Ag 338/339 R aj 26.4.88

PWC No. 4995

RAILWAY.

Govt. of {1888} Madras.

PUBLIC WORKS.

No 1654 dtd 5 June 1888

B

Recorded

Recorded

Dated May, 10th.

Recd. 29.5.88 Encl.

G.O., 10th May 1888, No. 390 R.

No 1654 dtd 5 June 1888

MAY.

Closure of Canals in the Godavari and Kistna Deltas

Correspondence relative to the injury to traffic arising from the — and the extension of the line of railway from Bezváda to the Godávari, ordered to be forwarded to the Government of India.

Sub I circle ✓
S.D. I canals
Sub II circle ✓
S.D. II circle to act
Received
5/11/88

30/5 11186 Am 1.6.

Draft

No. 1612 W dt 15.6.87 PWK No 4990

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Establishment.

READ—the following papers:—

From the Superintending Engineer, I Circle, dated 21st Feb. 1888, No. 391 V.Z.

G.O., dated 19th April 1888, No. 215, Educational.

Read the following paper from the Public Works Department, dated 12th March 1888, No. 1065 C.

Order—dated 19th April 1888, No. 215, Educational.

G.O. dated 4th January 1866, No. 11, will be extended to the clerks in the Public Works Department employed on the Potinghi-Koraput road.

(True Extract.)

(Signed) W. L. C. BADDELEY, Captain, R.E.,
Under-Secy. to Govt., P.W.D.,
for Chief Secretary.

ENCLOSURE.

Proceedings of the Madras Government, Revenue Department, dated 4th January 1866, No. 11.

Read the following letter from the Agent to the Governor, Vizagapatam, to the Secretary to Government, Revenue Department, Fort St. George, dated Vizagapatam, 7th December 1865, No. 1006.

By G.O., Revenue Department, No. 44, of the 9th January 1864, the operation of the Examination Rules in the Jeypore country was postponed for two years from that date, under the exceptional circumstances of that territory.

2. I beg to state that it appears necessary to make a further postponement. From sickness and death, casualties amongst the Sub-Magistrates occur with terrible frequency; and men who have passed the test and are therefore eligible for employment in the low country will not become candidates for service in Jeypore. The men I do succeed in getting are, on the whole, good average men, but inferior of course to passed men. I should be only too glad to secure passed men; I am always on the look-out for them, but with their chances of procuring office in the plains, they invariably decline office in the hills.

3. Besides the six Sub-Magistrates in the Jeypore country, there are only two situations, clerkships in the Assistant Agent's office, of which the salary is more than 25 rupees a-month. For these eight offices a relaxation of the Examination Rules is now sought for. I see no advantage in proposing a postponement of the Rules for two years or other limited period. The drawbacks of Jeypore are of a permanent nature. If a passed man comes forward on the occurrence of any future vacancy, let the superiority of his claim be acknowledged, but in the absence of passed candidates, we may be permitted to carry on the administration with the next best candidates we can discover.

ORDER THEREON, 4th January 1866, No. 11.

Miscellaneous.

Under the circumstances stated, Government accede to Mr. Carmichael's application, relying on his assurance that he will appoint passed candidates when procurable.

(True Extract.)

(Signed) J. D. SIM,
Secretary to Government.

ORDER—dated 5th May 1888, No. 1316 W., Public Works.

Communicated to the Superintending Engineer, I Circle, and the Examiner, Public Works Accounts.

(True Extract.)

(Signed) J. O. HASTED, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, I Circle.
" Examiner, Public Works Accounts.

Exd. F. R. Bantleman.
Spare Copies

GENERAL.
ESTABLISHMENT.

Govt. of {1888} Madras.

PUBLIC WORKS.

Dated May, 5th.

Read. *Encl.*

G.O., 5th May 1888, No. 1316 W.

MAY.

Potinghi Koraput Road

Communicating to the Superintending Engineer, I Circle, and the Examiner, Public Works Accounts, orders directing that the rule regarding the entertainment of unpassed candidates be relaxed in the case of the clerks employed on the —.

