M.R.O. 1—77,006—8-6-37.

(1) Number of pages.

(2) Date of repair.

(3) Initials of the Referencer.

MADRAS RECORD OFFICE.

Government of Madras.

DEPARTMENT.

G.O. No. Press Mis.

Dated 18 .

Not to be folded or roughly handled

Read the following papers :—

No. 323. From the Superintending Engineer in charge of 4th Division, to the Acting Chief Engineer for Irrigation, dated Madras, 12th August 1870, No. 1,999.

I HAVE the honour to forward a survey and section, with plans, of the masonry works of the Poloor Channel supplying the Poloor Tank in Poloor Talook, North Arcot District, and the specification and estimate for building a dam across the Cheyaur River and improving the Poloor Channel, amounting to Rupees 10,300, prepared and submitted by Mr. Bevan, Assistant Engineer.

One letter from Mr. Bevan, dated 25th July 1870.
One Survey.
One set of Sections.
Two plans of masonry works.
One Specification.
One Estimate.

This channel is referred to in your Note,* No. 275, dated 21st September 1869, paragraph 10. The survey and levels of the channel have been taken under Captain Hasted's directions, when he was in executive charge of the Poloor Range.

* G. O., No. 3,854, dated 8th December 1869.

2. Mr. Bevan gives, as the enclosed letter shows, but a meagre report of this project, and affords very little information as to the nature of the work proposed, the capacity of the tanks, the extent of irrigation, and the remunerative prospects of the project. Owing, however, to the lateness of the season, and the impossibility of now obtaining further information before the Budget lists are submitted, I have sent the file connected with the project for your perusal and disposal.

3. Mr. Bevan gives the capacity of the Poloor Tank, the principal one to be fed by the channel, as only 5 millions cubic yards. He gives no ayacut revenue statements, but I observe that the cultivation is entered in the appendix to the reports in G. O., No. 3,854, dated 8th December 1869, on the Mambaukum Cheyaur project, for all the six tanks affected by this channel. This statement shows that the Poloor Tank has an ayacut of 946 acres, and the highest revenue of the past five years has been 852 acres, so that the reservoir either has been filled or partly filled twice in the year, as Captain Hasted supposes, or has its irrigation supplemented by rain water direct to the fields.

4. I believe that the tank receives a supply partially from freshes twice in the year, once in July or August, and again at the close of the monsoon. I observe also, on examining the section and survey of the project, that the capacity of the tank would appear to be much more than that represented by Mr. Bevan, and amounts to 9 millions cubic yards, more than sufficient for the full ayacut of nunjah, punjah, and waste lands, amounting to 1,106 acres.

5. The channel is now in very bad order, and the Cheyaur River when in fresh is apt to scour out the bed and leave the channel dry. Captain Hasted proposed a dam with its level one foot above the bed, Mr. Bevan has, however, estimated for a work with its crest flush with the Cheyaur River bed. The channel now receives but little water, and what does flow down is principally turned off at Canpaloor sluice. The Executive Engineer proposed to introduce falls, and Mr. Bevan has provided accordingly.

6. The six tanks under the influence of this channel have an ayacut of 1,736 acres, of which 1,571 have been cultivated in the most favourable season of the last five years. There are 177 acres of punjah convertible into nunjah, and 152 acres of waste. Supposing the channel to fill the tanks, the 165 acres of full ayacut not now cultivated would yield, at the average return of 4½ Rupees per acre taken from the statement, Rupees 742, and the 329 punjah and waste acres, at half this assessment, would yield Rupees 740, or Rupees 1,482 in all. The cost of the project is Rupees 10,300, so that the returns on the above data would amount to 14 per cent.

7. As regards the quantity of water available and capacity of the channel, the reports already submitted on the Cheyaur River show that water flows at the anicut near Amurthay, for an average of 120 days in the year, 2 feet deep. Allowing that a portion of this water is derivable from local rains and springs in the bed, for which a deduction of one-third may be made, I find that a channel with the section of the proposed Poloor one, that is, 13 feet at sole, banks 1 to 1, and 2 feet fall per mile, flowing for 80 days 2 feet deep, will discharge 17 millions cubic yards per annum, sufficient for 2,400 acres, whilst the land under the tanks, as shown in paragraph 6, amounts to 1,736 acres nunjah, 177 punjah, and 152 waste, or 2,065 acres in all.

