

REPORT OF THE MADRAS HARBOUR COMMITTEE.

The plans for the improvement of the harbour, which were in the first instance submitted for the consideration of the Committee, may be divided into three separate groups, each group containing plans differing in points of detail, chiefly in the amount of accommodation provided, but alike in the general features.

2. These groups are—

- (1) Boat basins in the reclaimed land to the south of the harbour, as shown on plan No. I, four designs.
- (2) Boat basins inside the water area to the south-west of the harbour, as shown on plan No. II, four designs.
- (3) Boat basin formed by an enlargement of the canal to be constructed between the Buckingham canal and the north end of the harbour; two plans, Nos. III and IV.

3. The Committee have assumed, as a basis for their deliberation, that Government has determined upon the construction of the canal from the Buckingham canal to the harbour, and that the works necessary for the entrance of this canal to the harbour will have to be constructed, whatever arrangements may be recommended for the improvement of the latter, and it has therefore appeared to them desirable to utilize, as far as possible, the works to be constructed for the former object, in aid of the latter.

4. In considering the cost of the various schemes it has been considered convenient to distinguish between what is essential to each, and what is independent of the particular position adopted for the boat basin and the wharves connected with it; for this reason it has been considered advisable to eliminate from the estimates for each scheme the cost of custom house buildings, sheds and similar charges.

5. The Committee has also taken into consideration the fact that the schemes under group (3) include in themselves the cost of connecting the canal with the harbour for which, for the purposes of comparison, a sum of Rs. 3,20,000 has to be added to the estimates for the schemes in the first and second groups.

6. Making these corrections, and certain others that an examination of the estimates shows to be necessary, the total cost to be incurred for the different schemes would be—

Group (1), Rs. 8,41,000 to Rs. 10,71,000.

Group (2), Rs. 5,79,000 to Rs. 11,08,000.

Group (3), Rs. 8,35,000 and Rs. 8,85,000.

7. After consideration of the whole of these schemes, none of them appeared to the Committee to satisfy the requirements of the port; and after the fullest discussion it was unanimously determined to recommend for adoption the scheme shown in plan No. A-1.

8. This scheme provides for a canal entrance, with a covering arm running southwards from the northern arm of the harbour, and for a boat basin in the south-west corner of the latter, leaving a sandy foreshore for masulah boats to the north of the screw pile pier. The cost of the works required for this scheme is estimated at Rs. 9,54,000.

9. It would be slightly cheaper to place the boat basin in the north-west corner of the harbour, but the saving as compared with the plan proposed would be only Rs. 65,000, and it is considered that the superior convenience of the southern portion outweighs this small difference of cost.

10. In the future, should the trade of the port require it, the wharfage accommodation can be increased as shown in plan No. A-1 with extension, at an additional estimated cost of Rs. 4,74,000, but at present this need not be taken into consideration.



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11. The general arrangements for railway communication are shown on the plan, but the details of these arrangements, as well as those for the construction of sheds and other buildings, can only be worked out by the departments concerned.

12. The Committee desire, however, to call special attention to the inconvenience to traffic caused by the narrowness of the Beach road, at and to the immediate north of the screw pile pier. The road is here narrowed by the existence of three buildings, namely, the Police station, the Harbour Masters' office and the Harbour Trust office, as well as by a fourth building, the bonded warehouse, under construction. It would be possible to form a new road to the east of these buildings, leaving them as an island: but this would be only a partial remedy for the inconvenience to traffic, and would take up space which would be exceedingly valuable for the reception and storage of goods.

13. The Committee understand that the value of the buildings already completed is not more than Rs. 60,000: and that of the work which will be sacrificed by the stoppage of the bonded warehouse, Rs. 15,000, or Rs. 75,000 in all; of which about Rs. 20,000 would be recovered by utilizing the material of the iron sheds, and of the other buildings: and they consider that the improvement in the facilities for traffic along the beach which their removal would afford, would be well worth the sacrifice of Rs. 55,000; they therefore strongly advocate their removal. They understand that their President, in his capacity of Chief Engineer, has given orders for the suspension of further operations in connection with the bonded warehouse, pending the decision of Government upon this question.

14. In this connection the Committee desires to point out the necessity for widening the North Beach road for Parry's corner to Clive's Battery, to a minimum of at least 120 feet. If the improvements recommended in the preceding paragraph are effected, there will be no difficulty in carrying out this most important improvement, in connection with the present scheme.

15. The Committee have had under consideration a suggestion by the Chamber of Commerce, to adopt at Madras a system similar to that at Bombay, by which the Harbour Trust Board would receive into their sheds all cargo as landed, deliver the same upon pass orders from the Collector, warehouse goods upon warrant; and, at the expiration of four months, deliver to the Collector any goods not then cleared through the Sea Customs office. Copies of correspondence explaining the arrangements in force at Bombay, are attached to this report, and the Committee strongly recommend the adoption of a similar procedure at Madras.

16. Attached to this report are copies of correspondence which has passed between the Chamber of Commerce and the President of the Committee, regarding the tenure of appointment of the combined post of Collector of Sea Customs and Chairman of the Harbour Trust Board, and the Committee desire strongly to support the recommendation of the Chamber that measures should be taken to render this tenure of a more permanent nature than has hitherto been the case.

17. This can be done, either by the appointment of a gentleman from outside the Indian Civil Service, or if selection from that body be considered necessary, by the appointment of a comparatively junior officer, who will be content to hold the appointment for some years without expecting further promotion.

18. Under recent orders this post has been added to those the holder of which is precluded from taking furlough within two years of appointment, but the Committee observe that the reason of the frequent changes in the office, is not so much the departure of its holders on leave, as their promotion or retirement. The matter is one of urgent and serious importance to the interest of the port, as well as of the mercantile community; and the Committee desire strongly to recommend it to the consideration of Government.

19. In conclusion, the Committee desire to express their acknowledgments of the assistance they have received from Mr. Pogson, the Engineer, and Mr. Pinsent, the Secretary to the Harbour Trust Board—the former has met their request for information regarding the cost of the various schemes proposed in a most prompt and thorough manner.

20. Mr. Pinsent has acted as Secretary to the Committee, and his services have been invaluable; the labour imposed upon him has been considerable, and the Committee trust that Government will reward them by a suitable pecuniary recognition; they have no doubt that the Board will be willing to contribute towards this object.

(Signed)	H. SCOTT.
(")	R. J. BLACK.
(")	GEO. L. CHAMBERS.
(")	H. C. WEST.
(")	V. G. LYNN.
(")	C. SETON.
(")	C. T. R. SCOVELL.
(")	G. M. J. MOORE.
(")	DAVID LOGAN.
(")	A. T. ARUNDEL (assent to para. 15 is withheld).
(")	ROBT. G. ORR.
(")	W. SHAW.
(")	J. PENNYCUICK, Col., R.E., President.

From the Hon'ble Mr. G. G. ARBUTHNOT, Chairman, Chamber of Commerce, Madras, to the President, Madras Harbour Committee, dated 13th March 1895.

With reference to the Committee appointed under G.O. No. 47, Marine, dated the 9th February 1895, over which you are presiding, I have the honour to briefly bring before your notice two matters, which, as they deal with the more efficient working of the trade of the port, the Committee of this Chamber trust you may consider to come within the scope of the enquiry.

2. In whatever scheme is eventually recommended, no doubt a comprehensive system of warehouse accommodation will form a part. The question might then be considered to what extent the custody of goods is to be under the Collector of Sea Customs as at present, or whether the system in force in Bombay and Calcutta might not be adopted and the goods be dealt with entirely by the Harbour Trust Board, subject to the necessary supervision by the Customs Department for revenue purposes.

3. The other point is, whether it would not be advisable for the office of Chairman of the Port Trust to be made a permanent post, as it seems to the Chamber that, where such large interests are involved, it is essential that a continuity of policy should be ensured. The office of Chairman has been held by officials of the Civil Service of great ability, but it would be impossible for any one during the short periods for which some of them have acted to acquire the necessary experience. In Bombay and Calcutta these appointments have not been confined to the Civil Service, and if a member of the latter body could not be put in as a permanency, the Chamber sees no reason why the procedure which has been so successful elsewhere should not be tried in Madras.

From the Hon'ble Colonel J. PENNYCUICK, R.E., President, Madras Harbour Committee, to the Chairman, Chamber of Commerce, Madras, dated 15th March 1895.

In reply to your letter of the 13th instant, I have the honour to state that I see no reason why the Committee appointed under G.O. No. 47, Marine, dated the 9th ultimo, should not take into consideration the question raised therein, and your letter will accordingly be laid before the Committee.

2. A member of the Committee has already announced his intention of bringing forward the question of whether the entire management of the landing of goods, including the collection of the Customs revenue, should not be under the control of the Harbour Trust, and upon this point I should be glad to be favoured with the opinion of the Chamber, which will be of great service to the Committee in discussing the question.

3. I gather from your letter under reply that the Chamber desires the separation of the office of Chairman of the Harbour Trust from that of Collector of Sea Customs, which latter must, I believe, by law, be held by a Member of the Civil Service. I shall be glad to know whether this reading of your letter is correct.

4. In this connection it would be well to bear in mind that the separation of the two offices will impose a heavy additional charge on the Trust, inasmuch as the salary of a "whole time" Chairman of the position and experience necessary to fill the post satisfactorily will greatly exceed the allowance paid to the present Chairman.

From H. SCOTT, Esq., Vice-Chairman, Chamber of Commerce, Madras, to the President, Madras Harbour Committee, dated 23rd March 1895.

In reply to your letter of the 15th instant, I have the honour to state that the Chamber did not wish it to be understood that its desire was that the posts of Chairman of the Harbour Trust and that of Collector of Sea Customs should necessarily be held by separate parties. The Chamber recognizes the difficulty there would be in securing the services of a competent person for such a salary as the Harbour Trust alone could afford.

However necessary it may be in the opinion of members of this Chamber that the Chairman of the Harbour Trust Board should be a permanent official, it is of even greater importance to them that the Collector of Sea Customs should be a permanency, for questions of great delicacy requiring a thorough technical knowledge of his duties have continually to be decided by this official, both in the matter of Sea Customs as well as of Income Tax Revenue.

So far as the Chamber is aware, it is not obligatory that either the Collector of Sea Customs or the Collector of Income Tax shall be members of the Civil Service, but it might, perhaps, be both preferable and most convenient if a member of that body could be appointed, subject to the necessary stipulation as to his remaining for some years. To arrange this, it is suggested that a more junior official shall be appointed in the first instance.

With reference to paragraph 2 of your letter, Government has already ruled that, under the present Act, the Harbour Trust has no power to "land" goods. The question seems to be as to the custody and disposal of the goods when landed, and the system that the Chamber would advocate is that in force in Bombay. Some of the members of this Chamber had recently an opportunity of reading a description of the system in force there, as detailed in a letter from the Secretary of the Bombay Port Trust to the Madras Harbour Trust, and this so exactly describes the arrangements that this Chamber would propose for this port that I venture to suggest your applying for a copy of this communication.

