
Bombay Development Department.

**REPORT ON THE WORKING OF THE
DEVELOPMENT DEPARTMENT.**

FOR THE PERIOD ENDING 31st MARCH 1921.

[Price—Rs. 4.]

Bombay Development Department.

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Report
on the working of the Development Department

for the period ending
31st March 1921..

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With the compliments
of
The Director of Development, Bombay.

To _____

Report on the working of the Development Department for the period ending 31st March 1921.

The Development Department was formally constituted on the 18th November 1920, under Government Order, Financial Department, no. 661, dated the 18th November 1920. Its duties were specified by His Excellency the Governor in his speech in the Bombay Legislative Council on the 3rd August 1920, as follows:—

(a) To carry out the Back Bay Reclamation Scheme and any other reclamation schemes which may be found necessary in or near Bombay City.

(b) To undertake the industrial housing scheme of 50,000 one-roomed tenements for the working classes in Bombay.

(c) To organise systematically the supply of building materials for its own work and for the works with which it is connected.

(d) To take over all questions relating to the acquisition of land in Bombay City and all questions regarding the utilisation of Government land.

(e) To carry out large schemes for the systematic development of Salsette—

(i) by town planning schemes to be carried out by local authorities, and

(ii) by the purchase of areas outright with a view to resale after development.

(f) To secure an adequate water supply for the whole of Salsette when it is developed as an urban area.

(g) To deal with the supply and distribution of electrical energy, both for domestic and industrial purposes in the area outside Bombay.

(h) To take up the question of the improvement of communications to link up Bombay City with the areas to be developed in Salsette and Trombay.

2. Prior to the formation of the Department, certain important preliminaries had been undertaken by Government in connection with the Back Bay Reclamation Scheme. Messrs. Meik and Buchanan having been appointed Consulting Engineers for the project, arrangements were made during the summer of 1920 to place orders for the necessary plant through the Stores Department of the India Office. Mr. L. W. Lewis, C.I.E., was appointed Chief Engineer, and Mr. G. M. O'Rorke, Senior Deputy Chief Engineer, and both these officers were associated with the Consulting Engineers in London in the preparation of the detailed designs and specifications for the various items, and in the selection and ordering of the necessary plant for the quarry and sea wall. At the same time, Mr. W. R. Philpot-Brookes, an Executive Engineer of the Bombay Public Works Department, was placed on special duty in Bombay to deal with certain preliminary investigations, required mainly in connection with the establishment of a large quarry at Akurli (near Kandivli Station) in Salsette to provide the necessary material for the sea wall, and the provision of the sidings and other facilities for handling the product. Apart from the reclamation, steps were taken by Government to secure the services of Mr. W. R. Davidge, F.S.I., A.R.I.B.A., as Consulting Town Planner to the Department.

3. Since November 1920, much of the period covered by this report has been taken up in organising the Department and in the preliminary enquiries necessary to enable conclusions to be arrived at on broad lines as to the best means of carrying out the work assigned to it. The offices of the Department, at first located in the Secretariat, were subsequently moved to the Town Hall before being permanently established, on 1st January 1921,

in the new building behind the Old Custom House. The names of the principal officers and an outline of the organisation of the Development Department as on 31st March 1921, are given in the Appendix to the report.

4. To secure the necessary control of the areas outside Bombay with which it is proposed to deal, a large part of Salsette and Trombay, comprising 84 villages, was constituted the Bombay Suburban Division under Government Notification No. 3419-B., dated the 15th November 1920, and Mr. P. W. Monie, C.S.I., I. C. S., Deputy Director of Development and Secretary to Government, Development Department, was appointed Commissioner of the Suburban Division. Later, a further area comprising seven villages in the Kalyan Taluka of the Northern Division between Kalyan and Badlapur stations on the G. I. P. Railway was attached to the Bombay Suburban Division as the Ambarnath Taluka. The accompanying map, Plate I, indicates the area included in the Bombay Suburban Division on 31st March 1921. On the introduction of the Reforms Scheme, the Development Department was placed in charge of the Honourable Sir Chimanlal Setalvad, Kt., Member of the Executive Council.

