

Public Works (1898) Department.

E. Park
G.O., No. 21 J

DATED 7 January 1898

10/11/98

[Despatch Abstract.]

Trans. sanctioning certain transfers
of - under 43. minor works & navigation
for works in the Nellore D.C.

100/14

[Signature]

RJ 7.10.98-

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers:—

Copy of letter from L. L. WICKHAM, Esq., Executive Engineer, Nellore division, to the Superintending Engineer, II Circle, dated 2nd December 1897, No. 294 S.E.

With reference to your endorsement, No. 501 N.L., dated 13th November 1897, I have the honour to request that you will be good enough to obtain the necessary funds for the execution of the improvements to the Kanigiri reservoir sanctioned in G.O., No. 927 I., dated 19th October 1897.

2. An application for the requisite funds is herewith sent.

ENCLOSURE.

Application to the Superintending Engineer, II Circle, for a Re-appropriation of Budget Grants.

Proposed new grant.								
Departmental and service head.	Item No.	Works.	Amount of estimate.	Outlay to end of previous year.	Original grant for current year.	Existing grant for current year.	Proposed increase.	Grant as now proposed.
43. Minor Works and Navigation. Capital and Revenue Accounts are not kept.	1	Sangam Anicut System.	RS.	RS.	RS.	RS.	RS.	RS.
		Improvements to the Kanigiri Reservoir ..	9,000	..	..	..	9,000	9,000

No. 580 N.L.

Forwarded to the Chief Engineer for Irrigation for favour of compliance.

(Signed) W. M. ELLIS, Capt., R.E.,
for Suptg. Engineer, II Circle.
11th December 1897.

No. 308 I.

Submitted to Government.

2. The amount applied for for the work "Improvements to the Kanigiri reservoir, Sangam Anicut system," may be met by appropriating the sum of Rs. 8,892 from the existing grant of Rs. 48,500 for Tank Restoration repairs for the Salem division, the outlay against which up to the end of November 1897 was only Rs. 19,642, or Rs. 12,691 below the average.

(Signed) W. HUGHES,
Chief Engineer for Irrigation.

18th December 1897.

ORDER—No. 21 I., dated 7th January 1898.

The following transfers of funds are sanctioned:—

From		To	
43. Minor Works and Navigation.		Irrigation.	
Minor Works for which neither Capital nor Revenue Accounts are kept, P.W.D.		Minor Works for which Capital and Revenue Accounts are kept.	
Salem division.		Capital Account.	
Tank Restoration Works.		Sangam Anicut System.	
		Nellore division.	
Repairs	...	Works	...
Establishment	...	Establishment	...
Tools and plant	...		
Total	...	Total	...
	RS.		RS.
	8,892		9,000
	2,045		2,070
	133		
	11,070		11,070

(True Extract.)

Under Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, II Circle.
" Superintending Engineer, IV Circle.
" Examiner, Public Works Accounts.

Exd. C. M. Thumbarwamy.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the

Read the following

From the Super. Engineer, Second Circle. (42 N. 580-N.L. dated 11.12.97).

N. 308. I

Submitted to Government.

2. The demand applied for for the work "Improvements to the Kani-jiri reservoir, Sangam-Aricut system" may be met by appropriating the sum of Rs 8,892 from the existing grant of Rs 48,500 for Tank restoration repairs, for the Salem division, the outlay against which up to the end of November 1897 was only Rs 19,642, or Rs 12,691 below the average.

Note. The Exec. Eng. Salem division in his November's Progress Report, proposes to surrender Rs 16,500 from the existing grant for T.R. repairs for his division. Of this amount, Rs 100 + Rs 3,800 have already been proposed to be transferred to the Bakery and Kistna R. divisions respectively. It is now proposed to transfer a further sum of Rs 8,892 to meet the present demand.

W.H.

18/12/97

18/12

57. N. 219 7-1-98.

Order thereon.

The following transfers of funds are sanctioned:—

Irrigation

Irrigation.
43, Minor Works and Navigation.

From

Minor Works for which neither Capital
nor Revenue Accounts are kept, P.W.D.

Labour division.