From F. G. DUMAYNE, Esq., Secretary to the Trustees of the Port of Bombay, to the Secretary, Harbour Trust Board, Madras, dated 22nd March 1895, No. 987.

With reference to your letter No. 4264, dated 4th instant, I am directed to say that at this port the premises of the Wet Docks (Prince's and Victoria Docks) and of the Boat Basins are enclosed with fences or walls and no goods can be removed into town except on presentation at the gates of import entries, showing that the goods have been "cleared" through the Custom House.

2. Only such packages as the Customs authorities may select for examination are taken to the places set apart for the purpose, which are small enclosed spaces in sheds belonging to the Trustees, situated conveniently for the trade and for the Customs officials. The number of examined packages, it may be remarked, bear a very small proportion to the total imported, so that the great bulk of the imports are taken delivery of by the importers at the places where they may happen to have been landed.

3. The Head Office of the Customs Department is in the Fort, a position convenient for the merchants whose offices are all in the same district; but in order to afford every facility to the trade there is a Branch office in a central position at the Docks, where the goods are dealt with.

4. The Branch office and the places set apart for the examination of goods are marked on the accompanying lithographed plan.

5. With the exception of a few vessels with part cargoes from China, small sailing vessels with sugar from the Mauritius, and coal and kerosine laden vessels, the

whole of the foreign trade—dutiabale and non-dutiabale—carried in square-rigged vessels, *i.e.*, not country craft, from the Persian Gulf, &c., is dealt with at Prince's and Victoria Docks.

6. The procedure at the docks is as follows.

7. On the arrival of a vessel the master or agent presents his Import General Manifest at the Custom House in duplicate, and the duplicate is made available by the Customs authorities for the use of the Dock officers.

8. Until the manifest is lodged a vessel cannot break bulk, except with the special permission of the Customs Department.

9. The Trustees' officers take charge of the goods as they are landed, have them removed by labourers in the employment of the Trust to the transit sheds or storage space alongside the vessel's berth, see that they are stacked according to marks in a way convenient for delivery, and grant receipts to the vessels for the quantity landed from day to day.

10. In delivering, importers are required first to "clear" their goods through the Custom House, then they present the Bill of Lading with the Import Private Manifest endorsed "let import" under the signature of the Assistant Collector in charge of the Branch office, to the Dock Shed manager in charge of the vessel's cargo, who thereupon authorizes the delivery, deputing a clerk to make the delivery, and forwarding the Import Private Manifest to the gate through which the goods must pass.

11. The delivery clerk sees the carts loaded up, and issues a ticket for each cart, giving the name of the vessel, mark, description and number of packages and manifest number, which tickets are presented at the gates and compared with the manifest and the loads checked.

12. As each vessel's cargo is disposed of, a statement called the outturn is sent to the Custom House, showing the number of packages landed, and what were short or in excess of the manifest.

13. At the boat basins the procedure is more simple so far as the Trustees are concerned, as there the goods are not taken into the Trustees' charge.

14. The goods come to the basins in lighters from vessels unloading in the stream, *i.e.*, not at the docks, each lighter being furnished with the usual boat note which is given up to the Customs Preventive officer stationed at the place of landing. The Trustees have only to see that their own fees are paid and the Customs Preventive officers and gate-keepers (the latter at the wharves outside the docks are Customs employés) see that the goods are not taken into town without being cleared.

From F. G. DUMAYNE, Esq., Secretary to the Trustees of the Port of Bombay, to the Secretary, Harbour Trust Board, Madras, dated 8th July 1893, No. 2364.

Referring to your letter, No. 668, dated 30th May, I am directed to say that the arrangements detailed in my previous letter were made under the provisions of the Bombay Port Trust Act, 1879, subject to the approval of the Collector of Customs, where they affected the work of his department.

2. I am unable to understand the difficulty raised by the agents of steamers at Madras to similar arrangements being carried out at that port. No difficulty has ever been experienced here.

From J. M. CAMPBELL, Esq., C.S., C.I.E., Collector of Land Revenue, Customs and Opium, Bombay, to the Collector of Customs, Madras, dated 22nd July 1892, No. 5876 C.

In reply to your letter No. 1422-G., dated the 25th ultimo, I have the honour to state that all landing places at Bombay are within Customs limits, and neither free nor dutiable goods landed at those places are allowed to be cleared until after all

necessary customs formalities; no special arrangement exists at Bombay for the separate storage, and delivery of free goods from premises situated outside of Customs limits. Consequently no separate guarding, supervising or examining establishment is necessary.

I forward a detailed note of procedure which I trust may prove useful.

NOTE.

Under section 11, clause (c) of the Sea Customs Act, the Local Government have appointed 39 places for landing and shipping goods on import and export.

Nearly the whole of the import and export trade passes through three of these 39 places, namely, (1) The Prince's Dock, (2) The Victoria Dock and (3) The Carnac Bunder; the remaining 36 places are set apart for specified goods, such as coals, hay, straw, raw cotton, bricks, tiles, chunam, &c.

The following practice is observed in clearing free goods from the Prince's and Victoria Docks, both of which are controlled by the Port Trustees, and are worked by officers appointed under the orders of the Trust and paid from the Trust funds.

As soon as the goods are landed on the wharf, their tally is taken both by the Port Trust and the Agents of the vessel; these tallies are used in checking off the cargo of the vessels with the duplicate copy of the General Manifest in charge of the Customs Preventive Inspector posted at the Docks.

Port Trust labourers remove the goods from the wharf and deposit them in the Transit sheds.

An order on the Bill of Entry serves as authority for the temporary delivery of the goods by the Port Trust to their owners or agents for Customs examination. When the Customs examination is completed the packages are returned to the shed where they were originally deposited.

Packages are opened and closed by carpenters kept for the purpose by the Port Trust, on payment of a fee which varies according to the size of the package.

Except that in the case of steel and iron seven free days are allowed, all free goods may, on payment of a single wharfage fee, remain in the transit sheds free of rent for five clear working days.

Goods remaining uncleared for home consumption at the end of the sanctioned period are on the sixth day removed to the Port Trust uncleared warehouse. In this warehouse which is within Customs limits, goods incur rent for every three days or part of three days. And here they remain until cleared on an "out of charge" order issued by the Customs on the duplicate Bill of Entry.

If not cleared from the Port Trust uncleared warehouse within four months from the date of landing, the goods are taken charge of by the Customs Preventive department, and are removed to the Queen's Warehouse, where they are lodged pending their disposal under section 88 of the Sea Customs Act.

The "Transit sheds," the "Uncleared Goods Warehouse" and the Queen's Warehouse are all within Customs limits.

When vessels discharge in the stream the bulk of their cargo is under cover of boat notes landed at Carnac Bunder either by the muccadums engaged by the vessel's agents or by the owners of the goods.

As at the docks five clear working days are allowed for the clearance of goods landed from steamers arriving from free or foreign ports. And five days are also allowed for goods imported by such country craft as arrive by foreign ports. In the case of goods brought by native craft from free ports, three free days are allowed.

It will be seen from the above that, except for disposal under section 88 of the Sea Customs Act, no goods are taken charge of by the Customs; that the department has nothing to do with landing, storage or delivery of goods; that on landing, goods are always kept within customs limits before clearance for home consumption, and that in no premises outside the customs are uncleared goods allowed to be deposited.

DOCK CUSTOM HOUSE,
13th July 1892.

(Signed) D. COWASJEE,
Second Examiner.

From J. M. CAMPBELL, Esq., C.S., C.I.E., Collector of Land Revenue, Customs and Opium, Bombay, to the Collector of Sea Customs, dated 16th August 1892, No. C. 6511.

In reply to your letter, No. 1646 G., dated the 25th ultimo, I have the honour to give the further information required by you.

1. The practice prevailing at the Prince's and Victoria Docks in respect of the landing of dutiable goods is the same as that described for free goods in the accompaniment to this office letter, No. C. 5876, dated the 22nd idem, except that dutiable goods are allowed to remain free of rent for seven days (exclusive of Sundays and holidays) instead of for five days, the time allowed for goods. *Greater care is taken in stacking dutiable goods, to facilitate their being quickly traced for customs examination.* As in the case of free goods, dutiable goods are delivered by the Port Trust to the consignees or their agents on production of a delivery order from the agents of the importing vessel, and complete documents from the customs. No delivery of imported goods, whether free or dutiable is made on any account, except under cover of customs documents on which orders for their being "out of customs charge" are given.

2. All free as well as dutiable goods landed at the docks are delivered to their owners or their agents by the Port Trust employés exclusively, and the sheds in which the goods are stored are under the sole control of the Port Trust. Up to the present no cases have occurred in which goods have been passed without documents, no immediate precautions are taken by the custom house to prevent packages being so passed. But four months after the entry inwards of a vessel, a list is prepared showing all items which remain uncleared in the vessel's manifest, that is, for which bills of entry have not been prepared, and which are not reported as short landed. This list is sent to the Preventive Department, by the officers of which the necessary inquiries are made, and the uncleared packages are taken charge of by them, and sent to the Queens Warehouse for disposal under section 88 of the Customs Act. Should any of them be not forthcoming, the Port Trust would be held responsible (*vide* last paragraph of section 85). Except a general supervision by the Customs Preventive Department the entire management of the sheds and the gates at the docks is conducted by the Port Trust. The sheds being all within custom's limits, removal of packages from one shed to another is permitted by shed managers, who are all in Port Trust employ.

3. It is under the provisions of section 85, clause (b) of the Customs Act that goods are landed at the two docks.

4. Goods are landed at the Carnac Bunder also under section 85, but in some cases the owners take delivery from the vessel's side in the stream, and land the goods themselves. In the former case they are in charge of the vessel's agents, and in the latter in that of the owners, who employ watchmen to look after the goods. Free goods are stored in open sheds on the wharf, while dutiable goods are placed in a godown, the key of which remains in charge of the preventive officer at the Bunder after it is closed at sunset, but both classes of goods lie at the risk of the agents of the vessels, or the owners of the goods, as the case may be. The gates at the Bunder are in charge of customs gate-keepers, who allow the goods to pass on presentation of duplicate of the bill of the entry endorsed with an order signed by an Assistant Collector, permitting the removal of the goods.

MINUTES of the Proceedings of a Committee held under G.O., No. 47, Marine, dated 9th February, at the residence of the Hon'ble Mr. Bliss (Doveton House), Nungumbakum, to consider the whole question of improving the means which the Madras Harbour provides for working the trade of the port, involving suggestions for the provision of improved railway communication, facilities for landing and shipping cargo, and ample customs accommodation, and the construction of a canal to connect the harbour and the East Coast canal system.

