2901
12/5/86

Rel 14/5

Perandorea
11th May 1886

1235
14 MAY. 86
P.W.D.

m 4-10 / 4463/86

During the whole of the ten days from 1st to 10th of May the Restoration works have been flooded by a series of freshes. Three of the Rear wells built of brick in surki mortar have collapsed, and another one has cracked in all directions and will have to be rebuilt; with the exception of delaying work, this appears to be the damage done by the freshes, but until the water clears off it will be impossible to ascertain whether the wells which have been partly sunk, and the concrete already laid have received any damage.

The wells in cement mortar, in front, have not been damaged.

It has been ascertained by means of boring, that there is a strata of good stiff clay y at [illegible]

under these wells.

The Sand Excavators which have arrived from Porto Novo cannot of course be used for sinking the front row of wells into clay, but they will doubtless be useful for inking the rear line of ells.

Lime Kiln

The lime stone is broken up, rted, and stacked at site of n for Rs 1-2-0 per c. yard. by tract. The firewood is delivered site for Rs 2-6-0 per bandyload 1250 lbs.

Packing Kiln

cub. yds. of stone jelly Rs 1-2-0 per c. yd.	20-4-0
Bandyloads of wood ked in Kiln, and burnt in flues, total bandyloads @ 2-6-0 each	~~76~~ 85-8-0
boolies @ 0-2-6 each	1-9-0
do. @ 0-2-6 – do.	1-14-0
do. @ 0-2-6 – do.	1-14-0
do. @ 0-2-0 – do.	0-2-0
do. @ 0-1-6 – do.	0-15-0
olies lighting kiln hours @ 0-0-6 each	0-2-0
	112-4-0

Brought forward	112-4-0
Unpacking slaking & screening	
5 boolies @ 0-1-6 each	0-7-6
10 – do. @ 0-1-3 do.	0-12-6
2 – do. @ 0-2-6 do.	0-5-0
1 – do. @ 0-2-0 do.	0-2-0
12 – do. @ 0-1-6 do.	1-2-0
6 – do. @ 0-1-3 do.	0-7-6
8 – do. @ 0-1-6 do.	0-12-0
2 – do. @ 0-1-9 – do.	0-3-6
2 – do. @ 0-2-6 – do.	0-5-0
8 – do. @ 0-1-6 – do.	0-12-0
1 – do. @ 0-1-9 – do.	0-1-9
	117-10-3
Contingencies	1
	118-10-3

ract for 6 cubic yards of e refuse available for con te @ 1-2-0 per cub. yard	6-12-0

Cost of out-turn 260 Parahs slaked lime = 111-14-3

do. of 1 Parah = 0-6-10¾

or say – 0-7-0

One Parah of unslaked lime gave 1 Parah + 20 × 20 × 6 cubic inches of slaked lime

∴ 1 Parah of unslaked = 1.6 Parahs slaked lime.

Jas Ruck
Apprentice Overseer

12/5/86

29/5

1

Pelandorai Anicut

May 1st 1886

t Apron

On the 27th April the concrete
pron in rear was commenced
nd about 30 cubic yards of
ncrete has been laid. The
ixture used is 1 lime, ½ surki,
d 1½ sand.

lls in Cement.

3 new wells have been built
a height of 7 feet and partly
unk. This makes 33 wells now
n progress; the sinking of these
vells is proceeding very slowly.
ed of clay has been met with;
some places at a depth of from
5 feet below the bed of the
river, and as the clay is not of
a very stiff nature, it would be
dvisable perhaps not to stop the
the sinking at a less depth than
7 or 8 feet below river bed.

Ring Bund

The Ring Bund is nearly up to its full height; the slope facing the River is being protected with a coating of clay from 1 to 2 feet thick. The sand which is being excavated from the apron site for laying concrete, is used to strengthen the Ring Bund.

Supply Channel

The supply channel appears to be.

of the Head Sluice is 3 feet above the sill of the sand sluices, and if a line of levels were taken I think it would be found that the present bed of supply channel in some places is about 3 feet above sill of Head Sluice.

Data for surki

Cost of 1 cub. yard of brick bats = 11.6 Parahs Rs 1-0-0 ∴ cost of 30 Parahs of brick bats =	2-9-8
ne boy @ 0-1-6 will break Parahs of jelly in 1 day ∴ the ost of breaking 1 Parah will be $\frac{8}{4}$ = 4½ pies ∴ cost of breaking o Parahs @ 0-0-4½	0-11-3
ost of 30 Parahs of brick jelly	3-4-6
do. of 1 do. do.	0-1-9

30 Parahs of Brick jelly @ 0-1-9 per Parah	3-4-6
Grinding (1 Pair bullocks driver) @ 0-12-0 per day	0-12-0
creening and ifting — 1 Man @ 0-2-6	0-2-6
6 Women @ 0-1-6	0-9-0
Total	4-12-0
educt 7 Parahs refuse jelly @ 0-1-9 per Parah	0-12-3
Cost of 30 Parahs surki	3-15-9
do. 1 do. do.	0-3-2¼

This is exclusive of the original cost of the mill. The stone used in this case measured 4'-4" in iameter and 9" thick.

This is the case, I believe, but there are no funds for silt clearing

JW

30/5

Cost of Cement

Price at ~~at~~ Arbuthnot's Store when over 10 tons are taken ~~Rs~~ 40-0-0 per ton

Cost of 25 tons @ 40-0-0 per ton	1000-0-0
Railway carriage from Madras to Porto Novo for 25 tons	170-0-0
Carting by road from Porto Novo to Pelandorai Anicut	142-0-0
Cost of 25 tons at Pelandorai	Rs 1312-5-0
Cost of 1 do. do.	Rs 52-7-10½
	say 52-8-0
Cost of 1 cwt. = .53 Parahs	2-10-0
Cost of Well bricks $(9 \times \frac{6+4\frac{1}{2}}{2} \times 3)$ delivered at site per 1000	6-0-0
iver sand washed per parah	0-0-6

Brick in Cement

1½ Bricklayers @ 0-10-0 each	0-15-0
6 do. @ 0-9-0 do.	3-6-0
5½ do. @ 0-8-0 do.	2-12-0
5 do. @ 0-7-0 do.	2-3-0
3 do. @ 0-6-0 do.	1-2-0
4½ do. @ 0-5-0 do.	1-6-6
22½ coolies @ 0-2-6 do.	3-8-3
2 do. @ 0-1-9 do.	0-3-6
42 do. @ 0-1-6 do.	3-15-0
33 do. @ 0-1-3 do.	2-9-3
7000 bricks @ 6-0-0 per 1000	42-0-0
8 cwt (=16 Parahs) cement @ cwt @ 2-10-0 per Parah	78-12-0
3 Parahs River sand @ 0-0-6 per Parah	1-8-0
Actual cost of 22 cub. yards	144-6-6
do. of 1 cub. yd	6-9-0

Jas Ruck
App. Overseer

EXECUTIVE ENGINEER
REGD. NO 1252
14 MAY 86
P.W.D.
SOUTH ARCOT DIVISION

270
4/5/86

Notes on
Pelandorai Anicut
20th to 30th April

Sent. [illegible] as requested

Retd
28/4

Pelandorai Anicut
21st April 1886

Report on the Restoration of Anicut from 10th to 20th April.