Tank Restoration Works.

Repairs. ————— Rs. 8,892 ✓
Establishment. ————— 2045. ✓
Tools and Plant. ————— 138. ✓
Total 11,070. ✓

HS
16/12
97.

Minor Works for which Capital &
Revenue Accounts are kept.

Capital Account.

Saugam Ancient System.

Nellore division.

Works. ————— Rs. 9,000.
Establishment. ————— 2070. ✓
Total 11,070. ✓

Issue

W.H.

23-12-97 J

X.S. 9/10/97

To The Chief Engineer for Irrigation.
" Supp. Engineer, Second Circle. } in m/s
" Supp. Engineer, Fourth Circle. }
" Examiner, P.W. Accounts. }

K. Doraiyan, Engineer
& later in m/s

Public Works (1897) Department.

CURRENT No. 12/32

Order

for 21/1/98
7-1-98

From

The Chief Engineer for Irrigation

No. 308. I.

Dated 23-12-97

Received 30-12-97

Enclosures

Spare copies

SUBJECT.

Application for funds for
improvements to the Kanigiri
Reservoir - submitting for
sanction of Government

Public Works (1897) Department.

CURRENT No. 64 N2

From The Superintendent of
Hercules.

No. 580 NL

Dated 11 December 1897

Received 13 — 20 —

Registered

Enclosures /

Spare copies

SUBJECT.

Funds for carrying out
improvements to the
Kavigiri reservoir.
Requesting to sanction.

Draft disposed for appeal. JEJ

100
15/12/87 100
13/12/87

[Signature]
4/12/87

pg 14-29

123 124 125 126 127 128

1001/827
3000 1325

16500
3900
12600
8892
3708

bill

BACK PAPERS.

No.	Date.
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FURTHER PAPERS.

No.	Date.
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P. W. D. FORM No. 41H.

Application to the Superintendent, Superior Title for a re-appropriation of Budget grants.

[illegible]

Orders by the Government of

Dated the 20th December 1897.

No. _____, dated the _____ 189_____

Secy. to Government of

P. W. Department.

(Signature)

(Signature)

NOTES.

Reference to P. W. D. Code.

Vol. II, Chapter IV, para. 135 (h).

1. This form should be used by the Executive Engineer in any of the following cases:—

- (a).—When he requires a grant, or an addition to an existing grant, is required for carrying on a sanctioned major work.
 (b).—When he is unable to utilize the grant at his disposal for any work and wishes to resign it, either wholly or in part.
 (c).—When he wishes to utilize the grant for one work upon some other.

2. Either of the columns for "Proposed new grant" or for "Proposed reduction," or both, may be used as required.

3. If it happens that the grant already allowed has been reduced, the entry in the column "Existing grant for the current year" would of course be the amount less such reduction.

4. In the case of Irrigation works, the entries in the column "Departmental and service head" should show distinctly whether the proposed re-appropriation is debitable to Capital or Revenue, and the entries in the column "Works" should be so arranged as to show the project to the Capital or Revenue account of which the charge is debitable, and the class of service to which the charge is debitable, thus:—

PROJECT.

(1).—HEAD WORKS—

(B). Land.

(K). Buildings.

In cases of Productive public works, the fact of their being so should be noted against the entries.

5. It being of the utmost importance that early intimation of possible lapses, or of excesses, in outlay on works should be communicated to the Government, a close watch should be maintained on the progress of all works by executive officers, and this form employed the moment the facts are sufficiently known.

6. Applications for re-appropriations which require the sanction of the Government of India should be submitted by the local Government in duplicate; applications by Executive Engineers should be submitted through the Superintending Engineers of their Circles.

EXPLANATION OF NECESSITY FOR RE-APPROPRIATION.

(Signature)

Madras. PROVINCE.

BRANCH— Building & Roads.

CIRCLE— Secund.

DIVISION— Nullue.

FUND— Irrigation.

Application for a re-appropriation
Budget grants.

No. _____, dated the _____ 189

Forwarded to the _____

for sanction if approved.