Present:

THE HON'BLE COLONEL J. PENNYCUICK, R.E., President.
THE HON'BLE MR. A. T. ARUNDEL, I.C.S.
MR. C. SCOVELL, Officiating Deputy Consulting Engineer for Railways.
" E. TURNER, Collector of Sea Customs.
" G. L. CHAMBERS, Harbour Trust Board.
" R. J. BLACK, Do.
" H. SCOTT, Chamber of Commerce.
" W. SHAW, Do.
" C. SETON, Trades' Association.
" R. G. ORR, Do.
" H. C. WEST, Madras Railway Company.
" D. LOGAN, South Indian Railway Company.
COLONEL G. M. J. MOORE, R.A., President, M.M.C.
MR. V. G. LYNN, Kolar Gold Field Mining Board.

Read—G.O. No. 47, Marine, dated 9th February 1895, appointing the committee.

The President briefly explained the causes which had led to the appointment of the committee, and stated that a question having been raised as to the construction of a joint Madras Railway Company and South Indian Railway Company passenger station opposite the post and telegraph offices near the south arm of the harbour, it was found that considerable difficulties had to be overcome, and the Harbour Trust Board then appointed a committee to consider the various matters which had arisen in connection with this proposal. It was considered advisable in the opinion of that committee that a general scheme for harbour improvements, in connection with railway and canal communication, should be taken into consideration, and Government was accordingly addressed upon the subject and the present committee had been appointed.

A printed copy of the correspondence, which had taken place in the Harbour Trust Office regarding plans for a boat basin and a new custom house, was handed to each member of the committee, including estimates for carrying out the various proposals referred to therein, viz.:—a boat basin in the sand south of the harbour, suggested by the Harbour Trust Board's Secretary, and a boat basin inside the harbour itself proposed by the Harbour Trust Board's Engineer.

The President further informed the committee that, in connection with the proposed improved sanitation of the Cooum river, it was intended to cut a canal from the north-west corner of the harbour to the Buckingham canal, and it had been suggested that it might be advantageous to make use of the facilities which would be afforded by this canal, to locate the boat basin and the proposed new custom house to the north, on and near the site now occupied by the harbour works block-making ground, which was Government property, and between which to the west, towards the Buckingham canal, plenty of land was available for the various purposes which might be required for the efficient handling and storage of cargo. A sketch plan showing the proposed alignment of the canal, together with custom house and other arrangements prepared by the Harbour Trust Board's Secretary, was placed upon the committee's table, and the relative advantages and disadvantages of the north and south localities were discussed. Mr. Chambers alluded to the practicability of

arranging for a system of warehousing under warrants by the Harbour Trust Board, as is done in Bombay, and Mr. Orr raised the question whether it would not interfere with the proposal to build docks to the south of the harbour, if a boat basin and custom house were constructed to the north. In reply to an enquiry regarding the estimated cost of constructing docks for sea-going vessels, the Secretary stated that the estimates had ranged from 30 to 86 lakhs of rupees.

The Secretary was directed to obtain information as to the approximate comparative cost of all three schemes. Messrs. H. West and D. Logan undertook to revise the plans submitted by the Secretary, in order to provide better railway communication than that sketched upon the plan for a boat basin with the custom house on the north, and in connection with this Mr. Turner, the Collector of Sea Customs, stated that he did not consider it essential that a new customs office should be built, that the custom house sheds might, without inconvenience to the Sea Customs Department or to the public, be in his opinion placed at a considerable distance apart, as at other ports; and the present custom house could still be used as a custom's office, if the present locality was that best suited to the merchants of Madras.

J. PENNYCUICK, Colonel, R.E.,
President.

PROCEEDINGS of a Committee appointed under G.O., Marine, No. 47, dated 9th February 1895, held in the library at the Technical Institute, Pantheon road, on Monday, 11th March 1895.

Present :

THE HON'BLE COLONEL J. PENNYCUICK, R.E., President.

THE HON'BLE MR. A. T. ARUNDEL, I.C.S.

MR. E. TURNER, Collector of Sea Customs.

„ G. L. CHAMBERS, Harbour Trust Board.

„ R. J. BLACK, Do.

„ H. SCOTT, Chamber of Commerce.

„ W. SHAW, Do

„ C. SETON, Trades' Association.

„ R. G. ORR, Do.

„ H. C. WEST, Madras Railway Company.

„ D. LOGAN, South Indian Railway Company.

COLONEL G. M. J. MOORE, R.A., President, M.M.C.

MR. V. G. LYNN, Kolar Gold Field Mining Board.

Read—the minutes of the last Meeting held on Thursday, 7th March 1895.

The President informed the committee that since the last meeting a rough approximate estimate had been framed of the cost of providing, for foreign import cargo, a boat basin upon the site now occupied by the harbour works block-making ground, 1,165 feet long by 150 feet broad, with quays and custom house sheds and yards; also of a smaller basin on the site of the present coal hard, 700 feet by 70 feet, for coasting cargo and exports, both connected with the canal from the harbour to the Buckingham canal. The estimated cost of this scheme was considerably less than any of the suggestions made for similar accommodation in the sand to the south of the harbour; but the proposed method of construction differed, as also the rates, and there had been so little time to prepare the estimate for the northern scheme that it was, and could only be approximate. The cost as estimated however compared as follows for the various boat basins:—

A. Rs. 7,51,000; B. Rs. 6,87,000; C. Rs. 5,75,000; D. Rs. 5,21,000, as against Rs. 4,65,000 for the northern scheme, excluding custom house sheds in all cases.

Mr. West placed before the committee two sketches—one showing how he, in consultation with Mr. Logan, proposed to give improved railway communication by means of turn-tables, with the northern basin as previously sketched, and the other showing how they would propose to modify the position and shape of the basin, by slanting it in a north-west and south-east position, which would permit both the Madras and South Indian Railways to run direct alongside the custom house sheds, and along the quays, by sidings curved from the main through line along the Beach road.

The Honourable Mr. Arundel addressed the meeting, and stated that he had on Saturday evening accompanied by the Secretary and the Deputy Collector of Sea Customs visited the site of the proposed boat basin and custom house to the north-west of the harbour, and had discussed the various proposals upon the spot with Mr. Chambers and the Harbour Trust Board's Engineer Mr. Pogson, he found that many difficulties existed which could not be shown upon any plan, and would deprecate any hasty decision upon the part of the committee. It must be remembered that the method in which the whole trade of the port was in future to be conducted was, to a great extent, in the hands of the members, the relative distance of the various proposed sites was a matter of importance to the quick despatch of vessels, the wave action inside the harbour in ordinary monsoon weather was another important point, and with regard to the information given by the President in reference to the compensation which it would be necessary to pay for land and houses that must be acquired, he thought that the amount had been very much under-estimated, the committee must have reliable, and as far as practicable exact information as to the cost of every scheme and those which had so far been placed before the committee by no means exhausted the different methods by which harbour improvements might be effected. Mr. Chambers had on Saturday evening referred to and enquired about various other schemes for improving the facilities afforded by the harbour, one of which was building an inner wall across it, and utilising the foreshore between the arms for the construction of quays, and the erection of shed accommodation. The proposed site for the northern scheme appeared to him (Mr. Arundel) somewhat cramped for space, judging from the birds eye view obtained from the top of the Harbour Works office, and it was the same with the foreshore between the arms of the harbour: the road communication to and from the various possible sites for a boat basin was also a matter of great importance as also the respective distances by road to the various mercantile centres of trade in the town; all these and many other details; such as the facilities afforded by each scheme for customs purposes, must be carefully considered, and he would suggest that the Secretary should draw up a memorandum giving the *pros* and *cons* of each scheme; that this should be printed and circulated to each member, and all should note thereon any advantages or disadvantages which might occur to them, in connection with each or any of the suggestions which had been made, these could then be considered by the committee collectively and much valuable information would no doubt be thus obtained for consideration.

The President informed the committee with reference to Mr. Arundel's remarks that Mr. Chambers had suggested what he might term a central scheme and that the Secretary had just placed in his hand a sketch plan prepared by the Harbour Trust Board's Engineer for harbour improvements, very similar in principle, which was the outcome of Mr. Arundel's visit to the harbour, and had been prepared by Mr. Pogson within the last 24 hours, and he would call upon the Secretary to explain the details to the meeting.

Mr. Pinsent informed the committee that on Saturday evening he had had a long consultation with Mr. Pogson, after Mr. Arundel had left the beach, and that Mr. Pogson had undertaken to prepare the plan to which the President had referred. Mr. Pogson was unable to be present himself to explain it, as he was at the moment setting the caisson at the south pier head. This scheme possessed many undoubted advantages. If provided by means of a wall from the north arm of the harbour, and another from the south, with an entrance between, for two boat basins of much greater area and depth than the others, divided by filling in the piles of the present iron screw pile pier with rubble concrete, which thus become a low level jetty. The proposed walls across the harbour would also be low level jetties with a protecting wall upon the sea sides, both being accessible to railway communication. By placing

these walls across the harbour the inner portion being thus separated from the outer, the latter could be dredged to a minimum depth of 5 fathoms, which upon the present plan of berthing vessels would give accommodation for eleven steamers, instead of only nine as now. The western quay wall was placed about half way along the iron pier, this would advance the foreshore by about 200 to 300 feet and entirely remove the objection of want of space to which Mr. Arundel had alluded, as there was ample room for custom house accommodation, for imports, upon the new ground, which would be formed to the south: while exports, coasting imports and coal could be dealt with upon the northern half. There would still remain very ample space for the two railways to run between the wharves and the Beach roads and that itself could be widened all along except where buildings had been erected upon its east side. The customs enclosure provided greater shed area than any of the other schemes and also separate godowns, for warehousing goods when removed from the import sheds. The cost was estimated by Mr. Pogson for the half south of the iron pier roughly at Rs. 10,00,000 including custom house accommodation.

