

(1) Number of pages 40
(2) Date of repair 15/11-1969
(3) Initials of the Referencer /

MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revenue DEPARTMENT

G.O. No.	1283	~~Press~~
B.P. No.		Mis. ☒
Dated	2. 6. 1876	196

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*Proceedings of the Madras Government, Public Works Department,
9th May 1876.*

No. 155. Read the following letter from F. J. JOHNSTONE, Esq., Assistant Secretary to the Chief Commissioner, Public Works Department, Central Provinces, to Major-General G. W. WALKER, R.E., Secretary to the Government of Madras, Public Works Department, dated Nagpur, 18th April 1876, No. 2,558:—

Road from the Coast towards Jeypore, Raigarh, and Raipur.

WITH reference to correspondence ending with your No. 434, dated 20th September 1875, on the subject of opening up communication from Raipur to Jeypore, I am directed to say that the Chief Commissioner, having in view the desirability of carrying out this project, caused a preliminary inspection of that portion of the line under notice which is situated within the limits of the Central Provinces, to be made by the Executive Engineer, Eastern Division, and I am now to forward a copy of that officer's report and sketch map for the information of the Madras Government.

2. The Executive Engineer it will be observed has divided the road into two sections, viz., No. 1 which is 38 miles long and which extends between Raipur and Dhamtari; and No. 2 from Dhamtari to the borders of the Central Provinces near Raigarh, which follows two routes, one being $56\frac{1}{4}$ miles long and the other 61 miles.

3. As regards section No. 1, no expenditure is at present contemplated, for although certain small obstructions exist, the existing cart road is sufficient for all practical purposes for dry season traffic, and can be improved hereafter as the necessity for the same arises.

4. In regard to section 2, the present means of communication is decidedly very inferior; two so-called cart tracks are now in existence, viz., one which the Executive Engineer designates the "upper track" and which runs via Kokrel, Dokal, Gatta Sili, Birgudi and Borai, and the other the "lower track" which passes the villages of Semli-Modgadahan, Jamgaon, Bhursidongri, Birpani and Borai, the former route is 61 miles long and the latter $56\frac{1}{4}$ miles, the Executive Engineer recommends that the "upper route" be followed, and he submits an estimate, amounting to Rupees 9,707, for opening up this route for dry season traffic.

5. If the project can be carried out for the sum under notice, I am to say that the Chief Commissioner does not anticipate any difficulty in providing the necessary funds; but before proceeding further in the matter, I am to inquire what progress has been made to date with the Madras portion of the road towards Jeypore and Raigarh, and when it is likely to be open for traffic. On receipt of this information, the Chief Commissioner will endeavour to have the Central Provinces section of road opened out by the time the length from Jeypore to Raigarh is ready.

Report on the Road from Raipur to Dhamtari.

THE total length of this road from the Cantonment boundary is 38 miles.

Soil.—Of these only eight are moorum sandy loam or laterite, the remaining thirty are black cotton very deep, and at least ten miles of these thirty are under water from 6 to 16 inches deep for from four to five months during the rains, owing to road being on the same level or a little lower than the rice-fields which are on both sides.

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... but all have hard bottoms and can have easy slopes to their banks; the ground near Parwarilooka would be very swampy in the rains up to November.

From Gata Sili to Birgudi the road is everywhere passable, where there is jungle the trees are thicker together, but still there is very little valuable timber, and open spaces are more frequent than in the second and third stages.

There are four nullahs in this stage, the nearest Birgudi will be the longest wet, and it is the only one that has a bad bottom. The detour taken by the road is necessary; for on examination of the ground to the right with a view to cutting off this bend, it proved to be very swampy and a long and heavy embankment would be necessary, besides the nullah here would have to be bridged, as it is very muddy and holds water to the end of the hot weather. The road crosses the boundary of Bastar near the ninth mile from Gata Sili, and the town of Birgudi belongs to Bastar, the Sihawa road turns off just before reaching Birgudi, from which Sihawa is about four miles. Several of the villages marked on the map have been deserted, Gotigon remains, Kongra and Puklupara have disappeared, but a village in these parts means only a few huts made of sticks without mud walls and very imperfectly thatched. Birgudi is the best-to-do village on the line; gram and other supplies procurable. There was a difficulty about guides here and a peon had to be sent down to Belergaon to bring up a guide; the head man of Birgudi steadily refusing to give any guide when guides had been procured from Belergaon, he then gave one who knew the country well, though for four hours he had declared not a man in the village knew the road to Borai. From Birgudi, hills are visible on both sides and also in front; the road here is very undefined apparently, it is cultivated in the rains, and the traffic picks out a path in the dry weather. Up to this point there passed on average twelve carts and thirty foot-passengers a day, and sixty head of pack cattle every other day. From this point carts cease, only ten pack cattle passed in three days and about fifteen foot-passengers. At Keontipara, three-fourths of a