From W. G. BEVAN, Esq., Assistant Engineer, Poloor Range, to the Superintending Engineer, 4th Division, dated Arnee, 25th July 1870, No. 235.

I HAVE the honour to submit herewith an estimate, amounting to Rupees 10,300, with other enclosures as entered in margin, for improving the Poloor supply channel.

One Estimate.
One Specification Report.
One Sheet of Sections, No. 1.
One Survey, No. 2.
Two Plans, Nos. 3 and 4.

2. The survey and levels were taken by Captain Hasted, and I have followed his data in framing the estimate.

3. The masonry work across the river is not intended to raise the water, but to prevent the river from scouring, as it frequently does, leaving the channel perfectly useless, although the river may be bringing down a considerable supply of water at the time.

4. The masonry work might be considered too light to withstand the rush of water in a river having a fall of 8 feet a mile, but as it will offer no resistance to the floods, and rests on a bed of stiff clay, I think it will answer the purpose.

5. The channel now fills six tanks, paying an aggregate ayacut of Rupees 9,165; it is impossible to say what the increase of revenue will be in consequence of the very irregular flooding of the Cheyaur, but the extent of cultivation in such cases is governed by the quantity of water received in the tanks.

6. The project is an old one, and has been taken up from time to time since the days of Mr. Bourdillon and Captain Collyer, but it has always been laid aside for the larger Mambaukum project, which, if carried out, would render this undertaking unnecessary.

7. The Poloor Tank is capable of holding (when the water is flush with the crown of calingulah) 5,150,573 cubic yards of water. Some of the other tanks under the channel are very large, but I have not had them contoured.

No. 324. *Note by the Acting Chief Engineer for Irrigation.*

IN G. O. of the 8th December 1869, No. 3,854, it was decided to postpone for four or five years any further consideration of the proposition to construct an anicut across the Cheyaur near Mambaukum, and in paragraph 10 of my note printed in the Proceedings of Government it was mentioned that, in the meantime, it might be found practicable to augment the supply of the Poloor Tank by improving the existing channel from the Cheyaur. The Superintending Engineer, 4th Division, has now submitted for consideration an estimate, Rupees 10,300, for constructing a flush dam across the Cheyaur, for giving a head sluice to the channel, and for improvements to the latter.

2. The project has not been sent up, as noticed by Colonel Bean, in a very complete shape, but the information afforded is, I think, sufficient to enable a decision to be arrived at.

3. The names of the six villages in which the ayacut wet cultivation has an area of 1,736 acres, and an assessment of Rupees 9,165, are not given, but four villages are shown on the survey as having tanks commanded by the channel. These are Poondy, Canpaloor, Kanganoor, and Poloor, and from Appendix C., printed in the G. O. already quoted, the following particulars have been obtained:—

	Ayacut.		Averages 1862-63 to 1866-67.		Available for conversion into Nunjah.	
	Acres.	Assessment	Cultivation.	Revenue.	Poonjah.	Waste.
Poondy	94	442	93	475	11	4
Canpaloor	492	2,157	352	1,539	50	27
Kanganoor	131	644	120	596	34	...
Poloor...	946	4,424	708	3,276	67	93
	1,663	7,667	1,273	5,886	162	124

From this statement it appears that Poondy is already very well supplied, and that there is no great room for improvement in Kanganoor, while in the other two villages a good deal of land is left uncultivated owing to a deficient supply of water. Appendix A., in the same Proceedings, shows that even in bad years the water passing the Amurthay Anicut would suffice for 1,000 acres additional cultivation, and in average years for a much larger area, and no doubt an enlarged channel and better arrangements will lead to an extension of the average area of cultivation in the villages interested in this channel. The possible returns for the outlay now proposed are Rupees 1,781 on nunjah, and perhaps 1,000 Rupees on converted lands; and the probable average returns may be taken at one-half, or, say, 1,350 Rupees.

