

- (1) Number of pages _____
(2) Date of repair _____
(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public works. DEPARTMENT

G.O. No.	837	Press
B.P.-No.		Mis.
416-417		
Dated	17. 3.	1843.

Not to be folded or roughly handled

15

*Proceedings of the Madras Government, Public Works Department,
17th March 1873.*

No. 416. Read the following Endorsement of the Chief Engineer for Irrigation, dated Cuddapah, 15th February 1873, No. 97 :—

From the District Engineer, Nellore, to the Chief Engineer for Irrigation, dated Nellore, 20th January 1873, No. 6.

I HAVE the honour to enclose, for your perusal, a copy of Mr. VansAgnew's letter No. 2,910 of 16th ultimo to my address, regarding the preparation of the Financial Statements, of the results from Irrigation works, in this Presidency, ordered in G. O. No. 1,102 of 30th April 1872.

2. From paragraph 4 of the letter referred to, you will observe the Collector has called for detailed information under particular heads, and I should feel obliged by your letting me know if the revenue realized, under all the heads enumerated in Mr. VansAgnew's letter, is to be entered as "special water rates" in the column "receipts" of the statements under reference.

From G. VANSAGNEW, Esq., Collector of Nellore, to the District Engineer, Nellore, dated 16th December 1872, No. 2,910.

I HAVE the honour to acknowledge the receipt of your letter No. 89, dated 27th ultimo, forwarding thirteen statements relative to groups Nos. II. III. and IV., and requesting me to return them after filling in the column "receipts" in three of those statements.

2. The entries to be made in column "receipts" are shown to be as follows :—

- (1.)—Irrigation.
- (2.)—Special water rates.
- (3.)—Navigation.
- (4.)—Water-power.
- (5.)—Plantations.
- (6.)—Miscellaneous.

3. It is not clear what entries are to be made under the head of "Irrigation" or the head of "Special water rates." The other items do not appear to refer to the Revenue Department.

4. I have called upon the local officers to furnish information in the following form for the groups referred to, and I will forward the same as soon as I get their replies :—

		Acres.	Assessment.
Government land.	Wet lands cultivated with one crop and waste charged ...		
	Do. cultivated with a second crop and Faslijaste charged thereon ...		
	Dry lands irrigated and the additional charge made for such irrigation ...		
Inam land.	Dry lands irrigated and the additional charge made for such irrigation ...		
	Survey excess charged on wet Inams ...		
Total...			

5. I beg to return all the enclosures received with your letter, and to request that, if any information is required from this office, a definite form may be given, with reference to the items of demand recognized in this district.

No. 38.

REFERRED to the Controller of Public Works Accounts for report.

FORT ST. GEORGE,
28th January 1873.

(Signed) C. J. SMITH, Captain, R.E.,
For Chief Engineer for Irrigation.

*Proceedings of the Madras Government, Public Works Department,
17th March 1873:*

No. 416A. From the Controller of Public Works Accounts, to the Chief Engineer for Irrigation, dated Fort St. George, 7th February 1873, No. 2,604.

I HAVE the honour to return, herewith, the correspondence forwarded with your docket No. 38, dated 28th ultimo, and with reference thereto I beg to submit the following remarks:—

2. With G. O. No. 1,102, dated 30th April 1872, the Government communicated to the Revenue Board and the Revenue Department and to all Superintending Engineers certain forms, received from the Government of India, showing the detail in which the annual accounts of irrigation works were in future to be submitted; and called upon Collectors and Superintending Engineers to lose no time "in determining how their respective charges may be divided into groups or sub-divisions, and in collecting the information required to admit of the financial statements of irrigation being prepared at an early date."

3. The financial statements here referred to are, in effect, Capital and Revenue Accounts, in various degrees of detail, of each group of irrigation works; and the receipts side of the Revenue Account is required to show for the year to which the accounts relate, the revenue under the following heads, namely:—

Special water rates,
Navigation,
Water power,
Plantations,
Miscellaneous,

and also the total net revenue up to the close of the year.