Fifth stage from Birgudi to Borai, distance 19½ miles.
From Borai to the boundary, distance 3 "
Total distance from Dhamtari to boundary, 61 "

mile from Birgudi, the Mahanadi is crossed; this is also the boundary of Bastar; from this the line is in Khalsa, the road runs by Bhamka to Belergaon, this latter is a very large straggling village, three nullahs are passed and the ground will be swampy until late in November. After the road is fairly opened an embankment will be needed here and causeways; but the whole of these 3 miles requires lining out, probably a better crossing could be found for these nullahs. The country changes from Belergaon, the hills draw close to the road, the jungle is thick, and the trees of better size. The track continues fair after passing Belergaon, but 7½ miles from Birgudi the road runs round a very steep hill marked A on the trace; this is rocky with a nullah on the right and will have to be worked out. The whole road from Birgudi should be re-lined and straightened, the jungle cleared, and nullahs sloped; the general direction cannot be altered on account of the ground. The road from this point is only a foot-path, though four carts came down with the camp with only one breakage; 12½ miles from Birgudi the Chita river is crossed for the first time. During the day an attempt was made to see if the road could be turned round this river and be brought down the left bank in the line shown by red dots BBB, but the ground is very difficult, and the expense of making even a 12 feet track through it would be great; to ascertain the feasibility properly a trial trace should be cut, but the natural difficulties (rock and ravines) appear to be too great for a line of road, the traffic on which can never be anything but very small. Crossing the Chita river, the road gets a little better, and the path is more defined; for merely a fair-weather road the fact of crossing the river twice is of little consequence, as the crossing can be made very easy. Towards the top of the ascent the brushwood commences and becomes thicker as you proceed; before reaching Borai it is thick, the trees along this portion of the road are large, several fine Sal trees were seen, the jungle becomes more open; after reaching Borai coasts, fields and low hills replacing it. About two miles of jungle have been cleared on the line of road before reaching Borai, but the trees have been cut too high up and the stumps are rather long and sharp, but still it renders the track easier. From Borai, Banseadi village is visible, and between this and

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Hutmoli is the boundary dividing the C. P. and Jeyipore; this line runs through fields and should be embanked from 1½ to 3 feet high, the nullah is a very troublesome one, and as there is plenty of timber lying and rotting within 3 miles, I would suggest a good substantial well-put-together wooden bridge, the only cost would be the carriage and labor, care would have to be taken to clear all grass from its vicinity early in November to prevent its being burnt, and a bridge could be put up that would last for twenty years. From this boundary, Raigurn is about 15 miles, from thence to Noarangpur is 65 miles, the road is not yet in hand of this section; from Noarangpur to Koraput there is a dry-weather cart road, distance 36 miles. Pottinghy ghaut is 28 miles from this, and Salur 24 miles beyond Pottinghy; this would fix Pottinghy, which is not marked in any of my maps, at about 18° 50' north and 83° 12' 30" east. Salur is well known, it is 66 miles from Calingapatam, 52 miles from Bimlipatam, and 66 from Vizagapatam; and the new ghaut commences 4 miles from it and is 20 miles in length, the distances given are by the road not straight across country. The ghaut is not expected to be finished till 1878, by which time the rest of the road may probably be somewhat advanced. In looking at the G.O.T. survey it appeared likely that a line from Borai leaving Hutmoli to the left up to Gorawan would probably be easier than the Chita river route, although if this line should be decided on; owing to the swampy nature of the ground near Kaunkera and Mainpur, it will still be advisable to run the road by Borai joining into the Chita river road on the ground just above the village. The first

	MILES
First stage on return from Borai by "Hutmoli" to Birpani	10½
From Border to Borai	3
Total	13½

stage had to be a place where water was to be found, as there are no villages on the line. The spot selected was Birpani just at the junction of the roads from Hutmoli and Kosmi to Gorawan; it takes its name from a large Bar tree. The first 7 miles are easy, the proper line would be somewhere between the two red dotted lines, but the jungle is too thick to decide without cutting a trial trace. The next 4 miles after crossing the Dhamtari border present as many difficulties in the way of rock cutting and clearing as the Chita river route, though only one nullah of any size is crossed up to this point. There is a thick bamboo jungle for these last 4 miles with rocky hillocks on both sides of the path, and the line is exactly that shown in the map with the drainage sometimes from right to left and sometimes from left to right.

