M.R.O. 1—77,000—8-6-37.

(1) Number of pages 40

(2) Date of repair 31-8-43

(3) Initials of the Referencer

CONCERNS BOTH BRITISH INDIA
AND INDIAN STATES.

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 2133-34 Press / Mis.

392-395

Dated 15-7- 1867.

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department, 15th July 1867

Read the following papers:—

No. 392. From the Consulting Engineer for Irrigation and Canal Company, to the Secretary to Government, Department Public Works, dated Madras, 2nd July 1867, No. 40:—

1. I have the honour, with reference to Proceedings, Madras Government, No. 1,817 of the 17th ultimo, to submit a letter of the 1st instant, No. 144, from the Agent and Manager, Madras Irrigation and Canal Company, with its accompaniments, from the Chief Engineer and Executive Engineer, Bellary Division, on the subject of the information to be given regarding the lands which would be submerged by the construction of reservoirs at the Mudduk Masoor, Luckawally, and Bagoli sites.

1 Letter in original from Agent.

2. I was under the impression that preliminary surveys, and other information sufficient for the purpose of designing the dams, had been made and obtained; but it would seem from the Chief Engineer's letter, No. 314 of the 19th ultimo, that much remains to be done under this head.

3. As regards the surveys required by the order of Government above quoted, I think that where the ground is covered by continuous jungle, the contour line may be fixed approximately, and that it would not be worthwhile in such cases to incur the loss of time and expense which would result from attempting to lay down an accurate contour.

Para. 9 of Executive Engineer's letter No. 39.

4. If the Revenue Survey and Settlement, referred to by Mr. Gordon, have made sufficient progress, and will, in other respects, and within a moderate time, afford much of the information required by Government, there would be no object in requiring the Company to repeat this work, and in that case it would be sufficient for the Company's survey to show clearly on the maps of the Revenue Survey what lands would be occupied by the waterspread of the reservoirs or by the works connected with them. On the other hand, if the Revenue Survey cannot be depended upon to supply the requisite information, it will be requisite that the survey and land plans should exhibit all the cultivated land that will need to be taken up, as well as full particulars of the villages, roads, &c., that will be submerged or interfered with by the reservoir projects.

Letter No. 40, paragraph 2.

5. Perhaps the Government will be pleased to communicate with the Commissioner of Mysore, with a view to ascertain exactly what information the Revenue Survey and Settlement Departments, reported to be at work in the Nuggur Division, will be able to afford, and I would also recommend that the Commissioner be asked to issue such instructions as may be necessary for the protection of the survey marks, which the Company's Officers may find it necessary to fix and erect.

Executive Engineer's letter No. 39, Para. 14.

6. The present sanction for establishment for the Bellary Division amounts to Rupees 3,615, and the scale attached to the Executive Engineer's letter, quoted in the margin of the preceding paragraph, is therefore within that sanction.

Proceedings Madras Government, No. 2,374, dated 16th August 1865.

From the Agent and Manager Madras Irrigation and Canal Company, to the Consulting Engineer for Irrigation and Canal Company, dated Madras, 1st July 1867, No. 141.

No. 39, dated 24th June.
" 40, " 25th " from Mr. Gordon.
" 214, " 24th " " Mr. Latham.

In transmitting copies of communications which I have received from Mr. Latham and Mr. Gordon, relative to the Reservoir Surveys, I have the honour to draw your attention to Mr. Gordon's statement, that the Revenue Survey and Settlement are in progress in the Nuggur Division, in which all the sites are to be found, and to his observations thereon.

P. S.—The tracings referred to in Mr. Gordon's letter, No. 39, will be forwarded immediately on receipt.

From G. GORDON, Esq., to the Agent and Manager, dated Bellary, 24th June 1867, No. 39.

1. With reference to your No. 24, of the 4th instant, I have the honour to enclose tracings of the proposed reservoirs at Masoor and Luckawally, as I have already explained,* these surveys were made with the view of ascertaining the engineering capabilities of the sites, and did not include a survey of the land in detail. In the case of the Masoor reservoir, the total area submerged at the level of the waste weir is approximately 25,500 acres. I cannot, however, state how much of this is cultivated land, and how much jungle. Roughly, I should think, half the area is grazing land, but without the Revenue Survey or Registers of holdings it is impossible to say where the grazing land ends, and the jungle begins. A good deal of the more valuable land will be laid awash during floods by the new weir now being constructed by the Bombay Irrigation Department. Some of the wet cultivation is shown on the plan. It does not profess to show all of it, but only what was met with in the course of the survey. No land in Mysore will be required for the waste channel. The waste weir and the old dam are on the boundary line, between Mysore and Dharwar. For the same reason Mysore can derive no benefit from the construction of this reservoir. I shall shortly be able to submit a plan of the ground required in the Dharwar Collectorate for the waste channel and temporary occupation by the station.