5. Before dealing with the various schemes in detail, reference may be made to an important settlement arrived at with the Government of India, during the period under review, in regard to the exchange of land with the Military Department in Bombay. Certain scattered properties held by the Military Department in the Fort area have ceased to afford the necessary accommodation or convenience for modern military requirements, although possessing considerable value from a commercial point of view as sites for offices, etc., in central situations. The Government of India agreed to dispose of the plots in question provided an area could be made available on the proposed reclamation at its southern extremity, sufficient to house those displaced establishments which could not, without inconvenience, be located outside Bombay, and that terms could be agreed upon for the transfer of the necessary reclaimed land. As indicated above, the negotiations have been brought to a satisfactory conclusion, but it is not possible at this stage to state the actual terms of the agreement, as the sanction of the Secretary of State to the proposed settlement has not been received.

6. *Back Bay Reclamation*:—Sir George Buchanan, K.C.I.E., visited Bombay from November 1920 to February 1921, when numerous details in connection with the reclamation were discussed. The plant has begun to arrive in India and a considerable amount of work of a preparatory nature has been done. At Kandivli, a siding connection with the B. B. and C. I. main line has been laid nearly up to the quarry. Sites for the stores workshops and power house have been levelled and preparation of foundations started, and work has been carried out on the levelling of the quarry floor as well as of sites for weigh bridge, wagon inspection shed and loco. shed. A temporary magazine has been constructed. Difficulty has been encountered in providing water for the work, and wells already existing on the land to be acquired have been cleaned and deepened. New wells are in progress of being sunk and there is every hope that all the water required for the works population, as well as for boiler feed and other machinery, will be obtained from wells on the site. The shortage of water has unfortunately slowed down progress on building operations on accommodation for the staff and labour. At Kandivli there were no buildings existing at all and everything has had to be started from the beginning. The staff have been temporarily provided with tents and huts and several ranges of temporary cooly lines with latrines have been provided.

7. At the Northern end of the area to be reclaimed, the Kennedy Sea Face wall is being completed up to a certain level on the length for which the foundations had been laid by the Presidency District, Public Works Department. A cross wall at the end of the previously laid foundation, connecting to the Jackson wall, is also under construction to provide for a starting place for the new work. The laying of rails in the workyard has been put in hand, and work has been started on the connection with the B. B. and C. I. main line at Chowpatty. Arrangements are being made for the supply of material of all kinds required for next season's work.

8. The wall, of a total length of just over 4 miles, with the exception of the southern end at Colaba, will consist of a rubble mound on which a mass concrete superstructure will first be built for a height of 7' 9". On this wall will travel the heavy crane to set the protection blocks of stone. On completion of the whole wall up to this working level, a further layer of concrete to form a footpath as well as a parapet wall will be added. It is hoped to commence the gantry, from which work on the wall will be carried out, immediately after the monsoon and the items of work for the various portions of the wall will be executed in sequence, so as to enable 2,000 ft. in length to be completed, including protection blocks, during the season 1921-22. At Colaba arrangements are not so far advanced, but it is hoped that a 2,000 ft. length of wall of a special design will be completed. The final outline of the reclamation is shown on Plate II.

9. In future years, when the production of the quarry has been developed, it is hoped to increase the length of wall completed yearly, and to finish the main mass of the work in four working seasons. The completion of the top of the wall and parapet will be carried out as the various compartments into which the reclamation will be divided, are filled in with the pumped material. Designs for quarters, offices and workshops are in various stages of progress and construction will be commenced shortly. Reports received from the India Office up to 31st March 1921, show that good progress has been made on the dredger and the intermediate pumping station. The pipe lines, both floating and shore, are also progressing and it is expected that some parts will be shipped shortly. The dredger is timed to arrive in Bombay after the monsoon of 1922 when it is expected to have a compartment of the reclamation area ready for filling.

