Public Works (189) Department.

✓

G.O., No. 887 I

DATED 19 Oct 99

19/10/99

[Despatch Abstract.]

Head-Sluice. The estimate of Rs 16,150 for providing Drake-Brockman's shutters to the — of the Kurnool-Cuddapah Canal at Sunkesala, sanctd.

110

P. W. 26.
150—26-9-99.

19.10.99

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

IRRIGATION.
ACCOUNT.

Government {1899} of Madras.

PUBLIC WORKS.

Recd. } 1899. *Enclosures*
Regd. *Spare copies*

G.O., No. 887 I., 19th October 1899.

OCTOBER.

Head Sluice

The estimate of Rs. 16,150 for providing Drake-Brockman's shutters to the — of the Kurnool-Cuddapah canal at Sunkesala, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers :—

From Lieutenant-Colonel W. L. C. BADDELEY, R.E., Superintending Engineer, III Circle, to the Chief Engineer for Irrigation, dated Bellary, 27th May 1899, No. 1976 I.

I have the honour to report that in March 1898 the Superintending Engineer of this Circle ordered the removal of the groyne in front of the scouring sluices of the Sunkesala anicut.

2. He also directed that new shutters should be provided for the head sluice, and recommended a pattern consisting of two shutters worked by one screw, the lower shutter being lifted when necessary by a catch attached to the upper one.

3. The Inspection notes containing these proposals were returned for record in your office with No. 155 I. of 16th April 1898.

4. Experience has shown that the groyne is required, and I have had it replaced. The existing shutters of the head sluice do not however admit of proper regulation to prevent sand entering the canal in large quantities, and it is very necessary to provide an improved pattern.

5. The arrangements referred to in paragraph (2) were not approved by you and there is no doubt that the "Brockman" pattern as used in the Gódávari and Kistna is the most suitable for the head sluice of the Kurnool-Cuddapah canal.

6. I forward plans and estimates amounting to Rs. 13,500 for the work required.

ENCLOSURE.

REPORT to accompany estimate for providing Brockman's shutters to head sluice of Kurnool-Cuddaph canal at Sunkesala.

	RS.
Amount of estimate	13,500

The object of the double shutters is to lessen the silting up process as much as possible in the canal proper.

Silt clearances at head have cost as follows for several years back :—

	RS.
1880—85	1,161
1885—90	8,664
1890—95	15,084
1895 97	2,386

No elaborate arguments are necessary to show that with shutters as now proposed, if the bottom are shut and the top only open, there will be less silt carried into the canal than if the whole series of bottom ones were opened too. Care will have to be taken, however, not to allow the bed of the river in front of the head sluices to silt up to level of top of lower shutters or in fact to silt up at all. The scouring sluices whose sills are lower than sills of head sluices by 3 feet should be opened occasionally to scour out the accumulation. At present, following the results of experiments by Mr. Buckley, the scouring sluices are kept shut.

2. There are 24 vents, each 3 feet wide; as long as the river is in flood and water muddy, 6 feet depth in canal in rear of head sluices is ample. When water has become clear, as much water as the canal will safely carry can be passed down and then the lower shutter can be raised. The discharge at 6 feet on gauge in canal = 1,163 c ft. per second; and with water standing at crest level, the head = 1·20 feet, and discharge through each foot run over the lower shutters = 18 c ft. per second. If ten upper shutters (vents each 7¼ feet wide) are raised, the desired discharge will be effected.

Originally there were 12 vents, each 7¼ feet wide; these were formed into 24 vents, each 3 feet wide, by the insertion of a stone in the middle. It is proposed to restore vents to their original widths.

(Signed) J. C. JOHNSTON,
Ex. Engineer, Kurnool Divn.

From the Chief Engineer for Irrigation, to the Superintendent of the P.W. Workshops, (through the Superintending Engineer, V Circle), dated 1st June 1899, No. 145 M.

From the Superintending Engineer, V Circle, dated 3rd September 1899, No. 322 E.I.

No. 184 I.

Note by the Chief Engineer for Irrigation.

The existing sluice at the head of the Kurnool-Cuddapah canal at Sunkesala is provided with the old pattern of screw shutter in one piece which opens from the bottom, and during flood time this arrangement takes large quantities of sand into the canal. The Superintending Engineer submitted with his letter No. 1976 I., dated 27th May 1899, an estimate for providing the head sluice with double shutters after the design of Colonel Drake-Brockman which has the advantage that the upper half of the shutters can be opened while the lower half remains closed. The estimate has been scrutinized by the Superintendent of the Public Works Workshops so far as it relates to the workshop work, with the result that the estimate has been increased from Rs. 13,500 to Rs. 15,950. Some of the rates for work have been altered by the Superintendent of the Workshops, some being reduced and others increased; but the chief causes of difference which call for attention are a sum of Rs. 720 added by the General Superintendent for fitting and painting charges and an addition of Rs. 1,590 to the cost of conveying the gearing to the site of work.