No. _____, dated the _____ 189

Copy of letter from L.L.
William Requin, Executive Engineer,
Nullue Division to the Superintending
Engineer, II Circle, No. 294 & L., 7/2-11-97.

With reference to your endorsement No. 501 & L., 13-11-97, I have the honour to request that you will be good enough to obtain the necessary funds for the execution of the improvements to the Shanigiri reservoir sanctioned in G.O. No. 927 J, dated 19-10-97.

2. An application for the requisite site funds is herewith sent.

L:1

No. 580 & L.
11-12-97

Forwarded to the Chief
Engineer for Irrigation for favour
of compliance.

Wm. Wm.
Executive Engg.,
for Superintending Engg.,
II Circle.

10/12/97

CHIEF ENGINEER
FOR IRRIGATION.
13 DEC. 1897.
No. 6472

IRRIGATION.
ACCOUNT.

Government { 1897 } of Madras.
PUBLIC WORKS.

CHIEF ENGINEER
FOR IRRIGATION.
10 NOV. 1897.

Recd.

Enclosures

Regd.

1897.

Spare copies

G.O., No. 927 I., 19th October 1897.

OCTOBER.

Kanigiri Reservoir

Estimate of Rs. 11,100 for improvements to the —, Sangam anicut system, sanctioned with remarks, and a copy of the Proceedings ordered to be forwarded to the Government of India.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers :—

From L. L. WICKHAM, Esq., Executive Engineer, Nellore division, to the Superintending Engineer, II Circle, dated 27th March 1897, No. 435 S.E.

I have the honour to forward the enclosed estimate for raising the revetment to Kanigiri reservoir, and request that you will obtain early sanction to the same as the work should be put in hand without delay.

2. The leave of the Chief Engineer will be also required to allow the F.S.L. to be maintained in the reservoir during cyclone months.

No. 11 N.L.

Forwarded to the Chief Engineer for Irrigation, for favour of obtaining the sanction of Government to the estimate, amounting to Rs. 9,000, for improvements to the Kanigiri reservoir.

2. The report which accompanies the estimate explains the necessity for the work.

3. A further reference will be made regarding the proposal to keep a higher level of water in the tank during the north-east monsoon, but it is necessary, first, to make the bund secure against wave action.

7th April 1897.

(Signed) W. L. C. BADDELEY, Major, R.E.,
Suptg. Engineer, II Circle.

To the Superintending Engineer, II Circle, dated 30th April 1897, No. II/29 N.L.

From the estimate now received it is noticed that it is obviously intended to bring all the stone for raising the revetment from the same quarry, and as the bottom and upper courses are proposed to be of selected stone, it is to be inferred that the intermediate work would, in all probability, have to be built of small stone. From the Executive Engineer's letter of January 1890, it is evident that small stone cannot be depended on to stand the wash of the waves anywhere within 5 feet of the still water level. The Superintending Engineer will be good enough to report what it would cost per unit to build revetment of squared laterite, and should the rate for this be very high, he is requested to report also what the rate would be if the revetment were made entirely of selected stone (minimum size 2 feet on one side) of the description provided in the estimate. The rate would, no doubt, have to be raised if all small stone were rejected.

2. The Superintending Engineer is requested to state what action was taken on this office No. II/11 N.L., dated 24th February 1890, whether the instructions regarding the quality of the new work were carried out and whether the revetment has since sustained any injury.

3. The Superintending Engineer will oblige by reporting how far the present rules have operated in preventing the filling of the reservoir and what the effect has been in causing short crops or loss of crop.

(Signed) W. HUGHES,
Chief Engineer for Irrigation.

From L. L. WICKHAM, Esq., Executive Engineer, Nellore division, to the Superintending Engineer, II Circle, dated 21st July 1897, No. 125 S.E.

[Reference your No. 82 N.L., dated 10th May 1897.]

I have the honour to inform you that the stone called selected stone is in practically square blocks like laterite, and I first thought of building the whole revetment with it; but there would be about 80 per cent. wastage, and the cost would be prohibitive if I could get any one to do it.

2. The ordinary revetment stones will be about $1\frac{1}{2}$ feet long placed on end in the usual way. The cost of laterite is Rs. 25 per unit; it has to be carted 14 miles.