10. *East Colaba Reclamation.*—A scheme for the development of Colaba, including the reclamation of 139 acres of foreshore on the Eastern side, was worked out early in 1919 by Mr. A. E. Mirams, F.S.I., F.S.A., Consulting Surveyor to the Government of Bombay. The proposal, however, was not proceeded with at the time, and subsequent investigations have led to the decision to modify the project and to confine it for the present to the reclamation portion of the work only. The scheme is accordingly being revised, and it is hoped to submit it for sanction shortly, so that the work may be carried out at the same time as the Back Bay Reclamation. The position of the proposed reclamation is indicated on Plate II.

11. *Industrial Housing in Bombay.*—The first two schemes to give effect to the general programme of housing the working classes, are Naigaum and DeLisle Road. The Naigaum area consists of two blocks of land which are being taken over from the Improvement Trust. One was handed over in March and tenders for the construction of the chawls have been invited; the second block will, it is expected, be handed over in June. Both together will provide for the construction of 3,520 tenements. The DeLisle Road scheme comprises a piece of land which is being acquired to enable a large programme of chawl building to be put in hand, without waiting for the filling of the land at Worli which is to be made available by the Improvement Trust. It will accommodate about 2,640 tenements, so that before very long, it is hoped that work on over 6,000 tenements will be in progress. The Worli Scheme of the Improvement Trust aims at providing for about 13,000 tenements, and work will be started in that scheme as soon as the filling of the area to be allotted to chawls is sufficiently advanced. The position of the Naigaum, DeLisle Road and Worli chawl schemes is indicated on Plate II. Further sites for chawls will be provided by the Improvement Trust at a later date, in connection with their Dharavi and Sewri-Wadala schemes. The chawls will be built in blocks of 80 single-roomed tenements convertible into two-roomed tenements if required.

12. *Provision for the expansion of industries outside Bombay.*—In 1919, Government, at the instance of the Director of Industries, adopted a scheme for the establishment of an industrial area in the villages of Kurla and Kiorl in Salsette which now form part of the Bombay Suburban Division. Unfortunately, the area was found to be unsuitable for early development for the purposes intended, as the ground requires a good deal of filling and there is no probability of sufficient water being available until the Bombay Municipality's scheme for increasing the supply of water from Tansa is completed; also the area is small, about 613 acres only, and expansion to any appreciable extent would

have been difficult, whilst it is inconveniently placed from the railway point of view, being situated on a busy suburban section adjoining the tracks allotted to the local services. It is proposed to develop the area in the future to provide sites for factories and workshops of the smaller or domestic type which require to be within easy distance of the city, but meanwhile, it has been necessary to look elsewhere for an area suitable for development as a satellite industrial town. Briefly, the requirements of such a site were considered to be:—

- (a) Possibility of providing a large supply of water within a reasonable time and at reasonable cost;
- (b) Road and railway facilities and supply of power;
- (c) Room for very considerable expansion in the future, if necessary;
- (d) Conditions favourable to the disposal of a large quantity of more or less objectionable effluent and trade waste, and
- (e) Sites for factories and for industrial housing available for immediate building.

13. The area found best to satisfy the conditions is that adjoining the G. I. P. Railway South-East Line between Kalyan and Badlapur stations, and it was decided, as stated in paragraph 4 above, that seven villages of the Kalyan Taluka, *viz.*, Chikhaloli, Moravli, Kahoj Khuntivli, Ambarnath, Javsai, Kansai and Wadavli should be transferred to the Bombay Suburban Division, and that an area of nearly 1,282 acres should be notified for acquisition. A plan of the area notified is shown on Plate III, from which it will be seen that it adjoins the railway and the Andhra Valley Power Transmission line, and is traversed by the road from Kalyan to Badlapur. Abundant supplies of water will be available from the Uhlas river when the tail water of the Andhra Valley Power scheme begins to be discharged into it next cold weather, and the conditions are favourable for supply and distribution. The proposed industrial area is open to the westerly breeze and slopes gradually in the direction of Kalyan thus facilitating drainage into the Uhlas river several miles below its tidal limit. The total population of the seven villages to be included in the Ambarnath Taluka at the last census was under 2,100, and the area notified for acquisition amounts to less than one-fifth of the whole taluka.