Book Post.

* My letter of 3rd June to Secretary, copy to you under endorsement, No. 32, 4th June.

2. With respect to Luckawally, the proportion of cultivated land to the whole extent is much smaller. Probably there are not more than 2,500 acres of cultivation within the contour, which includes 14,750 acres, but it has not been surveyed. The plan marked 'C' shows the land that would be required for the waste-channel and the station ground, this is nearly all waste or grazing land. It amounts to about 291 acres, and the greater part would only be required during the progress of the works, and could be restored on their completion.

3. Other portions of land, which cannot now be determined, would be required for quarries, brick-fields, &c.

4. A new road will have to be made from Luckawully to Yedhully. It should cross the river at Luckawully and keep near or on the water-shed, as far as that is possible.

5. The safety of the dam is provided for by a waste weir in a saddle removed from the dam. The length of this, as at present designed, is 1,200 feet. This, with 8 feet going over, would discharge more than the greatest recorded flood. The top of the dam is 14 feet above the level of the waste weir, and it is further protected by a parapet wall 6 feet high. The top of the latter being thus 20 feet above the crest of the waste weir.

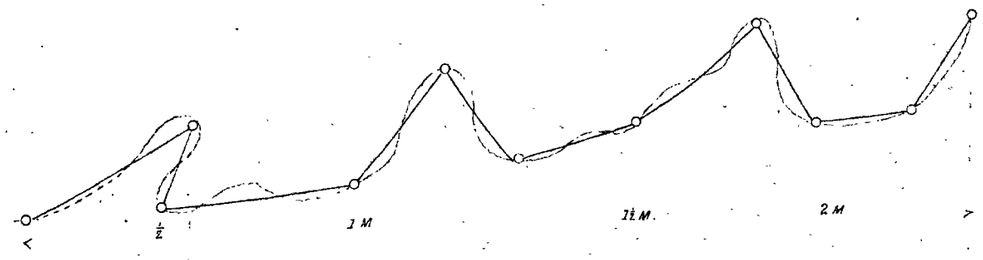
6. Both plans A and B show the spread at the level of the waste weir. There would be an additional strip all round which would be awash during floods.

7. I do not consider it any part of the duty of the Company to make detail surveys of the land included by the contour, but it will be necessary, in the case of all the reservoirs intended to be constructed, to make a detailed survey of the margin of the tank at high water level. This should be plotted on a scale not smaller than 200 feet to an inch, and will be a work of considerable labour, especially in the case of Luckawally, and hardly less so of the Toonga reservoir. It will be easier in the Masoor reservoir as the country is more open.

Proceedings of the Madras Government, Public Works Department,
15th July 1867.

8. A rough survey of the land likely to be submerged by the Toonga reservoir on the north side of the river will be submitted at an early date.

9. It would be a great boon if the Government would accept an approximate instead of an exact contour, where it runs through dense jungle, that is, supposing the *real* contour to be represented by the dotted line, the approximate line joining this will be represented by the full line below.



Wherever the jungle is open enough to admit of sights, 100 yards in length, being taken, the true contour could be given. In the above sketch the points or marks would be fixed by survey lines taken through the more open parts, and not necessarily on a contour.

10. Where the contour passes through cultivated ground, all the field and natural boundaries and other features should be shown as far as the boundary of the first field, or if that is very near, (20 yards) and there is a field beyond it, then as far as the boundary of the latter. All houses, temples, wells, &c., within 200 yards of the line should be shown. Villages in block.

11. The permanent marks in the open country should not be more than a quarter of a mile apart. It would be inconvenient to adhere *strictly* to this rule in the jungle. The marks in the open fields might be conical mounds of earth or cairns of stones where these abound. In the jungle a blaze on a tree, with a small board bearing the number of the station, would seem preferable. Those in the open should be fixed by station pointer angles, or by bearing and distance to conspicuous permanent objects whenever possible.

12. If this work is to be done for the three reservoirs, as well as the completion of the surveys for the dams, I beg leave to apply for an establishment, as per accompanying list, which does not exceed the former Bellary Division sanction.