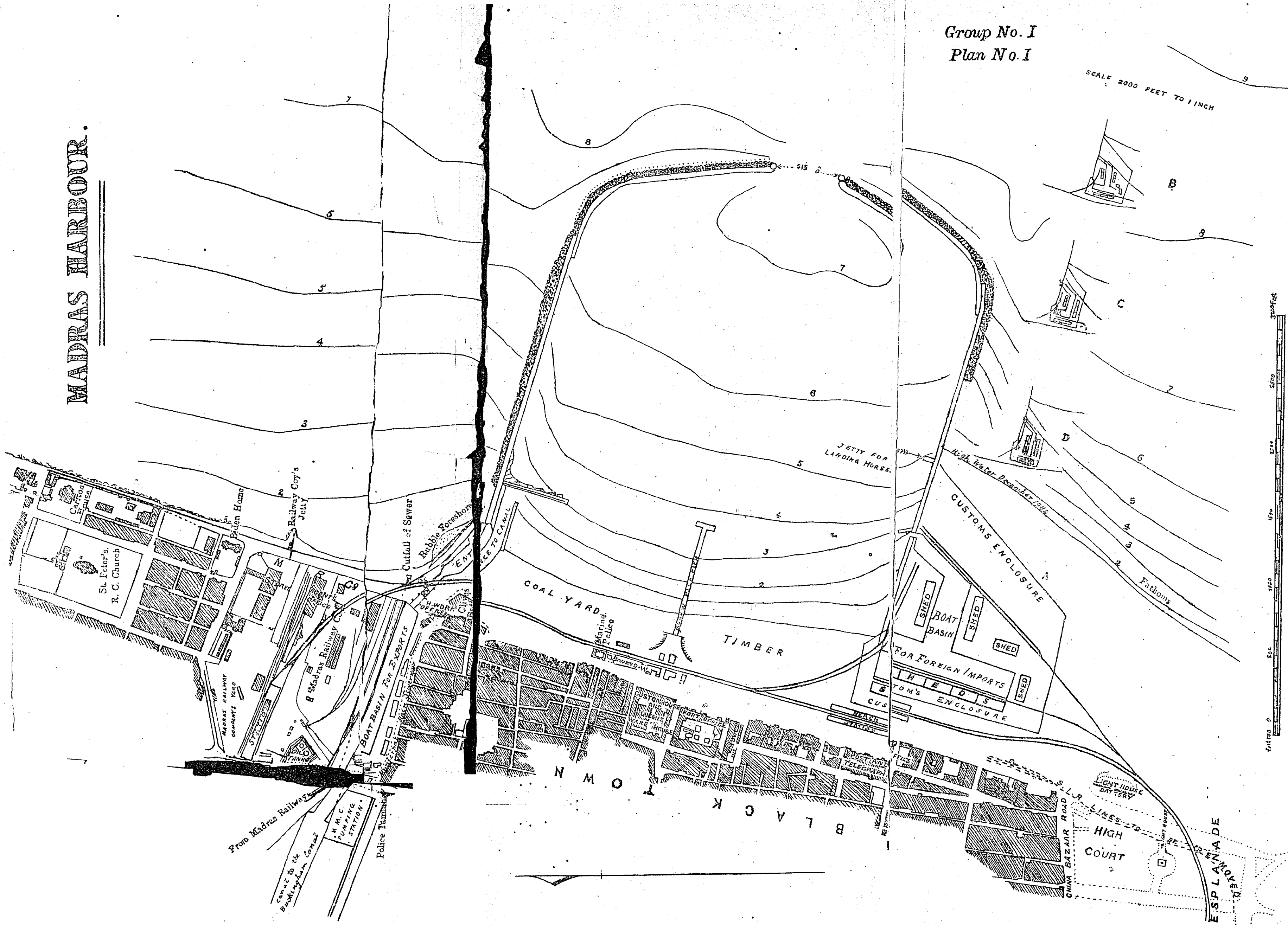
The committee expressed its appreciation of the very prompt manner in which Mr. Pogson had drawn up this central scheme. The Secretary was directed to have all plans lithographed and to prepare and have printed a memorandum as suggested by the Hon'ble Mr. A. T. Arundel.

J. PENNYCUICK, Colonel, R.E.,
President.

MADRAS HARBOUR.

Group No. I
Plan No. I

SCALE 2000 FEET TO 1 INCH



GROUP I.

PLANS D, C, B, A.

Boat basins in the sand to the south of harbour.

General features common to all.

Easy access for the railways.

Ample shed and wharf accommodation.

Sheds alongside of boat basin.

Cart roads in rear of sheds, with platforms to load carts with goods direct from sheds.

Open yard accommodation with railway communication for storage and removal of goods not requiring shed protection.

Ample space for cranes along quay walls, and loading direct on to railways lines.

The whole surrounded by a wall, making a convenient custom house enclosure.

PLAN D.

1. Ample sufficient for the present import requirements of the port.
2. Capable of extension and conversion into A, B, or C.
3. Railway communication, simple and efficient.
4. Shed area, 140,000 square feet.
5. Length of wharfage, 2,600 feet.
6. Estimated cost, Rs. 7,81,005.

Advantages.

Excellent arrangements for foreign imports.

Disadvantages.

- (a) Cost.
- (b) Distance from berths on north side of harbour.
- (c) Distance from Sea Customs Office.
- (d) All cart traffic to North Beach road.
- (e) The doubtful efficiency of the proposed entrance.
- (f) Site artificial land which may need to be revetted to secure it from erosion in a cyclone, and which may, at some future time, be required for docks.
- (g) Pier and beach must still be used for cargo other than foreign imports, unless canal is used for such.

PLAN C.

1. Ample sufficient for the present requirements of the port.
2. Capable of extension and conversion into B or A.
3. Railway communication, simple and efficient.
4. Shed area, 141,200 square feet.
5. Wharfage, 3,000 feet.
6. Estimated cost, Rs. 8,40,596.

Advantages.

Same as D.

Disadvantages.

Same as D.

PLAN B.

1. More than sufficient for the present requirements of the port.
2. Capable of extension and conversion into A.
3. Railway communication, simple and efficient.
4. Shed area, 150,800 square feet.
5. Wharfage, 3,800 feet.
6. Estimated cost, Rs. 9,82,650.

Advantages.

Same as D and C.

Disadvantages.

Same as D and C.

 PLAN A.

1. More than sufficient for the present requirements of the port.
2. Capable of extension for future increased trade, if necessary.
3. Railway communication, simple and efficient.
4. Shed area, 172,400 square feet.
5. Wharfage, 4,300 feet.
6. Cost estimated Rs. 10,88,528.

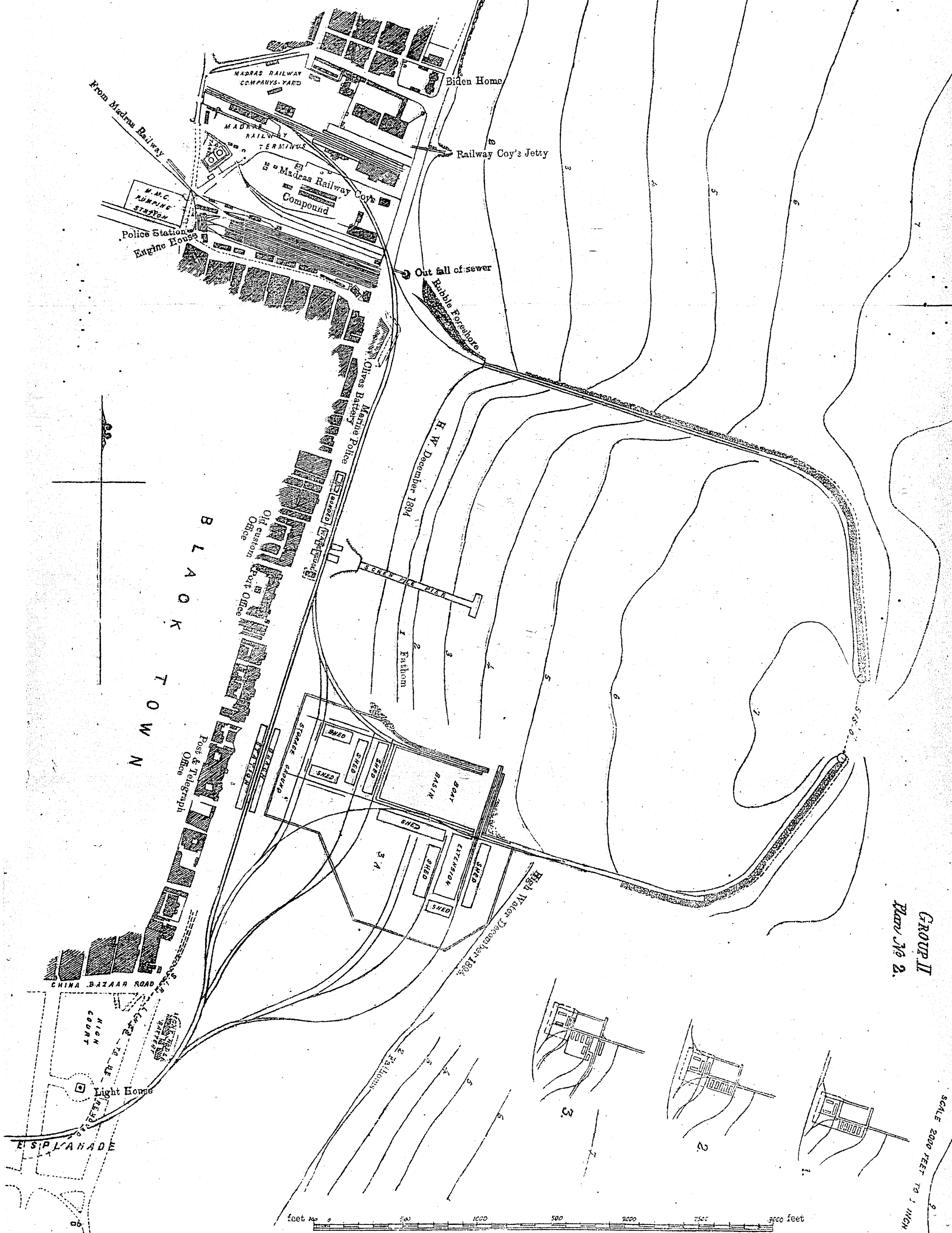
Advantages.

Same as D, C and B.

Disadvantages.

Same as D, C and B.

MADRAS HARBOUR



GROUP II
Plan No 2.

SCALE 2000 FEET TO 1 INCH

GROUP II.

PLANS 1, 2, 3 AND 3-A.

Boat basins inside the water area of the harbour.

General features common to all.

Ample railway communication with all sheds.

Ample shed and wharf accommodation.

No open yard accommodation alongside of quay walls, all such being behind sheds.

Limited space for all except small cranes along the wharfs.

The whole surrounded by a wall making a convenient custom house enclosure.

A considerably greater depth of water in the boat basins which are also of larger area than A, B, C or D.

PLAN I.

1. Ample sufficient for the present requirements of the port.
2. Capable of extension.
3. Railway communication to and from each shed very efficient, but complicated, and interferes with carts loading from the sheds, many of the lines might, with advantage, be omitted. The enclosed area ample for all present requirements.
4. Shed area, 136,000 square feet.
5. Low-level wharfage, 1,175 feet.
6. Estimated cost, Rs. 4,04,308.

The low estimate for this scheme is very much in its favour. The sheds and railway lines could be re-arranged in a more convenient manner, which would greatly improve the facilities afforded. No berthing space would be sacrificed inside the harbour, as the south-west corner being rewalled, the harbour could be dredged sufficiently to prevent any loss of anchorage area.

Advantages.

(a) Cost.

Disadvantages.

- (a) Distance from berths on north side of harbour.
- (b) Distance from Sea Customs office.
- (c) All cart traffic to north beach road.
- (d) Pier and beach must still be used for all cargo other than foreign imports.
- (e) A better arrangement of sheds and railway communication necessary, cart traffic being impeded by present proposals.

PLAN II.