4. The head "Special water rates" is quite inapplicable in most of the Collectorates of this Presidency in which the assessment on irrigated lands is, as a rule, consolidated. In the accounts of those districts in which special water rates do not obtain, it will probably be better to substitute for the head "Special water rates" a head "Share of land revenue irrigated."

5. What this share is to be, must be settled by the local officers, Collectors and District Engineers, in consultation one with the other. Any such apportionment of the land revenue must necessarily be, more or less, arbitrary. If half a dozen Collectors and as many District Engineers were associated in pairs, to apportion the land revenue in the same district, no two pairs could be expected to arrive at the same conclusion. The most that can be looked for is that the limits of possible divergence of opinion, and, therefore, the arbitrariness of the apportionments, shall be reduced to a minimum by the adoption of *fixed general principles* to regulate the apportionments throughout the Presidency, and I respectfully submit that these principles should be defined by the Government before any attempt is made to assess the irrigation share of the land revenue irrigated in any one district, or for any single group of irrigation works.

6. I would further point out that, excepting for a group of works [which has been *entirely* carried out within quite recent years, it is simply impossible to give at present, the total net revenue up to the close of any one year, for the reason

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17th March 1873.*

that no date can be fixed for opening the capital and revenue accounts until laborious search amongst a mass of old records and accounts shall have shown, for each group of works, how far back it is possible to trace expenditure.

7. And here I wish to refer to a difficulty in connection with the opening of the capital accounts. Whatever system or systems of grouping may be adopted for the irrigation works of the province, it may, I think, be safely predicted that there will not be a single group or project which can be completely dissociated from old works constructed years ago under Native Governments, works the cost of which it is obviously impossible to ascertain, and almost as impossible to estimate even if it were desirable to do so.

8. In dealing with the capital accounts of such groups, two courses are open:—

I. It may be ascertained for each group how far back actual expenditure can be traced. That date, when found, will fix the time for opening the capital and revenue accounts. All subsequent outlay on the group which is not debitable to revenue may then be taken as the capital cost of the group, the actual revenue under the works at that date may be ascertained; and all subsequent increase in the irrigation share of land revenue irrigated may be taken as direct returns on the capital expended on the group; or

II. The actual expenditure on the group may be traced as far back as possible, and the cost of works, the expenditure on which cannot be traced, may be estimated.

It is not clearly understood which of these courses the Government desire to follow.

9. Colonel Strachey, in his report on Irrigation works, dated 2nd September 1868, refers to the first course as the only practicable one. In paragraph 109 he says, "The only practical way of reviewing the financial results of the outlay on these works, is to compare the income as it was at a certain arbitrary starting point with the income now received. In such cases it will necessarily be assumed that all outlay before the fixed date taken was a direct set off against the gross revenue."

10. On the other hand, paragraph 7 of the note accompanying the forms printed with G. O. No. 1,102, dated 30th April 1872, runs as follows:—"The capital accounts to be opened in Madras and Sindh must be necessarily quite arbitrary, as in fact the real cost of existing works cannot, it is believed, be now ascertained," etc., etc., and the Accountant-General, Public Works Department, writing to this office on the 2nd December last, says, "It is readily admitted that much difficulty will be experienced in the preparation of the required account for several of these works, especially for those constructed by Native Governments."

11. These extracts appear to me to point to a desire on the part of the Government of India that the capital account should be opened in the second of the two modes indicated by me; and I gather from Captain Smith that such is the impression left in his mind by a conversation on the subject with the Honourable Sir

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17th March 1873.*

R. Temple; and at the risk of going beyond the sphere of my duties, I venture to express here a most decided opinion against adopting such a course.

12. I need scarcely dilate here upon the extreme difficulty, not to say impossibility, of arriving at a fairly accurate estimate of the cost of works carried out under Native Governments; this is admitted when it is said that "the capital accounts to be opened in Madras and Sindh must necessarily be *quite arbitrary*;" I will therefore only point out that if the course proposed by Colonel Strachey be followed, the accounts, though they will not reach back to the beginning of all things, will, as far as they go, be records of actual facts, and any conclusions drawn from them as records of past experience may be at once utilized for future guidance; but if the other course be adopted, no useful lessons can be drawn from the accounts until they have been corrected by the elimination of items, the introduction of which will have rendered one half of the account *quite arbitrary*, and therefore the whole quite useless. At any rate, if the cost of existing works is to be estimated, and no arbitrary starting point is to be assumed, it will be necessary that definite instructions should be issued as to the manner in which the *total net revenue* up to the close of any given year is to be arrived at.