The Wells in cement mortar in front of the apron are being built as rapidly as possible; 30 wells have been commenced 19 of them have been built to a height of eight feet, 9 to a height of six feet & 1 to a height of seven feet. Out of these; 8 wells have been sunk to a depth of between 6 & 8 feet; and 7 to a depth of between 3 & 5 feet. In most cases clay has been met with, but the depth of clay has not yet been ascertained. In any case an effort will be made to sink all the wells to a depth of not less than 7 to 8 feet.

The Wells in surki mortar in rear are being first built to a height of 5 feet as it is anticipated that in some cases clay may be met with at that depth. The total number of wells to be ~~placed~~ sunk in rear is 100; out of these 31 were sunk during last working season; 9 wells have been built during this season to a height of 6 feet & partly sunk, and 18 more have been built to a height of 5 feet but they are not yet ready for building, the mortar taking rather long to set. The remaining 42 wells will be commenced as speedily as possible, but the small stream of water at present in the river must first be diverted down the river channel; this will not be difficult as the ring bund has been raised to nearly its full height i.e. 5 feet above Cement bed level.

257
4/5/86

The cost of the wells will be a considerable item as there is a great deal of percolation and the [illegible] have to be kept going. The proposed cost of the [illegible] was Rs [illegible] each Rs 1110-0-0

No 1086

I do not know if Mr. Larminie gave any instructions about the depth each well is to be sunk but in any case they should be imbedded at least 2½ feet in clay

[illegible]
29/4/86

In order to ascertain the actual quantity of Cement required for building a cubic yard of the [illegible] [illegible] [illegible] [illegible] one of two trials, in each one [illegible] of Cement & three Parahs of sand were mixed together by hand and when mixed it made 3.8 or say 3¾ Parahs of mortar. With this quantity of mortar 35 cub. feet = 1.3 cub. yds of brickwork was built. This gives .77 Parahs of cement and 2.3 Parahs of sand to a cubic yard, but in [illegible] [illegible] this particular [illegible] wastage, and the [illegible] wells being only one brick thick

You will never get them sunk in time if you don't push on. Do you want any more excavators.

[illegible]
29/4

but are not yet ready for sinking the mortar taking rather long to set. The remaining 42 Wells will be commenced as quickly as possible, but the small stream of water at present in the river must first be diverted down the main channel: this will not be difficult as the Ring bund has been raised to nearly its full height ie. 5 feet above Anicut crest level.

The cost of baling water will be a considerable item, there is a great deal of percolation and six Pacotahs have to be kept going. The original cost of the Pacotahs was Rs 18-0-0 each = Rs 111-0-0 And the daily cost of labour for the six Rs 10-0-0.

In order to ascertain the actual quantity of Cement required for building a cubic yard of the well work I have taken the mean of two trials. In each case one Parah of Cement & three Parahs of sand were mixed together by hand, and when wetted it made 3.8 or say 3¾ Parahs of mortar. With this quantity of mortar 36 cub. feet = 1.3. cub. yds of brickwork was built. This gives .77 Parahs of Cement and 2.3 Parahs of sand to a cubic yard, but in framing an estimate a little more should be allowed as in this particular case there was actually no wastage, and the wells being only one brick thick a less quantity of mortar was required than would be the case if the work were two or more bricks thick.

It would appear from the above that when the mixture of cement mortar is 3 of sand to 1 of cement and the shape of the bricks is fairly good, one Parah of Cement would be ample for a cubic yard of brickwork.

A few experiments were made with surki mortar but they gave very poor results; but the time allowed for setting (12 to 48 hours out of water & 15 days immersed) was, I think insufficient and if the brickets had been kept for from 30 to 60 days there would probably have been a great improvement.

Jas Kuck
App. Overseer

25/4/86

you do not state the size of the bricks or number used per cubic yard

HWL
29/4

Yes.

HWL
29/4

Can you not make a series of experiments commencing with no surki & gradually increasing the quantity & also immersing some specimens in water at once & keeping others for various periods out of water ~~before~~ at first. Several small moulds for the purpose can be obtained from Shatatope. I doubt if any surki at all is required at Pelandorai

HWL
29/4
Asst. Engr.
In ch of Division
29/4/86.

To be returned
Despd 30 — do

243P
25/4/86

EXECUTIVE ENGINEER
106
28 APR. 86

No 4663/86

Report on the Restoration of Pelandorai Anicut

21st April 1886

---

3. On the morning of
the bed of the river above

No
1

Pelandorai 31/5/86

The following is a list of the works which Apprentice Overseer Private J. Ruck has seen in progress since the 16th June 1885.

Red Hills from 16th June 1885 until the 31st January 1886.

Earthwork

The restoration of the bund of the Red Hills tank, puddling the inner slope & protecting the puddle by a Laterite stone revetment.

Turfing the outter slope and gravelling the top of the bund so as to form a roadway

Masonry

Building a retaining wall 600 feet long having an outter frame work of cut Laterite stone in Mortar & the interior filled with concrete of Laterite stone & mortar,

Building a Parapet wall of cut Laterite stone in Mortar on top of tank bund.

Work done personally by the App. Overseer

Taking a small survey of the surplus channel of the Red Hills tank.
Estimating for & superintending the gravelling of a portion of the Red Hills tank bund.

In

In conjunction with Mr. Goddard
App. Overseer.

Taking sections of and estimating for the restoration of the Cholavarum Tank bund.

2

Shatiatope from 6th February till 20th March 1886.

The Manufacture of bricks departmentally. The building and sinking of Wells in Cement mortar, clearing debris and preparing bed for Concrete apron.

Work done personally by the App. Overseer

Taking sections of & estimating for the extension of the Left Flood bank of the Vellaur River above Shatiatope Anicut.

Sections & Estimate for the raising of a Ring bund near the Cumuru Odapoo sluice.

Doing the Office work of the Overseer in charge of Shatiatope Anicut for one week.

Pelandorai from 22nd March 1886

The Building and sinking of wells in cement mortar and in surki mortar. Building of the Ring bund and the Manufacture of Lime Departmentally.

243 P

PW E 7/4463/86

List of Works in progress
observed by Private J. Ruck
2nd Batt. South Wales Borderers
during his Apprentice year
commenced 16th June 1885

243

(9) A gang of wudders have been employed getting out rough stone apron &c, for line of wells in rear; also for clearing silt, in Supply Channel, at the rate of 2 annas per c yd.

— 450 ft. of the Channel from the head Sluice has been cleared up to date.

These wudders were also employed raising ringbund.

For the last 8 days Contractors Coolies have been employed on the ringbund. The average daily number being 108 —

I beg to remain
Sir
Your Most Obedient Servant
W. H. Goddard Pte.
Apprentice Overseer.

W. P. Lowick
L D O
11-4-86

$\frac{15575}{4000} = 3.84$ [illegible]

0.72 parah Cement per C yd of work

(8) In order to find out how much mortar is used to the C. yard, 3 parahs of sand were mixed up with 1 parah of cement, and the cubical contents of the mortar found to be 15375 c. in.