14. The proximity of the large railway yard at Kalyan will facilitate the handling of the traffic, and the G. I. P. Railway Company have agreed to the provision of the necessary sidings on the usual terms. Arrangements have already been made for a temporary supply of water sufficient to enable building operations to commence at once, and the details of the permanent scheme for the supply of one million gallons per day, to commence with, are well advanced. The permanent supply will be pumped from the Uhlas river near Badlapur station to a service reservoir constructed on high ground conveniently situated to command the whole area.

15. The proposed satellite industrial town is intended primarily to accommodate new industries. But it is perhaps not too much to hope that when existing mills and factories in Bombay require extension or reconstruction, some of them may be attracted to this area by reason of the greater advantages which it will be able to offer. This is a possibility which suggests a step towards a real solution of the congestion of the working classes in Bombay. Up to the 31st March 1921 sites for three factories had been definitely allotted. The question of provision of the necessary housing for the working classes within the area is under consideration.

16. *Suburban Development in Salsette and Trombay.*—The accompanying map, Plate IV, has been prepared to show generally the proposals for development within the suburban area excluding the Ambarnath Taluka. Before dealing with schemes initiated by the Development Department, it will be convenient to mention certain projects which were in progress prior to its formation. These mainly consist of small town planning schemes undertaken for the improvement and development of areas, in the neighbourhood of existing railway stations, in which building in the past has been carried on in a haphazard manner. The method aims at re-arranging the boundaries of building plots with a view to providing roads for purposes of access, the general principle being that the cost of carrying out the work is met by contributions from the

owners of the properties which are thus improved. Two of these schemes have been completed; seven others are sanctioned and in varying stages of progress; one scheme awaits sanction; the preparation of four schemes has been approved; and application for sanction to the preparation of two schemes has been received; a total of sixteen schemes completed, in progress or projected. The position of the schemes completed and in progress is indicated on Plate IV.

17. Apart from town planning schemes, certain other works were taken over by the Department, *viz.*, the provision of a permanent aerodrome for civil aviation at Andheri and the widening of the Bandra-Ghodbunder Road. These works are in progress. The proposed Kurla-Kirol industrial area has already been referred to in paragraph 12 above. In addition there is a small scheme at Mogra for the provision of land near the proposed Ismail College for model housing.

18. Of schemes initiated by the Department, mention may first be made of two for providing building sites in connection with existing or proposed stations on the B. B. & C. I. Railway. These are a proposal to acquire about 123 acres of land immediately adjoining the site of the new station which the B. B. & C. I. Railway intend to build near Khar village, and to sell it after development; and a smaller scheme in Bandra (Chapel Road), comprising about 28 acres, which it is proposed to deal with in a similar manner. Much of the land in the latter scheme belongs to the St. Sebastian Housing Society, and the intention is to re-sell to the Society as much of the land as they can satisfactorily utilise in the near future, charging them a share of the cost of developing the area. In addition, an area of about 41 acres has been notified near Ghatkopar station and proposals are under consideration for developing it. The position of these schemes is indicated on the map.

19. There is now the question of developing much larger areas. The reclamation schemes and the various projects of the City Improvement Trust will provide considerable room for expansion for the wealthy and upper middle classes for residences, offices, hotels, etc., as well as for Government and public buildings, whilst the working classes are to be provided for under the housing scheme, and by the establishment of new industrial areas outside Bombay. There remain, however, the middle and lower middle classes for whom the provision of decent housing accommodation in the Bombay Island is becoming a matter almost of impossibility, owing to the high cost of land. The existing suburbs and facilities for transport are altogether inadequate, whilst the development of much larger suburban areas is important if educational establishments, requiring hostel and playing ground accommodation, are not, in the future, to occupy an undue share of the area within the narrow confines of the City.