No. 101 V.Z.

FROM,

J.E. Paul Esqr
Executive
~~THE SUPERINTENDING~~ ENGINEER *in charge.*

FIRST CIRCLE.

TO,

THE CHIEF ENGINEER

PUBLIC WORKS DEPARTMENT.

DOWLAISHWARAM, 28th May 1888.
Recd 29th.

SIR,

In continuation of this Office letter No 391 V.Z. dated 21-2-88. and the orders passed thereon in G.O. No 1316 W. dated 5-5-88. I have the honor to request that you will be good enough to obtain the sanction of Government for admission of clerk T. Venkataredday whose age is over 25 years and who is employed on the Potinghi ghat road in the Vizagapatam Division.

I have the honor to be
Sir
Your most Obedient Sv.

Executive Engineer in charge First Circle.

VIZZ 2815

2 MILITARY DEPARTMENT, 30 MAY 1888, No. .

No. . ORDER THEREON, 31 May 1888, No. 3534

Communicated to the Government of India and the Public Works Department in view to the needful corrections being made in the regulations quoted.

No. . *To the Secretary to the Government of India, Military Department;*
dated May 1888, No. .

(True Extract.)

Brigdr.-Genl.,
Secretary to Government.

To the Quarter Master General.
,, Public Works Department.

Exd. E. C. Shunker.

No 1654 Rdy 5 June 1888
Recorded

(As) J.O.4

RAILWAY.

Govt. of {1888} Madras.

PUBLIC WORKS.

Dated May, 10th.

Recd. *Encl.*

G.O., 10th May 1888, No. 390 R.

MAY.

No 1654 Rdy 5 June 1888

Closure of Canals in the Godavari and Kistna Deltas

Correspondence relative to the injury to traffic arising from the — and the extension of the line of railway from Bezváda to the Godávari, ordered to be forwarded to the Government of India.

S&I circle
S&T circle

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following papers :—

Proceedings of the Board of Revenue (Land Revenue), dated 14th March 1888, No. 246.

H. S. THOMAS, ESQ., F.L.S., F.Z.S.

Read—the following letter from J. M. BRYCE, Esq., Chairman, Cocanada Chamber of Commerce, to the Collector of the Godávari District, dated Cocanada, 3rd November 1887 :—

I have the honor to acknowledge receipt of your No. 984 of 25th ultimo, handing statement of intended dates of closure of canals, and asking for any remarks the Chamber may have to make on same.

Presuming the closures are unavoidable, the Chamber thinks it unnecessary to offer any special remark on the mere dates of closure, but it may not be out of place to refer here to the utter inadequacy of the means of transit of produce from the interior of such a very rich produce country to its natural outlet which is Cocanada, and the consequent restriction placed on trade.

The closures referred to mean that at least from 1st April till end of May communication between Ellore and Cocanada, as far as transit of produce is concerned, is virtually closed, while, owing to the canal between Bezváda and Ellore being, as a matter of fact, unnavigable from end of February or beginning of March till middle of June, Cocanada is for at least four months of the year without means of getting delivery of certain kinds of produce; take, for instance, an article of such large production as castor-seed, the trade in which, as in other articles, would, there is little doubt, be very considerably increased, were it not for the want of proper means of communication with the interior.

While the Chamber is of opinion that by a system of efficient dredging the necessity for closing the canals and interfering with business every year for so long a time might, as far as removing silt is concerned, to a great extent, be avoided, and that some means might be adopted by which both canals hence to Dowlaishweram need not be closed at the same time.

Merchants have got to look on the annual stoppage of communication at a time when large quantities of produce ought to be coming forward as unavoidable, and calculations have hitherto been made accordingly; but prolonged interruptions, such as have occurred during the past two seasons owing to breaches, siltings, &c., resulting in heavy losses, must inevitably have a highly-hurtful effect on the trade of this port.