The nullah is crossed immediately after leaving Birpani, and long slopes with some rock cutting will be required. Bamboo-jungle continues as before up to the place where the road for Amgaon turns off, here it ceases,

Second stage from Birpani to Bhursidongri, distance 6½ miles.

open jungle commences, and the country becomes more and more clear, and the soil changes from good to black cotton, and from this point up to Bhursidongri will be wet and swampy until January, any line can be taken here, the carts drive all over the country; from Bhursidongri, hills are visible on all sides from 1 to 5 miles distance. From Bhursidongri up to Dekloand there is no defined road, but carts drive over the country in any direction they wish, making a detour to avoid any difficulty; the ground is usually black and will be swampy till late, it is quite dry now. The Mahanadi is crossed near Deokot and is about 250 feet

Third stage from Bhursidongri to Jamgaon, distance 9½ miles.

broad, there is no jungle only pollard trees. At Dekloand a road joins from Bhamka and from this point there is a well defined route, the pollard trees continue and soil changes to hard sandy loam, there are after this about two miles of uncut jungle open and with no large trees, passing this the trees have again all been lopped, and on to Jamgaon the country continues the same with here and there short distances of swamp, or what would be swamp in the rains and cold weather. From Jamgaon the track continues

Fourth stage from Jamgaon to Modgadlihan, distance 9½ miles.

good and well defined country open, trees all lopped as before, a river about 100 feet broad is crossed, near which is a narrow belt of uncut jungle, the soil is black cotton with a few yards of hard kunkur now and then, the small drainage channels would be troublesome if there were any traffic, all the larger nullahs have good

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sandy bottom and easy slopes, there is little cultivation at the village of Bansoli, after this there is a mile of very good road and then three chains of swamp, after which for three miles the road is good running through open jungle, and the soil improves and continues good up to a small drainage channel which has a soft bottom, on the other side of which is black soil until the nullah is reached on the banks of which is the village of Modgadihan. This march is a difficult one, carts can go but nullahs are numerous, the road is shut in with rocky hills, and so confined that one large nullah is crossed four times, six other nullahs are passed, and everywhere the track is sandy and heavy except where it is rocky, there are about 2½ miles of rocky track on which a good deal of labor would be required to make it easily passable, and the line is one that would not be chosen if there was the slightest possibility of the road being bridged or much improved. From Temli the road crosses the Sillari river and is shut in for about 1½ miles between the river and a ridge of rock, the hill then recedes from the river and the track runs through cultivation and waste to the Mahanadi which is crossed at Rodree ferry, the track up to this point is very heavy. After crossing the river there is half a mile of good hard soil and then alternately sand and swampy ground to the town of Dhamtari.

Fifth stage from Modgadihan to Temli, distance 9 miles.

Sixth stage from Temli to Dhamtari, distance 8 miles.
Total from borders to Dhamtari, 56½ miles.

SUMMARY.

From the above it will be seen that there are two tracks, one by Kokrel, Dokal, Gatta Sili, Birgudi, and Borai, 61 miles in length; and the other by Temli, Modgadihan, Jamgaon, Bhursidongri, Birpani, and Borai, 56½ miles.

The first runs, with the exception of one and three quarters of a mile, entirely through country belonging to the Raipur district and under the Tehsil of Dhamtari, it is now used by carts as far as Birgudi, offers no great obstacles, and up to this point can be improved to any extent that may be considered advisable by a corresponding expenditure, the soil on the whole is favorable, and the only heavy work is that detailed from Birgudi to the boundary 22½ miles; this road is also linked by a fair cart track to Sihawa from Birgudi, and what cart traffic there is follows this line.