The mortar was then issued to 7 bricklayers each helped by 2 boys, and the building of the wells carried on. When all the mortar was used it was found that 37¼ c. ft of work had been done.

The mortar used = $3\frac{3}{4}$ parahs

$\therefore$ Amt. of mortar to 27 c ft = $\frac{3\frac{3}{4} \times 27}{37\frac{1}{4}}$ ph.

= $2\frac{3}{4}$ parahs

Cub. contents of 1 Brick = 150.813 c. in.

— do — 350 Bricks = 52784.71 c. in.
(The no. used)

— do — of work done = 64790 c. in.

$\therefore$ — do — of Mortar in the work = 12005 c. in.

But

C. Conts. of mortar mixed up = 15375 c. in

$\therefore$ Wastage in Mortar = 3369.71 c. in

= $\frac{3}{4}$ parah.

This wastage can be accounted for in the irregularity of the bricks, amount left on the mixing platform, amount left sticking to the tattoos, wastage in building, wastage by the inability of the bricklayers to draw the joints.

The no. of bricks per c. yd = 280; allowing for wastage.

The bricklayers are very inferior workmen.

———

Wellsinkers are supplied with wool and oil for their ears & pepper for their stomachs.

1 mangets 1½ rupees weight of each.
(i.e. oil and pepper)

They rub some of the oil on their heads.

2431

Concrete covered with [illegible] of the new wells at [illegible] sunk last year, but before [illegible] were could be done a fresh came down and covered them with loose stone and sand. This covering has been excavated and part of the loose stone taken out to clear up & construct the line of wells this year. The getting out a considerable quantity of the rough stone [illegible] that [illegible] this [illegible] got [illegible] water and probably [illegible] the [illegible] of the rough stone [illegible] were used [illegible] the [illegible]

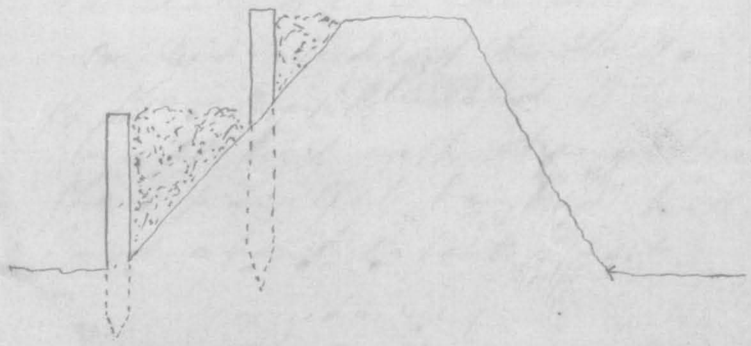
On the top of [illegible] wells the [illegible] being built, and is [illegible] a retaining wall. 13 of the wells are being built and are partly sunk. The wells [illegible] brought [illegible] the [illegible]

In front of the breached portion of the river part, at a distance of 23 feet from the body wall, a line of wells are being built, with returns of 8 wells at an angle of about 45° towards the anicut meeting it a little beyond each end of the breach. Of these wells 22 have been built to a height of 5ft and are being sunk. These wells are built of brick in cement mortar. They are intended to be 15ft deep with their tops flush with the present river bed above the anicut. From a depth

5 S O [illegible]

(9) [illegible] would [illegible] have been

(5) taken of revetting the outer toe with clay. But the bund, I think, has a critical position if a strong fresh comes down as the right bank is rocky about three quarters of a mile up stream and would tend to direct the greatest velocity of the fresh right on to the ring-bund. Two rows of stakes driven upright, one row along the toe, the other half way up the slope, and each filled in behind with branches of trees, brushwood &c would be a simple way of protecting ~~the~~ the ring bund.

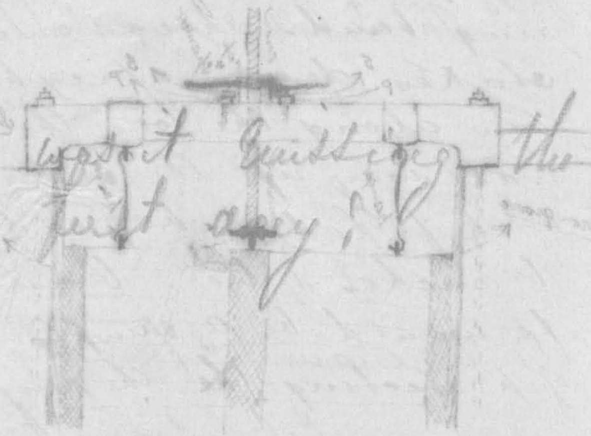


To restore and strengthen the apron in rear, a line of wells at a distance of 68' from rear toe of the body wall, and along the whole breadth of the river, are being sunk, with returns of two wells each, at the wing walls, and a little beyond each end of the breached portion. The wells have to be sunk to a depth of 15 feet below apron level. The wells themselves are to be 12 feet deep. On the top of the wells a retaining wall 3ft. high is to be built. The apron in rear of breach is to be of

Concrete

the bed of the river above anicut was to the [illegible] all across from bank to bank

The other set of [illegible] the head sluice [illegible] and is provided with iron bound shutters raised by means of a portable screw [illegible] & [illegible] been raised to its full height the shutter is held up by two iron hangers suspended from a cross beam of iron. (See sketch)



On the 29th of last month I found one of the shutters (left hand sluice) jammed at about 1'3" from its full height. Four anicut lascars,

Govinda [illegible]
Hengal
Narain
Shaik Hossein

and two mile coolies,

Ramakrishna
R Rangan

were employed to try to raise the shutter. The [illegible] on the [illegible] grooves above the shutter was first scraped and then they commenced to turn the spanner. Four anicut lascars should know how to work a [illegible] shutter by using their united strength in working the spanners. These men went to work as if they had never seen a [illegible] shutter and pulled one after the other in the most dis-organised manner; and finding their efforts [illegible]

(4) they wanted to give it up and advised that a blacksmith should be employed. This was not done. They were made to work together and in two hours the shutter was raised to its full height. In letting the shutter down to get a fresh run on the screw one of the screws marked s in the sketch was forced up and it was found to have its thread worn away.

On the next vent one of the small plates, marked P in the sketch, is missing.

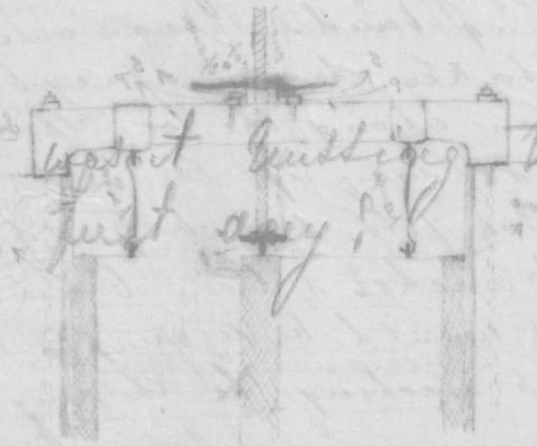
Dimensions of plate P = 6½" × 2" × ¾"

(2.)