13. I have only further to point out that the Accountant-General, Public Works Department, has called upon this office to prepare the financial statements, which Government in their Order of 30th April 1872, called upon Superintending Engineers and Collectors to prepare; and I would, therefore, suggest that the latter should be relieved from the duty, and should be requested to confine their attention to the writing up of the irrigation registers, and to the preparation of schemes for grouping the irrigation works in their several charges; I would also suggest that, with a view to securing uniformity of system as far as possible, the proposal for grouping of works should be submitted to the Government for approval before such grouping is accepted as final; and I would submit for your consideration whether, instead of grouping together in the irrigation registers all tanks the cultivation under which is less than ten cawnies, it would not be preferable to lump together only such of these tanks as come under one group.

SUBMITTED for the consideration and orders of Government.

(Signed) J. MULLINS, Lieut.-Colonel, R.E.,
Chief Engineer for Irrigation

No. 417.

ORDER THEREON, 17th March 1873, No. 837.

IRRIGATION, No. 17.

THESE papers relate to the way in which the Financial Accounts of Irrigation works are to be prepared, and instructions are required as to the mode in which the entries on the capital and revenue sides of these accounts are to be calculated.

2. Taking first the capital side of the account, the Controller alludes* to the difficulty which will be experienced in opening the capital account of groups of irrigation works, however these may be arranged, owing to every such group

* Paragraphs 7 and 8.

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17th March 1873.*

being more or less associated with old native works of the outlay on which there is no authentic record, and he proceeds to point out that two courses are open in dealing with this subject; the one under which the capital account would be opened from the comparatively modern date to which records of expenditure extend, subsequent to which all outlay would be debited to capital or revenue according to its nature, and the results as indicated by the revenue returns obtained after that date, as contrasted with the previous revenue, would be compared with the outlay on improvements, and the cost of maintenance; this arrangement would, therefore, deal with the financial results of modern outlay only. The second course would be to ascertain first the outlay according to existing records, and secondly to arbitrarily estimate the prior outlay, and so obtain a complete capital expenditure account, with which the whole revenue, as distinguished from the difference of revenue, prior and subsequent to a certain date in the former case, would be contrasted. This arrangement would, if correctly worked out, show whether the works had or had not been, with reference to the total outlay, financially successful.

3. It may here be noticed that the first of the two courses above described is in effect that which the Government have already, in paragraph 10 of the Order of the 30th April 1872, No. 1,102, directed to be adopted. It is there stated that, for the great mass of the irrigation works in this Presidency, the capital outlay is to commence with the expenditure of 1856-57, the year of the transfer of the executive of public works to a professional department; while, for certain larger works which were commenced prior to that date, the capital account will be opened from the date on which they were begun. The Government have to consider what is really practicable, and His Excellency the Governor in Council is convinced that there would be no prospect whatever of the capital and revenue accounts of Madras Irrigation works being ever completed, were an attempt to be made to estimate the original cost of the thousands of tanks which are dotted all over the country. There are absolutely no data for such a calculation. The accounts thus prepared, so far as they might in time be completed, would be utterly valueless; they would be necessarily compiled in the absence of any definite information as to the circumstances under which the works were constructed, and as to the actual cost of work at the time, they would, therefore, be misleading instead of useful, and they would in no way serve as a guide to what the State could or could not advantageously undertake to do at the present time.