2. The General Superintendent estimates the rail charges at Rs. 1,440 and the road charges for 24 miles Rs. 200, assuming the route to be by rail to Kurnool road station and thence by road, but as the distance from Kurnool road station to the work spot is 52 miles, the amount for cartage should be about Rs. 400. The amount provided in the estimate has been accordingly altered to Rs. 1,840. As estimated in this office the rail and road charges by this route would be only Rs. 1,395, and if the gearing could be sent up the canal from Cuddapah about Rs. 836.

3. The Executive Engineer should be directed to arrange for the gearing being sent by the cheapest practicable route, and his attention drawn to the absurdly small sum of Rs. 50 allowed in his estimate to cover these charges. The inadequacy of this provision should have been noticed also in the Superintending Engineer's office.

4. With the alteration alluded to above, the estimate amounts to Rs. 16,150 and is recommended for sanction.

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

18th September 1899.

Order—No. 887 I., dated 19th October 1899.

The following estimate is sanctioned :—

Irrigation.
42. Major Works (Working Expenses).
Kurnool-Cuddapah Canal.
I. Head Works.
2. Maintenance and Repairs.
2. Works.
Providing Drake-Brookman's shutters to the Head sluice of the Kurnool-Cuddapah Canal at Sunkesala.

	RS.
Estimate	16,150

2. This sanction is registered as No. 76 I. of 1899–1900.

3. The attention of the Superintending Engineer, III Circle, is drawn to the remarks in paragraph 3 of the foregoing note by the Chief Engineer for Irrigation.

(True Extract.)

Under Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
„ Superintending Engineer, III Circle, with five enclosures.
„ Examiner of Public Works Accounts.

Exd. T. K. Narayana Aiyangar.

PUBLIC WORKS DEPARTMENT,
IRRIGATION BRANCH.

9

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Estimate of Rs 16150 for providing Drake Brookman's shutters to the Head sluice of the Kurnool Cuddapah Canal

UNDER date the

READ the following

From the Superintending Engineer Third Circle No 1976 I, dated, 27th May 1899.

From the Chief Engr for Irrgn to the Supdt of the P.W. Workshops through the Supg: Engr 5th circle No 145 M, dd 1st June 1899.

From the Superintending Engineer Fifth Circle. No 327-E.I. dated, 3rd September 1899.
No 184 I dd 18-9-99

Issue
MA
7.10.99
I

N.E.
7.10.99

Note by the Chief Engineer for Irrigation

The existing sluice at the Head of the Kurnool-Cuddapah Canal at Sunkesala is provided with the old pattern of screw shutter in one piece which opens from the bottom and during flood time this arrangement takes large quantities of sand into the canal. The Superintending Engineer submitted with his letter No 1976 I dated, 27th May 99 an estimate for providing the Head Sluice with 8 double shutters after the design of Col: Drake-Brockman which has the advantage that the upper half of the shutters can be opened while the lower half remains closed. The estimate has been scrutinized by the Superintendent of the Public Works Workshops so far as it relates to the Workshop work with the result that the estimate has been increased from Rs 13.500 to Rs 15.950. Some of the rates for work have been altered by the Superintendent of the Workshops, some being reduced and others increased, but the chief causes of difference which call for attention are a sum of Rs 720 added by the General Superintendent for fitting and painting charges and an addition of Rs 1590 to the cost of conveying the gearing to the site of work

2. The General Superintendent estimates the rail charges at Rs 440 and the road charges for 24 miles Rs 200 assuming the route to be by rail to Kurnool Road Station and thence by road, but as the distance from Kurnool Road Station to the work spot is 52 miles the amount for cartage should be about Rs 400. The amount provided in the estimate has been accordingly altered to Rs 1840. As estimated in this office the rail and road charges by this route would be only Rs 1395 and if the gearing could be sent up the canal from Cuddapah about Rs 836

3 The Executive Engineer should be directed to arrange for the gearing being sent by the cheapest practicable route and his attention drawn to the absurdly small sum of Rs 50 allowed in his estimate to cover these charges. The inadequacy of this provision should have been noticed also in the Superintending Engineer's Office.

4 With the alteration alluded to above the estimate amounts to Rs 16.150 and is recommended for sanction

No: 887 I d/19.10.99

Order thereon

The following estimate is sanctioned:

Irrigation
42 Major Works (Working Expenses)
Kurnool - Cuddapah Canal.
I Head Works.
2. Maintenance and Repairs.
2. Works.