13. The contingent expenses would vary with the work, and would consist chiefly of axe-men, coolies putting up marks, &c.

14. It will be necessary to apply officially for the assistance of the Mysore authorities, who should require the villagers to respect the survey marks, and give any little assistance that might be required by the Company's officers, for payment of course. This was necessary, even in Kurnool and Bellary, where the Company's officers were considered benefactors; here we are only destroyers.

15. I would fix head-quarters for the dry season at Shimoga. The Senior Assistant would have, at first, the Masoor reservoir with one Surveyor and one Assistant Surveyor. The two other Assistants would, at first, with a Surveyor each, take up the Toonga reservoir; the Luckawally reservoir, in which there is the least extent of cultivated land, which area could possibly be ascertained without additional surveys, being left till the last. The Executive Engineer should, with the temporary assistance, if necessary, of one subordinate, complete the surveys of the dam sites and the designs for the dams, and visit frequently the different parties.

16. I have not included an Estimator in the above list. There will not be a great deal of work of that kind. The so-called Estimators that I have seen in this country are generally inefficient in that, and useless for any other work. I have applied for a Calculator, who will only have to work out sums, and make himself generally useful.

17. As operations ought to begin in September, I respectfully request that if you approve of these arrangements, I may be informed in time, to indent for various stores and instruments that will be required, some of which may possibly have to be got from England.

Madras Irrigation and Canal Company, Bellary Division Establishment, applied for by letter No. 39, dated 24th June 1867.

Name of Office.	Salary.	Allowance.
	Rs.	Rs.
Executive Engineer	1,000	150
Assistant do.	400	120
Do. do.	300	120
Surveyor	250	120
Do.	150	60
Assistant Surveyor	100	60
Do. do.	75	35
Draughtsman	75	35
Do. and Calculator	60	...
Clerk	40	...
Peons (8) at Rupees 7 each*	75	...
Surgeon	56	...
Dresser	50	...
Chainmen (30) at Rupees 7 each	40	30
	210	...
	2,881	730
	730	
	3,611	
Contingencies including rent average...	...	350

* Good men cannot now be got for Rupees 6. Peons to have batta at 1 Anna 6 Pie per day when required to be two days or more absent from their station, reckoning 18 miles per day.

From G. GORDON, Esq., to the Agent and Manager Madras Irrigation and Canal Company, dated Bellary, 25th June 1867, No. 40.

1. Since my No. 39 of the 24th instant was written, I have received a copy of the Proceedings of the Madras Government of 17th June.

2. The information required by paragraph 3 of Captain Mullins' letter is the same as that which Mr. Latham required by his letter to me, No. 13 of the 17th May. In my letter on this subject to the Secretary, dated 3rd June, of which you have a copy, I ventured to offer the opinion that the Company should not be called on for so detailed a survey of the lands within the contours of the reservoirs, and I would still hope that an arrangement may be come to with the Mysore Government by which the needless double survey of the same land may be avoided. The Revenue Survey and Settlement are in progress in the Nuggur Division, in which all three sites are situated. I do not think (Captain Mullins' paragraph 3) that the survey alone will enable the Revenue authorities to settle the value of the lands, they must also be classified by the Revenue Surveyors, and this classification and the Revenue Surveys go on simultaneously. There is ample time, however, to arrange this, as in any case my first work would be the survey of the contour and the running of main and tie-lines.

3. The scales for the surveys, suggested by Captain Mullins, will do very well.

4. The Specification (descriptive) Report mentioned by Captain Mullins in paragraph 5 will accompany my plans and estimates of the dams as a matter of course.

From the Assistant to Chief Engineer, to the Agent and Manager, dated Bangalore 19th June, and Kurnool 24th June 1867, No. 314.

Reservoir Sites.

Your No. 110 of 13th ultimo, with Captain Mullins No. 35 of 13th ultimo, and G. O. No. 1,397 of 8th ultimo.

1. The object to be first obtained by the most direct means is, I suppose, a concurrent opinion that a given reservoir is feasible; and these papers refer to one branch only of the feasibility, *i. e.*, to the amount of damage they will cause to the land submerged.

2. Unfortunately, the accurate definition of the submerged land must be one of the last things done, after the level of the waste weir and the cost of the works, as compared with the quantity of water stored, are ascertained to be satisfactory. For each task it, alone, would take a large staff some months.