The second line is through a much more open country and the soil is generally unfavorable, swampy and heavy, and it would be a good month longer than the first route in becoming dry; the last two stages from Modgadihan to Temli and Dhamtari are also very difficult, and could not be taken for anything but a fair-weather road, the distance is 4½ miles shorter than the first route, but, owing to the heaviness of the soil, carts would take longer to traverse the shorter distance. It also runs for half its length through Konker territory, and the Sihawa carts would have to follow the first route as far as Bhamka before being able to join into this track. Under these circumstances the first appeared the best, and a memorandum of expenditure required to open it for a cart track 15 feet wide is appended.

Memorandum showing probable expense of improving the fair-weather road from Dhamtari to the borders of the Central Provinces.

THE track to be made fifteen broad; where the country is open a dagbel to be marked on both sides 50 feet from the centre of the road, so that the ground may be taken up at once, and in case the road should hereafter be made into a second or first class road, this will not again have to be done.

Where the jungle is thick no dagbel to be nicked, but the line cleared to the breadth of 50 feet, the 15 feet in the centre to have the stumps cut close, the rest to be not more than

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one foot high; this clearing to be so done as to straighten the road where possible. Nullah slopes to be graded to one in twenty as also the Sillari river crossing.

From Dhamtari to Achota ghaut, 2½ miles at 30 per mile	75
39,600 Cubic feet of moorum for covering the most swampy places, at 2 per cent.	792
Mahanadi river slopes	30
Marking and improving 6 miles of road to Kokrel at 30 per mile	180
Clearing jungle	180
9½ Miles from Kokrel to Dokal as above	285
Do do clearing jungle	285
10½ Miles of road from Dokal to Gatta Sili	315
Clearing jungle at Rupees 50 per mile	525
To the Sillari river crossing blasting, removing rock, and reducing the slope to one in twenty	1,000
10 Miles from Gatta Sili to Birgudi marking at Rupees 30 per mile	300
Four nullahs sloping, &c.	120
Improving the bed of the nullah nearest Birgudi	280
Clearing jungle on the above at Rupees 20 per mile	200
From Birgudi to Belergaon about 3 miles, there is a good deal of work on this portion, a careful survey of this place might perhaps discover a better crossing to the nullah, embankment averaging 2 feet and 10 feet wide earthwork taken at 6 per cent. Rupees 400 per mile	1,200
Nullah crossing three, one to be sloped, two dry pitched	450
17 Miles from Belergaon, clearing jungle, working out the rock, cutting marked A, sloping river and nullah banks, at Rupees 200 per mile	3,400
From Borai to the borders of Jeypore marking only at 30 per mile, distance 3 miles	90
Total	9,707

This leaves the embankment of these last three miles and the bridge over the nullah to be provided for hereafter, as until the road from Raigarh is in hand it will be scarcely advisable to commence this portion as there would be no traffic to pass over it.

Sixty-one miles of road Rupees 9,707, or Rupees 160 per mile nearly.

CAMP AT DRUG,
18th March 1876.

(Signed) A. FRANCIS, Lieut.-Colonel,
Executive Engineer, Eastern Division.

No. 156, ORDER THEREON, 9th May 1876, No. 1,160.

CIVIL WORKS, No. 12-A.

COMMUNICATED to the Revenue and Judicial Departments, with reference to G.O., No. 2,698, of 20th September 1875.

2. The Chief Commissioner will be supplied with copies of Judicial Department Order, No. 2,257, of 18th October, and Public Works Order, No. 3,546, of 15th December 1875; from which it will be seen that Rupees 4,000 are to be laid out in the current year in completing the line up to Noarangpur as a dry-weather road, and that it is proposed to expend Rupees 32,500 on the extension to Raighur as funds are available.

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And the Chief Commissioner will be requested to be so good as to cause operations to be commenced with the improvements between Dhamtari and the frontier near Borai, estimated to cost Rupees 9,707.

(Letter No. 161, dated 9th May 1876.)

(The Extract.)


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

To the Revenue Department.
" Judicial "
" District Engineer, Vizagapatam.

Exd. E. C. Shunkar.

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Revenue 1875 Department
Govt. of 1876 Madras.
PUBLIC WORKS.

THE REVENUE DEPARTMENT.

&c. &c. &c.

Dated May 9th.

Issued

Recd. 29 May

Recd.

G. O. No. 1816, No. 1160.

MAY.

Nos. 155-156.

Communication from Madras to Jeppore.
Passing orders on letter from the Secretary to
the Chief Commissioner Central Provinces,
submitting a report on the subject of open
ing up — No 1283

Communicated to the R. Secy.

2 June 1876

MADRAS RECORD OFFICE