1. Ample sufficient for the present requirements of the port.
2. Capable of extension.
3. Railway communication to and from each shed very efficient, but complicated, and interferes with carts loading from the sheds, many of the lines might, with advantage, be omitted. The enclosed area ample for all requirements.
4. Shed area, 160,000 square feet.
5. Low-level wharfage, 2,195 feet.
6. Estimated cost, Rs. 4,99,084.

The low estimate for this scheme also is very much in its favour, and as in I, railway lines and sheds could be better arranged upon the space available and greatly improve the facilities for landing cargo. No berthing space would be sacrificed inside the harbour, as the south-west corner being rewalled, the harbour could be dredged sufficiently to prevent any loss of anchorage area.

Advantages.

Same as I.

Disadvantages.

Same as I.

PLANS III AND III-A.

1. Ample sufficient for the present requirements of the port.
2. Capable of extension.
3. Railway communication to and from each shed very efficient, but complicated, and interferes with carts loading from the sheds, many of the lines might, with advantage, be omitted but better than in I or II.
4. Shed area, 213,600, nearly seven times that of the present Custom House.
5. Low-level wharfage, 3,455 feet.
6. Cost, Rs. 7,35,663.

The shed accommodation given in these plans is more than is required. Railway communication could be simplified, and by re-arrangements of sheds, imports and exports could be both accommodated separately, and the arrangement would be very convenient. The south-west corner being rewalled, where there is leakage of sand through the old south wall, the harbour could be dredged and no berth would be taken away.

Advantages.

- (a) Exports provided for if shed and railways are re-arranged. Old screwpile pier no longer required for exports.

Disadvantages.

- (a) Distance from berths on north side of harbour.
 (b) Distance from Sea Customs office.
 (c) All cart traffic to north beach road.
 (d) Cost.

MADRAS HARBOUR

GROUP III
Plan No 3.



Photo Aereo Survey Station 1895

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GROUP III.

NORTHERN SCHEME.

A boat basin on the site of the harbour works block-making grounds, behind Clive's Battery for foreign imports with Custom House sheds adjoining, upon the south side of the basin; a yard for the entrance of carts and delivery of cargo and a new road, again to the south, an open wharf on the north side of the basin adjoining the Madras Railway Company compound with easy railway connection from the Madras Railway Company iron-yards to the west of Custom sheds; the whole on the south, a Customs enclosure. Coal storage space further west. The canal runs through this boat basin which is merely a widening of the canal, land is available on the banks of the canal further west for extension. The boat basin and Custom House sheds are clear of the Madras Municipal drain. The canal has to cross the storm water outfall drain, and the Madras Municipal Company pumping station delivery. Ample wharfage and shed accommodation; coal can be conveniently handled; railway communication on the south by means of turn-tables. Screwpile pier no longer required for cargo. Existing beach arrangements inside the harbour not interfered with. Easy road communication on the south to and from Custom House yards and sheds, and from the new roadway several direct roads to European and Native Mercantile centres. Godown accommodation more than ample; part could be used as a warehouse; a subsidiary boat basin to the south of the north wall of the harbour, for exports and coasting imports.

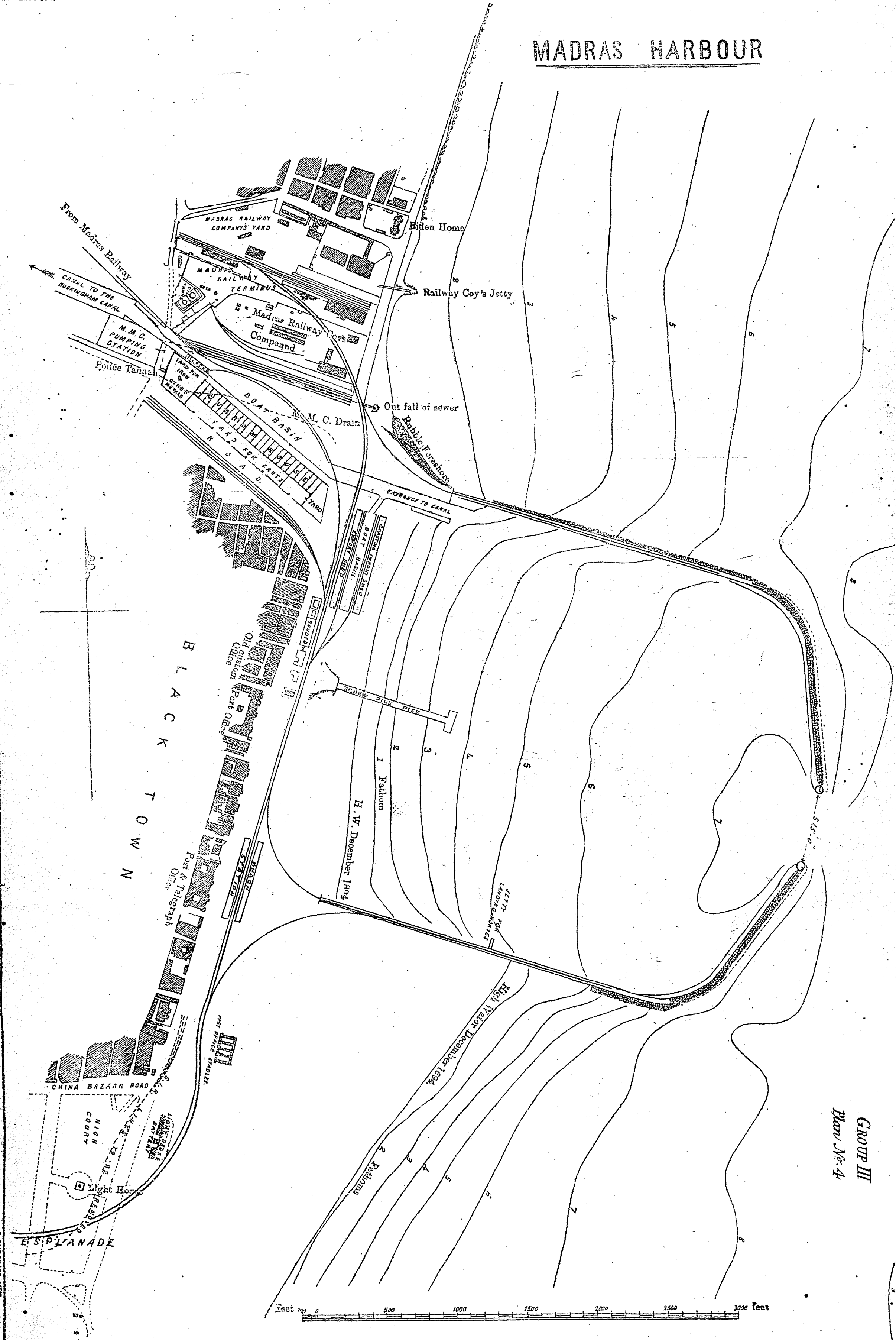
Estimated cost Rs. 6,25,000 including compensation for land Rs. 89,000 and including the boat basin and sheds on the site of the present coal-yards.

Wharfage, low-level; shed area, 129,600 square feet.

*Advantages.**Disadvantages.*

- | | |
|--|--|
| (a) Small cost. | (a) |
| (b) Traffic diverted from beach road. | (b) |
| (c) Other roads, north and south, available to convey traffic to mercantile centres. | (c) Distance from the shipping and Customs office. |
| (d) Does not interfere with Municipal Main Sewer up Boundage lane. | (d) |
| (e) Excellent communication with the Madras Railway. | (e) |
| (f) Wharfage, 3,970 feet exclusive of wharfage for coal further west. | |
| (g) Absolute security, site being on natural land. | |

MADRAS HARBOUR



GROUP III
Plan No. 4

MODIFICATION OF NORTHERN BASIN AND CUSTOM HOUSE.

Modification of northern boat basin suggested by Messrs. West and Logan to provide better railway communication.

In this the basin is placed in a north-west and south-east direction and crosses the line of the Madras Municipal Company main sewer in Boundage lane, the Custom House arrangements are similar in both, but this gives railway communication by curved lines from main through line instead of by turn-tables on the south.

The cost of railway facilities is not included in any estimate for any scheme. In this provision is made for marshalling trains to the south of the Customs enclosure and in the other on ground further west. The space occupied and houses to be removed would be about the same in either case; except that in the modified scheme, the buildings to be removed one of a better class and more expensive. The necessity for so much railway accommodation near the Custom House sheds for foreign imports is questionable, as very little traffic could be expected direct from the Custom House.

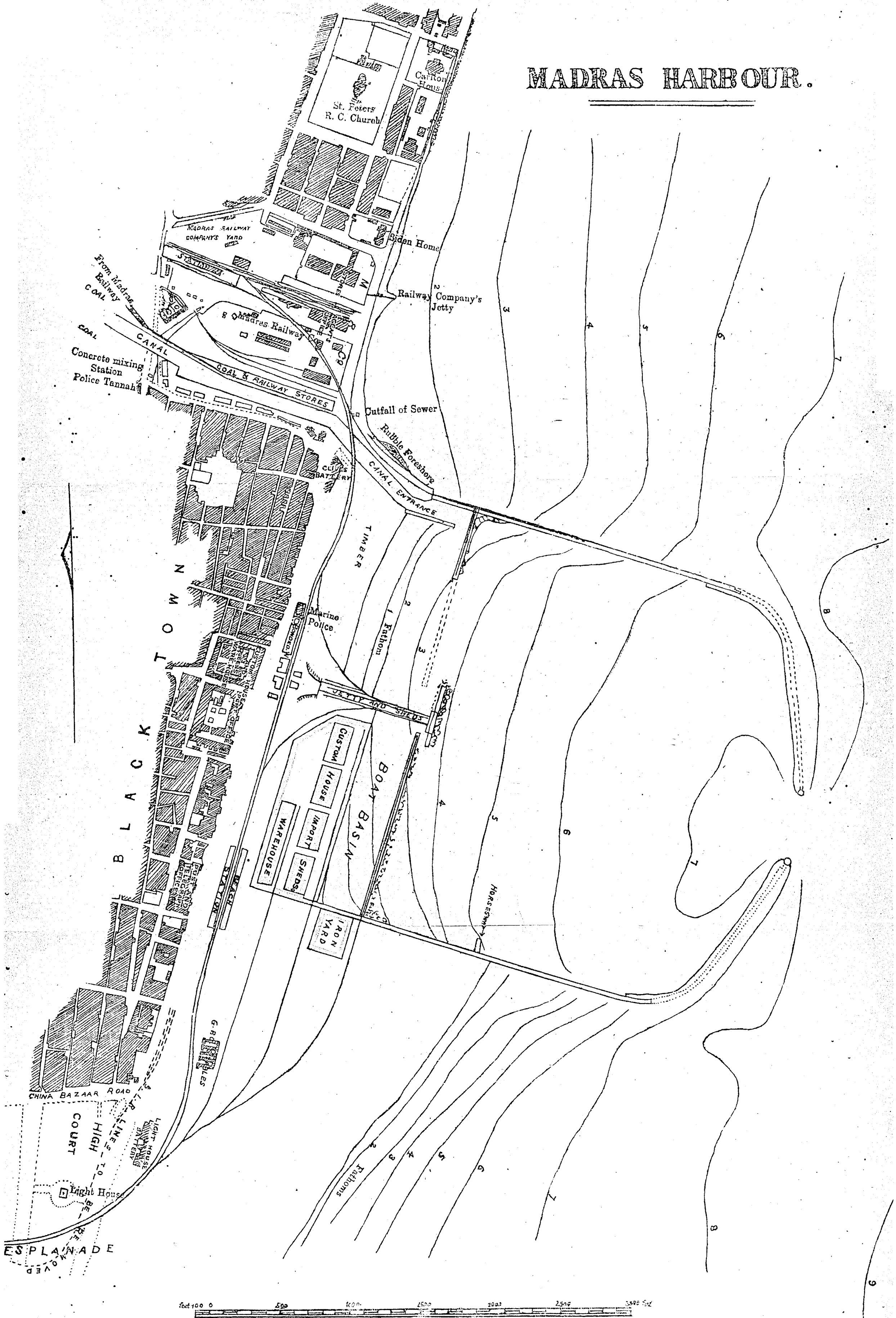
Advantages.