3. But such a definition as will be needed by the Government in order to purchase and make over the land is hardly required, I think, in order to give the Mysore Government data for expressing views favourable to, or suggestions upon, the sites, long before the accurate contour can be marked out. So soon as a scheme is in a sufficiently forward state to lay before the Board, the first plans got ready shall be sketch plans of the sites, based upon the cross-sections, contour and lines of levels which have been taken to show the water-capacity of the tank. These will be soon ready, and while they will not give the margin, with the accuracy of a land survey, will be sufficient to afford the Commissioner a general idea of the land submerged. These sketch plans will soon be ready, and shall be forwarded so soon as ready, in order that if possible the sites to be more accurately surveyed may be chosen in time for a staff to be collected before the dry weather arrives in October.

No. 393. From the Consulting Engineer for Irrigation and Canal Company, to the Secretary to Government, Public Works Department, dated 8th July 1867, No. 43.

1. In continuation of my letter of the 2nd instant, No. 40, I have the honour to submit, for the information of Government, the undermentioned tracings:—

1. Showing the waterspread of the proposed Masoor reservoir.
2. Showing the land that would be submerged by the proposed Luckawally reservoir.
3. Showing the land required below the site of the dam of the proposed Luckawally reservoir for waste channel and station ground.

2. The following remark is taken from the Chief Engineer's report for May:—

"Sketch plans of the sites for the inspection and remarks of the Mysore Government "will be shortly ready; and I hope that those remarks will reach the Board at the "same time with the full designs and estimates which will be ready shortly after."

A sketch plan of the Bagoli site on the Toonga remains to be furnished; the others are those which are now forwarded.

No. 394. ORDER THEREON, 15th July 1867, No. 2,133.

IRRIGATION, No. 21.

The Government regret to observe that the surveys of the sites for the reservoirs which the Irrigation Company propose to construct on three of the affluents of the Toongabuddra have made little progress, and that much time must elapse before the designs for the dams at those

sites can be completed. Under the circumstances, the Government will not insist upon the contour line defining the waterspread being marked with absolute correctness where the ground, covered by continuous jungle, is of little value, but they consider it essential that the most correct possible information, that can be obtained without incurring much loss of time and expense, should be furnished of the extent of land, whether cultivated or waste, which, in each case, will be submerged; and the Government of Mysore will be requested to give the Company all the assistance which the prosecution of the Revenue Survey and Settlement, referred to by Mr. Gordon, may be capable of affording.

Ordered that the following letter be sent:—

(Here enter, No. 2,134, dated 15th July 1867.)

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To the Consulting Engineer for the Madras Irrigation and Canal Company, with three Tracings.
,, Manager for do. do.

Exd. S. T. Augustin.

PUBLIC WORKS DEPARTMENT,
FORT SAINT GEORGE,
15th July 1867.

No. 2,134.

No. 395.
To
THE OFFICIATING COMMISSIONER FOR THE GOVERNMENT OF THE TERRITORIES OF HIS HIGHNESS THE MAHA RAJAH OF MYSORE.

SIR,

IRRIGATIGN, No. 22.

To Commissioner of Mysore, No. 565, 25th February 1867.
From do. No. 7,141-55, 21st March 1867.

1. With reference to the correspondence marginally noted, I am directed to forward the accompanying papers regarding the Survey by the Officers of the Madras Irrigation and Canal Company of sites for reservoirs at Luckawally on the Budra, Bagoli on the Toonga and Mudduk Masoor on the Choardy, and to request that, if the Revenue Survey and Settlement of the Districts in which those sites are situated are sufficiently advanced to be of use to the Company, you will have the goodness to order copies of them to be supplied to its officers, to facilitate as far as possible their labours.

2. I am also to request that you will cause instructions to be issued for the protection of the survey marks which the Irrigation Company's Officers may erect in the course of their operations.

I have the honour to be,
Sir,
Your most obedient servant,

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

Exd. S. T. Augustin.

Madras Irrigation & Canal Co.
Bellary Division

No. 40

To.

The Agent and Manager
Madras.