RESTORATION OF ANICUT 1886

I found the work of restoring the anicut in progress when I arrived here. A Ring-bund was made from a point on the left bank about 360 feet above the anicut, to a point about 125 feet from the west sand sluices; and was raised to the height of the anicut crest. Since then it has been raised to a height of about 3 feet above anicut crest. It is still being raised with the intention of getting it 5ft above the anicut crest. A rough stone-in-chunam retaining was commenced on the anicut wall today for the ring bund to butt against.

A slight fresh came down the river about the end of last month, but did no harm to the ring bund as far as I could see on account of the precaution taken



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RESTORATION OF ANICUT 1886

A slight fresh came down the river about the end of last month but did no harm to the ring bund as far as I could see on account of the precaution taken

3. — On the morning of … the bed of the river above the anicut, was to be seen nearly all across from bank to bank. Laborers were set to work making up the bunds &c in rear, in order to proceed with the baling and sinking of rear wells. By 2.30 P.M. another fresh had come down and again inun… the whole of the work. … the vents of the Sand & … Sluices were opened, but the fresh rose to within … of the crest in front. At 5 P.M. it rose to 15 inches below crest. At 6.30 P.M. a very severe storm of wi… & rain came on from the N.W. and raged till about 8.30 P.M. — At 8.10 P.M. the rain had stopped and the wind had changed round to the S.E. At 8.20 it was found that the water had not risen but the wind was beating the waves over the crest.

I beg to remain
Sir,
Your Most Obedient Servant
W. H. Goddard
Apprentice Overseer

12/5/81

Report of Apprentice Overseer
W. H. Goddard for the
10 days ending 10th May
1881.

To
The Sub-Divisional Officer
Vriddhachalam.

Sir,

1. In accordance with the Assistant Engineer's remarks on my last report I have been employed during the preceding 10 days in colle… data for a Complete Data Sheet for the works in progress at present, which I forward with my report.

2. — On the morning of the instant it was found that a fresh had come do… during the previous ni… A slight …

---

(2)

raw round the rear No … near to the New Sand Slu… was washed away and … of the wells smashed up. A fourth well was tilted over towards the Right Ban… to an angle of about 45°.

All the work was inund… and progress, with the re… wells and apron, impede…

The Front Wells, were uninjured and easily got at. On the 6th a borer w… got to work to find out whether the layer of clay on which the wells are resti… is 3ft. thick or less.

Results of Boring:

Well No —	Depth —	Time.
13	1½'	30 m
14	3'..1"	2hr. 30 m
15	3'	2hr. 8 m
16	3'	1hr.
18	2'..5"	1hr. 30 m
20	3'	1hr.
22	3'	1hr. 15 m
* 24	1' 5¼"	22 m
26	3' 1"	1hr. 3 m
28	3'	15 m
30	2' 11½"	2hr.
* 32	1'	15 m
* 34	1' 8½"	50 m
36	2'..10½"	1hr. 45 m

* In these wells there was a lay… of sand on top of the clay and whe… the borer was taken up to be clea… the hole would fill with sand a… couldn't be found again.

Report of Apprentice Overseer
W. H. Goddard for the
10 days ending 10th May
1886

14/5 R No 289 P
12/5/86

1234
14 MAY 86
P.W.D.

4463/B

To

The Sub-Divisional Officer
Vriddhachalam

Sir,

1. — In accordance with the Assistant Engineers remarks on my last report, I have been employed during the preceding 10 days, in collecting data for a complete Data Sheet for the works in progress at this Anicut, which I hope to forward with my next report.

2. — On the morning of the 2nd Instant, it was found that a fresh had come down during the previous night. A slight bund which ran

---

I have copied, for future reference in my note book the different rates that have been paid for different works on this Anicut for the last 3 years.

I beg to remain,
Sir,
Your most Obedient Servant
W. H. Goddard Pte.
Apprentice Overseer

25/4/86

R No. 260 P
3/5/86

No. 1089.

To apprentice overseer thro S D O with reference to remarks

F W Ashpitel
Asst. Engineer
in ch. of S.A.D.
30/4

Nellikuppam
30th April 1886.

To be returned

I have copied for future reference in my note book the different rates that have been paid for different works on this Anicut for the last 3 years.

I beg to remain,
Sir,
Your most Obedient Servant
W.H. Blackard
Apprentice Overseer

This is very expensive
WOH
30/4/86

As these [illegible]
Could the [illegible]
the bricks [illegible]
[illegible]
WOH
3-5-86

The attention of the S.D.O. is drawn to this
WOH
3.5

Vide remarks above.

Attention has been [illegible] given to them. Initiative taken by S.D.O. who instructed Overseer [illegible]

---

roughstones; and [illegible] all along the toe, and about 3 feet apart, with brushwood packed behind them.

Baling.

Baling has been continued with six '2men Picottahs', night and day.

Detail of Cost of one '2men Picottah'

	R. A. P.
The upright (Adukal)	1-8-0
The lever (Yaytam)	6-0-0
'2men baling bucket'	2-12-0
Brushwood Well (6' deep 4½' Outer dr.; 3' Inner dr.)	2-0-0
Sinking — do — at 6as per ft.	2-4-0
4 Carpenters at 8as. each	2-0-0
Turfing	1-0-0
Earthwork	0-12-0
Total Rupees.	18-4-0

Rough Data for burning bricks in a Clamp

— Size of Bricks $9\frac{1}{2}'' \times (6'' \times 4\frac{3}{4}'') \times 3''$.

Cost of moulding per thousand	0-14-0
Packing & Burning — do —	0-10-0
Firewood — do —	~~4~~ 3-0-0
Loss in clinkers &c 25 p.c.	
∴ Cost of 750 good bricks	~~5~~ 4-8-0
Unloading & Carting 750 bricks at 13as per thousand	0-9-9
Total Cost of 750 Bks = Rs	~~5~~ -1-9
Cost of 1000 Bricks = Rs	~~7~~ 6-10-3

The Tamarind Tree affords the best firewood for Brick or Lime burning. —

Careful supervision would, I think, reduce the above cost per thousand very considerably.

Data for making mortar. (Soorkee in Circular Trough. —

		R-A-P
2 bullocks per diem		0-12-0
6 women each — do —	$1\frac{3}{4}$as.	0-10-6
2 men each — do —	$2\frac{1}{2}$as.	0-5-0
Total Rs		1-11-6

The above detail should grind 40 parahs of mortar daily.

∴ Cost of making 1 parah = $8\frac{1}{4}$ pies.

Rate

Report of Apprentice Overseer W.H. Blackard on the Works of the Palavanur Anicut for the 10 days ending 3rd April 1886.

To the Sub-Divisional Officer
Vriddhachalam

Sir,

In continuance of my last report I beg to forward the following notes and observations:

Wells in front; (Brick-in-Cement Mortar)

20 wells have been built to a height of 5ft.
1 well to a height of 7ft.
9 wells to a height of 6 ft.

Most of these wells have been partly sunk meeting with clay at an average depth of 4½ ft.