4. The capital accounts of large works will, therefore, be opened from the date on which they were commenced; those in the Tanjore Delta or belonging to that system of irrigation date from an earlier period than any others, as the Upper Anicut was commenced about the year 1834; probably it will be possible to trace the expenditure from that time forwards, as correspondence relating thereto and colluding to the results is believed to be still in existence. For the Godavery system of works which dates back to 1845, and for the Kistna Delta works, statements of expenditure from the beginning were prepared by the late Colonel Anderson, and these will require to be supplemented only so far as may be necessary to bring to account the cost of establishments and land, with the capitalized value of the latter. For other large works, the difficulty of ascertaining the

capital outlay will, it is hoped, be comparatively slight, as most of them were constructed in recent times; but, should the records be found to be incomplete as regards details, it is probable that definite information will be obtainable at least as regards the total expenditure upon them in each year.

For the comparatively small works all or nearly all of which were constructed prior to the date of any records, the capital account will, as already directed, commence with the year 1856-57.

5. With regard to the revenue side of the accounts, the Government consider that, in the vast majority of cases, the difference between the average net revenue prior to the date on which the capital account may be opened, and the net revenue actually obtained since that date, should be credited to the works. The average net revenue, which may be called the standard revenue, should, for all except large system of works, be determined by ascertaining the gross revenue, and the expenditure for maintenance, for the period of ten years prior to 1856-57, while for large works the similar standard will be deduced from the period of fifteen years prior to the commencement of these works. If in any case the records of the Revenue Department will not afford the required information as to expenditure on maintenance, this latter must be deduced by ascertaining the expenditure for ten years from 1856-57, or subsequent to the opening of the capital account, and by correcting the average thus obtained by comparing the outlay on irrigation repairs for the whole district in the one period with that during the other. Thus if for a group the outlay on repairs for 1846-47 to 1855-56 inclusive be unascertainable, the best approximation will be thus obtained. The outlay from 1856-57 to 1865-66 will be taken, and if the outlay on repairs for the whole district is found to have been 50,000 Rupees in the earlier ten years, and 60,000 Rupees in the later similar period, five-sixths of the outlay on the repairs of the group in the latter will be assumed to be the sum to be deducted from the gross revenue of the earlier ten years, in order to obtain the standard net revenue.

6. No attempt should be made to ascertain the share of land revenue belonging to any irrigation work or group of works, except in the way thus indicated, unless the revenue aspect of any work or group of works has already formed the subject of special investigation, and has been reported upon to Government. The effect of alterations of assessment, correction of irrigated areas consequent upon the revenue survey, and many other circumstances may properly be taken into consideration in estimating the financial merits of an individual large work when brought forward for sanction, but it would be impracticable to apply such corrections of results to the existing works generally. The remarks contained in paragraph 5 of the Controller's letter will, therefore, not need to be considered in preparing the accounts.

7. Where water rates have been introduced in supersession of a consolidated assessment, the works will, from the date of the change, be credited with the water rate, and the standard net revenue will have to be adjusted by deducting from the amount, as ascertained in the way already laid down, the land assessment as fixed under the new settlement. The column in the accounts headed "Special water rates" will, where the assessment is consolidated, be termed "land revenue irrigated."

8. The Controller reports (paragraph 13) that the Accountant-General, Public Works Department, has directed him to prepare the financial statements in his office, and to this arrangement the Government have no objection. District Officers will, therefore, furnish the Controller with all the old records of expenditure on which the capital accounts must be based, so far as these may be necessary to supplement the information to be found in the Controller's office. This latter should be ascertained as soon as possible, in order that the District Officers may not be asked for anything which is already among the Controller's records. The irrigation registers in their present form go back only to the year 1867-68; but the former registers will, it is believed, contain much of the information required for the preparation of the financial statements. Instructions regarding the grouping of works will form the subject of a separate order. In the meantime the determination of the standard net revenue of each irrigation work in each district should be taken up in earnest; the revenue details and those of expenditure on repairs will alike have to be furnished from the Collector's records, except in those cases in which the probable cost of repairs prior to 1856-57 may have to be deduced from the subsequent expenditure, when the District Engineers will provide these details; at the same time the particulars of revenue for years subsequent to the date of opening the capital accounts, and the expenditure on both new works and maintenance, should be ascertained and recorded, where this has not already been done in either the irrigation registers formerly in use or in those which commenced with the year 1867-68.

(True Extract.)