What I have written points to what this Chamber considers the mercantile community would not be unreasonable in asking, viz., that Government should consider the advisability and practicability of connecting Cocanada by railway with Bezváda, where the lines of the Bellary-Kistna State Railway and the British section of the Nizam's Guaranteed State Railway Company converge.

I have to add that the Chamber will feel much obliged by your putting this letter before Government with a view to some action being taken to remedy the state of matters which has obtained during the past season,—a state of matters a continuance of which must result in ruining the trade of a port which, excepting Colombo, has the only safe harbour on the coast of India between Calcutta and Bombay, and moreover is a port which, with justice done to it, will play an important part in developing the trade of the country.

Endorsement by W. A. HAPPELL, Esq., Collector of the Godávari District, dated Cocanada, 22nd February 1888, No. 93.

Submitted to the Secretary to the Commissioners of Land Revenue for submission to Government as requested by the Chamber.

2. The failure of the eastern delta head lock at Dowlaishweram in 1886 reduced the trade of Cocanada by about 31 lakhs.

3. There was a breach in the Ellore canal last year by which traffic was stopped for three weeks. The western delta head sluice was also allowed to silt up, and the canals had to be closed to clear it out. Both these stoppages of traffic were unforeseen, and could not be provided for when merchants' contracts were made. So, many persons doubtless suffered heavy loss from this cause.

4. I agree with the Chamber that the proper terminus for the lines of railway mentioned is Cocanada. Nearly all the export trade which passes through Bezváda, whether from Guntúr or from Hyderabad territory, comes to Cocanada for shipment. The state of the Kistna canal is worse even than the Chamber state it to be. When I was Collector of Kistna, Local Fund contractors refused to undertake to convey heavy material along the canals after the middle of January, because heavily-laden boats were liable to be brought to a standstill by accumulations of silt in certain parts of the canals. There is not sufficient water in the Kistna to keep the canals open for effective navigation after the beginning of March, even if the difficulties in regard to silt could be overcome at a reasonable expense. On the other hand, there is always sufficient water for navigation in the Godávari, and if it was worth while to incur the expense of dredging, the canals could be kept open all the year round.

5. When the delta works are completed, it will not be necessary to close canals for more than two or three weeks each year, even if the present system of removing silt is adhered to. It would therefore be very advantageous to trade if the *ad interim* terminus of the Hyderabad railway were fixed at Ellore instead of Bezváda. The Godávari canal system meets the Kistna system at Ellore.

6. The railway could be carried on to Cocanada without bridging the Godávari. There is water from bank to bank throughout the year at Dowlaishweram, so that trains could be taken across by steam ferry without difficulty. Colonel Hasted and Mr. Walch, to whom I made this suggestion some years ago, both agreed that it was quite feasible.

Resolution—dated 14th March 1888, No. 246.

Submitted for the orders of Government.

(A true Copy and Extract.)

(Signed) R. S. BENSON,
Acting Secretary.

No. 2284, Revenue.

Transferred to the Public Works Department (Irrigation and Railway Branches).

(By Order.)

Ootacamund,
17th April 1888.

(Signed) H. A. STUART,
Under-Secretary.

From G. T. WALCH, Esq., Superintending Engineer, I Circle, to the Chief Engineer for Irrigation, dated Dowlaishweram, 11th April 1888, No. 159 G.D.

With reference to your No. I/22 G.D., dated 21st March 1888, I have the honor to say that if all the head sluices, their floors, aprons, &c., are each year to be *thoroughly* examined, as wisely ordered after the collapse of the central delta sluices, a closure of the canals for some appreciable period in each year is an absolute necessity. That period in the eastern division in which lie the canals from the Godávari to Cocanada is generally three weeks, but sometimes a month, and considering that a bund has to be put in the river to shut off water from the sluices, that a large mass of silt has to be removed from the front floor and aprons to admit of their thorough examination, that there are always repairs to be done to shutters, piers, floors and rear aprons, and that then the bund in the river has to be removed, I consider the shorter period named is the very least that will suffice, whilst the longer (one month) will sometimes be necessary, as in this year, when two new vents have to be built to the head sluices during the closure.

