store on the 30th September 1895, was 3,715½ Casks, containing Tons 663-9-2-25 of Cement.

15. The issue of cement during the quarter ending 30th September was 9,597½ casks containing Tons 1,713-16-0-16.

16. **Expenditure.**—The expenditure upon the works during the quarter was Rs. 1,36,949-6-5 including establishment, &c., and the quarter closed with a balance upon the revised estimate of Rs. 2,76,373-0-0 including materials, cement, and stores, already upon the works on the 30th September 1895.

17. **Protective Works North of Harbour.**—No further settlement of stone was perceptible along the revetment above water level, but the line of revetment throughout is generally low, and will require feeding with stone next year.

18. **Sea Bottom within the Harbour.**—The depth of water inside the Harbour was carefully surveyed in July, August and September 1895, and the soundings were taken along the same Survey lines, and in the same manner, as in all previous Surveys.

19. The new chart forwarded with this report shows the soundings of 1895 in feet and inches below, DeHavilland's Mean Sea level, and the contour lines at half fathoms, are shown in black lines.

20. For comparison, the half fathom contour lines of the Survey of 1893 which Survey was made at the same time of the year, are shown in blue lines.

21. The following is the information to be gathered on comparing the soundings of 1895 with those of 1893.

22. The High Water line of 1895 has advanced 30 feet along the Southern half of the Harbour, while it remains in about the same position North of the Iron Pier, although the line has become irregular in the past two years.

23. The 1 and 1½ fathom contour lines are almost in the same position as in 1893, but the 2 and 2½ fathoms lines have advanced seawards by about 20 feet.

24. The 3 and 3½ fathoms contour lines have become very irregular, but on an average show no advance.

25. The 4 and 4½ fathoms lines have shallowed about 2 inches to the North of the Iron Pier, while both contours have deepened on the Southern half of the Harbour. The 4 fathoms line at a distance of 300 to 400 ft. from the South Pier is now 2 ft. deeper than it was in 1893 while the 4½ fathoms line at 400 and 900 feet from the South Pier is about one foot deeper.

26. The 5 and 5½ fathoms lines have become irregular, and deeper. At 700 feet from the South Pier the 5½ fathoms line has returned to within 25 feet of the position of the 5 fathoms line in 1893, and may be taken to have deepened 2'-9".

27. The Sand bank along the South Pier has had the effect of moving the 5 and 5½ fathoms contour lines to about 50 to 60 feet further from the South Pier.

28. The 6 fathoms line has deepened from 6 to 9 inches in the centre of the Harbour, but has shallowed near the North and South Arms, at the commencement of the curves to the outer straights.

29. The 6½ fathoms line has shallowed from 6 inches to 1 foot at the northern half of the Harbour, and deepened from 1 to 1¼ feet on the Southern half.

30. The 7 fathoms line has shallowed from 6 to 9 inches.

31. The 7½ fathoms contour line of 1895 has advanced 90 feet nearer to the Entrance to the Harbour, than it was in 1893, which shows a shallowing of 1 foot.

32. The line of soundings across the entrance from Caisson to Caisson has shallowed from 47 feet below DeHavilland's Mean Sea Level in 1893, to 44'-5" in 1895, which shows a reduction in the depth of water at the entrance of 2'-7", which has been the cause of the filling up of the 7½ fathoms line.

33. From the above, it will be seen that the depth of water in the Harbour has not altered due to the deposit of silt, nor has any change of any importance taken place from the High Water Line down to the 3½ fathoms line.

34. The movement of sand, from the 4 and 4½ fathoms lines, into deeper water, together with a similar change between the 5 and 6 fathoms contour lines, is an improvement as it has increased the depth of water available at the various moorings.

13

35. This movement of sand, between the 4 and 6 fathom lines have apparently been the cause of the shallowing of the $6\frac{1}{2}$ and 7 fathoms lines, but this change, in no way, effects the moorings, while the reverse action may take place in a cyclone.

36. The shallowing of the Entrance by 2'-7", and the fact that there is a ridge of sand to be found immediately across... Entrance, where there is 9 inches less water than there is inside or outside the Harbour, shows that accretion has taken place.

37. Further soundings outside the Harbour show that at a distance of 220' East of the Entrance, where there was a depth of 48'-4" in 1893, (and 51 feet in 1889), there is now 45'-4", or 3 feet less water.

38. This change, together with what has taken place in deeper water would tend to show that the Roadstead is shallowing as it has been known to have done in years past, and therefore the time has now arrived when it will be necessary to adopt measures to prevent the further accretion of sand outside the entrance, where dredging would be of no avail.

39. In my opinion it is clear that the sand will not travel past the Entrance without entering it, as was originally surmised it might do.