Lieut.-Colonel, R. E.,
Joint Secretary to Government.

To the Controller of Public Works Accounts.
.. Chief Engineer for Irrigation.
.. Revenue Department.
.. Financial ..

Exd. E. C. Shunker.

N^o 97

N^o 6. 20th January 1873 from District
Engineer Nellore with enclosure
from Collector of Nellore.

N^o 2604. 7 February 1873 from Controller
of Public Works Accounts.

Submitted for the considera-
tion and orders of Government.

Cuddapah

15 February 1873

W. L. L. L. L.

Lieut Col W.

Chief Engineer for Irrigation.

To
The Secretary to Government
P. W. D.

No 6 District Engineers Office
Yellow, 20th January 1873

From R. Smith Esquire
District Engineer, Yellow,
To Lieutenant Colonel S. Mallins, R.E.
Chief Engineer for Irrigation
Sir

I have the honor to enclose for your
perusal, a copy of Mr. Evans Agnew's letter, No 2910
of 16th ultimo to my address, regarding the
preparation of the Financial Statement,
of the results from Irrigation works, in this
Presidency, ordered in G.O. No 1102 of 30th
April 1872.

2 From Paragraph 4 of the letter referred
to, you will observe the Collector has called
for detailed information, under particular
heads, and I should feel obliged by your
letting me know if the Revenue realized,
under all the heads enumerated in Mr.
Evans Agnew's letter, is to be entered as special

No 30 Civil/2290450453

P. M. 1873. Received
Mr. J. G. B. B. B. B.
Feb 11/31. 11
The Chief Engineer for
Irrigation,
Yellow, 20th Jan 1873.
R. S.

1197

Letter 15 January 1873.
Recd 19th Jan 1873.
Enc. 3.

Instructions from
relating to the pre-
paration of Financial
statement of Irrigation
works for submission
to the Board of Genl.

Ch 416

Ch 837 - 14 March 1873

1. 21. 1873

Water rates in the Columns Receipts of
the Statements under reference.

I have the honor to be

Sir
Your most Obedt Servant

Ignite

Respect Engineer Bellone

4.06

No 30.
 Referred to the Controller, Public
 Works Accounts for report.
 For City Comr. 3
 20 January 1893.
 J. C. Smith
 City Comr.

Chas. J. J.
note
 The District Engineer
 G. below
 11/10/73.
 The Chief Engineer,
 Immigration
 Madras.

Dated 20 January 1873
 Despatched 21st "
 Received 27th —.

No 6.

Enc. /

With reference to the Collector's letter (Copy enclosed) requests information as to the preparation of Financial Statements of the results from Irrigation works.

P. W. 11,31/73.

Ex 2910
Sellon's Collectors Office
16th December 1872.

From

G. Davis Agnew Esquire
Collector of. Yellow

Handwritten signature

R. Smith Esquire,

Private Engineer, Hellou,

Per,

I have the honor to acknowledge
the receipt of your letter. No 89, dated 27th
Octob^r, forwarding 13 Statements relative
to groups. Nos II, III, & IV and requesting me
to return them after filling in the Column
"Receipts" in three of those Statements.

2 The entries to be made in Column "Receipts" are shown to be as follows:

(1) Irrigation

(2) Special water rates.

(3) Navigation

3 (4) "Water-power."

4 (5) Plantations

5. (6) ... Miscellaneous.

3. It is not clear what entries are to be made under the head of "Irrigation" or the

12/16/1904

head of special water rates. The other items do not appear to refer to the Revenue Department.

I have called upon the local officers to furnish information in the following form for the groups referred to, and I will forward the same as soon as I get their replies.

Government Land	Wet lands cultivated with one crop and waste charged —	Acres. A. 1/2 1/4
	Or Cultivated with a 2 ^d crop and 1/2 acre charge thereon	
	Dry lands irrigated and the additional charge made for such irrigation	
Irrigated Land	Dry lands irrigated and the additional charge made for such irrigation	
	Survey except charged on wet lands	
Total		

5 I beg to return all the enclosures received with your letter; and to request that, if any information is required from this Office, a definite form may be given, with reference to the items of demand.