No more have to be built but of these the two coming close to the body wall in the [illegible] cannot be sunk owing to the occurrence of a step of the body wall foundation coming nearly under the [illegible] of the wells.

By taking a daily measurement of the work of the Bricklayer I have found the average daily amount of work done by one Bricklayer helped by two boys to be 1.07 cubic yards.

The work is still far from being good but there has been some improvement. The work would be as good as could be expected if the Overseer would place a little more [illegible] in selecting good work from the Bricklayers when the Overseer and Apprentice are not on the work to inspect.

I notice that although the mortar contains as stated [illegible] as 3 [illegible] to 1½ cement [illegible] the [illegible] easily [illegible]

Bricks $9\frac{1}{2}'' \times (6'' \times 4\frac{3}{4}'') \times 3''$. Six rupees per thousand.
Brick mould $9\frac{3}{4}'' \times (6\frac{1}{4}'' \times 4\frac{3}{4}'') \times 3''$

Wells in rear; (Brick-in-Soorkee m

9 wells have been built to a height of 6' and partly sunk; clay being met with at an average depth of
3 wells to a height of 5'; partly su clay at abt. 3ft.
15 wells to a height of 5'; of these the will commence in a day or two.
5 more wells are being built.

Notes for Brick-in-Soorkee mortar, W one brick thick.

3" thick mangoe plank well curb each 9
Outer Diameter 7ft.; Inner Diameter 5
Bricks $12\frac{1}{2}'' \times (6'' \times 4\frac{1}{2}'') \times 2\frac{1}{2}''$, Ten rupees per thousand (on Contract.)
Brick mould $13'' \times (6\frac{7}{16}'' \times 4\frac{5}{8}'') \times 2\frac{3}{4}''$
Mortar; 1½ sand, 1 lime, ½ Soorkee.
39 bricks to a ring.
3.77 rings to the lineal foot.
11.33 rings to the lineal yard.
Area of annular ring 19.9 square fee
1.354 lineal foot to the cubic yard.
3 parahs of mortar to the cubic yard.
Average daily turnout by 1 Brick helped by 2 boys = 41⅔ cub: ft. or 1.544 cub: yards.

The work here also could be a great deal better. Horizontal joints are seldom less than half-an-inch thick. One horizontal joint I saw was one inch and a quarter thick. The courses (2) above were taken up and built in again.

Ringbund.

The ring-bund is being gradua brought up to a height of five fee above anicut crest; and is bein revetted on the front slope w clay clods.

The roughstone-in-chunam retaining wall, on the anicut-crest for the end of the ring-bund to butt against, has been completed.

It is intended to revet the fro slope of the ring-bund for a fe feet from the body wall, with

Report of Apprentice Overs. W. A. Goddard on the Restoration Works of the Pelandorai Anicut, for the 10 days ending 20th April 1886.

25-4-86

rec 28/4

To
The Sub-Divisional Officer
Vriddhachalam

Pr 4 / 4463/B

Sir,

In continuation of my last report, I beg to forward the following notes and observations:—

Wells in front; (brick-in-Cement mortar)

20 wells have been built to a height of 8 ft.,
1 well to a height of 7 ft.,
9 wells to a height of 5 ft..

most of these wells have been partly sunk meeting with clay at an average depth of 4½ ft.

14 more have to be built but of these the two coming close to the body wall in the plan cannot be sunk owing to the existence of a step of the body wall foundations immediately under the site of the well.

By keeping a daily measurement of the work of the bricklayers I now find the average daily amount of work done by one bricklayer helped by two boys, to be 1.07 cubic yards.

The work is still far from being good; but there has been some improvement. The work would be as good as could be expected if the Maistry would spare a little energy in exacting good work from the bricklayers, when the Overseer and Apprentices are not on the work spot.

I notice that although the ~~cement~~ mortar contains as much as 3 parts sand to 1 of cement, it does not break very easily when struck, under water.

Bricks 9½" × (6" × 4¾") × 3" Six rupees per thousand.

Brick mould 9 13/16 × (6 3/16" × 4 3/4") × 3"

Apprentice overseer W. Murphy is requested to prepare a complete data sheet for all work at Pelandorai anicut

W. H. [illegible]
Asst. Engr. in ch. of S. A. D.
30/4

Nellicuppam.
30 April 1886.
Desp. 1st.

To be returned.

23 APR

Pray to notice when I inspect

W.H.G.
30/4/86

I [illegible] that
[illegible] with the work
[illegible]
W.H.

Please prepare a complete data list ~~for~~ of all work done at Pelandorai, commencing with the raw materials.

W.H.G.
30/4

In the data sheet in the case of bricks state their size & the size of the mould used.

W.H.G.
30/4

Bring to notice when I inspect

WOH
30/4/86

Please prepare a complete data list for all work done at Pelandorai, commencing with the raw materials

WOH
30/4

In the data sheet in the case of bricks state the size & the size of the mould used

WOH
30/4

Report of Apprentice Ove
W. H. Goddard on the Re 25-4-86
Works of the Pelandorai Anic
the 10 days ending 20th Apri

To
The Sub-Divisional Office
Vriddhachalam

Sir,

In continuation of my
report, I beg to forward the
notes and observations:—

Wells in front; (brick-in-Ce

20 wells have been built to a heig
1 well to a height of 7 ft..
9 wells to a height of 6 ft..
most of these wells have been pa
meeting with clay at an ave
depth of 4½ ft.

14 more have to be built bu
the two coming close to the b
in the plan cannot be sunk
to the existence of a step of
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By keeping a daily measur
of the work of the bricklayers
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improvement. The work
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little energy in exacting
work from the bricklayers,
Overseer and Apprentices a
on the work spot.

I notice that although the
mortar contains as much
parts sand to 1 of cement
not break very easily w
struck under water.

Bricks 9½" × (6" × 4¾") × 3" Six
per thousand.

Brick mould $9\frac{13}{16}" \times (6\frac{3}{16}" \times 4\frac{3}{4}") \times 3"$

---

28 APR. 86
P.W.D.
SOUTH ARCOT DIVISION
1067/S

No funds to do anything with

WOH

Notes on Pelandorai Anicut

17. 4. 86.

T. [illegible]
Appᵗ. Overseer

261 P
3/5/86

Nᵒ 1988.

To S.D.O.

This should be repacked by the channel lascars

WOH
30/4

Please see last page.

Continuation of Notes.
Pelandorai Anicut

Supply Channel. The top of the left bank is in a great many places in the 1st mile from the Anicut, and mostly in places where the bank is almost perpendicular, consequently there the rain silt, which portions will slip and fall into the channel and choke it. These portions have been trimmed and the slope flattened it [illegible] a good deal of after attention. The left bank ruts on top of the bank require to be filled in or it will in a short time be difficult for inspecting officers to ride along the length of the works along the channel. The channel requires the following petty repairs.

The rough stone revetment of a jungle stream at 1st mile requiring re-packing as a portion of it has fallen down.

The left wing of the aqueduct at 1¾ mile is cracked.

The right wing walls of bridge at 2⅓ mile require plastering at a portion of the abutment below springing line.