4. Some of the details of the works require revision, and I have noted in pencil on Plans Nos. 3 and 4 the points which need attention. I have estimated roughly the additional cost of the alterations required as follows :—

	Original Estimate.	Proposed.
	RS.	RS.
Channel	4,700	4,700
Head sluice...	1,330	1,700
Dam	3,800	4,500
3 Falls...	470	750
	10,300	11,650

The anticipated increase of revenue will give a return of 11½ per cent. on the larger amount ; and, as repeated reports have been made of the want of improved means of irrigation in the Poloor Talook, I beg to recommend that sanction for the entry of Rupees 11,650 in the Budget of 1871-72 for this project be given, and that the estimates be returned to the Superintending Engineer for the reconsideration of those details which appear to need revision, and, in reforwarding them, a complete revenue statement for all the villages to be supplied should be transmitted.

5. It may be added that the channel, as designed, will carry over 50,000 cubic yards an hour with a depth of 6 feet of water, and about 9,000 cubic yards with a depth of 2 feet, and it will, therefore, be capable of conveying to the tanks in ordinary seasons a very ample supply of water.

OOTACAMUND,
2nd September 1870.

(Signed) J. MULLINS, Major, R.E.,
Acting Chief Engineer for Irrigation.

No. 825. ORDER THEREON, 19th September 1870, No. 2,254.

IRRIGATION, No. 17.

ALTHOUGH the project for the improvement of the supply of the Poloor, and other, tanks, in the Poloor Talook of the North Arcot District, has not been submitted for sanction in as complete a form as is desirable, the Government, taking into consideration the desirability of according sanction to any scheme for the improvement of this part of the North Arcot District, which can be shown to be likely to be fairly beneficial, approve of the entry in the Budget of 1871-72 of Rupees 11,650, the sum required for constructing a flush dam across the Cheyaur, and for increasing the efficiency of the existing channel.

2. The attention of the Superintending Engineer, 4th Division, will be called to the remarks of the Acting Chief Engineer for Irrigation, and those details of the

works which appear to need revision should be reconsidered, and complete revenue statements should be obtained and transmitted with the amended estimates.

(True Extract.)

Colonel, R.E.,
Secretary to Government.

To the Superintending Engineer, 4th Division.
" Acting Chief Engineer for Irrigation.
" Controller of Public Works Accounts.

Exd. S. T. Augustin.

No 1999 Supg Engrs: Office 4 Div
Madras 12 August 1870.

From

Lieut Colonel J. Dean R.E.
Superintending Engineer
in charge of 4th Division

To,

Major J. Mullins R.E.
Acting Chief Engineer for
Irrigation

Sir,

I have the honor to forward a survey and section with plans of the masonry works of the Colour Channel supplying the Colour Tank in North Arcot District and the specification and estimate for building a dam across the Cheyair River and improving the Colour Channel amounting to Rs 10300-0-0; prepared and submitted by Mr. Peran Assistant Engineer - This Channel is referred to in your ×Note No 275 dated 21 September 1869 para 10. The Survey and levels of the Channel have been taken under Captain Hasted's directions when he was in executive charge of the Colour range -

Mr. Peran gives as the enclosed

2

letter

Enclosures /
One letter from
Mr. Peran dated
25 July 1870 /
One Survey /
One set of sections /
two plans of
masonry works /
one specification /
one estimate. /

× G.O. No 3854
dated 8 Dec 1869.

letter shows, but a meagre report of this project, and affords very little information as to the nature of the work proposed, the capacity of the tanks, the extent of irrigation, and the remunerative prospects of the project - Owing however, to the lateness of the season, and the impossibility of now obtaining further information before the budget lists are submitted, I have sent the file connected with the project for your perusal and disposal -

3 Mr. Bevan gives the capacity of the Poloor tank, the principal one to be fed by the channel, as only 5 Million - cubic yards - He gives no Ayacut revenue statements, but I observe that the cultivation is entered in the Appendix to the reports in G.O. No. 3854 dated 8 December 1869, on the Mambakum Cheyaur Project, for all the 15 tanks affected by this channel - This statement shows that the Poloor tank has an Ayacut of 946 acres, and the highest revenue of the past 5 years has been 852 acres, so that the Reservoir either has been filled or partly filled

twice

twice in the year, as Captain Basted supposes, or has its irrigation supplemented by rain water direct to the fields - 4 I believe that the tank receives a supply partially from freshes twice in the year, once in July or August and again at the close of the monsoon - I observe also in examining the section and Survey of the project that the capacity of the tank would appear to be much more than that represented by Mr. Bevan, and amounts to 9 Million cubic yards more than sufficient for the full Ayacut of Irrungal, Poongadi and waste lands, amounting to 1105 acres -