Not

12 June 1904
District Engineer's Office

James H. Stewart
Collector

Recognized in this District.
I have the honor to be

12/16

245

Revenue

499/73
2/17/73
Enclosure in
letter No. 6 of
20 January 1873 from
District Engineer

San Belene

1924/73

P.W. 1131/73.

Office of the Controller of
Public Works Accounts
at Fort Saint George, February 1873.

From the Controller of P.W. Accounts
To the Chief Engineer
for the Irrigation
San Belene

I have the honor to
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Revenue up to the close of the year.

4. The head "Special Water Rates" is quite inapplicable in most of the Collectorates of this Presidency in which the assessment on irrigated lands is, as a rule, consolidated. In the accounts of those districts in which special water rates do not obtain it will probably be better to substitute for the head "Special Water Rates" a head "Share of Land Revenue Irrigated".

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and District Engineers in consultation one with the other. Any such apportionment of the Land Revenue must necessarily be, more or less, arbitrary. If half a dozen Collectors and as many District Engineers were associated in pairs, to apportion the Land Revenue in the same district, no two pairs could be expected to arrive at the same conclusion. The most that can be looked for is, that the limits of possible divergence of opinion, and therefore the arbitrariness of the apportionments, shall be

be reduced to a minimum by the adoption of fixed general principles to regulate the apportionments throughout the Presidency, and I respectfully submit that these principles should be defined by the Government before any attempt is made to assess the irrigation share of the Land Revenue. Irigated in any one district, or for any single group of irrigation works.

I must think in all cases, except perhaps for some small works, which require special consideration.

I would further point out that, excepting for a group of works which has been entirely carried out within quite recent years, it

It is, in fact, impossible to give at present the total Net Revenue up to the close of any one year, for the reason that no date can be fixed for opening the Capital and Revenue Accounts until a laborious search amongst a mass of old records and accounts shall have shown for each group of works how far back it is possible to trace expenditure.

And here I wish to refer to a difficulty in connection with the opening of the Capital Accounts. With whatever system or systems of grouping may be adopted, it is not possible to

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59
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of a preliminary

conversation on the subject with
the Honorable Sir R. Temple,
and to the risk of going
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duties, I venture to express
here a most decided opinion
against adopting such a
course.

12. I need scarcely
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13. I have only further to
point out that the Accountant
General, Public Works
Department, has called
upon this Office to prepare
the financial statements,
which

which Government in their
Order of 30th April 1872, called
upon Superintending Engineers
and Collectors to prepare,
and I would therefore suggest
that the latter should be
relieved from the duty, and
should be requested to confine
their attention to the writing
up of the irrigation registers,
and to the preparation of
schemes for grouping the
irrigation works in their
several charges; I would
also suggest that, with a
view to securing uniformity
of system as far as possible,
the proposal for grouping
of

not enough
as the
system
will be
better
than

13
of works should be submitted
to the Government for appro-
val before such grouping
is accepted as final; and
I would submit for your
consideration whether, instead
of grouping together, in the
irrigation registers, all tanks
the cultivation under which
is less than ten Cawnies, it
would not be preferable to
lump together only such of
these tanks as come under
one group.

I have the honor to be,
Sir,
Your most obedient Servant,

J. Hooley
Controller of Mr. Accounts

Chartered Accountant, Secy. R.P.
Deputy Controller Irrigation Branch.
No. 28.

No 170

From,
The Controller of Accounts
To,
The Chief Engineer
for Irrigation

Dated 7.
Read 7. February 1873.

No 2604

Returning with
remarks letter from the
District Engineer Nellore
regarding the entry as
"Special Water Rates" of
the Revenue derived
under certain heads.

G. 416A

P.W. 1131/73.

No 837 P.W.D.

Proceedings of the Madras Government
Read the following.

From,
The Chief Engineer
for Irrigation {H.E. & Co. 97 of 15 Feb 1873}

These papers relate
to the way in which
the financial accounts
of irrigation works are
to be prepared, and in-
structions are required as
to the mode in which
the entries on the Ca-
pital & Revenue sides
of these accounts are
to be calculated.

