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FROM

THE DIRECTOR GENERAL OF TELEGRAPHS IN INDIA,

To

THE SECRETARY TO THE GOVERNMENT OF Madras

Public Works Department

Simla, the 12th of May 1885.

Sir,

With reference to the Order of the Government of Madras dated 23rd March 1885, No 722 W Public Works, I have the honour to inform you that arrangements are in progress to connect Dowlaishwaram by telegraph with the main system.

I have the honour to be
Sir,

Your most obedt Servant

H. Leppaoppis

Director General of Telegraphs in India

Ref. 10/5.

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The — by the Chief Engineer, Public Works Department, of the I Circle, recorded with certain observations.

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GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following paper :—

NOTES of inspection by the Chief Engineer, Public Works Department.
I Circle, February-March 1885.

COCANADA—*Extension of harbour groynes.*—This work is making slow progress. Out of a projected additional length of 1,900 feet, the north groyne has advanced about 60 feet and the south groyne about 140 feet. I am aware that difficulty has been experienced in the supply of stone, and the port officer has been obliged to build boats suitable for the rough work. It may be hoped that progress will be more rapid in future.

The section adopted by Captain Baker for these groynes is a good one; but the stones which I saw being placed in position seemed far too small to withstand the force of the sea during a monsoon gale from the north-east; and there seemed reason to anticipate some considerable subsidence through the soft yielding bottom on which the groynes are built.

It seems by no means certain that the extension of the groynes will exercise any permanent effect upon the depth of water over the bar. The bar will, of course, be forced further into the bay, but whether a better depth of water will be secured is far from certain.

2. *Groynes committee.*—The native merchants of Cocanada are anxious to be represented upon the groynes committee. When that body was first formed, Mr. Ramakristua, one of the principal merchants, was appointed as one of the three members; but it is understood that he was obliged to resign through ill-health, and his place was taken by a European merchant. Considering how largely they are interested in the welfare of the port, it seems not unreasonable that the native merchants should be represented on the committee.

3. *Boat traffic in river.*—Some effectual mode of maintaining order among the boats anchored in the river is greatly needed. At present they seem to be moored wherever their owners choose, and at some points almost the whole of the available waterway is blocked.

4. *Iron lattice bridge over river.*—The iron work of this bridge is in great need of careful overhauling. The bracing between the piles is broken in many places, owing probably to corrosion and other causes. The piles also appear to be in need of strengthening. It is understood that the bridge is entirely in the hands of the municipality, and no time should be lost in having it carefully inspected and in carrying out all needful repairs.

5. *Cocanada water supply.*—I understand that this is led off from the Sámalkót canal, above the tidal lock, and carried in an open channel into the town. At a point where I saw this channel, it was taken close alongside of a public highway, without any attempt to secure it from pollution by fence or otherwise. The arrangement appeared objectionable in many ways.

6. *Additions to Collector's cutcherry.*—The work is well advanced, and appears to be making fair progress; but the quality of the masonry is not so good as it might be. The walls are constructed of rubble stone, at a rate of about Rs. 3-8-0 per cubic yard. The work is certainly not dear, but it is very rough and lacking in bond.

7. *Quarters for telegraph signallers.*—The work is well advanced, and should be finished before long. The quality of the masonry is better than at the cutcherry, but cannot be termed good.

8. *Repairs to Marine Villa.*—This work has proved to be more extensive and more costly than was at first expected. The sanctioned estimate amounts to Rs. 7,700; and when the building is finished, the accommodation afforded will probably be larger than required by the port officer. No time should be lost in bringing the work to completion.

9. *New church.*—This work is in progress under the Local Fund engineer, and the quality of the masonry seems above the average. I was informed that the sanctioned estimate has been exceeded, and that work had therefore come to a stand for the present.

10. *DOWLAISHWERAM—Houses for Superintending and Executive Engineers.*—These buildings are urgently required, as the only ones at present available are in every way unsuitable, being low and damp, and the walls riddled with white-ants. The new house for the Superintending Engineer is in progress, and had risen to basement level at the time of inspection; the work appeared sound and good. The proposal to build the Executive Engineer's house is now before the Government of India.

11. *Telegraph office.*—Considerable inconvenience arises from there being no telegraph office nearer to Dowlaishweram than Rajahmundry, a distance of more than 3 miles, and it seems in every way desirable that an office should be established at a station of such importance as Dowlaishweram.

12. *VIZAGAPATAM—Old military buildings, &c.*—The removal of the native infantry regiment from Vizagapatam has set free a considerable number of military buildings, and these have been, for the most part, handed over to the police and other civil departments.

The land occupied by the native infantry lines was ordered to be cleared, and handed to the Revenue authorities. The clearance has not been done properly, and should be carried out thoroughly without delay, as the huts, in their half destroyed state, are certain to be used as latrines.