2. In the western division the period of closure is generally six weeks, because, in addition to the examination of the head sluices, there are on the long (47 miles) main line of canal to Ellore many things to be done in the way of repair of aqueducts and other masonry works and clearance of silt, especially at the behind end of the canal near Ellore lock. This closure of the Ellore canal may doubtless, with good management and a considerable extra cost for dredging, be kept down, if considered necessary, to generally one month. It should be remembered that the closure takes place only during the time that the Kistna canals are perforce, from want of water, closed, and therefore no produce is coming forward from Bezváda.

3. Of course, during the closures much clearance of silt is done in the canals, because it can be done cheaper and, especially in lock channels, much better by hand than by dredgers, but the apparent belief of the Chamber of Commerce that the closures are entirely, or even chiefly, on account of silt clearance is an erroneous one; if no silt clearance was done by hand, closures of, at all events, nearly as long as those now usual would be necessary.

4. As regards the oft-suggested arrangements "by which both canals hence (Cocanada) to Dowlaishweram need not be closed at the same time," the question is simply, would the advantage to be gained, viz., the keeping open water-traffic from the Godávari river to Cocanada for an extra three weeks or a month in each year warrant the great cost? In considering this it must be remembered that from Rajahmundry to Cocanada there are two excellent roads, one of which passes through Dowlaishweram, and runs along side the Sámalkót canal. There would be no real engineering difficulty in providing an independent head for the Sámalkót canal, but the cost would be great not only because the excavation for the channel would have to be deep, but because separate head sluices on the river, if not also a separate lock, would be necessary, if thorough examination of head sluices had to be carried out as now, and it would be folly, indeed, to give up such examinations.

5. As your Memorandum under reply only calls for remarks regarding the closure of canals, I do not, in this letter, go into other questions raised by the Chamber of Commerce, but enclose a memorandum (which I trust you will not think out of place) on the subject of the through canal-traffic of the Godávari district and the advisability of supplementing it by extension of the railway from Bezváda to the Godávari river.

Enclosure.

MEMORANDUM.

Canals for the combined purposes of irrigation and navigation, with special reference to such canals in the Godávari district and the necessity for providing other means of traffic between the Kistna and the Godávari.

It may be accepted as an axiom in canal engineering that the requirements of irrigation and navigation are conflicting, *e.g.*, for *irrigation* large quantities of water, and consequently of

silt, have to be taken into a canal, and therefore the slope of the surface must be considerable; for *navigation*, the less water taken into the canal, the better, and its surface should have no slope; for *irrigation* there are times when the canal should be kept low, so that large quantities of surplus water may not have to be passed into the drainages when they are already filled by rain-water; for *navigation* the canal should always be kept up to its full level; for *irrigation*, even when the river or other source of supply is low, it is often necessary to go on letting as much water as possible out of the canal to supply crops, thereby reducing the level and the depth in the canal, especially at its end; for *navigation* at such times the water should be kept in the canal to maintain as nearly as possible its full depth.

2. The canals of the Godávari delta are primarily for *irrigation*; they have been made also navigable to supplement their usefulness, and never has there been a more successful combination. Its very success, however, now threatens, especially on the through lines, to cause the secondary object of the canals to over-top and seriously interfere with the primary one.

3. The clashing of the irrigation and navigation requirements mentioned in para 1 is well exemplified on the Ellore canal, which is the through line of communication between the Kistna and the Godávari river. On that canal considerable silting, inevitable when large quantities of water have to be passed through a canal from a silt-bearing river, frequently impedes traffic, whilst the necessity for keeping sufficient water for heavily-laden boats leads at times to more water being taken into the canals and surplussed out, and at other times to less water being given out of the canal to its distributaries than suits the irrigation; and it is a fact that much tempting and perfectly possible extension of irrigation from near the end of the canal has to be foregone, because it would still further add to the already great difficulty at times of keeping the navigation going.