* paras 7 & 8.

2 Taking first the
Capital side of the
Account, the Controller
alludes to the difficul-
ty which will be ex-
perienced in opening the
Capital Account of groups
of irrigation works, however
these

These may be arranged,
owing to every such group
~~being given on separate points~~
with the ~~work~~ nature
works, of the outlay
on which there is no
authentic record, and
he proceeds to point
out that two courses
are open in dealing
with this subject; the
one under which the
capital account would
be opened from the
comparatively modern
date to which re-
cords of expenditure
extend, subsequent to
which all outlay would
be debited to Capital
or Revenue according
to its nature, and
the results, as indica-
ted by the Revenue
returns obtained after
that

that date, as ⁴¹contrasted
with the previous Re-
venue, would be compared
with the outlay on im-
provements, and the cost
of maintenance: this
arrangement would
therefore deal with
the financial results
of modern outlay only.
The second course would
be to ascertain first
the outlay according
to existing records, &
secondly to arbitrarily
estimate the prior out-
lay, & so obtain a com-
plete capital expendi-
ture account, with
which the whole re-
venue, as distinguish-
ed from the difference
of revenue, prior & subse-
quent to a certain date,
in the former case,
would be contrasted. This
arrangement

arrangement would, if correctly worked out shew whether the works had or had not been, with reference to the total outlay, financially successful.

3. It may here be noticed that the first of the two courses above described is in effect that which the Government have already, in para 10 of the order of the 30th April 1872 N-1102, directed to be adopted.

It is there stated that for the great mass of the irrigation works in this Presidency, the Capital outlay is to commence with the expenditure of 1856-57, the year of the transfer of the executive of Public Works

18
works to a professional Department; while, for certain larger works which were commenced prior to that date, the Capital account will be opened from the date on which they were begun. The Government have to consider what is really practicable, and His Excellency the Governor in Council is convinced that there would be no prospect whatever of the Capital and Revenue accounts of Madras Irrigation works being ever completed, were an attempt to be made to estimate the original cost of the thousands of tanks which are dotted all over the country. There are

are absolutely no data for such a calculation. The accounts thus prepared, so far as they might in time be completed, would be utterly valueless; they would be necessarily compiled in the absence of any definite information as to the circumstances under which the works were constructed, & as to the actual cost of work at the time. They would therefore be misleading instead of useful, & they would in no way serve as a guide to what the State could or could not advantageously undertake to do at the present time.

4. The Capital accounts of large works will therefore be opened from the date on which

19
which they were commenced: those in the Tauxford Delta or belonging to that system of irrigation date from an earlier period than any others, as the upper ancient was commenced about the year 1834; probably it will be possible to trace the expenditures from that time forward, as correspondence relating thereto and alluding to the results is believed to be still in existence. For the Godavary system of works, which dates back to 1845, & for the Krishna Delta works, statements of expenditure from the beginning were prepared.

the

the late Colonel
Anderson, and these
will require to be
supplemented only so
far as may be necessary
to bring to account
the cost of establish-
ments & land, with
the capitalized value
of the latter. For
other large works,
the difficulty of
ascertaining the ca-
pital outlay will,
it is hoped, be com-
paratively slight, as
most of them were
constructed in recent
times; but, should
the records be found
to be incomplete as
regards details, it
is probable that
definite information
will be obtainable
at least as regards
the total expenditure
upon

76
upon them in each
year
For the comparatively
small works all or
nearly all of which
were constructed prior
to the date of any
records, the capital
account will as al-
ready directed com-
mence with the year
1856-57.