The main road is being thoroughly repaired before being handed over to the municipality.

13. *Proposed pier.*—Nothing has been done towards the construction of this pier beyond ascertaining, by boring, that there is sufficient depth of sand to allow screw piles being fixed along the proposed line. It appears probable that the project for a pier must be shelved until the construction of the railway to Raipur is undertaken.

14. *Pontoon bridge across the backwater.*—Beyond advertising for tenders, I could not learn that anything has yet been done towards securing the construction of this much needed communication.

15. *Signal tower on Dolphin's Nose.*—This building is in a state of great disrepair, and has evidently been neglected for years. It is surmounted by a flagstaff, the supporting ropes of which appeared to be rotten, and the wood-work might fall at any time. The present condition of the building is certainly dangerous, and it should be either repaired or pulled down.

16. *BIMLIPATAM—Stone groyne in harbour.*—This groyne has been completed according to estimate at a cost of Rs. 8,207. The quality of the work shows a decided improvement since I inspected it a year ago. The entire length of the groyne is 300 feet; but the result has not been to open a passage into the boat harbour at the point expected, the failure being attributed to the unusually low freshes in the river during 1884.

It was suggested by the Master Attendant that the action of the river freshes should be assisted by cutting an opening through the sand ridge at a point near the groyne, and a sum of Rs. 200 has been sanctioned for the purpose from Port funds, the work to be carried out by the Port officer.

17. *GOPALPUR—New buildings for customs and port offices.*—An estimate, amounting to Rs. 4,050, for adding an upper story to the existing customs building,

was sanctioned in November 1883; but the present Collector of Ganjam took exception to the proposal, and recommended the erection of a new and much larger building, for which estimates are now being prepared. If Mr. Horsfall's recommendation is accepted, the existing buildings must be removed to make way for the new ones. The old buildings are inconveniently designed for the addition of an upper story; and, so far as I am able to judge, looking to the prospects of the port, the course recommended by Mr. Horsfall is the correct one. The site is suitable to the purpose, and convenient in all respects. The line of the proposed pier will start from the centre of the new buildings.

18. *Proposed pier.*—Messrs. Massey and Company's tender for the construction of this pier has been accepted, and it is hoped that the deed of contract will shortly be signed, in which case the completion of the work may be looked for within 18 months or two years.

19. *CHATRAPUR—New residence for Collector of Ganjam.*—The construction of a new residence for the Collector has been ordered, and the plans and estimates are now under preparation by the Consulting Architect. The circumstances connected with the purchase of Onslow Court, and the condemnation of the old building, are briefly stated in an attached précis.

In connection with this, the question arises whether the new house should be built at Chatrapur, which is some 10 miles from everywhere. It is situated at a very inconvenient distance from each of the important towns, Berhampore and Gopalpur; and is near to no place of importance.

Before final action is taken towards building a new house, it seems right to suggest for consideration whether the site should not be changed to Berhampore, where there is a large native town, a regiment, a judge's court, a bank, &c., whereas at Chatrapur there is nothing of the kind, only the Collector and the Superintendent of Police living in the country.

The cost of building a residence for the Collector would probably be the same, whether at Chatrapur or at Berhampore; but, of course, if built at Berhampore, there would be the additional cost of a new cutcherry.

One point which deserves consideration in dealing with the question is that any railway made in Ganjam would certainly run from Gopalpur, through Berhampore and Aska, to the valley of the Mahanadi, and by Sonepur to join the new lines under construction and proposed in the Central Provinces. For that reason, as well as for other important reasons connected with administrative convenience, it may be thought worthwhile to incur some present additional outlay, and to take advantage of this opportunity to locate the chief civil officer of the district at a large centre of population and trade.

As regards the purposes for which existing public buildings at Chatrapur might be utilised, in the event of the Collector being moved to Berhampore, it may be thought desirable to transfer to Chatrapur the Senior Assistant now located at Berhampore; and I learn from the Commissioner of Salt and Abkari Revenue that part of the Chatrapur buildings might possibly be utilised in his department. A demi-official letter on the subject from Mr. Bliss is appended.

20. *BERHAMPORE—New cutcherry for Senior Assistant Collector.*—This building is in progress, and is capable of enlargement, if thought desirable, with advertence to the previous remarks.

21. *Site for new buildings.*—For any new civil buildings that may be required at Berhampore, an excellent site is available on the high land to the east of the town, near the jail. It is understood that good water is to be had on that site.

22. *Chilka canal.*—This most useful short line of water communication was first suggested by Lieutenant-Colonel (now Major-General) F. C. Cotton, in his interesting report on the capabilities of the Ganjam district, dated 12th July 1856 (*vide* proceedings of Government, dated 24th November 1857, No. 2167). It connects the Ganjam backwater with the Chilka lake, and through it with the Mahanadi and its system of navigable canals.