4. On this (Ellore) canal especially the staff of this department has to attempt to serve the two antagonistic interests with the inevitable result that neither is satisfied. The one that has for its mouth-piece the powerful commercial community of Cocanada can best make its voice heard in high quarters, but district officers know that the other has much to say from an entirely different point of view.

5. The truth is that up to a certain point of development of traffic the conflicting interests can be fairly well reconciled but not beyond, *and that point has already been reached on the Ellore canal*; what then will be the case when to the existing and increasing general traffic along that canal is added the canal traffic to Cocanada?

6. There is but one solution to the difficulty, viz., the provision of other good means of communication between Bezváda and the Godávari river. *At present there is not even an ordinary road.* The extension of the railway from Bezváda to the Godávari nearly opposite Rajahmundry is exactly what is needed. It would, if run just above the system of canals, be an exceptionally easy line to make; it would pass along a well-populated and thriving country, which would give it a large passenger traffic; and it would bring large quantities of agricultural produce as well as coal to a point from which, except for a month in the year, it could be boated to Cocanada. It would form the first section (complete in itself) of the line which doubtless before very many years will be carried along the coast to join the Bengal system of railways at Puri.

(Signed) G. T. WALCH,
Superintending Engineer, I Circle.

From the same officer, dated Dowlaishweram, 17th April 1888, No. 184 G.D.

As an addendum to my memorandum with my No. 159 G.D., dated 11th April 1888, I have the honor to say that in the official year 1887-88 there passed through the Dowlaishweram head lock 20,065 boats and 1,736 rafts and through the Vizeshweram lock 24,254 boats and 2,943 rafts.

No. 71 I.

Note by the Chief Engineer for Irrigation.

With reference to endorsement No. 2284, dated 17th April 1888, transferring Resolution of the Board of Revenue, No. 246, dated 14th March 1888, forwarding an endorsement by the Collector of Godávari on a letter from the Chairman of the Cocanada Chamber of Commerce regarding the closure of the canals in the Godávari and Kistna deltas, I forward a report from Mr. Walch, the Superintending Engineer of the I Circle, and to state I fully agree with him.

2. In the Godávari district the main lines of communication are—

(1) the canal from Ellore to the south side of the Godávari river; and,
(2) that from north side of the river to Cocanada.

As a rule, the closure of the first lasts six weeks, that on the second line, three weeks or a month. I do not consider that on these lines a system of efficient dredging, as proposed by the Chamber, would shorten the closure sufficiently to justify the cost, as three weeks is, I consider, the least time that can be allowed for the thorough examination of the floors, aprons, &c., of the head-works, and a curtailment of the closure of the canal from Ellore to the Godávari to three weeks would be of little or no use, as the Kistna canals cannot, owing to want of water, be kept open; as this is the case, the result would not justify the cost.

3. If a new separate head and lock were made for the Sámalkót canal, water-communication, except in very bad years, could be maintained all the year round between the Godávari at Dowlaishweram and Cocanada; the cost of this would be very great, and I do not consider the extra three weeks' navigation would be worth the cost, especially as there is a good road available.

4. With regard to the Kistna canals we have three main lines of communication:

(1) From Bezváda to Ellore.
(2) Do. Bezváda to Masulipatam.
(3) Do. Bezváda to Buckingham Canal.

These canals are closed, as a rule, for three months in the year, and putting aside the necessity of closing the canals for the clearance of silt (which in the Kistna delta is a most serious item) and for repairs, the water-supply in the river Kistna is not sufficient to maintain water in the canals in ordinary season certainly for more than ten months in the year, if as long.

5. With systematic dredging of the main canals on the Bezváda side, I believe that, with comparatively a small extra outlay, these canals, Bezváda to Masulipatam and Bezváda to Ellore, could be kept open in good and most ordinary years ten months, to the great advantage of trade, but more than this cannot be hoped for. Enquiries regarding this are being made and information being collected, and it is hoped that a definite proposal regarding this may be made hereafter.

6. In conclusion, I will add that I agree with Mr. Walch in advocating a line of rail from Bezváda to the south side of the Godávari river.

OOTACAMUND,
2nd May 1888.