5 With regard to
the Revenue side of
the accounts, the
Government consider
that, in the vast
majority of cases the
difference between the
average net Revenue
prior to the date on
which the Capital
account may be opened
and the net Revenue
actually obtained since
that date, should be
credited to the works
The

21/10/1868
The average net Revenue, which may be called the standard Revenue, should, for all except large system of works, be determined by ascertaining the gross revenue & the expenditure for maintenance, for the period of 10 years prior to 1856-57, while for large works the similar standard will be deduced from the period of 15 years prior to the commencement of these works. If in any case the records of the Revenue Dept. will not afford the required information as to expenditure on maintenance, this latter must be deduced by ascertaining the

upon

the expenditure for 10 years from 1856-57, or subsequent to the opening of the Capital account, and by correcting the average thus obtained by comparing the outlay on irrigation repairs for the whole District in the one period, with that during the other. Thus, if for a group the outlay on repairs for 1846-47 to 1855-56 inclusive be unascertainable, the best approximation will be thus obtained: the outlay from 1856-57 to 1865-66 will be taken, and if the outlay on repairs for the whole District is found to have been 50000 Rupees in the earlier 10 years, and 60000 Rupees in the later similar period,

5. This of the outlay on the repairs of the group in the latter will be assumed to be the sum to be deducted from the gross revenue of the earlier 10 years, in order to obtain the standard net Revenue.

6. No attempt should be made to ascertain the share of land Revenue belonging to any irrigation work or group of works, except in the way thus indicated, unless the Revenue aspect of any work or group of works has already formed the subject of special investigation, and has been reported upon to Government. The effect of alterations of

of assessment, correction of irrigated areas consequent upon the Revenue survey, and many other circumstances may properly be taken into consideration in estimating the financial merits of an individual large work when brought forward for sanction, but it would be impracticable to apply such corrections of results to the existing works generally. The remarks contained in para 5 of the Controller's letter will therefore not need to be considered in preparing the accounts. Where water rates have been introduced in supervision of a consolidation

consolidated. apportionment,
the works will, from
the date of the change,
be credited with the
water rate, and the
standard net revenue
will have to be ad-
justed by deducting
from the amount, as
ascertained in the
way already laid
down, the land ap-
portionment as fixed under
the new settlement.

The column in the
accounts headed "spe-
cial water rates" will,
where the apportionment
is consolidated, be termed
"Land Revenue irrigated"

The Controller re-
ports (para 13) that
the Accountant Gene-
ral, Public Works Dept.,
has directed him to
prepare the financial
statements in his office,
and

and to this arrange-
ment the Government
have no objection. Dis-
trict officers will there-
fore furnish the Con-
troller with all the
old records of expendi-
ture on which the
capital accounts must
be based, so far as
there may be necessary
to supplement the in-
formation to be found
in the Controller's of-
fice. This latter should
be ascertained as soon
as possible, in order
that the District of-
ficers may not be
asked for anything
which is already
among the Controller's
records. The irrigation
registers in their pre-
sent form go back
only to the year 18
but the former

registers will, it is be-
 lieved, contain much
 of the information re-
 quired for the prepa-
 ration of the finan-
 cial statements. In-
 structions regarding
 the grouping of works
 will form the subject
 of a separate order.
 In the meantime
 the determination of
 the standard net
 Revenue of each irri-
 gation work in each
 District should be
 taken up in earnest;
 the Revenue details
 & those of expendi-
 ture on repairs will
 alike have to be
 furnished from the
 Collector's records, except
 in those cases in
 which the probable
 cost of repairs prior
 to 1856-57 may have

have to be deduced
 from the subsequent ex-
 penditure, when the
 District Engineers will
 provide these details.
 At the same time
 the particulars of
 Revenue for years sub-
 sequent to the date
 of opening the Capital
 accounts, & the expen-
 diture on both new
 works & maintenance,
 should be ascertained
 & recorded, where this
 has not already been
 done in either the
 Irrigation registers for-
 merly in use, or in
 those which com-
 menced with the
 year 1867-68.

To the facts of the
 5 - Ch. Eng. for Ins. 75
 21 - Rev. Dept. 6
 11 - Fin. Dept.
 St. Engineer
 Minor Branches

By 17/4/73
 L.M.R.

Desp. 21/3/73

C/2/1/31

Gobt. of 1873 Madras.

PUBLIC WORKS.

To The Controller of Public
Works Accounts

Date

Recd.

Encl. 3

17th Mails No. 837.

Nos 416 & 417.

Irrigation Works. Vaking
Orders on papers relative
the preparation of the
financial accounts of
Irrigation Works.