The wings of aqueduct at 3⅔ mile are cracked and also parapets on the small bridge and rough stones; and to [illegible]

the [illegible] between [illegible] 2
and 5 1/2 miles, requires
some filling in between
the rough stone and
the bank, and the right
wing requires some backing, and in some places
the rough stone requires
a little [illegible].

The sluice for supplying Rajandrapetnam
tank at 6 1/2 miles has
no shutters, and consequently [illegible] [illegible]
[illegible] in the channel
is [illegible] [illegible] in the
tank there is a waste
of water [illegible] [illegible]
The [illegible] [illegible] [illegible]
[illegible] [illegible] head of
A [illegible] requires
[illegible] [illegible] places
and [illegible] the front
of the sluice. The silt
[illegible] requires to be
cleared away from
the front of the sluice
and also a new
shutter, as that used
at present as a shutter
[illegible] simply a couple of
pieces of board [illegible]
[illegible] the groove, and
there is no means
of raising them from
[illegible]

The [illegible] of [illegible]
on the [illegible] [illegible]
carried out by the
[illegible] [illegible].

Wells & Cement. The
[illegible] of the [illegible]
[illegible] of wells is being
rapidly carried out.
up to date 30 has
been built 1 7 ft high
8 ft. and 9. 6 ft high

Shutters will
be provided from
the grant for the
storage works if
they are not already
in use

5 80 written to

[illegible]
30/4

This is provided for
in the storage works estimate

[illegible]
30/4

[illegible] of [illegible] [illegible] [illegible]
are [illegible] 8 feet
3 [illegible] 6 feet
[illegible] of the remainder
[illegible] have been sunk to an
average depth of 7 1/2 ft.
at which depth a hard
black has been met with,
and the depth to which
it extends has not yet been
ascertained. A pump
would greatly facilitate
the removal of this clay
and materially assist
the well sinking.

[illegible] [illegible]. The [illegible]
[illegible] of wells are being
rapidly built. Beyond
the 172 ft of crib work
already finished there
are 2 wells of 3 ft high
and 2 are 6 high. Of these
8 are sunk to an average
depth of 7 1/2 feet below
apron level. Two places
have been met with where
wells cannot be sunk, one
has space for 2 wells, and
the other for 4.

Apron. The rough
stone and debris is being
cleared away in order
to prepare the bed for
the concrete. This is a piece
of [illegible] work on account
of the large quantity of
rough stone.

River Bund. The [illegible]
bund is almost finished
it is now being faced
with puddle clay and
is sufficiently [illegible]
to resist any fresh that
does not top it, and
I think water may now
be safely passed down
the supply channel

[illegible] Bricks. I have not yet been able to finish my observations in this portion of the work as the bricks are not yet entirely dried.

Mortar. Made 3 parts of lime, 2½ of [illegible] of surkhi and 1½ of [illegible] sand [illegible] sand [illegible] forming the [illegible] of [illegible] 10% [illegible] 34.65 [illegible] given 3 x 26 cub. ft of mortar ground.

Observations. The bricks which were joined with the different mixtures of mortar, under rate of 10. 20. &c. although kept under the most favourable conditions, could not after 9 days bear the slightest movement without fracturing, the joints the mortar had hardly any appearance of setting. Once [illegible] the mortars were [illegible] all superior to the mortar at present used for the [illegible] walls. I think 20 days for setting before working is not enough, and is I daresay the principal cause of [illegible] of the [illegible] of the small [illegible] the [illegible] prepared for testing their hydraulic properties, the [illegible] each was immersed after 6, 18, 24, 45 and 48 hours, the ones which were kept 9 hours

on being immersed immediately in water went to pieces, the others had kept from 14 to 15 days in water and on examination found to be much better but nothing in comparison to what they should be after such a time. The bricks I do not intend to test until they are 20 or 30 days old.

The different compounds for cement I have ready for testing, and hope to know some of the results in a few days.

T. [illegible]
App: Overseer.

Pelandorai
11. 4. 86

W. [illegible]
E. D. O
25/4-86

P. J. B

Apprentice overseer
Mr. Murphy is requested
to prepare a complete
data sheet for all
work at Pelandorai anicut

W Uebbpitel
Asst Engr in ch. of
30/4 S. A. Dn

Nellicupam
30 April 1886.
Desp 1st.

To be returned.

---

there is abundance along
the river banks.
Clay and slaked lime
Clay and half burnt lime
stone. powdered.
Clay and powdered lime
stone. Of each, 4 sorts
of different proportions
are mixed.

P. Murphy Sunnr
App: Overseer

Pelandorai
16. 4. 86.

H P Lemesh

Returned —
Hke
24-4-86

Ul
1914

sand as follows in order to try and find the proper proportions
1 lime, 1 sand gave 1 mixture (dry)
1 do. 1½ do. — 1 do.
1 do. 2 do. gave slightly over 1 of mixture shewing that 2 of sand is about the proper proportion for the lime here.

How can this be? 1 lime + 2 sand only 1 when mixed?

Adhesion of mortar. In order to test the mortar I joined 7 pairs of bricks with mortar composed as follows.

1 lime 2 sand
1 do. 1 surki ½ sand
1 do. 1 do. 1 do.
1 do. 1 do. 2 do.
1 do. ½ do. 1 do.
1 do. ½ do. 1½ do.
1 do. ½ do. 2 do.

Tensile strength. Made 2 brickets of each of the above mixtures.

Hydraulic properties. In order to test the properties of the above mixtures made 4 pats of each about the thickness of a mortar joint, and placed them in water at noted intervals.

I am unable to note the results of any of the above as sufficient time has not yet elapsed.

Cement making. I have almost ready for burning the following compounds in order to try and obtain a good local cement.

Good

× Pure clay from revisited and white clay of which there

× Very doubtful will see on next visit

Brickmaking is going on 3 kilns are ready for drawing. A great deal more attention should be paid to the moulding, as the bricks are very irregular, and a great deal of waste in cement and surki is the consequence.

The lime kiln is packed and fired and will be ready for drawing on 13th. I will then be able to complete my observations on the manufacture of lime and cost.

Jelly. There is abundance of jelly ready stacked for concrete.

Ruined Anicut. The remains of the old anicut about a mile above the present one could if occasion required × be cheaply utilized as jelly for concrete by the aid of a few pounds of dynamite.

Experiments. Made the following trials and found that 1 cement wetted gave in volume ·88 or lost in bulk 12 p.c.

1 sand, washed, dried, sifted and re-wetted gave ·78 or lost 22 p.c.

1 parah cement gave in mortar 2·31 cub ft or ·86 parah
1 parah cement + 1 parah sand gave 3·35 cub ft or 1·45 parahs
1 do. cement 1½ sand gave 4·12 cft or 1·87 para
1 — 2 — .. 5·7 — .. 2·46 do.
1 — .. 3 — .. 8·87 — .. 3·84 .. ..

also mixed lime and sand

channel. If however the under sluice shutters were each provided with screws they could be raised a few inches and assist to keep the silt from passing into the channel instead of facilitating it.

The silt is now cleared away from the head of the channel.

For the smaller set of under sluices 2 needle shutters are required each 10'×3/4'×1/4'. They can be provided at a cost of about Rs 15.