5 The channel is now in very bad order, and the Cheyaur river when in fresh is apt to scour out the bed and leave the channel dry - Captain Basted proposed a dam with its level one foot above the bed, Mr. Bevan has however estimated for a work with its crest flush with the Cheyaur river bed - The channel now receives but little water, and what does flow down is principally turned off at Capaloor sluice - The Executive Engineer proposed to introduce falls, and Mr. Bevan

Revan has provided accordingly—

6th The 6 tanks under the influence of the Channel have an Ayacut of 1736 Acres, of which 1571 have been cultivated in the most favorable season of the last 5 years— there are 177 Acres of Punjah converted into Punjah, and 152 Acres of waste— Supposing the Channel to fill the tanks, the 1865 Acres of full Ayacut, not now cultivated, would yield at the average return of 4½ Kalpar Acre taken from the Statement, Rs 7542, and the 329 Punjah and waste Acres, at half that assessment, would yield Rs 740, or Rs 1482 in all— The cost of the project is Rs 10,500, so that the Returns on the above data would amount to 14 per cent—

7th As regards the quantity of water available and capacity of the Channel, the reports already submitted on the Cauvery River show that water flows at the Anicut near Amurthay for an average of 120 days in the year, two feet deep— allowing that a portion of this water is derivable from local rains and springs in which a deduction of one

third may be made, I find that a Channel with the section of the proposed Polam one, that is 13 feet at sole, banks 1 to 1 and 2 feet fall per mile, flowing for 80 days 2½ feet deep, will discharge 17 millions cubic yards per diurnum, sufficient for 2400 Acres, whilst the land under the tanks, as shown in paragraph 6, amounts to 1736 Acres Punjah 177 Punjah and 152 waste, or 2065 Acres in all—

I have the honor to be
Sir
Your most obedient Servant

J Fleur Lieut & Adc.
Asst Engineer in Ch. 4th Div.

P. W. 1870 Dept.

No 3545

From

The Supg Engineer
in charge of 4th Dn.

To

P.W. 3591/70

The Supg Chief Engineer
for Irrigation.

Poona.

Dated 12th August 1870.

Rec'd 16th " " No 1911.

Submitting with Remarks
a Survey and Section with
plans of the Masonry works
of the Poloor Channel
supplying the Poloor tank
in Poloor taluq North Arcot
District and the specification
and estimate for building a
dam across the Cheyaur
River and improving the
Poloor Channel Amounting
to Rs 10300-
No 2254-19 Sept 1870

No 323

as the Range Officer
Cannot receive
the Estimate with
the original papers
Yours &c
Sd Illegible
25 May

No 15

Note by the Acting Chief Engineer for Irrigation

In G.O. of the 8th December 1869, No 3854, it was decided to postpone for 4 or 5 years any further consideration of the proposition to construct an Anicut across the Cheyaur near Nearnattam, and in para 10 of my note printed in the Proceedings of Government it was mentioned that in the meantime it might be found practicable to augment the supply of the Poler tanks by improving the existing channel from the Cheyaur. The Superintending Engineer 4th Division has now submitted for consideration an estimate, Rupees 10,300, for constructing a sluice dam across the Cheyaur, for giving a head sluice to the channel, and for improvements to the latter.

2. The project has not been sent up, as noticed by Colonel Beaw, in a perfect complete shape, but the information afforded is, of itself, sufficient to enable a decision to be arrived at.

The

3 The names of the 6 villages in which the ayacut wet cultivation has an area of 1736 acres, and an assessment of Rupees 9165 are not given, but 4 villages are shewn on the survey as having lands commanded by the channel. These are Pondy, Kangapoor, Kangaroor and Pelur A. B. from Appendix C printed in the G.O. already quoted, the following particulars have been obtained.