The work was executed in 1866-1868 by the Public Works Department, and has proved of great assistance to traffic.

Unfortunately, the canal appears not to have been excavated to a sufficient depth, and heavily laden boats have, consequently, great difficulty in navigating it. During 1884 it was decided to deepen the canal to a uniform depth of 6.5 feet below M.S.L.; and an estimate was prepared amounting to Rs. 74,600, which sum was allotted in G.O., dated 20th August 1884, No. 2040 W. It was subsequently discovered that this estimate was grossly incorrect, and a revised estimate is now under preparation. It is hoped that this very important work will be carried out early during the year 1885-86.

23. *Extension of canal to Gopálpur.*—As stated above, the object of the Chilka canal was to connect the Ganjam backwater and port with the large system of inland water communication which lies to the north; but the trade of the town of Ganjam seems to have entirely disappeared, and all goods which came down the Chilka canal for export are transferred to carts when they reach the south of the Ganjam backwater and carried by road to Gopálpur.

What has caused the complete disappearance of Ganjam as a trading port is by no means clear; but even 29 years ago General Cotton mentioned the growing preference for Gopálpur, though he was unable to account for it.

In consequence of that tendency shown by goods to seek shipment at Gopálpur, General Cotton suggested, in the report already alluded to, the construction of a second section of canal, to connect the Ganjam and the Gopálpur (or Munsureotta) backwaters. He observed that such a canal would pass through a singularly favorable natural hollow, occupied then (and now) by a chain of small freshwater lakes; and he raised the question whether the canal should be a tidal one, or a freshwater one with locks.

Up to the present time, nothing has been done towards the construction of this canal; but in 1882-83 the country was carefully surveyed and examined, and a decision arrived at in favor of a tidal canal uniting the two backwaters.

In 1884 an estimate, amounting to Rs. 4,44,335, was submitted to the Government of India for sanction; but, in consequence of slight omissions, a revised estimate, amounting to Rs. 4,51,145, has recently been submitted, and is now awaiting sanction.

It would be difficult to exaggerate the importance to the Ganjam district of this short section of canal. Its construction will complete the last link in the long chain of inland water communication to the north of Gopálpur, and will allow goods to be brought from great distances, without break of bulk, right up to that port, in which, when the pier is completed, the trade of the surrounding country will become more than ever concentrated.

24. *VIZIANAGRUM—Experimental Artesian well.*—At the request of His Highness the Maharajah of Vizianagram, I inspected a boring which is being made near the fort of Vizianagram, in the hope of striking a water-bearing stratum from which a supply may be obtained by an Artesian well.

Mr. Fraser, the engineer in charge, was good enough to show the boring apparatus at work, and to give full information on the subject.

The apparatus and plant seem excellent and suitable in every way. The cost is understood to have been about Rs. 12,000, which did not seem excessive.

At the date of inspection, the depth reached was stated to be 192 feet; and the rock which was being bored through was said by Mr. Fraser to be "intensely hard." On that point, the stuff brought up from the boring left no room for doubt. So far as could be judged, the boring was being made through a very close-grained and hard granitic rock; and it was understood that the greater part of the depth reached had been through rock of a similar character.

The opinion I formed was that there is not much prospect of obtaining water in that locality from an Artesian well, and I have informed His Highness the Maharajah accordingly, advising him to discontinue all expenditure there. I was not, however, in a position to say whether there are better prospects of success in other parts of the territory belonging to him.

ORDER—dated 23rd March 1885, No. 722 W., Public Works.

The above notes of inspection by the Chief Engineer, Public Works Department, are recorded, with the following observations.

Paragraph 1.—The action of the Cocanada harbour groynes on the depth of water over the bar should be carefully watched, and the result reported after sufficient time has elapsed for a decided opinion being formed.

Paragraphs 2, 3 and 15.—Orders on the questions herein raised will issue in the Marine Department.

Paragraphs 4 and 5.—Referred to the Financial Department.

Paragraphs 6, 7, 8 and 12.—The special attention of the Superintending Engineer, I Circle, is drawn to these remarks.

Paragraph 11.—The Director-General of Telegraphs will be requested to favor Government with his views on the subject of a telegraph office at Dowlaishweram.

Paragraphs 19, 20 and 21.—The suggestions in these paragraphs as to the selection of Berhampore for the site of the Collector's new residence and headquarter offices, and the utilisation of existing buildings at Chatrapur will be considered in the Revenue Department.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, I Circle.

- " Chief Engineer for Irrigation.
- " Director-General of Telegraphs.
- " Marine Department.
- " Financial "
- " Revenue Department, with two enclosures.

Exd. E. Fernandez.
Spare Copies