Sir,

Since my No. 39 of the 24th instant was written I have received a copy of the Proceedings of the Madras Government of 17th June -

2. The information required by para 3 of Captain Mullins letter is the same as that which Mr. Latham required by his letter to me No. 13 of the 17th May. In my letter on this subject to the Secretary dated 3d June of which you have a copy, I ventured to offer the opinion that the Company should not be called on for so detailed a survey of the lands within the contours of the Reservoirs, and I would still hope that an arrangement may be come to with the Mysore Government by which the needless double Survey of the same land may be avoided. The Revenue Survey and settlement are in progress in the Nuggur Division in which all three sites are situated - I do not think (Captain Mullins para 3) that the Survey

alone

will enable the Revenue Authorities to fix the the value of the Lands - they must also be classified by the Revenue Surveyors, and this Classification and the Revenue Surveys go on simultaneously - There is ample time however to arrange this as in any case my first recommendation will be the Survey of the Contour and the running of Main and the lines -

3. The Scales for the Surveys suggested by Captain Mullins will do very well -

4 The Specification (description) Report mentioned by Captain Mullins in para 5 will accompany my Plans and Estimates of the Dams as a matter of course -

I have &c
W. G. Gordon

Bellary
25th June 1867

No 314.

Madras Irrigation & Canal Co
Chief Engineers Office
Bangalore 19th June 1867
Runnod 24th June 1867

To
F. H. Henslowe Esqr
Agent and Manager
Madras.

Sir,

Reservoir Sites

I have No 110 of 13th Ultimo with Captain Mullins No 35 of 10th Ultimo and G.O. No 1397 of 8th Ultimo -

The object to be first obtained by the most direct means is I suppose a concurrent opinion that a given Reservoir is feasible; and these papers refer to one branch only of the feasibility, i.e. to the Amount of damage they will cause to the land submerged -

Unfortunately the accurate delineation of the submerged land must be one of the last things done, after the Canal of the waste weir, and the cost of the works as compared with the quantity of water stored are ascertained to be satisfactory - For each task it alone would take a large staff some months -

Bel

But such a definition as will be needed by the Government in order to purchase and make over the land is hardly required, I think, in order to give the Mysore Government data for expressing views favourable to, or suggestions upon, the Sites, long before the accurate Contours can be marked out. So soon as a scheme is in a sufficiently forward state to lay before the Board, the first plans got ready shall be sketch plans of the Sites, based upon the Cross Sections Contour and lines of levels which have been taken to shew the water-capacity of the tank. These will be soon ready, and while they will not give the margin with the accuracy of a land survey, will be sufficient to afford the Commissioner a general idea of the land submerged. These sketch plans will soon be ready and shall be forwarded so soon as ready in order that if possible the Sites to be more accurately surveyed may be chosen in time for a staff to be collected before the dry weather arrives in October.

Yours &c

(Sd) J. F. Lehmann

Apl to Chief Engineer

for Chief Engineer

True Copies

H. Hunter Hanson

Asst Secretary

a

Rathmines W.C. 15th

No 1414.

Rathmines 1st July 1864.

From.

The Agent and Manager

R. Br. W.C.Co.

To

The Commissioners

Irrigation W.C.Co.

Sir,

I transmit for your information copies of Commencing abstract I have received from Mr Latham and Mr Gordon relative to the Revenue Surveys. I have the honor to draw your attention to Mr Gordon's Statement, that the Revenue Surveys and Settlement arrangements in the Rugger District is not to be completed all the Cubic area to be included, and C. Cs. Remarks thereon.

I am, Sir,

Your most obt Servt

J. Mulvaney

Agent & Manager

Ld 19 P.10

To Govt No 240 of 5 July 64

From
The Agent Thames Br
R. W. & C. Co.

To The Commissioner
R. W. & C. Co.

No 111

Dated 1st July 1864
Rec'd 2nd July 1864

Transmits Copies of Communication received from Mr Latham, and Mr Gordon relative to the Revenue Surveys

P W 24 08 64

P.S. The Tracings referred to in Mr Gordon's letter No 39 will be forwarded immediately on receipt.

Bellary Division

No 39.

To,

The Agent and Manager
Madras.

Sir,

With reference to your No 26 of the 4th instant I have the honor to enclose tracings of the proposed Reservoirs at Maseor and Luckowully, as I have already explained these surveys were made with the view of ascertaining the Engineering Capabilities of the sites and did not include a surveying of the Land in detail. In the case of the Maseor Reservoir the total area submerged at the level of the waste weir is approximately, 25,500 acres. I cannot however state how much of this is cultivated land and how much jungle. Roughly I should think half the area is grazing Land but without the Revenue Survey or Registers of holdings it is impossible to say where the grazing land ends and the jungle begins. A good deal of the more valuable Land will be laid awash during floods by the new weir now being constructed by the Bombay Irrigation Department. Some of the wet cultivation is shown

Book Post.