3. As regards paragraph 2 of the Chief Engineer's letter, all repairs to the revetment have consisted of raising the sunken parts and replacing the small stones with long ones on end and backing the whole with gravel. Every year parts of the revetment are found to have sunk. This sinking goes on even considerably above the level of the water in the tank where the water could not have touched. The instructions in Chief Engineer's memorandum seems to have been carried except that the depth of the stones is 1 foot 6 inches and not 2 feet. The original thickness of the revetment is 1 foot 6 inches and not 2 feet. I doubt if 2 feet stones could be procured in sufficient quantity and the whole revetment would have had to have been replaced. The revetment has been considerably improved, the rear slope of the bund well turfed, and the top gravelled.

4. That there is usually sufficient water to fill the tank during November will be shown by the accompanying statement.

5. The restrictions as to height of the water in the tank at first sight seems to be of no hindrance to the irrigation of the project lands, but the south-west monsoon cannot be relied on to give sufficient water for the first crop till about the end of August when the time for sowing is almost over. The effect of first crop being late and owing to there being no water in the reservoir during April, May and June, second crop cannot be grown.

6. I have no data to give figures as to the capacity of the reservoir, but as 15 feet of water last four months with an average discharge of 350 cubic feet of water, it is probable that 21 feet of water will last seven and leave a surplus to start the next season with. The majority of second crop is indigo, requiring water only three times a month.

7. The discharge of 350 cubic feet per second seems enormous for the amount of second crop credited to the delta which is between three and four thousand acres. The reasons are as follows :—

(i) First crop is the first crop on the fields and is often grown during second-crop season.

(ii) Three hundred and fifty cubic feet is one quarter of the discharge of the channels and there is great wastage owing to the difficulty of watering the fields with water at an insufficient height.

(iii) There is about 10,000 acres of indigo grown in the delta during second-crop season which seems for some reason to be called a dry crop, subsisting entirely on rainfall though I have seen a considerable amount of it watered, and it is unlikely that ryots would not take water when it was flowing through their fields. The value of wet crops other than rice and ragi as published by the Revenue Department is Rs. 8-2 which would not include 10,000 acres of indigo.

(iv) Water is also used for grazing, and a recent order of the Board is to the effect that this will be charged as a dry crop wetted.

8. The probable amount actually irrigated during December, January, February and March, and sometimes April, is about 20,000 acres and more in bad seasons.

9. If the channels were open during April, May and June for a certainty, there is every prospect of the indigo crop increasing and being recognised as a wet crop.

No. 927 I., 19TH OCTOBER 1897.

10. The only time in which the reservoir could be filled is during October and November.
11. The balance of 8 feet left in the reservoir in July 1895 undoubtedly saved the delta from almost absolute failure of first crop, and if only the normal discharge had been allowed from the reservoir during January to May, there would have been a considerable saving in revenue.

REPORT to accompany the plan and estimate for the improvements to Kanigiri reservoir,
II Circle, Public Works Department.

Amount of estimate Rs.
According to the orders contained in G.O., No. 192, dated 24th March 1890, the Kanigiri reservoir has not been filled to F.T.L. and the loss to the Sangam project has been very great. The present estimate provides for raising the revetment, by which it is hoped that the danger due to cyclones will be sufficiently minimised to allow the restrictions contained in the above Government Order to be removed.

26th March 1897.

(Signed) L. L. WICKHAM,
Executive Engineer, Nellore Divn.

No. 257 N.L.

Forwarded to the Chief Engineer for Irrigation with a recommendation that the estimate be passed as originally framed.