Ayacut	Average 1862-63 to 1866-67			Available for conversion into Punjah	Punjah lost by
	Acres	Assessment	Cultivation	Revenue	Punjah
Pondy	94	442	93	475	11	4
Campatoor	492	2157	332	1559	56	27
Kangapoor	131	644	120	596	34	–
Pelur	946	4424	708	3276	67	93
	1663	7667	1273	5886	162	124

From this statement it appears that Pondy is already very well supplied, and that there is no great room for improvement in Kangapoor; while in the other two villages a good deal of land is left uncultivated owing to a deficient supply of water. Appendix A in the same Proceedings shows that even in bad years the water spareing the Amount hay ayacut would suffice for 1000 acres additional cultivation, and in average years for a much larger area, and no doubt an enlarged channel & better arrangements will lead to an extension of the average area of cultivation in the villages interested in this channel. The possible returns for the outlay now proposed are Rupees 1,781 on Punjah, and 1000 Rupees on converted lands; and the probable average returns may be taken at one half or say 1,350 Rupees.

4 Some of the details of the works require revision and I have noted in pencil on plans 1ºs 3 & 4 the points which need attention. I have estimated roughly the additional cost of the alterations required as follows.

	Original Estimate	Proposed
Channel	4,700	4,700
Head sluice	1,330	1,700
Dam	3,800	4,500
3 Falls	470	750
	10,300	11,650

The anticipated increase of Revenue will give a return of 11½ per cent on the larger amount; and, as repeated reports have been made of the want of improved means of irrigation in the Polur Taluq, I beg to recommend that sanction for the entry of Rupees 11,650 in the Budget of 1871-72, for this project, as now given, and that the estimates be returned to the Superintending Engineer for the reconsideration of those details which appear to need revision, and in forwarding them a complete revenue statement for all the villages to be supplied should be transmitted

5 It may be added that the channel as designed will carry over 50,000 cubic yards an hour with a depth of 6 feet of water, and about 9,000 cubic yards with a depth of 2 feet, and it will therefore be capable of conveying to the tanks in ordinary seasons a very ample supply of water.

Ootacamund
2nd September 1870

John Lumsden Major R.E.
Acting Chief Engr for Irrigation

To
The Secretary to Govt PW Dept

Rd. 18 Oct. 1870 Public
Proc. of Govt for Statistics 1 Nov 70

From

Chief Secretary
to Government

Dated Oct 22
Received Oct 31 } Sept 1870

Encls:

Letter from Executive Engr
Bellary Dist. dated 12th Sept 1870

Note on proposal for masonry work of the Polur Channel supplying the Polur Tank in the North Arcot Dist.

No 3214

No 2254 Mis.

Proceedings of the Madras Govt. dated 21st Oct.

Read the following

From the Inspg Engr. 1st Circle dated 12th Augt 70.
" Chief Engr for Irrign dated 20th Septr 70.

Although the proposed project for the improvement of the supply of the Polur and other Tanks, in the Polur Taluq of the North Arcot District, has not been submitted for sanction in as complete a form as is desirable, the Government, taking into consideration the desirability of according sanction to any

Scheme for the improve-
-ment of this part of
the North Arcot District,
which can be shown
to be likely to be fairly
beneficial, approve of
the entry in the Budget
of 1871-72 of Rs 11,650,
the sum required for
constructing a flush
dam across the Cheyaur,
and for increasing the
efficiency of the existing
Channel.

2. The attention of
the Superintending En-
-gineer 4th Division

will be called to the
remarks of the Acting
Chief Engineer for
irrigation, and those
details of the works
which appear to need
revision should be re
-considered, and com-
-plete revenue State-
-ments should be
obtained and trans-
-mitted with the
amended estimates.

Wm 5/9/70

3d

To
The S. Engr 4th Dn
Chief Engr for Irrigation
Controller

Dept 20/9/70

Ch 3545 & 3571

Govt. of Madras.

PUBLIC WORKS.

The Superintending Engr
N. C. Circle

Nos. 2254

Nos. 323-324 & 325

Dams across the Cheyaur - Specifications &c for the projected dam across the Cheyaur and for improving the Madras Channel in the North Arcot District.