By Letter of 3d June & Encl: copy to go under endorsement No 32. 4th June.

shown on the plan. It does not profess to show all of it, but only what was met with in the course of the Survey. No land in Mysore will be required for the waste Channel. The waste-weir and the old Dam are on the Boundary line between Mysore and Dharwar. In the former case Mysore can derive no benefit from the Construction of this Reservoir. I shall shortly be able to submit a Plan of the ground required in the Dharwar Collectorate for the waste Channel and temporary occupation by the Station.

2. With respect to Lachanully the proportion of Cultivated Land to the whole extent is much smaller. Probably there are not more than 2,500 Acres of Cultivation within the Contour which includes 11,750 Acres but it has not been Surveyed. The Plan marked "C" shews the Land that would be required for the waste Channel and the Station ground. The rest is nearly all waste or grazing Land. It amounts to about 1394 acres and the greater part would only be required during the progress of the works and could be restored on their Completion

3 After portions of Land which can not now be determined would be required for quarries, brickfields &c.

4. A New Road will have to be made from Lachanully to Yedhully. It should cross the River at Lachanully and keep near or on the watershed as far as that is possible.

5. The safety of the Dam is provided for by a waste weir in a saddle removed from the Dam. The length of this as at present designed is 1200 feet. This with 8 feet of water flowing over would discharge more than the greatest recorded flood. The top of the Dam is 14 feet above the level of the waste weir, and it is further protected by a parapet wall 6 feet high. The top of the latter being thus 20 feet above the crest of the waste weir.

6. Both Plans A & B shew the spread at the level of the waste weir. There would be an additional strip all round which would be a wash during Floods.

7 I do not consider it any part of the duty of the Company to make detail Surveys of the land included by the Contour, but it will be necessary in the case of all the Reservoirs intended to be constructed to make a detailed Survey of the margin of the Tank at high water level

level. This should be plotted on a scale not smaller than 200 feet to an inch, and will be a work of considerable labour especially in the case of Kuchaundly and hardly less so of the Tonga Reservoir. It will be easier in the Mason Reservoir as the country is more open.

8 A rough survey of the land likely to be submerged by the Tonga Reservoir on the North side of the River will be submitted at an early date.

9 It would be a great boon if the Government would accept an approximate instead of an exact Contour where it runs through dense jungle. That is supposing the real Contour to be represented by the dotted line the approximate line joining the will be represented by the full line below.



Wherever the jungle is open enough to admit of lights 100 yards in length being taken the true Contour could be given. In the above sketch the points or marks would be fixed by Survey lines taken through

through the more open parts and not necessarily on a Contour.

10 Where the Contour passes through cultivated ground all the field and natural boundaries and other features should be shewn as far the boundary of the first field, or if that is very near, (20 Yards) and there is a field beyond it, then as far as the boundary of the latter. All houses, temples, wells &c. within 200 Yards of the line should be shewn. Villages in block.

11 The permanent marks in the open country should not be more than ½ a mile apart. It would be inconvenient to adhere strictly to this rule in the jungle. The marks in the open fields might be Conical mounds of earth or Cairns of stones where these abound. In the jungle a blaze on a tree with a small board bearing the number of the station would seem practicable. Those in the open should be fixed by station pointer angles or by bearings and distances to conspicuous permanent objects wherever possible.

12. If this work is to be done for the three Reservoirs as well as the completion of the Surveys for the Dams, they leave

to apply for an Establishment as per accompanying list which does not exceed the former Bellary Division Establishment.

13. The Contingent Expenses would vary with the work and would consist chiefly of Axe men, coolies putting up marks &c.

14 It will be necessary to apply officially for the Assistance of the Purse authorities who should require the Village to inspect the Survey-marks and give any little assistance that might be required by the Company's Officers, for payment of course - This was necessary even in Kurnool and Bellary where the Company's Officers were considered benefactors; here we are only destroyers.

15. I would fix Head Quarters for the dry season at Shimoga - The Senior Assistant would have at first the Mandoor Reservoir with one Surveyor and one Assistant Surveyor - The two other Assistants would at first with a Surveyor each take up the Soonga Reservoir, the Lackmully Reservoir in which there is the least extent of cultivated land which area could possibly be ascertained without additional Surveys being left

till the last. The Executive Engineer should with the temporary assistance of one Subordinate complete the Survey of the Dam sites and the designs for the Dams and visit frequently the different parties -

16. I have not included an Estimate in the above List. There will not be a great deal of work of that kind - The so-called Estimates that I have seen in this Country are generally inefficient in that, and useless for any other work - I have applied for a Calculator who will only have to work out Dams and make himself generally useful -

17 As operations ought to begin in September, I respectfully request that if you approve of these arrangements, I may be informed in time to indent for various Stores and Instruments that will be required, some of which may possibly have to be got from England -

I have &c.