Disadvantages.

RELATIVE TO ORIGINAL.

- | | |
|--|--|
| (a) Better communication for the South Indian Railway. | (a) More expensive land and houses to be acquired. |
| (b) More wharfage space upon the north of the basin. | (b) Municipal main drain crosses boat basin. |

MADRAS HARBOUR.



GROUP IV.

MR. CHAMBERS' SUGGESTIONS.

(a) An arm running north from the south arm of the harbour to a point 100 feet east of the T head of the iron screwpile pier which is extended north and south, the base being filled in with rubble and cement concrete, thus forming a T headed low-level jetty, on which on the site of the present pier can be erected a long shed, using the piles of the pier for the uprights, roofed with corrugated galvanised iron.

The quay wall on the west side of the basin is placed halfway up the iron pier.

Custom House shed and yard accommodation; enclosed, ample and convenient. Railway communication easy, and very full provision for coal.

A protecting arm to canal entrance from north wall of harbour. Beach between north wall and the iron pier, sandy foreshore available for Masulah boats.

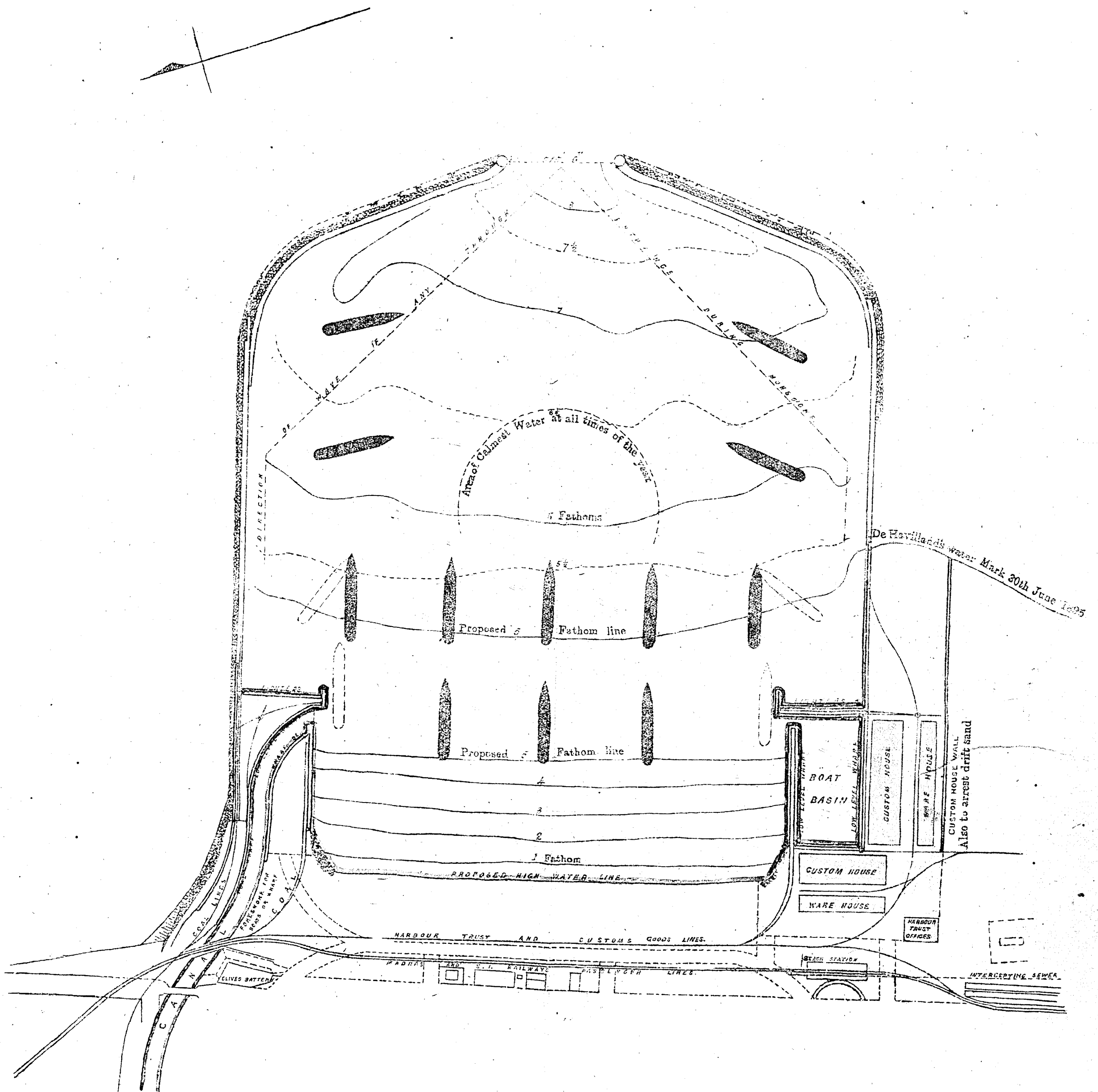
*Advantages.**Disadvantages.*

- | | |
|---|---|
| (a) Central position. | (a) No estimate of cost. |
| (b) Accessibility to all business centres. | (b) All cart traffic has to cross railways and go along beach road. This defect is common to all proposals except the northern basin. |
| (c) Excellent railways communication. | N.B.—Beach road can be made wider. |
| (d) General arrangements, an improvement upon all except those shown in Mr. Pogson's A-1 Scheme. | |
| (e) More vessels can be berthed in the harbour. | |
| (d) Provides a beach to the north of the iron pier for Masulah boats to ply and beach; case oil and dynamite can therefore still be landed outside the harbour. | |

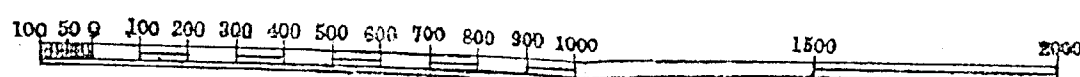
Advantages or disadvantages relative to Mr. Pogson's A-1 Scheme.

? Cost.

MADRAS HARBOUR IMPROVEMENTS.



Scale 400 feet = 1 Inch



NOTE. The Contour lines show the depths below De Havilland's Mean Sea level
Neutral tint Shows completed work
Red shows proposed Improvements.

Signed A Lee Pogson MICE M I M E & CO
Engineer Harbour Trust Board

MR. CHAMBERS' PROPOSALS FOR SMALLER BOAT BASIN SOUTH OF THE PIER.

Similar to his others except that the east wall of the boat basin in 100 feet inside the T head of the iron pier thus coming into shallower water and reducing the area of the boat basin, which would still be ample.

Advantages.

Disadvantages.

Same as in his other proposals.

Same as in his other proposal.

Advantages or disadvantages relative to his other proposal, or Mr. Pogson's A-1 Scheme.

? Cheaper and quite as efficient.

MADRAS HARBOUR.

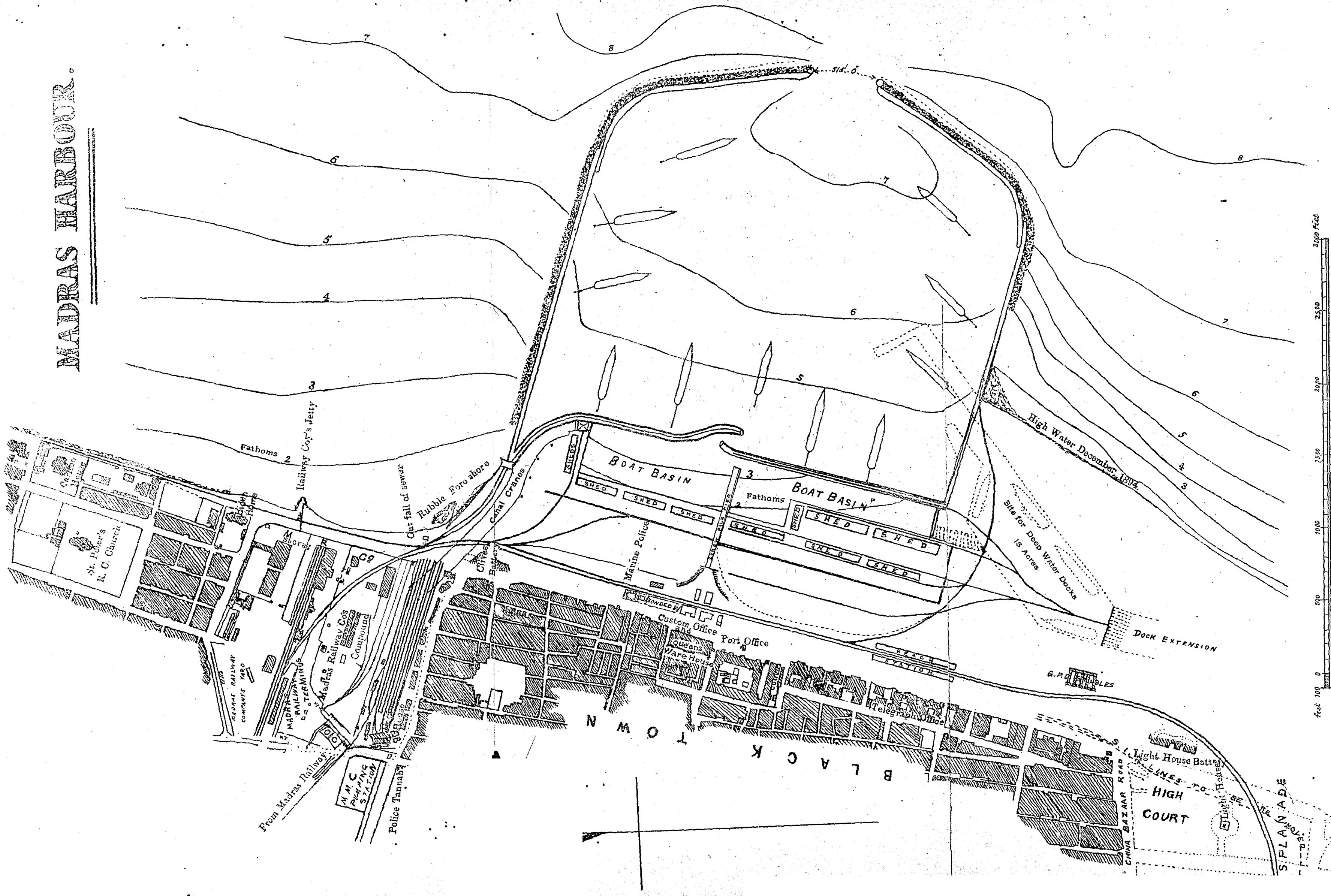


Photo-Zinc. Survey Office, Madras.
1886

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- (a) Central
- (b) Accessi
- (c) Excelle
- (d) General
- (e) More v

Advanta
? Cost.