40. The shallowing of the Roadstead cannot be said to be due to the Harbour, where deep water is concerned, and it is well known that previous to the construction of the Harbour, the Roadstead varied considerably in depth, and paragraph 16 of Appendix H, of G. O., No. 866 of 1869 mentions the shore line far in advance of where it is now.

41. From 1868 the Roadstead deepened until about 1882, but since then it has been shallowing, and para. 23 of the first Harbour Committee's Report in 1868 before the present Harbour was designed, states that the 7 fathoms line at Low Water was found to be at a distance of 900 yards East of the end of the Iron Pier.

42. This point is now the position of the Harbour entrance where at Low Water there is now a less depth of water than there was at the same point 27 years ago, or is upon record.

43. In 1882 after the construction of the Harbour, 8 fathoms at Low Water was found throughout and within the Harbour Entrance, or in shore of the position where the 7 fathoms line used to be 1868, showing the Entrance to have deepened by 6 feet between 1868-82, but in 1895 it is again less by more than one fathom, and there appears every possibility of its shallowing further.

44. For further evidence of the shallowing of the Roadstead, the latest soundings outside the South Pier, prove that the 9 fathoms line has advanced seawards slightly, which depth is well beyond any influence the Harbour may have upon the Roadstead. At a point where there was 52'-10" in 1893, there is now 52 feet, and this point would appear to be the limit where the appearance of the shallowing is taking place, as the sea bed changes from one covered with hard mud, to a sandy bottom, which continues towards shore where accretion has taken place.

45. The depth of water immediately to the South of the Harbour which must be watched with interest, is that ranging between the 5 and 7 fathoms contour lines, along the Survey lines 9 A on the chart accompanying this Report.

46. The Survey of 1895 at this point shows the $5\frac{1}{2}$ fathoms line in 1893 to have shallowed to 4 fathoms, and the 6 fathoms line to have advanced eastwards 90 feet, or shallowed from 6 fathoms in 1893 to 5 fathoms in 1895.

47. The 7 fathoms line of 1893, upon the same Survey Line, has advanced about 80 feet, or shallowed by 2 feet, while similar changes have taken place at a depth of 7 fathoms, extending as far South as 1,000 feet from the South Arm.

48. These facts must therefore direct the attention of the Trustees of the Harbour, to adopt a means of arresting the further travelling of sand towards the Harbour Entrance, at a depth of 6 fathoms below Water Level, and the subject has been treated in a separate report, suggesting the construction of a groyne, to be extended from time to time, if found necessary.

49. The Survey of 1895 shows the sand bank, which has formed along the South Pier due to the sand washing through the old wall, to extend further along the Pier, or to have advanced with the accretion of sand outside of the Harbour, but its dimensions in width remain the same.

50. In 1893 when sand was observed to be entering the Harbour through the South Pier, below Water Level, a groyne of rubble stone, capped with concrete blocks, was proposed as a means of arresting the further accretion of sand against the South Pier throughout its length, and from entering the Harbour.

51. By this means deep water would be secured and a dock formed naturally which would require very little dredging should a dock be required at Madras in years to come, and the Harbour Entrance by this means would be prevented from further shallowing.

52. Mention has been made that I admitted that the sand bank was encroaching upon and closed No. 1 mooring to long and deep draught vessels.

53. Past correspondence shows that the No. 1 mooring was early in 1893, made a berth for anything but long and deep vessels by the mooring having been brought into shallower water which closed the berth to that class of vessel, regardless of the sand bank.

54. Now that the new sternfast moorings have been brought still further in-shore, I referred to what might occur due to this alteration, and has already happened, when the "S.S. Elax" touched the bottom in No. 5 mooring, due to that berth in 1893 being brought into shallower water. Dredging was then suggested, but no further complaints have been made, and the latest soundings show no change to have taken place in the depth of mooring No. 5.

55. There is ample room in No. 1 mooring for an ordinary vessel of 340 feet in length with a draught of 25 feet at Low Water to swing clear of the sand bank on the bow mooring without damage. Instead of this berth having shallowed, the Survey of 1895 shows it to have deepened at the $4\frac{1}{2}$ and 5 fathoms lines, while the sand bank dies out so suddenly, that there is $4\frac{1}{2}$ fathoms at Low Water at a distance of 120 feet from the South Pier, which leaves a distance of 390 feet

clear between the sand bank and the mooring, with 27 feet at Low Water for an ordinary vessel to swing, should a stern hawser part. This depth is sufficient for any vessel, other than a long and deep draught one, for which the berth is not intended.

56. There is no doubt that additional and deeper berths are required for vessels calling at this Port, but these are only obtainable by dredging after certain protective works have been carried out, and these have been included in the Harbour Improvements scheme now awaiting sanction.