(Signed) H. R. MEAD, Colonel, R.E.,
Chief Engineer for Irrigation.

To the Joint Secretary to Government,
Public Works Department, Irrigation Branch.

No. 125 D.

Transferred to the Joint Secretary to Government, Public Works Department, Railway Branch, with reference to the Revenue Department's endorsement No. 2284, dated 17th April 1888.

OOTACAMUND,
5th May 1888.

(Signed) H. R. MEAD, Colonel, R.E.,
Joint Secy. to Govt., P.W.D.,
Irrigation Branch.

NOTE.

The extension of the broad gauge line from Bezváda to the south bank of the Godávari cannot, in my opinion, be long deferred.

It would not only secure for itself a paying traffic, but would extend the trade of Cocanada.

It is believed that the line will be found to be by no means a costly one, and I trust that funds will be provided and a survey staff entertained in time to commence a working survey of the line early in July next.

OOTACAMUND,
7th May 1888.

(Signed) C. J. SMITH, Colonel, R.E.,
Joint Secy. to Govt., P.W.D.,
Railway Branch.

ORDER—dated 10th May 1888, No. 390 R., Public Works.

Ordered to be forwarded to the Government of India, in continuation of letter No. 339 R., dated 26th April 1888, on the same subject:—

(Here enter No. 391 R., dated 10th May 1888.)

(True Extract.)

W. Coakes

" Major
~~Colonel~~, R.E.,
acting Joint Secy. to Govt., P.W.D.,
Railway Branch.

To the Consulting Engineer for Railways.
" Chief Engineer for Irrigation.
" Public Works Department, General Branch.
" Collector of Vizagapatam.
" Revenue Department, with copies of P.G. No. 159 R., dated 25th February 1888; P.G., No. 302 R., dated 18th April 1888; and P.G. No. 338 R., dated 26th April 1888.

Exd. F. R. Bantleman.
Spare Copies

No 338/839 R of 26-4-88

PWC No. 4995

RAILWAY.

Govt. of {1888} Madras.

PUBLIC WORKS.

No 1654 W dt 5th June 1888

B

Recorded

Recorded

W.M.S 30.5.88

Jm 1/6/88

Dated May, 10th.

Recd. 29.5.88 Encl.

G.O., 10th May 1888, No. 390 R.

No 1654 W dt 5th June 1888

MAY.

Closure of Canals in the Godavari and Kistna Deltas

Correspondence relative to the injury to traffic arising from the — and the extension of the line of railway from Bezváda to the Godávari, ordered to be forwarded to the Government of India.

Sub I Circle
S.O. I Circle
Sub II Circle
S.O. II Circle
Records to be destroyed
6/11/88

30/5 1180 1:6

No 210/E.W.

Supg. Engineer's Office, IV Circle,
Coimbatore, 2nd June 1888.

From

Colonel J. Beatty R.E.,
Superintending Engineer,
Fourth Circle.

To

The Chief Engineer,
P.W. Department.

Sir,

I have the honor to report that the Tappal Chavady on the Kistnagiri Vaniembadi road is in a ruined condition and it has been ascertained that it is not required by any department. I therefore request you will be good enough to obtain the sanction of Government to sell the materials of the building by public auction.

2. Mr. Cormac, the Sub Divisional Officer, Barur, reports that the wood of the roof has become unserviceable from age and is now worth about Rs. 3.

I have the honor to be,
Sir,
Your most obedt. Servt.,

J. Beatty Colonel R.E.
Superintending Engineer, IV Circle.

No. 338/339 R. of 26.4.88

P.W.C. No. 4995

RAILWAY.

Govt. of {1888} Madras.

PUBLIC WORKS.

Dated May, 10th.

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P.W.C. No. 5206

From

Colonel J. Beatty R.E.
Supg. Engr. 4th Circle

Dated 2nd June 1888
Rc.

No. 210
E.W.

Tapalchanady on the road from Kistnagiri to Vaniembady.

Requests to obtain the sanction of Government to sell the materials of the — by public auction as it is not required by any Department.