(Sd) G. Gordon

Bellary
24th June 67

Madras Irrigation and Canal Company
Bellary Division Establishment
Applied for by letter No 39 — 24th June 1867.

Name of Office	Salary	Allowance
Executive Engineer	1000 " "	150 " "
Assistant Engineer	400 " "	120 " "
do do	300 " "	120 " "
do do	250 " "	120 " "
Surveyor	150 " "	60 " "
do	100 " "	60 " "
Assistant Surveyor	75 " "	35 " "
do do	75 " "	35 " "
Draughtsman	60 " "	" "
do and Calculator	40 " "	" "
Clerk	75 " "	" "
Peons (8) @ Rs 7 each F	56 " "	" "
Surgeon	50 " "	" "
Orfser	40 " "	30 " "
Chainman (30) @ Rs 7	210 " "	
	2881 " "	730
	730	
	3611	

Contingencies including Rent average — Rs 350

F Good men cannot now be got for Rs 6.
Peons to have Batta at 1a 6p per day when required to be 2 days or more absent from their Station — reckoning 18 miles per day.

Received 5th July 1867

2701

Consulting Engineer's Office
Irrigation & Canal Company
Madras, 2nd July 1867.

No. 40.

From,

Captain, John Mullins, R.E.
Consulting for I. & C. Co.

To,

The Secretary to Government
Department of Pub. Works.—

Sir,

I have the honor, with reference to Proceedings Madras Government No. 1817 of the 17th ultimo, to submit a letter of the 1st instant No. 144 from the Agent and Manager Madras Irrigation and Canal Company, with its accompaniments from the Chief Engineer and Executive Engineer Bellary Division, on the subject of the information to be given regarding the lands which would be submerged by the construction of reservoirs at the Muddoor, Masoor, Suckawully, and Bagoli sites.—

2. I was under the impression that preliminary surveys and other information sufficient for the purpose of designing the dams had been made and obtained, but it would seem from the Chief Engineer's letter No. 314 of the 19th ultimo that much remains

to be done under this head.—

3. As regards the Surveys, required by the order of Government above quoted, I think that where the ground is covered by continuous jungle the contour line may be fixed approximately, and that it would not be worthwhile in such cases to incur the loss of time and expense which would result from attempting to lay down an accurate contour.— para: 9 of Ex: Engr's letter N°. 39.—

4. If the Revenue Survey and Settlement referred to by Mr. Gordon have made sufficient progress, and will, in other respects, and within a moderate time, afford much of the information required by Government, there would be no object in requiring the Company to repeat this work, and in that case it would be sufficient for the Company's survey to show clearly in the Maps of the Revenue Survey what lands would be occupied by the water spread of the reservoirs or by the works connected with them. On the other hand if the Revenue Survey cannot be depended upon to supply the requisite information, it will be requisite that the Survey and Land plans should exhibit all the cultivated land that will need to be taken up, as well as full particulars of the villages, roads &c. that will be submerged or interfered with by the reservoir projects.— Letter N°. 40—para: 2.

5. Perhaps the Government will be pleased to communicate with the Commissioner of Mysore, with a view to ascertain exactly what information the Revenue Survey and Settlement Departments reported to be at work in the Nuggur Division will be able to afford, and I would also recommend that the Commissioner be asked to issue such instructions as may be necessary for the protection of the Survey marks, which the Company's officers may find it necessary to fix and erect.— Ex: Engr's letter N°. 39—para: 11.—

6. The present sanction for re-establishment for the Bellary Division amounts to Rupees 3615 and the scale attached to the Executive Engineer's letter quoted in the margin of the preceding para: is therefore within that sanction.— P.W.D. N°. 2374 d/16 Aug. 1865.

I have the honor to be,

Sir,

Your most obedient Servant,

John Lumsden Captain, R.E.

Cons. Engr. for R.R. Co.ys &c.

Ex. McBroek.—

Consulting Engineer's Office
Bejapore Railway Company
8 July 1867

No 2493

From
Captain John Mullins R.E.
Chief Engr for P.W.D.