20. Practically the whole of Trombay Island, comprising twelve villages, was notified for acquisition by Government before the formation of the Department. In addition some 3,366 acres of agricultural land were notified in January 1921 in Central Salsette, including land in the villages of Bamanwadi, Bapnale, Vile Parle, Chakala, Shahar and Kole-Kalyan. It is intended to develop the latter, together with the western side of Trombay, for residential purposes, the areas referred to being coloured pink on Plate IV.

21. The first essential to the development of these new suburbs is the provision of means of rapid transit, and this has necessitated a study of the present conditions of the local traffic of the G. I. P. and B. B. & C. I. Railways, together with the possibilities after electrification. Without going into too much detail, it may be stated that each railway at present carries about 5,000 passengers per hour, in the loaded direction, during the morning and evening rush periods, with considerable overcrowding. After the completion of the quadrupling and electrification, they should each be able to handle, without overcrowding, about 10,000 passengers per hour on the local tracks only. In addition, the Harbour Branch Railway, when completed, will be able to deal with a similar number, partly from Kurla, and partly from Bandra *via* the Mahim chord. This means an aggregate increase of 20,000 passengers per hour over the present capacity, or of 40,000 in a two hour rush period. A certain amount of this increase will no doubt be absorbed by the developments of the north of

the Island which are now in progress, but there should still be an available balance sufficient for considerable further suburban development in Salsette.

22. In considering the best point at which to place the new traffic on the existing railways, it has to be remembered that of recent years, the local service of the B. B. & C. I. has developed more rapidly than that of the G. I. P. Railway. Moreover, it will, in all probability, continue to do so under present conditions, for the western side of Salsette is far more favourably situated for suburban development than is the eastern side of the Island north of Ghatkopar, where progress is likely to be restricted by climatic conditions. Again the quadrupling of the G. I. P. Railway is completed as far south as Byculla station, and though the widening of the terminal section and the remodelling of Victoria Terminus involve much heavy work, the B. B. & C. I. Railway on the other hand have hardly commenced to quadruple their line, and they have an altogether new terminus at Grant Road to construct. It appears that the G. I. P. Railway might attain the capacity suggested above in about five years, but it hardly seems likely that the B. B. & C. I. Railway can do so in much under ten.

23. For the reasons indicated above, it has been decided that Kurla offers the best point of interchange for a railway to serve Central Salsette and Western Trombay and it is proposed to construct a fast electric tramway or light railway on an alignment approximately as shown by a full red line on the map, starting from the neighbourhood of Andheri and running through the Central Salsette area, across the G. I. P. Railway at Kurla, and along the west side of Trombay. Whether interchange arrangements should be made at Andheri or elsewhere with the B. B. & C. I. Railway is a matter for future consideration, but it is at Kurla, as offering the line of least resistance in the shortest time, that the main interchange of traffic to and from Bombay will be made. It is not possible to effect a crossing at Kurla on the level, as a growing lateral suburban service would seriously obstruct the important and increasing passenger and goods traffic of the G. I. P. Railway with the Town and Port of Bombay. It is proposed therefore that the crossing should be overhead, passengers changing from high to low level platforms and *vice versa*, a plan which has also the advantage of securing direct communication between Central Salsette and the future industrial area which will spring up at the southern extremity of Trombay if the Port Trust carry out their present proposal to locate the new dock on that site. A fast ferry service, run between Pir Pau and Apollo Bunder might, in the future, link up, with the proposed Salsette Railway and form an alternative means of transit between the new suburban areas and the city. The figures given above of the possible increase of traffic resulting from the quadrupling and electrification are probably an underestimate of the actual result, because they take into account only the future capacity of the local lines and neglect the fast through tracks on which it will, no doubt, be possible to run local trains to an extent which will be determined by the requirements of the long distance services. At the same time, looking 20 or 30 years ahead, it can hardly be doubted that it will be necessary, in the future, to provide additional direct railway communication between the business part of the town and the suburbs and this is a contingency which will have to be considered.