MR. POGSON'S "A-1" SCHEME.

This is a boat basin inside the harbour formed by a wall running northward from the south arm, and another southward from the north, which approach each other at an overlapping entrance 60' wide. The basin is divided into two by the iron screwpile pier, the base of which filled in with rubble and cement concrete form a low-level jetty. Mr. Pogson does not propose to make this division if the two protecting arms are built across the harbour unless the jetty is considered essential. The northern protecting arm can be omitted and there will then remain a boat basin to the south of the iron pier with excellent railway approach and communication, also ample shed and warehouse accommodation.

Advantages.

- (a) Central position.
- (b) Accessibility to all business centres.
- (c) Excellent railway communication.
- (d) General arrangements, an improvement on all, except Mr. Chambers' proposals.
- (e) More vessels can be berthed in the harbour.

Disadvantages.

- (a) No estimate for cost.
- (b) All cart traffic has to cross railways and to go along beach road. This defect is common to all plans except the northern basin on the site of the block-making ground.
- N.B.—Beach road can be made wider except where buildings have been erected on the east side.
- (c) Masulah boats, being done away with, case oil and dynamite must be landed inside the harbour.

Advantages or disadvantages relative to Mr. Chambers' proposals.

? Cost.

NOTE.

The plans suggested for the improvement of the harbour may be divided into four separate groups, each group containing plans differing in points of detail, chiefly in that of the amount of accommodation provided but alike in their general features.

2. These groups are—

- (1) Boat basins in the land to the south of the harbour; four plans.
- (2) Boat basins inside the water area to the south-west of the harbour; four plans.
- (3) Boat basin formed by an enlargement of the canal which it is proposed to construct between the Buckingham canal and the north end of the harbour; two plans.
- (4) Boat basin formed by cross walls on the western side of the harbour; three plans.

3. In considering the cost of these various schemes, it will be convenient to distinguish between what is essential to each scheme, and what is independent of the particular position adopted for the boat basin and the wharves connected with it. As an instance it may be observed that while the estimates for schemes in group (1) include sums varying from Rs. 2,60,000 to Rs. 3,38,000 for Custom House and sheds, the estimate for those in group (3) makes no provision for the former and only Rs. 60,000 for the latter. It is obvious that differences of this kind vitiate any comparison that may be made between the cost of the various schemes, and in making any such comparison it will be convenient to eliminate all items which are practically common to all schemes.

4. In making any comparison of cost we are met at the outset by the difficulty that such estimates as have been prepared are based upon widely differing data; as an instance I may mention those under groups (2) and (3), both of which have been prepared either by, or from information furnished by Mr. Pogson; in the former case the cost of building with old blocks, exclusive of materials and manufacture, is estimated at from Rs. 40 to Rs. 8 per foot of wall, in the latter at Rs. 104 per foot; discrepancies such as this render necessary great caution in dealing with the estimates.

5. Eliminating in all cases the cost of Custom House buildings and sheds, the cost of the schemes under group (1) is from Rs. 5,21,000 to Rs. 7,51,000.

6. The estimates for schemes under group (2) are from Rs. 1,62,000 to Rs. 4,93,000, the difference in all cases being due to variations in the amount of accommodation required; I am, however, bound to say that in my opinion the estimates for these schemes are altogether untrustworthy and that fully 60 per cent. should be added to them.

7. For the first of the schemes under group (3), the only one for which an estimate has been prepared, the amount of that estimate is Rs. 11,23,000; but this include Rs. 60,000 for sheds and Rs. 4,98,000 for the construction of a wall to protect the entrance to the canal, the cost of which has been enormously over-estimated; the former item should be omitted for the reasons given above and the latter reduced to Rs. 1,50,000.

8. On the other hand I think that the provision for compensation for land is somewhat under-estimated even for the cheaper of the two schemes in this group, and that instead of Rs. 89,000 not less than Rs. 1,50,000 should be allowed; for the second scheme, which takes up a good deal of more valuable land, another Rs. 50,000 would be wanted. The provision for establishment is also I think insufficient and an addition of Rs. 60,000 should be made on this account. Making the necessary corrections on these grounds, the estimate of Rs. 11,23,000 mentioned above would become Rs. 8,35,000.

9. It must, however, be noted that this total includes Rs. 3,20,000, for the connection of the canal with the harbour, and for the excavation of that portion of the canal which is occupied by the boat basin, and that this expenditure will have to be incurred in any case, so that in comparing the cost of the various schemes the sum mentioned must be added to the estimates for those in groups (1) and (2).

10. As regards the two schemes included in this group, the second has the advantage of rather better communication with the South Indian Railway and also of avoiding the removal, which under the other scheme is necessary, of Clive's Battery; it is in my mind a matter of doubt how far these advantages outweigh the extra cost due to the more expensive land required and to the necessity for diverting the Municipal drain, the latter rather a serious operation.

11. For the schemes in the fourth group it is unfortunate that no estimate of cost has yet been prepared, and as it seems doubtful how long it will be before estimates can be obtained, I am unwilling any longer to delay submitting these papers to the Committee.

12. So far as I can make an approximate estimate by comparing the quantities of work in these schemes with those in the other groups, I should say that the three schemes named would cost, respectively, about Rs. 7,00,000, Rs. 6,40,000 and Rs. 8,00,000; to which sums, for comparison with the other groups must be added Rs. 1,70,000 for work belonging to the canal; the reason why the amount to be added on this ground is less than in the case of groups (1) and (2) is that the protection of the canal entrance is included in the cost of all schemes in the fourth group.

13. Making the corrections mentioned in the above notes, the total cost to be incurred for the different schemes would be—

Group (1)

Rs. 8,41,000 to Rs. 10,71,000.

Group (2)

Rs. 5,79,000 to Rs. 11,98,000.

Group (3)

Rs. 8,35,000 and Rs. 8,85,000.

Group (4)

Rs. 8,70,000, Rs. 8,10,000 and Rs. 9,70,000.

14. As regards the relative convenience to trade of the different schemes, which in the long run will be a much more important matter than their first cost, other members of the Committee are so much more competent to express an opinion than myself that I only propose to note very briefly on this point.

15. It has been said that the south side of the harbour is more fully occupied by vessels than the north and that consequently it is more convenient to have the landing place on that side of the harbour. I cannot but think that too much stress has been laid upon this argument, and that if the harbour is as crowded as we may hope it will be in the near future the traffic will be pretty evenly distributed over its whole area and there will be but little to choose between a landing place on the north and one on the south side, though a central position as in the fourth group will have advantages over either. As a matter of fact, however, the difference of time occupied in the journey of a boat to one landing place or another will in any case be small in comparison with the time occupied on a trip including loading and unloading.

16. Schemes under group (1) have the very serious disadvantage of occupying ground which at a future time may be required for docks.

17. The schemes under group (2) appear to me to possess no advantages over those in either of the other groups except the single one of cost, as compared with group (1), and this, for the reasons given above, I consider to be altogether fallacious. The reduction of the available area of the harbour appears to be an important disadvantage attaching to this group.

18. Schemes under group (3) have the advantage that the local traffic has not to be carried across the beach road but can go direct to the main arteries of Black

Town; this advantage appears to me to form a very important argument in favour of this group.

19. Of the three schemes coming under group (4) the second appears to me to be the preferable one; it is cheaper than the first and provides practically the same amount of accommodation; I cannot however help thinking that it would be still further improved by transferring the whole thing to the north side of the pier; its cost would be reduced by doing away with the separate arm for the protection of the canal, and for the reasons given above I cannot see that the facilities of landing would be reduced to any appreciable extent. A sketch illustration of this suggestion has been prepared and is attached to these papers. It will be seen that the plan possesses some decided advantages in the matter of economy and also of facilities for the provision of warehouse accommodation and railway communication, especially in connection with the despatch of coal. All the schemes of this group share with those of group (2) the disadvantage of encroaching upon the area of the harbour.

20. The last scheme under this group is practically the second scheme duplicated with the northern arm somewhat extended; it has one serious drawback, namely, that it leaves no beach inside the harbour, and therefore involves the immediate abandonment of Masula boats; this is a point to which attention should, I think, be given.

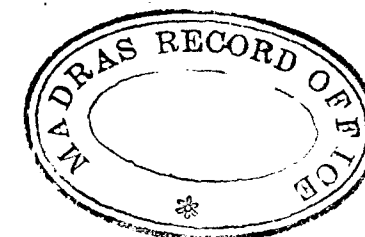
J. PENNYCUICK.

20th March 1895.

MODIFICATION OF MR. CHAMBERS' PROPOSALS, SUGGESTED BY COLONEL PENNYCUICK
—VIDE PARAGRAPH 19 OF HIS NOTE.

Relative advantages compared with group (4)—

- (a) Cost reduced by doing away with the proposed arm across the harbour from the south wall.
- (b) More space for railways and better railway communication.
- (c) More wharfage space, especially such as would be suitable for the prompt despatch of coal.
- (d) Alternative routes to Mercantile centres—(a) along North Beach road; (b) up Boundage lane and along main arteries, north and south, through Black Town.
- (e) Harbour can be dredged on the south side between iron pier and south wall, thus increasing space available for berthing steamers and country craft.



NOTE.