57. **Screw Moorings.**—In September, ten of the special screws sent out in 1880, for the moorings, were put down by an easier and cheaper method, to that for which they were designed, which due to wave motion and the necessary floating Plant proved so costly. This new system has enabled the moorings being put down when there was a considerable sea on, and in half the time, and permits of the moorings being raised and utilized elsewhere, if required. Each screw is 4 feet in diameter and attached to a $2\frac{1}{4}$ inch chain which takes the place of the usual pile, so objectionable where dredging may be necessary for improvements in future. The moorings used at Madras present no difficulty in this direction, are undoubtedly the best, and by the easy way they are now sunk to any depth, with any amount of swell, will make this abandoned design of mooring, become the mooring of the future, as sand, shells and clay to any depth presents no difficulty, and no screwing is necessary.

58. The moorings completed in the quarter were the sternfast buoys of Berths Nos. 2, 3, 4 & 5, and one bow mooring for No. 5 berth. Each buoy is attached to two screws, which were all sunk through hard sand and clay to 21 feet below bed level, which is as deep as the design of mooring will permit of, while with the old system this depth could not be reached.

59. As these moorings are so uniformly sunk, and only two links are left above the present sea bottom, they will be a ready and satisfactory proof of any change in the depth of the Harbour, and should dredging be carried out, they will not project above bed level to the danger of vessels as the screw pile moorings have been known to do.

MADRAS HARBOUR WORKS, }
17th December 1895. }

A. LEE-POGSON,
Engineer, Harbour Trust Board.

Progress Statement No. 42 (d).

MADRAS HARBOUR WORKS.

Statement showing Progress during Quarter ending 30th September 1895, as shown on accompanying Lithographed Plan No. 41.

	Sub Head of Works.	REMARKS.													
		North Pier Concrete Capping.		South Pier Concrete Capping.		South Pier Apron or Base Protection.		Pallavaram Quarries Out-turn.		Concrete made at mixing Station.		Railway Lines at Works.		Total Expenditure during Quarter.	
		A.	B.	C.	D.	E.	F.	G.							
Column.															
1	Total quantity blasted chips received on works	Tons...	...	...	...	...	6,666½	...	...	...	...	...	...	...	
2	Concrete Blocks made in situ, capping	No...	39	33	...	...	...	...	...	...	...	...	...	...	
3	Total out-turn of concrete	c. yds...	5,537½	5,338	155½	...	...	9,552	...	...	...	...	...	...	
4	Advance or Progress of completed work	Ry. ft...	938'-7"	855	...	...	...	...	...	...	...	...	...	...	
5	Rubble base protected with concrete	"	...	...	171	...	...	...	...	...	...	...	...	...	
6	Broad Gauge line, per yard, laid new	"	...	...	...	...	...	...	...	...	...	...	...	...	
7	Do. do. do. taken up	"	939	855	...	...	...	...	...	...	1,794	...	...	...	
8	Approximate expenditure under sub-head of works	Rs.	8,825	9,381	2,061	8,757	94,127	...	...	...	...	...	1,23,151	...	

		Tons. Cwt. Qrs. lbs.		Quantity due on Indents		Tons. Cwt. Qrs. lbs.	
7,213	Casks of cement received on works during quarter ending 30th June 1895 containing.	1,288	0	0	24	...	850
9,597½	Do. do. issued for do.	do.	1,713	16	1	16	...
3,715½	Do. do. balance in store at the end of	do.	663	9	2	25	...

MADRAS HARBOUR WORKS, }
18th December 1895. }

A. LEE-POGSON,
Engineer, Harbour Trust Board.

Harbour Trust Office,
MADRAS, 20th January 1896.

No. 3922

FROM

Wm Austin Esq D. L. S.

CHAIRMAN, HARBOUR TRUST BOARD,
MADRAS.

TO

Lieut-Col. D. McNeil Campbell, R.E.

SECRETARY TO GOVERNMENT,
Marine Department.

Sir,

I have the honour to acknowledge
the receipt of your memo No. 319 C
dated 18th Instant and to forward
herewith duplicate copies of the
plans which accompanied the Progress
Report of the Madras Harbour for the
quarter ending 30th September 1895.

I have the honour to be

Sir

Your obedient servant

Rec

Wm Austin
Chairman
Harbour Trust Board

24

MARINE DEPARTMENT.

Marine current No: 48

FROM

THE CHAIRMAN,
HARBOUR TRUST BOARD,
MADRAS.

Recd: 21.1.96

TO

THE SECRETARY TO GOVERNMENT,
Marine Department.

DATED 20th Jan 96

DESPATCHED 20th Jan 96

RECEIVED

ENCLOSURE 4 set of Plans

No. 3922

SUBJECT.

Submitting duplicate
Copies of the plans accompanied
the Report of the Chairman
Harbour for the quarter ending
30th Sept 95

Plans to be sent -
Despatched - Vide
C.O. 18/10/95
14-1-96
23rd Jan 96
To be despatched
with Report
14-1-96
23rd Jan 96