24. For the present, the surveys of the Salsette-Trombay railway and of the principal roads have been put in hand, together with investigations into the questions of water supply and drainage, but detailed development depends on the increased supply of water from Tansa. In the first instance the main roads and railway will be constructed, together with the principal drainage and pipe lines, so as to form a framework on which the future development of these large areas may be built up.

25. The northern portion of Trombay is intended to be developed for industrial purposes, primarily to provide for a Municipal slaughter house, tanneries and other offensive trades, and milch cattle stables with the necessary housing accommodation. It is proposed to take over the Municipal kutchra siding and to extend it to Trombay as shown on the map, when

it will eventually form a branch from Kurla connecting the whole area with Bombay. Incidentally, it will provide means of communication for the first development for the benefit of the lower middle classes which is to be begun near the village of Chembur.

26. In the acquisition of land in Trombay and Salsette, it is not intended to expropriate the whole of the land from agricultural uses, and village sites have been excluded from notification. It is proposed to leave sufficient land for market gardening, so that the small agricultural population of these areas may not be prejudiced by their development, but rather benefit as a result of improved conditions and communications.

27. *The organisation of the supply of building materials.*—Enquiry has shown that the main reason for the high cost of building materials in Bombay is the inadequacy of the means of transport, which restricts the supplies available to the consumer. Such material cannot bear a high railway rate and the traffic is short lead traffic, so that the railways can hardly be blamed for reluctance to provide sufficient wagons when they are faced, as they nearly always are, by demands for wagons for better paying traffic which they cannot meet in full. It is proposed therefore that the Development Department should provide wagons of its own for the carriage of building materials, and estimates prepared by the G. I. P. Railway for the provision of 150 high capacity open wagons are now before Government. It is intended to open depots with rail access where materials can be collected, and plans for the first of these on the Improvement Trust Dadar-Matunga Estate have been approved; the Improvement Trust having agreed to allot for the purpose, for several years, a plot reserved as a playing ground. Negotiations have also been opened with the Port Trust for the provision of land on the Mazgaon-Sewree reclamation for use as a depot for materials brought by sea. For the distribution of materials from these depots motor lorries will be used, and some are already on order.

28. The magnitude of the problem of the supply of building materials in Bombay may be gathered from the figures given below, which represent the estimated annual requirements of the lessees on Improvement Trust Schemes 5, 6, and 31 only.

Material.	Quantity.
Blue Ballast	2,300,000 c. ft.
Blue Rubble	2,800,000 „
Ashlar	60,000 „
Lime	2,100,000 „
Cement	1,500 tons.
Sand	3,000,000 c. ft.
Bricks	50,000,000 Nos.
Shahabad Stone	3,500,000 s. ft.
Mangalore Tiles	2,400,000 Nos.

29. Investigations have so far failed to disclose any area where a plant for the manufacture of bricks of good quality on a large scale could economically be installed, but enquiries are still proceeding. The raw material occurs for the most part in small patches which soon become worked out, and the best policy would appear to be to organise large numbers of small producers and to purchase from them at the site of the works, subject to quality, the Department arranging transport. The main supply of sand is from Mumbra, but the siding facilities are inadequate. Plans have been approved for a special siding of large capacity for the use of the Directorate, and it is intended to take over from the Improvement Trust the special plant installed by them for dredging and loading the sand. When these facilities have been provided, together with special wagons, the supply from this source will be improved. The question of the supply of timber is under discussion with the Forest Department, and lime and other materials are also being made the subject of special enquiry. It is hoped to make use of private enterprise to a considerable extent in the production of the necessary materials, although the Direc-

torate may find it necessary to supplement existing sources of supply in certain cases.

30. *Town Planning.*—Mr. W. R. Davidge, Consulting Town Planner, spent three months in Bombay during the period under review to study local conditions, and steps were taken to ascertain the requirements of Government in regard to the provision of sites for Government buildings on the Back Bay Reclamation. It is intended also to consult public bodies in regard to the provision of sites for public buildings generally. The question of the future layout of the reclamation is still in its early stages, but it is hoped that it will be possible, during the coming year, to put forward a tentative plan as a basis for discussion and criticism. The opportunity was also taken during the visit of Mr. Davidge to discuss a number of questions relating to the proposed suburban development as regards general layout and communications.