Revetment. The rough stone revetment on the river banks below the anicut require re-packing, as a portion on the left bank has sunk. I think the slope requires to be modified it is far too steep. ×

× Everywhere the same fault

Labor When the ring bund is complete labor will be available for the clearing away of the rough stone from the breach and preparing the bed for the concrete.

Material. There is abundance of material of all sorts and if the work is pushed on with the apron in the breached portion should be completed or nearly so in 2 months providing of course that there are no freshes to hinder it.

Rear apron. The cribwork

is

affixed to the trolly and being pushed over a shutter could be fastened there by a locking plate, or by a bolt dropping into a slot cut in the rail. The screw could then be made fast to the shutter by one man, and the cost of it would be trifling. I think it would however be the better plan to provide each shutter with a lifting gear of its own similar to the head sluice shutters, as owing to the present arrangement the under sluice can be only fully open or entirely closed, and thus preventing them from doing the work for which they were designed. This is evident from the manner in which the supply channel was silted up, as for a length of about 300 feet close to the head sluice the silt was at least 3' deep and as the sill of the head sluice is 3' above the sill of the under sluice it would take 4' of water on the under sluice sill to pass 1' of water down the supply channel. In the dry season when there is but little water, in order to pass that little down the supply channel the under sluices from their construction must be entirely closed, and the silt therefore has no other outlet but the

channel

by a row of wells 3' inner and 7' outer diameter built in Surkhi mortar. On top of these wells a crib wall 6' broad at base, decreasing its breadth by steps is to be built on which the new concrete apron is to rest. This rear apron will differ entirely from the remaining portion of the old one inasmuch that there will be no cut stone used. The top of the apron will be 2.¼ below river bed level, and the concrete will be effectually protected by a water cushion nearly 2½' deep. The outer edge of the concrete apron will be continued by one of rough stone which will protect the down stream side of the line of wells. The work of sinking the rear line of wells is difficult and tedious, owing to the labor of having to remove the old protective rough stone apron, and also the keeping down of the water which is very laborious on account of the top of the wells having to be 6¼ below bed level, and although there is very little water in river yet baling has to be carried on incessantly day and night. There is no way of avoiding the latter difficulty only at a very great expense as the average bed fall of the river is only 1 foot per mile, therefore in

between 6 & 7 feet per mile above

× My opinion at a glance also to a certain extent — i.e. distance differing — Kh

This is the mode at the Dowlaishwaram Under Sluices — Godavery

in order that the water should be carried off a channel would have to be cut about 7 mile ×long. This difficulty will however be much lessened in about 3 days as the ring bund will by that time be brought to a uniform height of 3' above anicut crest, the under sluices can then be closed and the water passed down the supply channel, and the works sufficiently protected from any ordinary fresh. Precautions should however be taken to have the means at hand at all times for opening the under sluices. This is unfortunately a tedious operation as there is but one screw for all the vents, and this screw is so unwieldy that it takes at least 4 men to place it in position only, and after one shutter is opened it has to be disengaged and attached to another, and moreover if water happened to be passing over the top of the sluices would not only be a matter of difficulty but of danger also from the weight of the screw.

This might be obviated by the construction of a small trolly running on a couple of lengths of railway iron; the screw could be easily affixed

EXECUTIVE ENGINEER
REGD. 981
17 APR. 86
P.W.D.

Notes

Pelandorai Anicut

10. 4. 86.

Notes on Pelandorai Anicut

1908

pd 17/4 2/2420/86 64/41/86 pd No 2 4463/86

This anicut was breached in 1844 for a length of 200 feet and restored at a cost of Rs 37,476, again in 1880 a portion of the old work for a length of 35 feet was destroyed and also the head sluice, the destruction of the head sluice was mainly due to the insufficient height of the wing walls. It was decided to increase the waterway by lengthening the anicut from 500 to 660 feet of which 35' was old work and 160' new work the head sluice was also built and the height of the wing walls increased; both new work and repairs were executed at a cost of Rs 81145. Again in the extraordinary wet season of 1884 the anicut was again breached for a length of 200 feet, and its restoration is now being carried out.

The river above the anicut has a drainage area of 1600 square miles and 17000 acres are irrigated yielding a revenue of Rs 54000.

Wells. The estimate provides for a row of wells for the front apron 4½' inner and 6' outer diameters built in cement and sunk to a depth of 15 feet. The apron in rear is to be supported by

---

5th Circle D. P. W.

From
J. Murphy Bunner
App: Overseer.

To
The Supt Engineer
5th Circle D. P. W.

31. 5. 86

Sir

I beg to submit herewith a list of works which I have seen, and my connection with them during my apprenticeship: —

Kistna Eastern Divn.

Assisted in the preparation of the Bank Canal Estimates.
Quarries, Lime Kilns, Inspecting Engineers' Qts. and Office, New Workshops, Workshops (small castings, screw-cutting, nail and bolt making, steam sawing, carpentry &etc) and Brickmaking. Owing to my being ordered to join Red Hills Tank Divn. at once I did not submit any notes.
On Buckingham Canal I had an opportunity of seeing 4 flood gates in course of construction.

Red Hills Tank Divn.

Reported my arrival on 13th August 85.
Surveyed and took long. and cross sections of Cholaveram Supply Channel and connected the levels with the various works on Red Hills Tank. prepared estimate for.

the repairing and clearing of the supply channel.
Assisted in running a line of check levels from Cholavaram Hd. sluice to Tamarapak anicut (about 12 miles)

Submitted notes on:- lime-burning, quarrying and laying laterite, dry and in chunam, concrete, gravelling, turfing and earthwork and the various data for the above.
Had charge of the building of the revetment and parapet wall for a length of 1300 feet from 1st Oct. until its completion in December 1885.

South Arcot Dist.

Reported my arrival on 2. 2. 86.

On 9. 2. 86 took charge of the building of Koudangi Tank waste weir and Tirupupaliyur flood embankment, took sections of bund and marked out site for weir, and took long. and cross sections of flood embankment, remained in charge until 21. 2. 86.

Took charge of Buddilam Anicuts from 22. 2. 86. rebuilt ring bund at Tiruvadi which was washed away, and searching for a site for wells free from debris, Taking various soundings at Vanamadevi Anicut as per instructions from Exc: Engineer; remained in charge until 16.3. 86.

Received orders to report myself to Conductor Lemon at Pelandorai. and to stay at Shatatope about a week and take notes on the work, and submit them to the Exc: Engineer.

Pelandorai. Submitted notes 3 times at intervals of 10 days. and trying various experiments of mortar, and the obtaining of a local cement.

Took survey and levels and ran a contour of Nagarapadi Tank, and obtaining information in connection with its drainage are and sources of supply, and the amount of land that can be brought under cultivation.

I beg to remain
Sir
Your most obedient Servt.
P. Murphy Gunner
Apps: Overseer.

5th Circle D.P.W.

4463/86

From
T. Murphy Esqr.
App: Overseer

To The Superintending Eng.
5th Circle D.P.W.