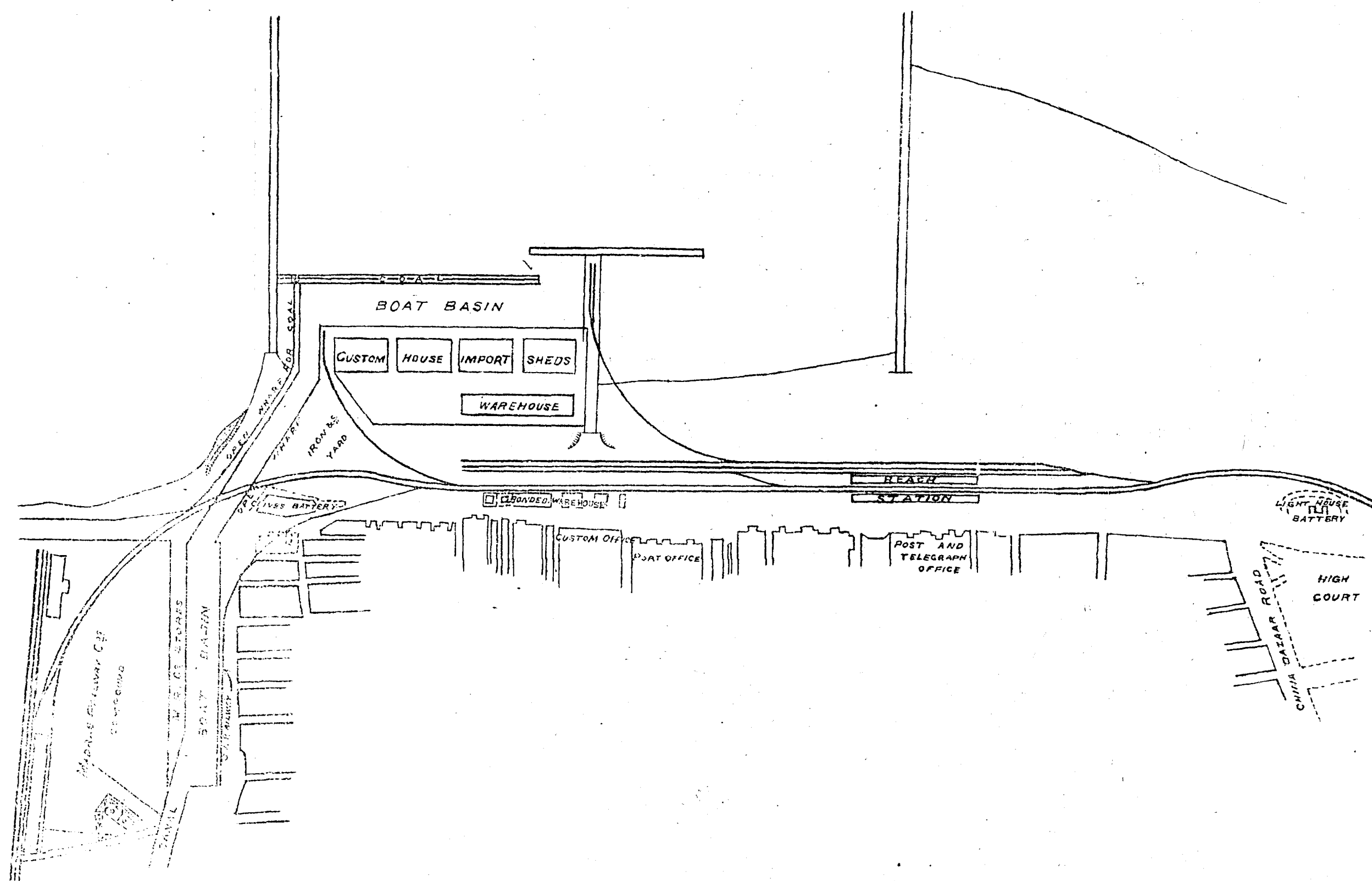
Since writing my note of the 20th instant, I have obtained from Mr. Pogson approximate estimates of the cost of two of the three schemes included under group (4) and of the modification suggested in paragraph 19 of the note; these estimates amount to Rs. 9,54,000 for the first of the three schemes, Rs. 14,28,000 for the third, and Rs. 8,89,000 for the modification suggested in paragraph 19; these estimates include a great deal of the work, which, in connection with the other groups, is shown as belonging to the canal, and in order to make a fair comparison with the other groups not more than Rs. 50,000 need be added to them, but with this they are a good deal more expensive than the approximate sums named in paragraph 13 of my note.

In this paragraph under group (4) for Rs. 8,70,000 should be substituted Rs. 10,04,000, and for Rs. 9,70,000, Rs. 15,27,000. The second scheme entered there at Rs. 8,10,000 will come to about Rs. 9,40,000, and the modification in paragraph 19, Rs. 9,39,000.

Drawings of these schemes are being prepared, and will, it is hoped, be ready for submission to the Committee at its next meeting.

MADRAS,
27th March 1895.

J. PENNYCUICK, Colonel, R.E.,
President.



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1896

PROCEEDINGS of a Committee appointed under G.O. No. 47, Marine, dated 9th February 1895, held in the library at the Technical Institute, Pantheon Road, on Friday, 29th March 1895 :—

Present :

THE HON'BLE COL. J. PENNYQUICK, R.E., President.
THE HON'BLE MR. A. T. ARUNDEL, I.C.S.
MR. E. TURNER, Collector of Sea Customs.
" G. L. CHAMBERS, Harbour Trust Board.
" R. J. BLACK, do.
" H. SCOTT, Chamber of Commerce.
" W. SHAW, do.
" C. SETON, Trades' Association.
" R. G. ORR do.
" H. C. WEST, Madras Railway Company.
" D. LOGAN, South Indian Railway Company.
COL. G. M. J. MOORE, R.A., President, M.M.C.
MR. V. G. LYNN, Kolar Gold Field Mining Board.

The Minutes of the last meeting held on the 11th March having been printed, and a copy furnished to each member, were taken as read.

2. The Committee then took into consideration the various plans and estimates for harbour improvements, which had been lithographed and printed, as suggested by the Hon'ble Mr. A. T. Arundel at the last meeting, and a copy of which, with notes by the President, dated 20th and 27th March, had been supplied to all members of the Committee.

Mr. Pogson, the Harbour Trust Board Engineer, submitted drawings showing how he proposed to carry out designs A-1 for a boat basin, inside the harbour, with canal entrance in the north-west corner, together with modifications meeting objections which had been raised, and a plan showing final arrangements, into which the proposal could ultimately be developed. He also gave the total cost of each design, progressing towards the complete plan, as follows :—

- (a) For a canal entrance with covering arm, Rs. 3,62,379.
- (b) For a boat basin in the south-west corner of the harbour, Rs. 5,91,570.
Total of the two, leaving a sandy foreshore for Masulah boats upon the north of the iron screw pile pier, Rs. 9,53,949.
- (c) For an extension of the northern arm protecting the canal entrance and the conversion of the sandy foreshore into a low level wharf, Rs. 4,73,939.
Total for the completed scheme, Rs. 14,27,888.
- (d) For a boat basin in the north-west corner of the harbour between the iron screw pile pier and the north arm, Rs. 5,25,667. Total with canal entrance, Rs. 8,88,046.

Mr. Pogson explained the method he proposed to adopt of progressive construction, whereby from a commencement at the canal entrance the various schemes in connection with plan A-1 could gradually be constructed, without interference with existing arrangements, until construction afforded other means for providing for imports and exports. The proposals were discussed in detail and it was unanimously resolved that the Committee approves plan A-1, providing—

- (a) For a canal entrance with covering arm at a cost of Rs. 3,62,379; (b) a boat basin in the south-west corner of the harbour for Rs. 5,91,570, total Rs. 9,53,949; and ultimately, if hereafter found desirable, the extension (c) at a cost of Rs. 4,73,939, or for the complete scheme, Rupees 14,27,888.

3. The Committee then discussed a proposal of the Chamber of Commerce suggesting the adoption at Madras of a system similar to that at Bombay, whereby the Harbour Trust Board would receive into the Harbour Trust sheds all cargo as landed, deliver same upon pass orders from the Collector, warehouse goods upon

warrant, and at the expiration of four months deliver to the Collector of Sea Customs, under section 88 of the Sea Customs Act, any goods not up to then cleared through the Sea Customs office. The Committee also took into consideration the opinion expressed by the Chamber of Commerce that the appointment of Collector of Sea Customs should be of a more permanent nature than hitherto, as regards the gentleman appointed, as it was considered by the Chamber very desirable that the office should be held by one person for a considerable number of years, in view of the important mercantile interests confided to him requiring an intimate personal knowledge of details.

Proposed by Mr. R. J. Black and seconded by Mr. R. G. Orr that this Committee recommends the adoption at Madras of the custom house procedure followed at Bombay regarding the reception and delivery of goods landed.

The Hon'ble Mr. A. T. Arundel stated that, as this was a matter which concerned his department, he would prefer not to express any opinion or to vote, but would be glad to learn the opinions held by other members of the Committee. Mr. Turner remarked that, as it was a matter which chiefly concerned the Mercantile public, perhaps the Committee would prefer that the votes of the Mercantile representatives only should be recorded.

Mr. Shaw replied that every one connected with the trade of this port was, he believed, unanimous; and that as the matter had been referred to the Committee, he considered that the Mercantile interests involved would receive most valuable support if those members of the Committee not personally interested expressed their opinions. Mr. Black's proposal was then put and carried unanimously, except that the Hon'ble Mr. Arundel declined to vote and expressed his intention of adopting a neutral attitude until he had had the opportunity of carefully studying and considering the proposal and whatever it might involve.

Resolved further that this Committee approves and endorses the recommendation of the Chamber of Commerce; that the tenure of the office of Collector of Sea Customs, and therefore also of Chairman of the Harbour Trust Board, should be of a more permanent nature.

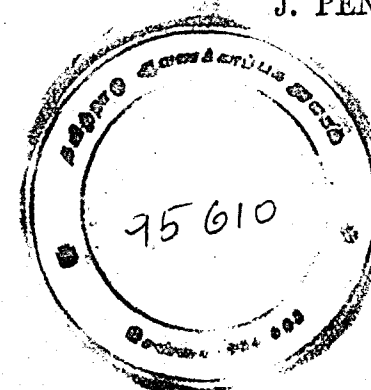
The President placed before the Committee papers forwarded to him by the Chief Secretary to Government, with a request that the question involved, regarding the charge levied by the Harbour Trust Board under section 45, Act II of 1886, for the entry and haulage of vehicles carrying goods, as it effected vehicles not hauled by Harbour Trust locomotive engines may be taken into consideration by the Committee and included in its recommendations.

The Committee considered that the matter scarcely came within the scope of its enquiry, and as the papers had only been received for circulation on the 27th March, which had enabled only two of the members to peruse them, as the correspondence and Government Orders were voluminous, and required careful consideration, which would delay the submission of a report to Government regarding harbour improvements, the members would prefer not to go into the matter which in their opinion was an executive question which could only be dealt with by Government.

The Committee requested the President to bring to the notice of Government the valuable assistance rendered to it by the Secretary Mr. Pinsent, with a view to his services receiving suitable pecuniary recognition from Government; the members of the Harbour Trust Board also expressing the willingness of the Board to contribute.

The members of the Committee also desired to express their acknowledgment for the prompt manner in which Mr. Pogson had complied with their request for information regarding the probable cost of the various schemes proposed and had prepared plans and estimates for them.

J. PENNYQUICK, Colonel, R.E.,
President.



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