To
The Secretary to Government P.W.D

Sir,

In continuation of my letter of the 2nd Instant No 40, I have the honour to submit for the information of Government the undermentioned Memorandum of the proposed Masonry Reservoir

1. Showing the land that would be submerged by the proposed Reservoir

2. Showing the land required for the purposes of the Reservoir and station grounds

3. Showing the land required for the Quarry for the proposed Masonry Reservoir

2. The following remarks is taken from the "Sketch Plan of the site for the Reservoir" "Sketch Plan of the site for the Inspection and remarks of the Hydrau Gymnumet" "will be shortly ready; and Simple Book thereon remains" "will reach the Board at the same time with the" "full designs and Estimates which will be ready" "shortly after".

2 Sketch Plans of the Bejapore Reservoir

P.W. 10 1867 Dated 8th July
Rec'd 24887
From
The Cons. Engr. N.W.C.
To
The Secretary to Govt to
G. N.W.P.
Dated Ex. 4th July 1867
Rec'd
C. W. S. 1

Submits a letter No 1144 of the 1st inst. from the Agent with its accompaniments from the Ch. Engr. & Engr. Bellary Div. on the subject of the information to be given regarding the lands which would be submerged by the construction of Reservoirs at the Muddula Nassoor, Kuchia-walla & Bagalakotes

Nos 2133 & 2134 - 15th July 67

No 392

10 July 1867 @ 11

to be furnished; the others are those which are now forwarded. I

I remain Dear Sir
Your most Obedient Servant
John Hamilton Capt R.E.
Consulting Engineer to G.C.&C.

to be furnish
forwarded

P. W. 1867 Dec.
Rec'd 43 for Disp.
£ 25-90
from the Secretary for I.F.C. Co.
to the Secy to Govt. P.W.D.

Dated 8th July 67.
Rec'd 12th

Encl: 3

Submits for the information of Govt. the tracings showing the water-spread of the proposed Mason Reservoir, the land that would be submerged by the proposed Lakshmanilly Reservoir & the land required for waste channel & station ground. —

No 393

Nos 2133. & 2134 - 15th July 1867

35

Public Works Department.

No 2133

PROCEEDINGS of the MADRAS GOVERNMENT.

Under date the 15th July 1867

Read the following

Lt. Col. Cousteling Engr I.F.C. Co.
&c &c &c

(Here enter No. 40 dated 2nd July 1867)
" 43 " 8th "

The Government regret to observe that the surveys of the sites for the reservoirs which the Irrigation Company propose to construct on three of the affluents of the Toongabudra, have made little progress, and that much time must elapse before the designs for the dams at those sites can be completed. Under the circumstances, the Govt will not insist upon the contour line defining the watershed being marked with

absolute correctness where the ground, covered by continuous jungle, is of little value, but they consider it essential that the most correct possible information, that can be obtained without mourning much loss of time and expense, should be given whether of the extent of land, whether cultivated or waste, which, in each case, will be submerged, and the Govt. of Mysore will be requested to give the Company all the assistance which the prosecution of the Revenue Survey and Settlement, referred to, by Mr Gordon,

To Com. Engrs with three tracings & a Statement
Bang 18/7/67

may be capable of affording.-

Ordered that the following letter be sent-

To The Officiating Commissioner for the Govt. of the Territories of His Highness the Rajah of Mysore.

Sir -

With reference to the correspondence marginally noted, I am directed to forward the accompanying papers regarding the Survey by the Officers of the Madras Irrigation and Canal Company of sites for reservoirs at Lockawally on the Budra, Bagoli on the Toonga and Muddu K Mavoor on the Bhoandy and to request that

To Commr of Mysore 565 - 25 Feb/67
From. — do — 7141/55 - 21 March a

If the Revenue Survey and Settlement of the Districts in which these sales are situated are sufficiently advanced to be of use to the Company, you will cause the Collectors to order copies of them to be supplied to the Agents, to facilitate as far as possible, their labours.

2. I am also to request that you will cause instructions to be issued for the protection of the Survey marks which the Irrigation Company's Officers may meet in the course of their operations.

P. W. 186. Department.

No.

Proceedings of Government.

Dated

Fort St George
15th July 1867

Copy of the above letter
sent to Collectors
of Districts

Pub: March 1867 Refd to

Proc: of Bombay for July

No 2133 & 2134

Proc: of the Madras Govt

Dd 15th July 1867

CONCERNS BOTH BRITISH INDIA
AND INDIAN STATES.

No 392 @ 394-395