31. *Surveys.*—The preliminary work of the Department has been somewhat hampered by the absence of accurate large scale maps of the parts of Salsette and Trombay with which it is proposed to deal. Small surveys of special areas have been undertaken by the Engineering staff to meet immediate requirements, but it has been arranged to secure the services of Mr. W. J. Newland to carry out a comprehensive survey of the whole area.

32. *Advisory Committees.*—In accordance with the promise made by Government at the meeting of the Legislative Council held on 29th September 1920, it has been arranged to form two advisory committees, one for Bombay City, and the other for the Bombay Suburban Division, as follows:—

For Bombay City.

- 2 members representing the Municipal Corporation.
- 1 member representing the City Improvement Trust.
- 1 member representing the Chamber of Commerce.
- 1 member representing the Millowners' Association.
- 1 member representing the Indian Merchants' Chamber and Bureau.

For the Bombay Suburban Division.

- 1 member representing the Bandra Municipality.
- 1 member representing the Kurla Municipality.
- 1 member representing the Ghatkopar Municipality.
- 1 member representing the Notified Area Committees.

The election of the members was not completed on the 31st March 1921.

11th April 1921.

H. A. L. HEPPER,
Director of Development.

APPENDIX.

Names of the principal Officers and an outline of the organisation of the Development Department as on the 31st March 1921.

Name of officer holding the appointment.

DIRECTION.

- Director of Development ... Sir Lawless Hepper, Kt.
(Also Chief Engineer for Project Divisions.)
- Deputy Director of Development ... P. W. Monie, Esquire, C.S.I.
(Also Secretary to Government and Commissioner,
Bombay Suburban Division.)

ENGINEERING.

Reclamation Branch :

- Chief Engineer ... Lt. W. Lewis, Esquire, C.I.E.
Senior Deputy Chief Engineer ... G. M. O'Rorke, Esquire.

Project Divisions :

- Superintending Engineer, No. 1 Project Division
(Industrial Housing) }
Superintending Engineer, No. 2 Project Division
(General Development, Salsette). } T. Harvey, Esquire.
(No. 2 is not yet formed and Superintending
Engineer, No. 1 Project Division, is in charge
of both branches of work.) }
Superintending Engineer, No. 3 Project Division } Captain A. F. MacDónald
(Special Projects). } Clark.
(At present employed on Ambarnath and Central
Salsette Railway location.) }
Superintending Engineer, No. 4 Project Division } E. F. Sykes, Esquire.
(Materials and Transport).

VALUATION AND LAND MANAGEMENT.

- Land Manager ... Captain E. M. Gilbert-Lodge.

SALSETTE DEVELOPMENT.

- Salsette Development Officer and Collector, Bombay Suburban District. } G. E. L. Carter, Esquire,
I.C.S.
(He is in general charge of Suburban schemes in their preliminary stages, and of the co-ordination of town planning schemes undertaken by the local authorities with direct development schemes. He is also, as Collector, in charge of the disposal of land in the Suburban District and of its acquisition. He is assisted by four Deputy Collectors.)

LAND ACQUISITION, BOMBAY.

- Land Acquisition Officer for the City of Bombay ... G. C. Rowe, Esquire.
(He and his staff are administratively under the Development Department. The cost of his office is divided rateably among Government and the local bodies, railways, etc., for which land is acquired.)

SURVEY.

- Superintendent, Bombay Suburban Survey ... W. J. Newland, Esquire.
(A new Survey of the Suburban area is being commenced under him to secure accurate records of the large area of land which will be affected by development schemes in the area.)

AUDIT OF ACCOUNTS:

- Audit Officer, Bombay Development Scheme ... G. H. Bailey, Esquire. ←