Providing Drikey Brockman's shutters to the Head Sluice of the Kurnool - Cuddapah Canal at Sunkesala.

	Rs
Estimate	16,150

2. This sanction is registered as No 76 I of 1899-1900.

3. The attention of the Superintending Engineer, Third Circle is drawn to the

the remarks in para 3 of the foregoing note by the Chief Engineer for Irrigation

A.S.H.
5.10.99

16/9

18.9.99

Sect. 19/14 To. The Chief Engineer for Irrign.

(with 5 enclosures) " Supg: Engineer III Circle ~~in manuscript~~

Examiner of P.W. accts

E. I. Form No. 1 (d)—400—27-3-99.

16-9-99

Public Works (1899) Department.

CURRENT No. 8425

8879

From The Chief Engineer for Irrigation

Order

No. 184 I

Dated 18-9-99.

Received } 13-10-99

Registered }

Enclosures Plans 2 } Total
Others 6 } 8

Spare copies.

SUBJECT.

Head Sluice of the Kurnool-Cuddapah Canal at Sunkesala — Estimate of Rs. 16150 as altered in this office for providing Stoke Brockman's Shutters to the — recommending that the — may be sanctioned

S.E. III in MS

Ck W's Clerk

Please communicate Ro. & Encl.

13/10/99

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

16-9-99

HE 15.5.55 Rebd 7.10.55

Public Works (1899) Department.

CURRENT No. 27 V

From The Supg Engineer
5th Circle

Order

No. 322 Ed.

Dated 3/5 September 1899.
Received } 5 - do —
Registered }
Enclosures 2 { 1 plan { 1 estt
Spare copies

SUBJECT.

Providing Brakmann's Shutters for Sunkesala Head Sluice - Kurnool Cuddapah Canal,

Forwards a revised Estimate for —

D.E.3

Rol 6
8425/99

lcu
6/9/99

mb
6.9.99

R 7.9.99

BACK PAPERS.

No.	Date.
D 145 M	1-6-99
R 15 Ke	27-5-99
R 11 Ke	13-6-98

FURTHER PAPERS.

No.	Date.

Copy of letter from H. A. Moss Esquire, General Superintendent, P. W. Workshops, to the Supg: Engineer, 5th Circle, No. W/45 S.C.5. dated 15 July 1899.

With reference to memo No. 145. M. dated 1st June 1899 communicated with your endorsement No. 183 P. W. S. dated 9th June 1899, I have the honour to forward herewith a revised estimate for "Providing Brockman's Shutters for Sunkesala Head Sluice Kurnool-Cuddapah Canal". It exceeds the original one by Rs 2450, the main items of increase being Shaft and Railway charges. There has also been slight alterations in rates for other items

×Rs 15950

No 322 E.I.

HIEF ENG
OR IRRIGA
5 - SEP. 1899
27 V

To the Chief Engineer for Irrigation with reference to his No 145 M. dated 1st June 1899.

The plan and revised estimate are herewith submitted.

3/5 September 1899.

Colonel R.E.

Supg Engineer, 5 Circle

15950
13500
2450

B -1.9.99

535

Public Works (1899) Department.

IRRIGATION BRANCH.

ISSUE No. 145th

To

The Supt P W Workshops
Thro' S E V Circle

(Reply to letter No. , dated)

Dated 1-6-99
Despatched 6-6-99
Enclosures * 2

* Particulars of Enclosures.

1 Copy of plan
1 do Estc.

PWE 5
8425/99

SUBJECT.

Sunkesala Head sluice.
Forwards copies of plans and estimate for providing the — with screw shutters with a request to check the details of the shutters provided and esto of their cost including carriage &c.

Indexed

K. I. Form No. 13—4,000—7-1-99

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.
R27 ~~IV~~	28-9-99

Papers.
R15 Kc/99
R11 Kc/98
R9 Kc/98
R8 Kc/98
I2 Kc/98
R3 Kc/98

Sent to Government with No. I.,
dated 189 .
Printed with G.O., No. I.,
dated 189 .

REMINDERS ISSUED.

No. 1,	dated 28 7	1899.
„ 2	„	
„ 3	„	
„ 4	„	
„ 5	„	

KEEP-WITHS.

No 145 Kc. d/- 1-6-99

To
The Supt. of the P.W. workshops

Thro S.E. V. circle.

In forwarding herewith copy of plan and estimate for providing the Surkeovala Head Sluice with screw shutters the E.E. has the honour to request that the Supt. of the workshop will check the details of the shutters provided & estimate of their cost including carriage &c.

JB
1/6
99.

F.C. by clerk
fair copy memo for signature & same time
JB

C.E.1.
a blue copy can be sent to Wk. Sp. as you will want plan for checking many part of estd. &c.