Pelandorai
21. 5. 86

Occupations of Mr.
T. Murphy during
~~his~~ apprenticeship

PWCles 3783

P. W. D. 3RD CIRCLE

From

The Superintending Engineer,
VI ~~3rd~~ Circle.

To

The Chief Engineer
P.W.D.

No. 229 T.8.

Dated 12 } May 1886
Received 19

Enclosures.

No 1713 C d/ 21-5-86.

Fm: Supervisor Sundra Sastri:
Reports that — has been posted to Negapatam D:

C/ Recorded with reference to + Memo 1800 C of 13th May 1886.

Recorded with reference to Memo. 1800 C of 13th May 1886.

19/5/86

now at 005 —

Entd: in Rept: Regr.

JC 25/5

in rear is to be supported by

in the Vizagapatam Division in the place of Supervisor Trutwein who has been sent to join your office on special duty in accordance with instructions received by telegraph. In anticipation of your approval Supervisor Sundara Sastri has been posted to Vizagapatam.

I have the honor to be
Sir
your most obdt. servt.

Lieut. Col. R.E.
Supg. Engineer 6th Circle

SUPERINTENDING ENGINEER'S OFFICE, 6th CIRCLE,
Kodaikanal 12/5/1886.
D 17/5.

No. 229 T.J.

From,
Lieut. Col. J. Pennycuick R.E.
Superintending Engineer, 6th Circle,

To,
The Chief Engineer
P. W. Department.

Sir,

I have the honor to report that S. Sundara Sastri, Supervisor, in the Lower Coleroon Irrigation Project Division is available for employment elsewhere. He was sent to this Circle as Overseer on Rs. 100 as per your Memo No. (not communicated to this Office) and since promoted to Supervisor in your memorandum No. 1807 C of 26th February 1886.

2. In the event of his services not being required elsewhere, I would ×suggest his employment in

× This Supervisor has already been transferred to the Negapatam Division vide Memo. 1000 C of 10-5-86

17/5
DW
To W after despatch

Ed 14/5 C. 14.5.86.

Public Works Department.

General Branch

No. 807 C dated 26th. February 1886.

MEMORANDUM.

Appointments.

The following appointments are made to the Temporary Establishment.

Name.	Post to which appointed	Rs	With effect from
R. Harris	Sub Engineer	250	1st. March 1886
E. Vigor	Do	250	Do
E. V. Beeby	Do	250	Do
C. Kuppuswami Mdyr	Supervisor	150	Do
R. V. Narayana Aiyar A. C. E. B. C. E.	Do	150	Do
R. Nageswara Aiyar B. C. E.	Do	150	Do
S. Sundara Sastri	Do	150	Do
J. Elliot	Do	150	Do
R. Chakrapani Rau	Do	150	Do
V. R. Rungaswami Aiyar A. C. E.	Do	150	Do
T. Prakasa Mudlyr	Overseer	100	Do
M. C. Rangaswami Pillay	Do	100	Do
C. R. Sundaram Pillay	Do	100	Do
V. R. Narayanaswami Aiyar	Do	100	Do
A. Mc Leish A. C. E.	Do	100	Do
C. Venkataramayya	Do	80	Do
T. Muttukumaraswami Mudlyr	Do	80	Do
A. V. Aiyanna Nayudu	Do	80	Do
R. Gopalaswami Aiyangar	Do	80	Do
T. Subharaya Mudlyr	Do	80	Do
P. Balasundra Mudlyr	Do	80	Do
T. Appaswami Aiyangar	Do	80	Do
S. G. Krishnaswamy Aiyar A. C. E.	Do	80	Do
R. Arunachella Sastri	Do	80	Do

(By Order)

D. McW. Campbell Major R.E.

Dy. Chief Engineer P.W.D.

To

The Suptg. Engineers

Suptg. Engineer T. M. Scheme

Examiner P.W. Accounts.

No. 1800 C d/ 13-5-86

After despatch

M
14.5

17.5-86

DW
To W after despatch

Ed
14/5

C. 14.5.86.

C

No. 1800 C d/ 13-5-86

Memorandum.

The following transfer is ordered:-

+ C. Sundara Sastri, Temporary Supervisor, from the Lower Coleroon Project to the Negapatam Division

To join at once.

13/5/86

+ The Exec: Engr: has reported that this Subordinate is available for transfer. It is proposed to send Supervisor Sundara Sastri to relieve Mr. Inturan.

13.5

Cn 16.5.86

To The Supg Engr: VI Circle & Examiner P.W. Acct

Despd 13/5/86

No. 1903 C.

Government of Madras.

PUBLIC WORKS DEPARTMENT,

Chepâk, 21st May 1886.

OFFICE NOTE.

From D.W.

To S.E. V Circle

Please expedite the despatch of the report on the practical training of the three Military Apprentice Overseers in the South Arcot Division (Vide para 112 of the P.W. Code)

(Sd) D. McC.
D.W.
21.5.86.

21.5

Despd 21/5

Ird 25/5

Rk 25/5

No 18

No. 940

Superintending Engineer's Office,
V Circle, Madras,
~~Chepâk~~, 7th J[illegible] 1886.

From
The SUPERINTENDING ENGINEER,
V Circle,

To
The Deputy Chief Engineer
P. W. Department.

Sir,

Enclosures.

In reference to your Office Note No. 1903C dated 21st May 1886, I have the honor to forward the Progress Reports of the three apprentice Overseers Puck, Goddard and Murphy - now employed under Sub Conductor and Sub Engineer Lemon in the South Arcot Division Virdachellum Sub Division. These Reports seem somewhat incomplete and informal - probably because no orders regarding

From (8) Tille 4463

THE SUPERINTENDING ENGINEER,
V CIRCLE,

To

THE ~~Depy~~ Chief Engineer
P. W. D.,

Dated 7 } June 1886.
Recd. 10 }

ENCLOSURES. 10

No. 1536 W. d/ 17th June 1886

No. 940

Apprentice Over-
-seers. Ruck. God-
-dard & Murphy -

Forwards Progress Re-
-ports of ______ and
reports on the practical
training of ______
now employed in
Virdachellam Sub
Divn - South Arcot
Division.

6. 11. 6-86 16·6·86

No. 15

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

17th June 1886

READ the following

From the S. E. V Circle - Lr. No. 940 d/ 7th June 1886.

Privates W. H. Goddard, J. Ruck, and Gunner T. Murphy, Apprentice Overseers, having completed their practical training, and having been favorably reported on by the Executive Engineer, South Arcot Division, under whom they served, will be brought on the permanent establishment as Overseers 1st Grade, Supernumerary

11/6/86

To
S. E. V Circle
Examiner P. W. A.

Cw
13.6.86

Despatched
18/6/86

14·6·86

(8)

No. 1536 W. d/ 17 June 1886

M
17.6

ans. 6/9/6 · cir. 8/6 · & desp.
3.11.6.86 R.14.6

C. No. 4463

(8)

D.W.

Orders as regards the posting of these three Apprentice Overseers are requested.

Their services will be needed for the Milty: Branch (when formed) & they might therefore be posted to V or III Circles.

M
11.6

No III & No VI are the only circles short of subordinates & one may be posted to each.

11/6/86