2. No small stones will be put into the revetment. In this circle dry revetments are, as a rule, made 1 foot thick and no small stones are allowed, all being 1 foot in length and set on end.
3. There is, in the opinion of the undersigned, no doubt that it is of the greatest advantage to keep the reservoir as full as possible during the north-east monsoon so that there may be water available to commence cultivation with, if the south-west monsoon is late.
4. The existing rules prevent the reservoir from being filled, when the supply of water is most favourable, and undoubtedly this has retarded the extension of cultivation.
5. The question of the dry crops watered from the reservoir will be taken up by the Collector, as apparently the project has not been credited with the amounts it ought to have been under this head.
- When the tank has been properly revetted, it will be possible to raise the F.T.L. during the north-east monsoon with safety, especially as the Kanigiri escape has had its discharging capacity considerably increased; but it will eventually be necessary to widen the Moldevi drain which carries off the surplus, as at present it is far too small in section, and the flood water would spill over cultivated lands and do a great deal of damage.

31st July 1897.

(Signed) W. L. C. BADDELEY, Major, R.E.,
Superintending Engineer, II Circle.

To the Superintending Engineer, II Circle, dated 17th August 1897, No. II/44 N.L.

No one can doubt the serious loss incurred through the reservoir not being filled when water is available. The estimate for raising the revetment will be submitted to Government, but consideration of the question of altering the rules must be deferred until the Pyderu escape is built. The condition of the revetment as described by the Superintending Engineer, makes great caution necessary.

(Signed) W. HUGHES,
Chief Engineer for Irrigation.

No. 927 I., 19TH OCTOBER 1897.

No. 203 I.

Note by the Chief Engineer for Irrigation.

In Proceedings of Madras Government, No. 192 I., dated 24th March 1890, rules were laid down confining the raising of the F.T.L. of water in the Kanigiri reservoir, Sangam anicut project, till after the 25th December in each year up to which date cyclones have been known to occur. By this date, however, the supply in the Pennér has very much subsided and is insufficient, after providing for the Nellore anicut irrigation, to bring the reservoir up to F.T.L. The object of these rules is to prevent injury to the bund of the reservoir which, for a length of about $1\frac{1}{2}$ miles, is subject to heavy wave action, but they have a serious effect in preventing extension of cultivation especially under second crop. Before any modification could be made in these rules, it is necessary that the revetment of the reservoir should be raised. The Superintending Engineer, II Circle, now submits for the sanction of Government an estimate of Rs. 9,000 for this work "by which it is hoped that the danger due to cyclones will be sufficiently minimised to allow the restrictions contained in the above Government order to be removed." With reference to this estimate, further information was called for with regard to the stone to be used for the work and as to how far the present rules have operated in filling the reservoir and what the effect has been in causing short crops or loss of crop. In reply, the Superintending Engineer states that no small stones will be put into the revetment and that "the existing rules prevent the reservoir from being filled, when the supply of water is most favourable, and undoubtedly this has retarded the extension of cultivation."

2. The estimate submitted by the Superintending Engineer may be sanctioned, but the consideration of the question of altering the rules must be deferred until the Pyderu escape is built.

(Signed) W. HUGHES,
Chief Engineer for Irrigation.

11th October 1897.

ORDER—No. 927 I., dated 19th October 1897.

The following estimate amounting to Rs. 11,100 is sanctioned, the proposed outlay being chargeable to "43. Minor Works—Provincial," subject to readjustment hereafter, if necessary, on receipt of the orders of the Government of India on the report called for in its letter, No. 270 I., dated 5th November 1895, printed in Proceedings of Madras Government, No. 1027 I., dated 26th idem:—

- Irrigation.
43. Minor Works and Navigation.
Minor Works for which Capital and Revenue Accounts are kept.
Sangam Anicut System.
Open Capital Account.
I. Works.
2. Main Canals and Branches.
14. Tanks and Reservoirs.
Remunerative Work.

Estimate—

Improvements to Kanigiri Reservoir—

	Rs.
I. Works	9,000
II. Establishment	2,070
III. Tools and plant	30
Total	11,100

No. 927 I., 19TH OCTOBER 1897.

2. This sanction is registered as No. 99 I. of 1897-98 and will expire on the 31st March 1899.

3. Ordered that a copy of these Proceedings be forwarded to the Government of India, for information.

[Here enter No. 928 I., dated 19th October 1897.]

(True Extract.)

(Signed) W. HUGHES,
Joint Secy. to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.

" Superintending Engineer, II Circle, with four enclosures.

" Examiner, Public Works Accounts.