M.E.1
C.E.1
F.E.1
Fair copy of this memorandum to issue same time — check the S.E.1. Estd. generally when F.E.1. can draft sanction order taking into account any additions thought necessary by the Supt.
JB 1/6/99

Ord. H.D.
2/6/99

Public Works (1899) Department.

CURRENT No. 15 K.C

From The Superintdg: Engineer
3rd Circle
Bellary

No. 1976 I

Dated 27-5-99

Received
Registered } 29-do

Enclosures 5

Spare copies

Order [illegible]

PWE1
8425/99

LCW
29/5/99

SUBJECT.

Sunkesala anicut
Kurnool Canal

Forwards for sanction an estimate Rs 13500 for providing new shutters &c—

D.E.I.

29.5.99

BACK PAPERS.

No.	Date.
R8KC	18-4-98
R11KC	13-6-98
R9KC	6-5-98

FURTHER PAPERS.

No.	D
R27-II	23-9-99

12 SP

C[illegible]IEF [illegible]
FOR IRRIGATION.
29 MAY. 1899
No. 15 KC

Report to accompany estimate for providing Brockman's shutters to Head sluice of Kurnool-Cuddapah Canal at Sunkesala.

5

Amount of estimate Rs 13,500

The object of the double shutters is to lessen the silting up process as much as possible in the Canal proper

Silt clearances at head have cost as follows for several years back

1880/85	Rs 1161
1885/90	Rs 8664
1890/95	Rs 15084
1895/97	Rs 2386

No elaborate arguments are necessary to show that ~~on the~~ with shutters as now proposed, if the bottom are shut and the top only open, there will be less silt carried into the canal that if the whole series of bottom ones were opened too. Care will have to be taken however not to allow the bed of the River in front of the Head sluices to silt up to level of top of lower shutters or in fact to silt up at all. The scouring sluices whose

sills

sills are lower than sills of Head sluices by 3 feet should be opened occasionally to scour out the accumulation. At present following the results of experiments by Mr Buckly, the scouring sluices are kept shut.

2. There are 24 vents each 3 feet wide; as long as the river is in flood and water muddy, 6 feet depth in Canal in rear of Head sluices is ample. When water has become clear, as much water as the Canal will safely carry can be passed down and then the lower shutter can be raised.

Originally there were 12 vents each 7¼' wide; these were formed into 24 vents each 3 ft wide by the insertion of a stone in the middle. It is proposed to restore vents to their original width.

The discharge at 6 feet on gauge in Canal = 116.3 cft per second, and with the water standing at crest level, the head = 1.20 feet and discharge through each foot run over the lower shutters = 18 cft per second. If 10 upper shutters (vents each 7¼ ft wide) are raised the desired discharge will be effected.

Johns Johnston

Executive Engineer

Kurnool Division

11/3/99

11/3

No. 1976 I

Superintending Engineer's Office,
3rd Circle.
Bellary 27th May 1899.

CHIEF ENGINEER
FOR IRRIGATION.
29 MAY. 1899
No... 15 KC

From
Lieut Col. W. L. C. Baddeley R.E.
SUPERINTENDING ENGINEER,
3rd CIRCLE,
BELLARY.

To
THE Chief Engineer
for Irrigation
Madras

1 P

Sir,

5 Enclosures.
1 Tracing
1 file of estimates with report &c.

I have the honor to report that in March 1898 the Superintending Engineer of this Circle ordered the removal of the groyne in front of the Scouring Sluices of the Sunkesala anicut.

2. He also directed that new shutters should be provided for the head sluice, and recommended a pattern consisting of two shutters ~~[illegible]~~ worked by one screw, the lower shutter being lifted when necessary by a catch attached to the upper one.

3. The Inspection notes containing these proposals were returned for record in your office with No. 155 I of 16th April 1898.

4. Experience has shown that the groyne is required, and I have had it replaced. The existing shutters of the head Sluice do not however admit of proper

regulation to prevent Sand entering the Canal in large quantities, and it is very necessary to provide an improved pattern.

5. The arrangements referred to in paras (2) were not approved by you and there is no doubt that the "Brookman" pattern as used in the Godavery & Kristna is the most suitable for the Head Sluice of the Kurnool Cuddapah Canal

6. I forward plans and Estimates amounting to Rs 13,500 for the work required.

I have the honor to be
Sir
Your Most obedient servant

W C Barddley
Lieut. Col. R.E.
Superintending Engineer
IIIrd Circle

26-5-99

From

The Superintending Engineer,
3rd Circle,
Bellary.

To

The

Dated
Received 189 .

Enclosures.

No.

Subject.

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6 P